An examination of how to engage young, underrepresented women in UK health surveys

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This thesis is submitted in partial fulfilment of the requirements of the award of Doctor of Philosophy

December 2020

Abstract

An understanding of the health, health beliefs and health behaviours of young women is vital for primary and secondary prevention to reduce the impact of poor health on women's own lives, their families, and future generations. However, young women from lower socioeconomic status (SES) categories are underrepresented in UK health surveys, limiting our understanding in this area.

The aim of this thesis was to understand what encourages and discourages young women in lower SES categories to complete UK health surveys. A marketing framework was adopted to explore this across two studies.

Study 1 employed focus groups across two phases. Phase 1 (49 women, 16-34 years) explored the first two stages of the framework ('motivation' and 'perception') through responses to recruitment materials. Qualitative data were compared across three life stage categories (education, work, and motherhood). In Phase 2, 45 Further Education (FE) students (16-24 years) participated to explore the remaining three stages of the framework ('attitude formation', 'integration of intention and action', 'post-purchase learning').

In Study 2, 37/489 (7.6%) FE students returned a health questionnaire mailed to their homes. Reasons for responding or not were followed up with an in-class questionnaire with 188 of the students, and in interviews with 5 responders and 9 non-responders.

Findings indicated that the women were in transition from adolescence to adulthood. They valued being treated as adults with choice and autonomy but could be easily distracted. A desire to help others encouraged response. Health information and opportunities to think and talk about health engaged participants; low self-esteem and pessimism were barriers. Some participants used cues such as amount of text and images to evaluate their eligibility for the study, and the importance and difficulty of the questionnaire.

The application of a marketing framework challenges researchers to design health surveys to provide an equitable exchange. Participation may be encouraged by meeting participants' pre-existing goals and responding to developing identities, lifestyles, and anxieties.

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Chapter 1 Introduction and overview

1.1 Background

This thesis addresses the need to engage young women from lower socioeconomic categories to take part in research to identify the aspects of their lifestyles that are detrimental to their health.

Reducing social and economic inequality has been named as the tenth United Nations Sustainable Development Goal (United Nations General Assembly, 2015). While many of the targets within this goal seem marginal to developed societies, current mortality and morbidity data demonstrate that, in the UK, people in the lowest socioeconomic categories die younger and spend more years of their lives in ill-health (Office for National Statistics, 2016). This is unsurprising since most of the risks to health, such as poor diet, cigarette smoking excessive alcohol consumption and little exercise, are associated with education and income (Marmot, 2016).

Health inequity is an issue of societal justice because many of the social determinants of poor health – for example, poverty and poor education – are preventable (Marmot, 2010). Public health research has an important role to play in promoting greater equity in UK society. Interventions which could effectively treat a physical or mental problem are not enough. Universal interventions that are offered to everyone in a target population in the same way and at the same intensity, can sometimes increase health inequality because those with greater access to services may benefit more than those who are not in a position to take advantage of available support (Shaw, 2009; White, Adams and Heywood, 2009). Proportionate universalism – the provision of universal interventions on a gradient to equalise the ease of access and need in a community (Marmot, 2010) – seems an intuitive solution to this problem yet there is evidence to suggest that simply ensuring access to an intervention is not sufficient to improve health. Tailoring interventions to individual needs may be required to tackle the social determinants of poor health and to meet the needs of different population categories (Carey, Crammond and De Leeuw, 2015). Understanding lifestyles, particularly health knowledge and health behaviours, across sociodemographic categories is essential for targeted interventions to be designed and implemented.

Collecting information on health knowledge and health behaviours, however, has become increasingly challenging. The survey methodology is valuable for mapping temporal and geographical trends and can identify relationships between sociodemographic determinants of poor health, the uptake of services, and health outcomes (Coggon, Rose and Barker, 2016). The ability to collect a range of information from a larger group of

individuals in a form which is comparable over time, also makes the methodology particularly useful for identifying where health interventions are working or need to be targeted to be more effective with at-risk categories (Calnan, 2019). However, the challenge for surveys is that the external validity of such research stands or falls with the ability of the sample to represent the population of interest. Overall response rates in health surveys have declined (Tolonen *et al.*, 2006; Natonal Research Council, 2013). More worryingly, the population groups at the greatest risk of poor health are typically underrepresented, so less is known about those for whom interventions could have the greatest, positive impact.

While health inequity is a concern for both genders (Galea and Tracy, 2007; Keeble *et al.*, 2015), the focus of this thesis is on women only. Concerns about poorer health outcomes for women have been addressed in UK legislation, along with other social groups such as ethnic minorities and asylum seekers (UK CEDAW Working Group, 2013). Healthy life expectancy data suggest that women live in ill-health for more years than men (Office for National Statistics, 2016) and remain particularly vulnerable to social influences on poor health. For example, poverty is associated with poorer health outcomes (Newton *et al.*, 2015; Marmot, 2016) and gender gaps in full-time salaries consistently favour men (Office for National Statistics, 2018). Women are also more likely to be on minimum wages or in part-time work (D'Arcy and Hurrell, 2013).

Effective internventions are needed to improve women's own health but also that of whole families and future generations. Young women aged 16 to 24 years have been identified as the group at the highest risk of mental health disorders in the population (McManus *et al.*, 2016; Morris, Earl and Neave, 2017). Poor maternal mental and physical health can affect child development due to foetal programming during embryonic and foetal development in which key organs adapt in ways which predispose the child to certain diseases in later life (Kwon and Kim, 2017). Maternal health can also influence later family health through the health behaviours which are modelled and encouraged in the home (Griffith *et al.*, 2007; Englund *et al.*, 2008). Indeed the preconception period in a woman's life is gaining increasing attention as an opportune time to intervene to improve the health of mothers, children and their wider social networks (Stephenson *et al.*, 2018).

Therefore, young women, particularly those in lower socioeconomic categories, are an important focus for public health research. According to the most recent Census for England and Wales, conducted in 2011, over a third of women aged 16 to 34 years (38.19%) were in the four lowest categories of the 8 category National Statistics Socioeconomic Status Classification (NS-SEC 8) system. This is likely to be an underestimate since not all young women were able to be classified in the NS-SEC 8 categories (Office for National Statistics,

2011a). Nevertheless, this figure does indicate that a substantial proportion of young women could be at higher risk of poor health outcomes which are associated with social influences such as income and education. If we are to prevent poor health outcomes for these young women and their future families, it is important to ensure that they are represented in research which aims to understand their health, health knowledge, and health behaviours as the basis for developing relevant advice and interventions.

1.2 Research question, aims and objectives

The research question to be addressed in this PhD thesis was: how can public health researchers encourage more young women from lower socioeconomic status categories (SES) to participate in UK surveys about their health, health knowledge and health behaviours?

The aim of this thesis was to understand and describe the factors which encourage and discourage participation in UK surveys on health, health knowledge and health behaviours by young women from lower SES.

There are two main objectives:

1. To develop a conceptual framework that draws on relevant survey designs and theories from psychology and marketing to improve the recruitment and continued participation of young women from lower SES categories to UK surveys on health behaviours.
2. To use this conceptual framework to identify and describe the responses of young women from lower SES categories to recruitment materials and questionnaires about health, health knowledge and health behaviours.

1.3 Thesis outline

1.3.1 The review of literature and data

The background to this research is presented in three chapters, each describing one of three approaches to improving survey response: sociodemographic correlates of response, recruitment and questionnaires design, and psychological explanations of response behaviour. Each chapter uses a different method to synthesise and present the evidence:

- Chapter 2 describes a secondary analysis of previously published data on the patterns of response in relation to four sociodemographic characteristics: age, income/occupation, education and ethnicity. The use of data as part of the background to this thesis – rather than only reviewing previous research literature - is important to establish the need to improve the recruitment of young women from lower SES categories. Also, by comparing multiple UK survey studies, it is possible to

identify barriers to response created by recruitment method, fieldwork and survey topic.

- Chapter 3 is a systematic review and a meta-analysis of randomised controlled trials investigating the effectiveness of strategies to improve the response rates of young women in studies about health risks. The review synthesises the literature on survey design strategies to contribute to objective 1 and the development of the conceptual framework.
- Chapter 4 provides a critical literature review of theories of response behaviour drawn from psychology and marketing. The chapter also outlines the conceptual framework which has been adopted from marketing and developed for use to explore survey recruitment, as part of objective 1.

1.3.2 Collection and analysis of primary data

Chapter 5 outlines the methodology and methods used to apply the conceptual framework proposed in the previous chapter to understand and describe the responses of young women from lower SES categories to recruitment materials and questionnaires about health, health knowledge and health behaviours (Objective 2 of the thesis). The methodology and methods adopted in this work were to provide a richer understanding of participants' responses to questionnaires and recruitment materials to address the gaps in the predominantly quantitative data and research outlined in Chapters 2, 3 and 4. The methods of the two studies are outlined in this chapter, both of which employ qualitative approaches to identify and describe the responses of young women from lower SES categories to being recruited to a health survey. Participants were initially recruited via Further Education (FE) colleges, workplaces and Children's Centres, then the recruitment was narrowed to FE colleges only.

Study 1 comprised two phases of focus groups in which participants discussed their reactions to advertising posters and videos asking for volunteers for a health survey, to participant information sheets and to a short health survey, shown to the participants for the first time during the focus groups. These materials were based on typical, widely used recruitment and research documents and were designed to provide a focus for conversations among participants. The composition of these focus groups and analysis of the data are presented and discussed in Chapters 6 and 7.

Study 2 built on Study 1 by providing young women, attending a Further Education college, with a real experience of being recruited to a health survey, through a mailed health questionnaire which was sent to their homes. This experience was followed at a later date by a short questionnaire completed in class and semi-structured online interviews to

explore how the young women responded to the mailed documents, and to identify factors which had encouraged or discouraged their participation. The findings of this study are presented in Chapter 8.

Reflections on the researcher's relationship with the participants of both Study 1 and Study 2 and about observations made in field notes at the time of data collection are described in Chapter 9.

Finally, in Chapter 10, the conceptual framework is extended to propose some strategies for designing a recruitment design to engage more young women from lower SES categories in UK health surveys. The chapter goes on to evaluate the usefulness of the marketing approach for survey recruitment and response.

Chapter 2 Participation of women in UK population surveys and cohort studies: An analysis of response patterns

2.1 Chapter introduction[1]

Cross-sectional surveys measure the relationships between health outcomes and determinants of health in a defined population at a specific point in time (Coggon, Rose and Barker, 2016). They are a frequently used method in research concerning health, health knowledge and health behaviours in a population because they can quickly and cheaply collect data about disease exposures and outcomes together. The ability to measure multiple variables at once provides useful evidence about prevalence of both disease and risk factors and generates hypotheses for future studies (Setia, 2016). The quantitative survey method, however, does rely on the assumption of probability sampling, namely that it should be possible to extrapolate the findings from the sample to the population from which that sample has been drawn. The sample should therefore be as similar as possible to the target population to capture the patterns of the risks and diseases that could exist in the population (Singer, 2006). Non-response bias (where findings are skewed because the people who respond are different to those who do not) can result if some population groups are harder-to-engage than others. This bias is problematic because it reduces the external validity of the data. There may also be insufficient data to make valid estimates about specific subgroups within a sample where groups are underrepresented.

This chapter describes the patterns of response by women in UK health surveys by sociodemographic characteristics and different recruitment methods. This analysis will illustrate where samples in UK health surveys differ to the population from which the samples have been drawn, challenging the assumptions of probability sampling. The

1 This chapter is adapted from an original manuscript of an article published by Taylor & Francis Group in *Women and Health* on 21 April, 2017, available online at https://doi.org/10.1080/03630242.2017.1310170. Permission for this reproduction may be found in Appendix 2.1.

disparities in the patterns of response between different surveys will also suggest possible barriers to recruitment.

2.2 Debates concerning survey response

The success of the recruitment of survey samples is typically assessed by overall response rates (Babbie, 2012; Mindell, Aresu, *et al.*, 2012). These have declined in the UK. For example, the response rate of the Scottish Health Survey (SHeS) has fallen from 84% in 1995 (Gorman *et al.*, 2014) to 56 % in 2013 (Corbett *et al.*, 2014). The focus on overall response as a proxy measure of data quality suggests that it does not matter who responds to a survey as long as there is a sufficient quantity of data on which to base estimates.

In support of this approach to evaluating survey data, Rothman et al. (2013) argue that when investigating causal relationships the representativeness of the sample is less important - the ability to generalise findings from a sample to a wider population is not weakened if the sample is not fully representative of the population. This is true when investigating biological determinants of health, for instance a biomarker such as creatinine for kidney function or a physiological parameter such as blood pressure for heart health. However, even Rothman et al. acknowledge that behavioural determinants such as smoking, alcohol misuse and dietary intake may be more strongly associated with certain sociodemographic characteristics than others and if samples are not representative of the population then the external validity of the data is threatened. As a result, a survey with a low response with people which are similar to the sampled population is more valid than a sample with a higher response rate but with a narrower range of attributes from the population (Morton *et al.*, 2012). In an ideal world a representative sample for the target population would be recruited to a health survey and a high proportion would respond meaning that the data could represent the population validly. However, as noted above, overall response rates are declining, so steps need to be taken to improve the usefulness of the data.

There are methodological approaches to limit the bias caused by non-response. Fieldwork strategies to increase response rates, such as increased call attempts, are costly and may increase questionnaire item-nonresponse (Olson, 2013). Another approach is to target underrepresented groups through 'boost' samples, i.e., oversampling of specific communities. However, boost samples pose difficulties due to the need to identify an appropriate sampling frame to reach larger numbers of the sociodemographic group easily and may introduce selection bias (Platt, 2013). This bias arises because heavier sampling of areas of high density for the sociodemographic characteristic of interest means that some people will then have a greater chance of being selected for the sample than others

(Berthoud *et al.*, 2009). Selection bias is a concern because it could result in a sample which does not capture the variability of the target population due to similarities arising from shared geography or social networks.

Statistical adjustment is often used to standardise results to population norms if non-response is evident after data collection. To deal with unit non-response (where some people do not respond to invitations to participate), weighting can be used. This method alters the influence of responses so that where sociodemographic groups are underrepresented each response is counted at a value greater than 1 per response and responses from overrepresented groups are counted at a value of less than 1 (Brick, 2013). Such manipulation of the values assigned to each response is designed to balance the sample to match the target population more closely, but it again assumes a similarity between people who respond and people who do not. Consequently, statistical adjustments are only useful for larger or more representative data samples with sufficient data to capture the variability within each sociodemographic group despite the missing responses. For example, in studies investigating alcohol use, heavier drinkers much are less likely to participate, so that adjustments still result in underestimation of actual consumption (Catto, 2008). A further concern is that statistical adjustments effectively increase the sample size, making summary statistics, such as measures of central tendency, appear more precise than they should.

There have been several reviews which have aimed to identify the sociodemographic correlates of nonresponse (Groves and Couper, 1998; de Leeuw and de Heer, 2002; Galea and Tracy, 2007; Uhrig, 2008; Keeble *et al.*, 2015). Some reviews have found that non-respondents are more likely to be male, young or elderly (if infirm), in lower income occupations, educated to lower levels and unmarried (Galea and Tracy, 2007; Uhrig, 2008; Keeble *et al.*, 2015). de Leeuw and de Heer even showed differences between response rates in countries with different rates of inflation or unemployment. This evidence effectively illustrates the problem of non-response bias because it is apparent that there are differences between people who are likely to respond and those who may not, and these differences are not confined to only one or two studies. With this knowledge of sociodemographic response patterns, researchers can therefore plan to assign more time and resources to recruit these harder-to-reach groups. Nevertheless, as Groves and Couper argue (1998), it is difficult to draw simple cause and effect conclusions about sociodemographic attributes and response rates because there are instances where the response does not fit expected patterns. For example, they outline evidence from a wide body of literature which seems to fit a social isolation hypothesis, namely that groups which

feel disengaged from a society will be less likely to follow social norms of civic responsibility, responding less often to government household surveys. One such example is that some researchers have found that ethnic minority groups are less likely to participate in surveys while other studies have found little difference between ethnicities and some instances of where minority groups have shown higher rates of cooperation. Groves and Couper (1998) argue that it is important to look across multiple studies to understand the more complex picture of response than can be derived from analysis of response patterns in single studies alone.

However, a challenge to linking survey response to participant characteristics is how to operationalise sociodemographic characteristics. Attributes such as age may be easy to define since the measures are commonly understood, objective and unchanged over time. Other concepts such as socioeconomic status (SES), important in previous research on response patterns, are more problematic due to the reliance on proxy measures to categorise groups. The construct of SES attempts to capture an individual or group's access to resources (Duncan *et al.*, 2002). Typically, it is measured using a person's occupation, income, education, housing or a composite of several of these measures.

Socioeconomic status is implicated in health inequality since differences in SES are associated with access to resources which promote good health, such as ability to take advantage of quality healthcare interventions or of information to assess choices. It also can be informative about the environmental health risks surrounding the individual (Newman and Adler, 2002). Yet measuring such a broad concept is difficult. Measures of SES may not be equally relevant to all population groups, for example, personal income will not be relevant to children. Composite measures, such as the Townsend Deprivation Scores have appeal as they can reflect the complexity of SES, but they need to be used with caution since they can mask relationships with health because the relationships between the different socioeconomic components and with the health outcomes cannot be disentangled (Committee on Guidance for Designing a National Healthcare Disparities Report, 2002). Thus, it may be the access to services, health education or the availability of work in an area of high deprivation which has an adverse impact on health, yet the composite measure makes it impossible to identify the important factor to address. Also, each contextual measure (capturing an individual feature of the person or their environment) is also limited. For example, a commonly used composite measure, the Index of Multiple Deprivation (IMD) defines socioeconomic status in terms of relative neighbourhood deprivation. In the English measure, England is divided into 32 844 small areas and ranked in terms of deprivation. These rankings are then grouped into deciles, or 10 equal groups, which range between the

10% least deprived areas to the 10% most deprived areas (Department for Communities and Local Government, 2015). However, while this measure is often used, the scores are based on an area as a whole and may therefore not represent individuals within the area and people may not experience the same amount of deprivation. Unemployed people may be living in an area of low deprivation due to family support or previous high income. Conversely, people may choose to live in areas of higher deprivation in order to increase the amount of available income that they have. Grouping into deciles is also a broad categorization. The IMD within each decile will vary while the distinction between the lowest rank in one decile and the highest rank in the decile below could be small (Campbell, 2018).

Simpler proxy measures of SES are also problematic. Measures of household or individual income/wealth, or occupation are more closely aligned with health but this association is stronger when services are not covered by some form of insurance (Committee on Guidance for Designing a National Healthcare Disparities Report, 2002). Education is another common measure of socioeconomic status. There is a positive association between level of education and median annual salary in the UK (Department for Education, 2019), but wealth may not entirely reflect years in education since some occupations may require high levels of education but not be highly rewarded in economic terms (Braveman *et al.*, 2005). Yet education is seen to be a useful measure because it is a good predictor of future working conditions, housing and social networks; it is easy to measure and most people have some form of education in adulthood (Shavers, 2007). Education can also capture risk prevention factors such as behaviour and uptake of healthcare services (Committee on Guidance for Designing a National Healthcare Disparities Report, 2002; Shavers, 2007). Due to the complexity of measuring SES, in this chapter, measures of socioeconomic status which have been used in each study have been compared in broad terms, recognising that there are differences between the definitions of this attribute. Education is also included, as a useful proxy measure for SES when the aim is to understand the health knowledge and health behaviours. For the same reason, this proxy measure for SES is also used to define eligibility criteria in the primary data collection of this thesis.

The aim of this review of data was to describe the patterns of response rates for women by sociodemographic attributes across a sample of health-related population-based surveys and cohort studies in the UK, and to compare these with expected values (population norms) for the respective sampled populations.

2.3 Methods

2.3.1 Study selection

Health surveys and UK-based cohort studies were selected for this review, as these types of study would be likely to afford big enough datasets with a sufficient range of variables collected to allow the required analyses.

General population surveys were identified via the UK Data Service and included if they covered one or more UK nations and if their focus was health and/or health behaviours (e.g., tobacco use). Data were explored for the five years (2009-2013) preceding the time period when the work was carried out. Medical Research Council (MRC) cohort studies were identified from the *Cohort Directory* (Medical Research Council, 2014) and included if they recruited women aged 16 to 65 years from non-treatment seeking populations. Data collection period was not an exclusion criterion, and the data collection periods of the reviewed studies spanned 1991-2014. MRC studies were selected because they were considered to be of high methodological quality and constituted a sampling frame for UK studies. Cohort studies concerned solely with individuals with a shared medical diagnosis or workplace were excluded because they were not recruiting a general population sample. This review focused upon adult women's health, not ageing, and therefore studies which only recruited women >50 years were also excluded, as were birth cohort studies when their focus was solely on infant/child health. Studies were also excluded if they had recruited insufficient women to allow analyses by sub-group within the sociodemographic attributes.

2.3.2 Data sources

For the population surveys, data for each sociodemographic factor were taken from unweighted datasets held by the *UK Data Service* (Department of Health, Social Services and Public Safety 2013; Field et al. 1995; Johnson et al. 2005; Johnson et al. 2015; National Centre for Social Research 2011; 2014a; 2014b; National Centre for Social Research et al. 2005; 2013; 2014; 2015; 2015a; 2015b; Scottish Centre for Social Research, 2015; Scottish Centre for Social Research and University College London , 2015; 2016; 2016a; 2016b), with the exception of the General Lifestyle Survey. Data for this survey series were taken from the survey's Technical Appendices (Dunstan 2012; Office for National Statistics 2011; 2011a). Annual population survey data were extracted for years 2009-2013. One population survey - the National Survey for Sexual Attitudes and Lifestyles (Natsal) is conducted every 10 years, and data were therefore taken from the 1990-1991, 1999-2001 and 2010-2012 runs.

Data for cohort studies came from published articles (Davey *et al.*, 2003; Robinson *et al.*, 2004; Inskip *et al.*, 2006; Wilkinson, Inskip and Southampton Women's Survey Study Group, 2006; Swerdlow *et al.*, 2011; Fone *et al.*, 2013; Fraser *et al.*, 2013; Hayat *et al.*, 2014; Cade *et al.*, 2015), with the exception of *Understanding Society* for which it was possible to obtain data from the technical summary (Buck, Laurie and Nolan, 2011) and the *UK Data Service* (University of Essex, 2015).

Population norms were primarily taken from census data. These data were obtained from the UK Data Service. The InFuse portal (Office for National Statistics 2011c) was used to locate data within the 2001 and 2011 censuses for England and Wales and the *Casweb* portal (Office for National Statistics 1991) for the 1991 iteration. The *Census for Scotland* was accessed via*, the Census Data Explorer* (National Records for Scotland 2015)

Estimates were as specific as possible to region. County-level data were selected to compare region-specific cohort studies. These were taken either from the peer-reviewed publications or were derived from mid-year population estimates, using the Stats Wales tool (2015) or Office for National Statistics reference tables (Office for National Statistics 2015b).

2.3.3 Sociodemographic attributes

Age, ethnicity, and socioeconomic status defined by measures of occupation/income and education were the selected sociodemographic attributes.

Age was summarized in 10-year age groups taken from the original data sources or created by collapsing data for single years of age for which raw data were available. Age data from cohort studies were taken as reported in published articles.

Ethnicity has only recently been routinely collected in UK surveys, and a wide range of classification systems exist due to changes in the political and social landscape (Mathur, Grundy and Smeeth, 2013). To facilitate comparison between different classification systems used, ethnicity was simplified to four categories: 'white', 'black' (black African and black Caribbean), Asian (Indian, Bangladeshi, Pakistani and Chinese) and 'Other' (mixed race and other ethnicities).

Proxy measures of socioeconomic status (SES) reflecting economic status were selected for this review, since this conceptualisation of SES was common across studies. However, it was only possible to compare studies in broad terms of deprivation level since each study employed a different measure to define this attribute. In five of the eight studies deprivation was categorised using the National Statistics Socioeconomic Classification 8 (NS-SeC 8) to provide a good level of detail for subgroups (Office for National Statistics,

2010). This measure reflects occupation type of the respondent. The E-Catalyst study (Fone *et al.*, 2013) used the Townsend Index of Deprivation (Townsend, Phillimore and Beattie, 1988) which defines SES by car and home ownership, and household overcrowding. The ALSPAC used house and car ownership and a house-crowding index (Fraser *et al.*, 2013). However, the Breakthrough Generations cohort study employed the ACORN measure which is a complex geodemographic measure, using housing type, lifestyle and consumer indicators (CACI, 2009).

Education was classified by level of the highest qualification earned to facilitate comparisons between different national qualification award systems and over time. English and Scottish levels were compared using the Scottish Credit and Qualifications Framework Partnership (2015). Changes in English qualifications over time were reconciled using resources from the National Career Service (2015) and Health Education East Midlands (2013). National Qualifications Framework levels for UK education were used as categories. Level 2 refers to qualifications typically taken at age 16, level 3 denotes vocational and school qualifications or apprenticeships typically taken at age 18 and level 4 represents qualifications awarded in higher education or higher apprenticeships (Gov.UK, 2019b).

It was investigated whether marital status could also be included, but this was not possible due to the large variation in how this was operationalised by each study, which limited making meaningful comparisons.

2.3.4 Summary statistics

Aggregate census data was the main source of population estimates for SES, education and ethnicity, and therefore the year 2011 was selected for these attributes to allow comparison against the most recent data. Where 2011 was not an appropriate reference year (for example because the study was before this date), contemporaneous data were used for population estimates for comparison. Data from the nearest available year were used in comparisons between population estimates and samples. It was only possible to explore response rates across multiple years for age due to insufficient data for other sociodemographic attributes.

To assess representativeness, the difference between the percentage of each sociodemographic attribute in each sample and in the population was calculated. Negative values denoted under-representation and positive values over-representation. The denominator in percentage calculations was the percentage of the total number of female respondents classified within each category. The unit of analysis was the individual respondent rather than the whole household to facilitate comparison across studies because not all studies had household level data.

2.4 Results

2.4.1 Included studies

Six population surveys were included, as listed in Table 2.1 (Department of Health, Social Services and Public Safety 2013; Dunstan 2012; Field et al. 1995; Johnson and London School of Hygiene and Tropical Medicine 2015; National Centre for Social Research 2011, 2013, 2014a, 2014b, 2015; National Centre for Social Research et al. 2005; National Centre for Social Research, University College London 2013, 2014, 2015a, 2015b; Office for National Statistics 2011a, 2011b; Scottish Centre for Social Research 2015; Scottish Centre for Social Research, University College London 2016a, 2016b; Scottish Centre for Social Research et al. 2015, 2016).

Each population survey was repeated annually, except the National Survey of Sexual Attitudes and Lifestyles (Natsal), which is conducted every 10 years. All involved adults aged 16 years and over. However, the Natsal survey stopped at age 44 years for the first two iterations and at age 74 years for the third. The Scottish Health Survey (SHeS) had the smallest sample (N=6 733), and the General Lifestyle Survey (GLS) had the largest (N=18 367). The oldest was the GLS which had been conducted from 1971 but stopped in 2012.The Welsh Health Survey (WHS) was the newest, having been first conducted in 2003.

Table 2.1 Included large population surveys: sample characteristics, sample size, geographic regions, dates covered and study focus

Survey	Sample Characteristics	Latest Available Sample Size (Year)	Geographic Region	Dates Covered by Survey (Frequency)	Study Focus
General Lifestyle Survey (GLS)[a]	Adults aged 16 and over in private households.	18,367 (2011)	Great Britain	1971 -2012 (annual)	Multipurpose - information about households and families for education, health, business and charity sectors.
National Survey of Sexual Attitudes and Lifestyles (Natsal)	Natsal 1&2 – adults aged 16 to 44 Natsal 3 – adults aged 16-74	15,162 (2010)	Great Britain	1990 – 2011 (every 10 years)	Sexual behaviour
Health Survey for England (HSE)[b]	Approximately 8000 Adults in private households aged 16 and over	10,980 (2013)	England	1991 to 2013[b] (annual)	Health – risk factors, past and current health status
Northern Ireland Health Survey (NIHS)[b]	Adults in private households aged 16 and over.	3059 (2010-2011)	Northern Ireland	2010/2011	
Scottish Health Survey (SHeS)[b]	Adults in private households aged 16 and over	6,733 (2013)	Scotland	1995, 1998, 2003, 2008 – 2013[b] (annual)	
Welsh Health Survey (WHS)[b]	Adults aged 16 and over in private households	15,007 (2013)	Wales	2003/4 – 2013[b]	

[a] This survey was named the 'General Household Survey' until 2008.

[b] These surveys continue beyond this date, but data were unavailable for all surveys at the time of writing.

Eight cohort studies were included (Buck et al. 2011; Cade et al. 2015; Davey et al. 2003; Fone et al. 2013; Fraser et al. 2013; Hayat et al. 2014; Inskip et al. 2006; Robinson et al. 2004; Swerdlow et al. 2011; Wilkinson et al. 2006; University of Essex 2015) (Table 2.2). Available data spanned between 1993 and 2009. Three cohorts were on a national scale, and five were regional. The Avon Longitudinal Study of Parents and Children (ALSPAC) and the Southampton Women's Study (SWS) focused on family health; the *Breakthrough Generations*, two European Prospective Investigations into Cancer (EPIC-Oxford and EPIC-Norfolk) and the UK Women's Cohort Study (UKWCS) projects focused on cancer prevention. The remaining two studies explored links between sociodemographics and health. Only limited data covering the entire cohort were available to the authors for the ALSPAC, and therefore these are only reported in the text.

Two cohort studies were excluded. These were the UK Biobank, because this cohort profile was only available as an abstract (Hutchings *et al.*, 2014), and the Southall and Brent Revisited study had a very small (n=1,198) target sample of women (Tillin *et al.*, 2012) which did not allow sufficient information to break the data down into multiple subgroups.

Table 2.2 Included cohort studies: cohort characteristics, sample size, geographical regions, recruitment period and study focus

Cohort Study	Cohort Characteristics	Sample Size at Recruitment	Geographical Region	Recruitment Period	Study Focus
ALSPAC	Mothers/ pregnant women aged 16 to 45 years	Mothers 14,541	Hampshire England	1991-1992	Health and educational outcomes for mothers and their children
Breakthrough Generations	Women aged >16 years.	112,798	British Isles	2003-2011	Links between lifestyle characteristics and cancer.
The Caerphilly Health and Social Needs Electronic Cohort Study E-CATALyST)	Adults aged ≥ 18 years	17,979	Caerphilly	1998-2008	Sources of health inequalities.
European Prospective Investigation of Cancer, Norfolk (EPIC-Norfolk)	Adults aged 40-79 years. Living in Norfolk and surrounding areas.	30,000	Norfolk	1993-1997	Diet, exercise and lifestyle and cancer.
European Prospective Investigation of Cancer, Oxford (EPIC-Oxford)	Men and women aged 17 to 98 years. Mainly vegetarians	65,000	Oxfordshire, Buckinghamshire Greater Manchester	1993-2000	Influence of diet on cancer risk.
Southampton Women's Study (SWS)	Women aged 20-34 years	12,583 women	Southampton	1998-2002	Dietary and lifestyle factors.
UK Women's Cohort Study (UKWCS)	Women aged 35-62 years	35, 372	England, Wales and Scotland	1994-2002	Links between diet and cancer in the UK

Understanding Society	Men and women of all ages	40,000 households (100 000 individuals) Health questions for 20 000 individuals	UK (including North Caledonian Canal)	2009-2014	Social and economic status and attitudes.

2.4.2 Recruitment and fieldwork techniques

The national population surveys used stratified samples based upon random selection of addresses from postcode sectors (Corbett et al. 2014; Erens et al. 2014; Mindell et al. 2012; Office of National Statistics 2011; Sadler et al. 2013). All surveys used face-to-face interviews, recorded using computerised assisted personal interviewing. In the Natsal and Northern Ireland Health Survey (NIHS), participants answered sensitive questions in writing to reduce embarrassment and social desirability bias. In Nastsal III a boost sample was used to increase the sensitivity of analyses in 16-34-year-olds (Erens et al. 2014).

More variation in study recruitment was observed for the cohort studies. The *Breakthrough Generations* study (Swerdlow *et al.*, 2011) aimed to recruit a group which was likely to remain in the cohort over many years through commitment to the study. They initially advertised through national cancer charities and then encouraged chain or snowball referrals from existing members to strengthen social ties between participants with a view to keeping participants in the study through providing an experience that friends and family can share. The E-CATALyST study (Fone *et al.*, 2013) employed postal contacts. Visits were organized to follow up missing questionnaires and verify property occupancy. Both *EPIC* studies used postal recruitment using lists from family doctors (Davey *et al.*, 2003; Hayat *et al.*, 2014) but the *EPIC* Oxford also asked vegetarian and vegan societies to advertise the study to reach non-meat eaters. The SWS sent leaflets and letters to eligible women (identified via family doctor registers) (Inskip *et al.*, 2006). This was followed by a telephone call, a letter and visit to update contact details. To reach women who were not registered with a local family doctor, women were also approached in supermarkets and at local events. The UKWCS, like EPIC Oxford, also wanted to recruit non-meat eaters (Cade, Burley and Greenwood, 2004). This study, however, contacted women via the World Cancer Research Fund using mailing lists targeted at women, including a number of charity databases. All vegetarians were selected, and a systematic sampling procedure was devised to create a meat-eating comparison group. *Understanding Society* used, like the population surveys, stratified sampling based upon postal code sectors to divide the UK into sampling units. A boost sample and inclusion of the British Household Panel Survey respondents allowed this study to develop an extremely large sample of minority groups. The sample was clustered in most of the UK with the exception of Northern Ireland (Buck, Laurie and Nolan, 2011). *Understanding Society* employed a variety of data collection techniques, including the collection of audio and video qualitative data plus record linkage.

2.4.3 Patterns of response by sociodemographic attributes

Four sociodemographic attribute categories are presented in this section. These are age, socioeconomic status (income/occupation), socioeconomic status (education) and ethnicity. In

each section the population surveys are considered first and then the cohort studies. Within each figure the data have been compared against population data closest to the sampled population.

2.4.3.1 Age

A pattern was observed across surveys and over time of under-representation of lower age groups and over-representation of older age groups (Figure 2.1). This ranged from 10% under-representation in 16-24-year-olds to 3% over-representation in > 44-year olds.

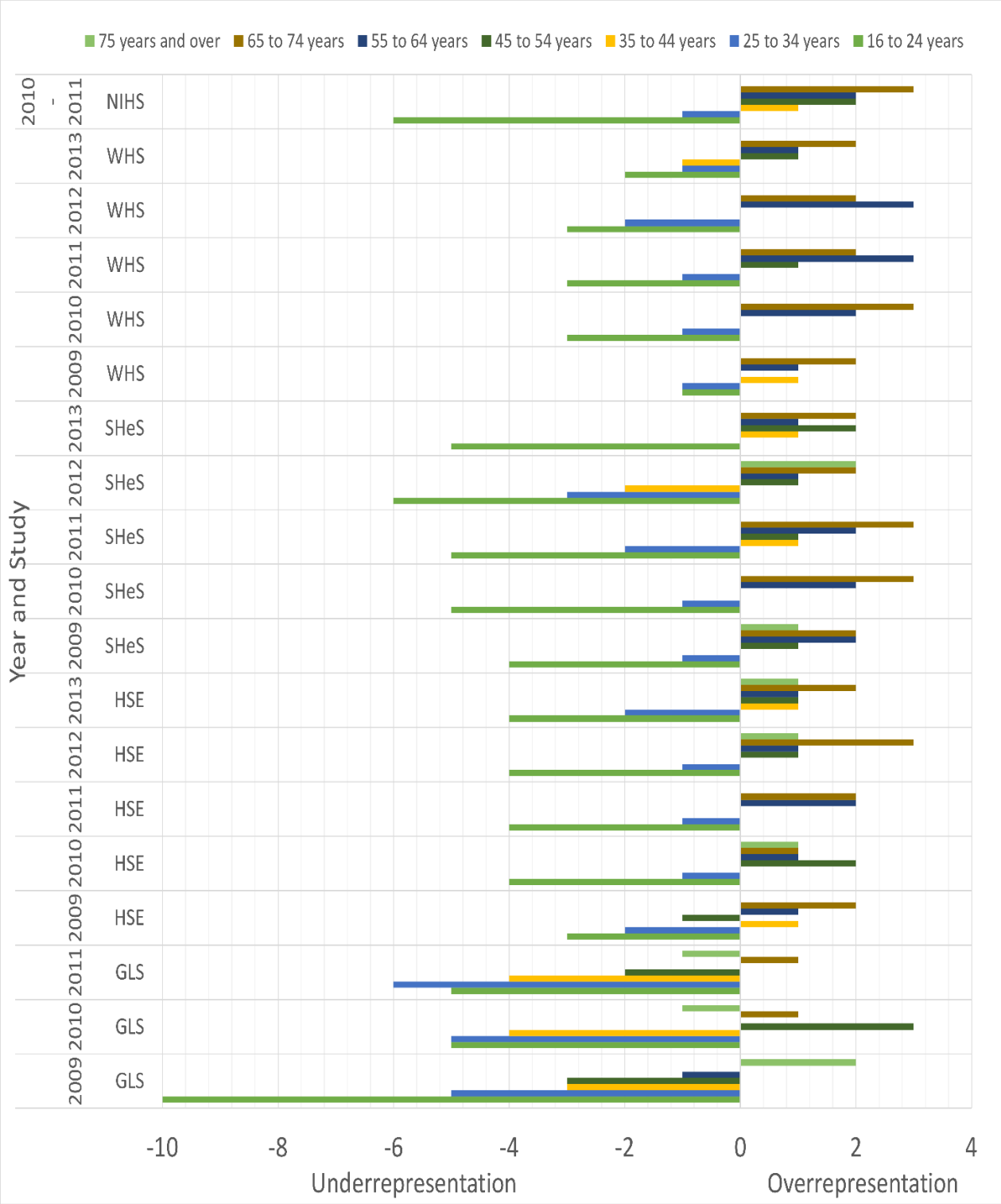


Figure 2.1 Difference between percentage of female respondents within general population survey samples and population estimates by age group: NIHS, HSE, SHeS, WHS and GLS for years 2009 to 2013

Differences between year of data collection in the population surveys (Figure 2.1), comparing the same age group in the same survey, were all within 2%, apart from the SHeS in which a 3% reduction in under-representation occurred between 2012 and 2013 for the 25 to 34-year age group. The Natsal differed from the other population surveys in that the first two iterations demonstrated the same pattern of under-representation at younger ages noted above (Figure 2.2). However, the results in the Natsal III were reversed. Individuals younger than 35 years were over-represented, and older groups were under-represented.

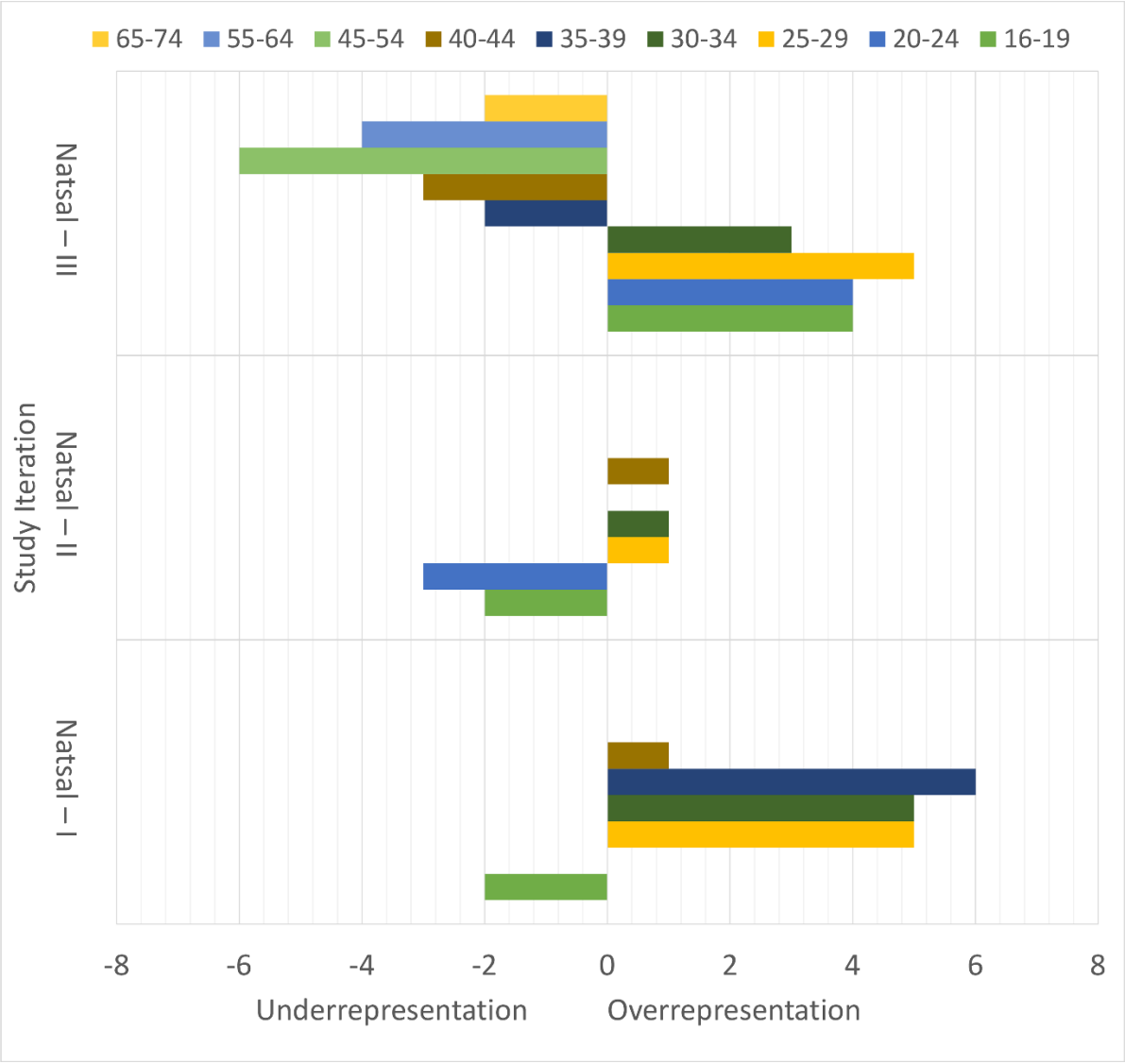


Figure 2.2 Difference between percentage of female respondents in Natsal I (1990-1991), II (1999-2001) and III (2010-2011) and population estimates for England and Wales by age group

In the cohort studies (Figure 2.3), with the exception of *Understanding Society*, the youngest age group was also under-represented. In two of the four studies, the oldest age group was under-represented. The *EPIC Norfolk* study recruited participants aged at least 40 years with the youngest and oldest age groups under-represented.

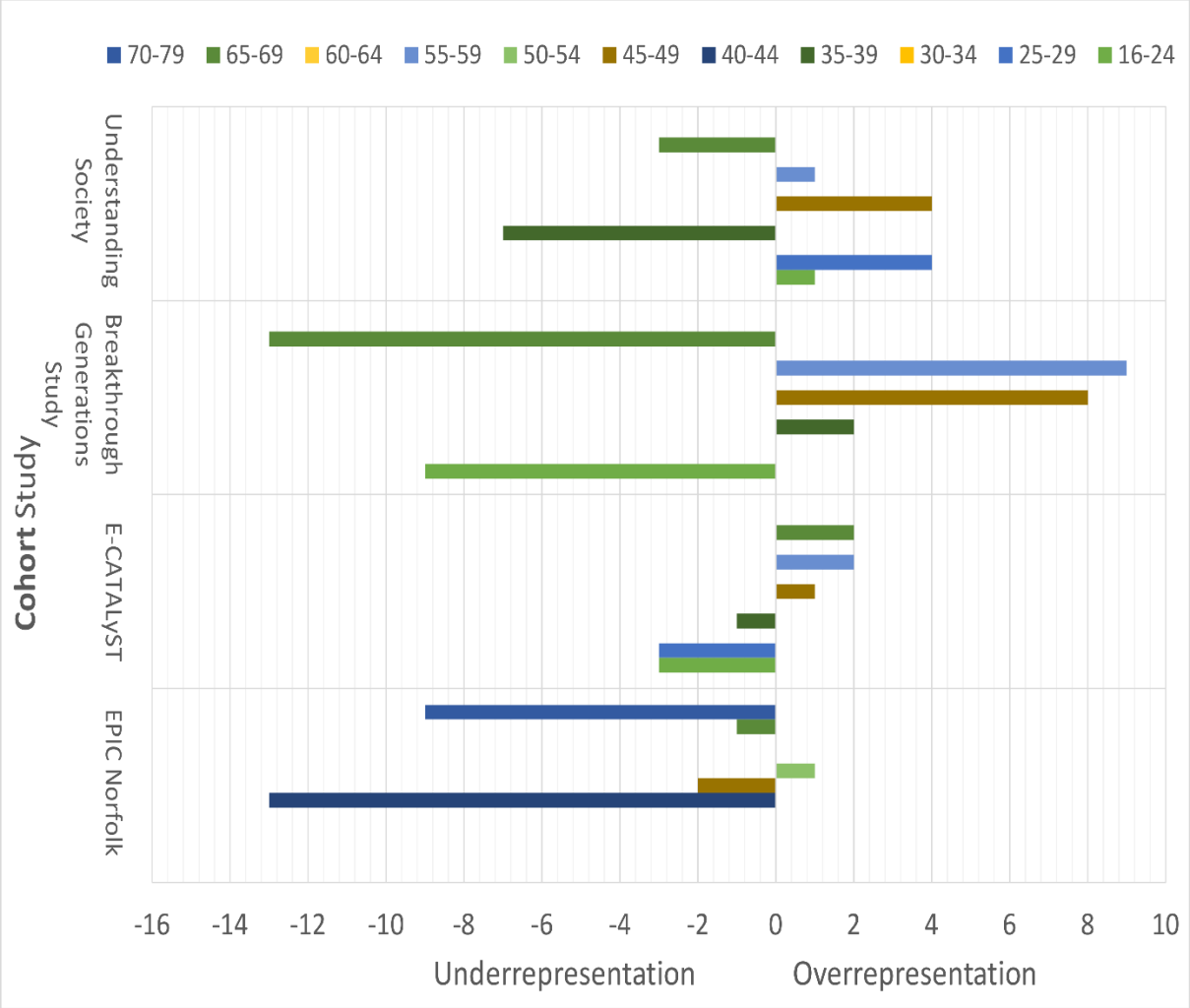


Figure 2.3 Difference between percentage of female respondents within cohort study samples and population estimates by age group

2.4.3.2 Socioeconomic status (occupation and income)

At the highest deprivation categories (according to the different measures used in the original datasets), three of four population surveys and one of three cohort studies with data showed under-representation of 2% to 15% (Figure 2.4). At the lowest level of deprivation, one of four population surveys and one of three cohort studies with data showed under-representation of 1% to 6%. The pattern for deprivation was less clear than for age, but the percentage differences between samples and population estimates were much larger in some cases. Notably, *Understanding Society* over-represented women with high deprivation by 43% and *Breakthrough Generations* over-represented those with lower deprivation by 21%.

In addition, the ALSPAC study (not reported in Figure 2.4 due to the smaller number of categories) had a sample which over-represented women owning cars (7% higher levels than Avon estimates) and homeownership (10% higher than Avon estimates) (Fraser *et al.*, 2013). Data were only available for genders combined in the *E-CATALyST* and population estimates from 2011 Census (England, Wales and Scotland).

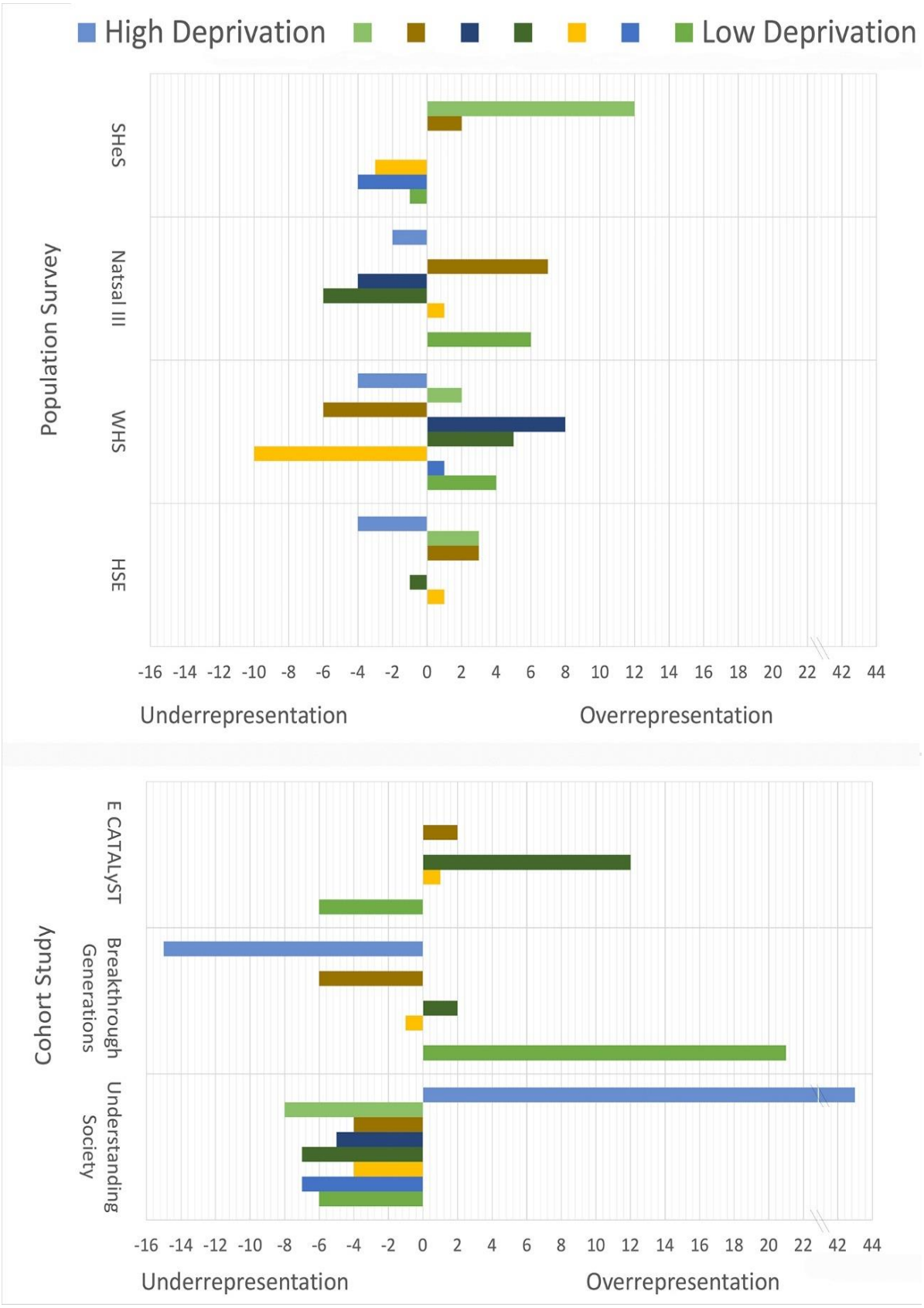


Figure 2.4 Difference between percentage of female respondents within general population survey and cohort study samples and population estimates by levels of deprivation

2.4.3.3 Socioeconomic status (education)

Two of four population surveys and two of five cohort studies demonstrated under-representation at the lowest level of education; two of four population studies and one of five cohort studies showed under-representation at the highest qualification level (Figure 2.5).

The SWS had the greatest under-representation at the lowest educational level (16%) (Wilkinson, Inskip and Southampton Women's Survey Study Group, 2006). While the WHS had the highest under-representation of women with level 4 (university) education (10%), EPIC Oxford had the highest over-representation at this qualification level (28%). *EPIC* Norfolk was the most successful in obtaining representation of those with no qualifications (22%), and yet it was the study that did not achieve representative samples at level 4 and over.

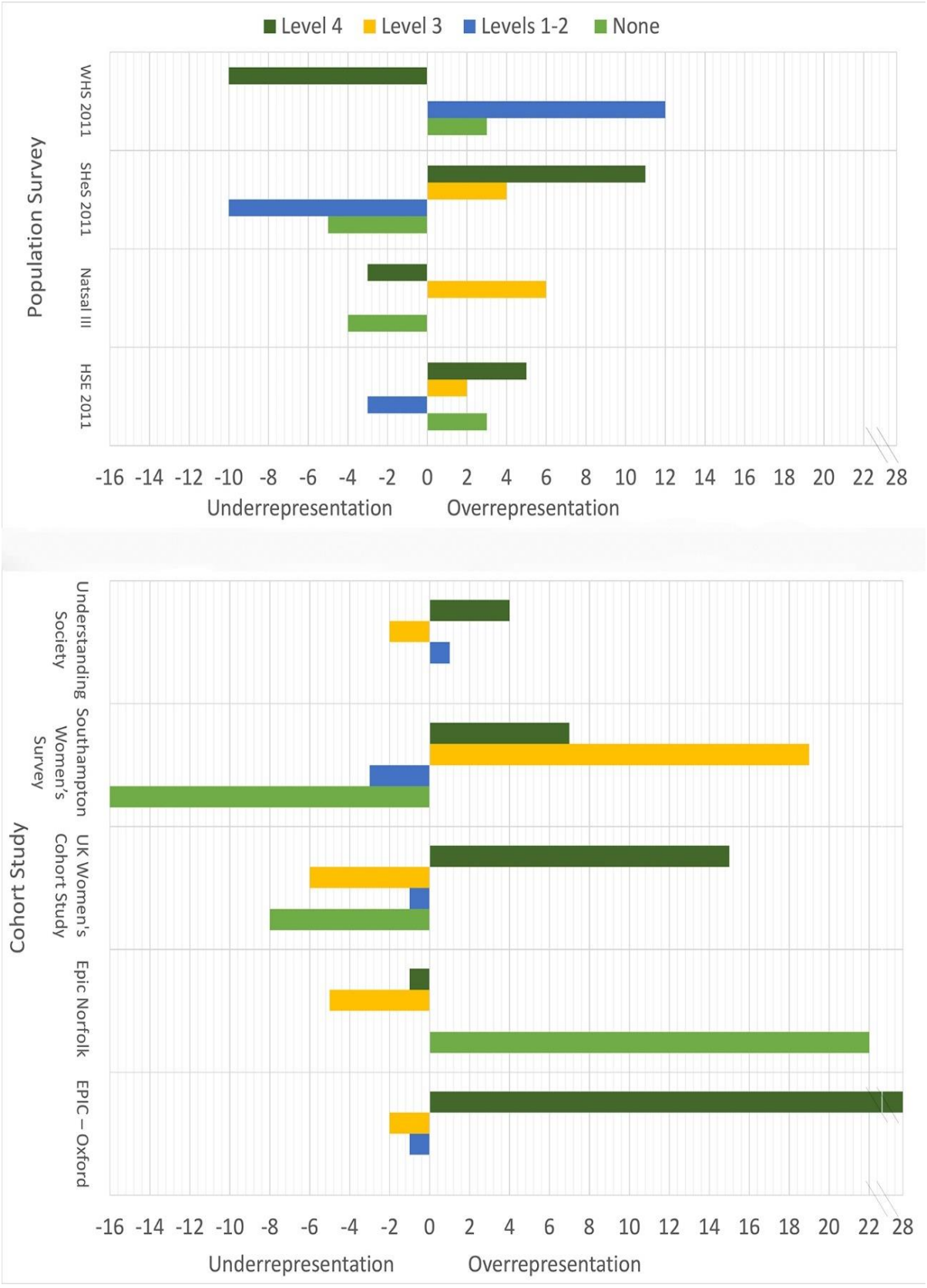


Figure 2.5 Difference between percentage of female respondents within general population survey and cohort study samples and population estimates by highest level of education attained

2.4.3.4 Ethnicity

Few included studies reported response rates by ethnicity. Individuals who classed themselves as white were over-represented by 1% in the HSE and 2% in the Natsal III (Figure 2.6). Asians were under-represented by 1% and 2% in the SHeS and Natsal III, respectively. *Understanding Society* employed a boost sample. 'White' women were under-represented by 9%. In the *ALSPAC* cohort, non-white mothers were under-represented by 2% compared to 1991 Census figures for Avon. No under-representation was observed in the 'Black' or 'Other' groups in the included studies.

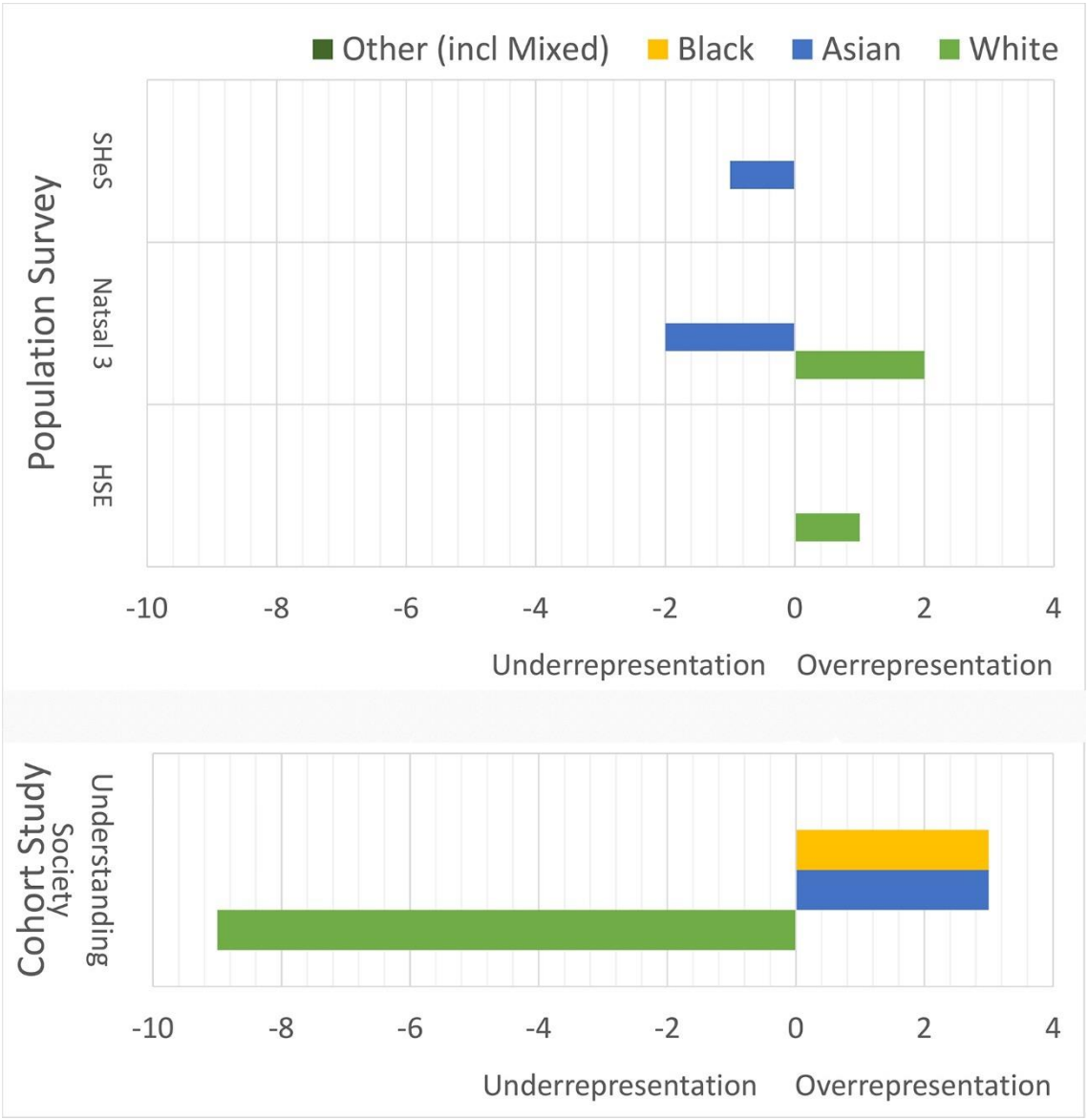


Figure 2.6 Difference between percentage of female respondents within general population survey (Natsal -3, SHeS and HSE) and cohort study samples (Understanding Society) and population estimates by ethnic group

2.5 Discussion

Overall a clear and consistent under-representation was observed of women at younger ages. Patterns of under-representation, particularly within SES attributes, were more varied. The differences between percentages of women within samples and populations were large in some cohort studies, particularly if income/occupation was the attribute under consideration.

Under-representation of women under the age of 35 years was found, notably in the population surveys. Lower response by young people has been attributed to availability. Stoop (2005) notes that younger individuals are difficult to contact and engage due to lack of landlines and time spent away from home for work/leisure activities. Older people may be more willing to participate due to greater ties to their social community (Groves and Couper, 1998). Some exceptions to under-representation at younger ages were observed, which could have been related to question topics. For example, *Understanding Society* included questions about crime and security. The different age profile in that study could suggest that reduced focus on health may have attracted different ages.

Recruitment strategies could also have affected response. Surveys employing methods with reduced direct contact seemed to under-represent women in the youngest and oldest age groups. Reliance upon charity mailing lists could reduce the younger and older people within the sampling frame because they may have had less disposable income to donate to these organisations. Interestingly, even when only middle to older aged individuals were the recruitment target, the youngest and oldest age groups were still under-represented in *EPIC* Norfolk, suggesting that contact methods (e.g. survey literature) may not appeal to all ages.

As discussed in the introduction, a key difficulty for making conclusions about the relationship between SES and response is the lack of comparability of the measures. However, by limiting the comparison to broad categories of deprivation only, it was possible to see that the data showed greater under-representation at higher levels of deprivation. The patterns suggested that women with lower socioeconomic status were less willing to participate. Groves and Couper (1998) have attributed this, in part, to pessimism in those with lower socioeconomic status, which is translated into reduced willingness to help organizations viewed as contributors to their difficulties. Yet these authors also recognise that lower social connectedness cannot explain all patterns in response. Indeed, in this study under-representation was also seen at the lowest level of deprivation. This finding could perhaps support the idea that availability may be a further barrier to participation. People with lower

incomes may be less accessible to contact due to irregular shift patterns and those with higher income due to long work hours but also staying away from home during leisure hours due to their greater disposable income.

Differences between SES in the cohort studies also suggested that recruitment strategies and survey topic were influential in response. Thus, *Breakthrough Generations* had a relatively large over-representation at the lowest level of deprivation, and this study relied on charity mailing lists and chain or snowball referral methods to contact new participants. Peer recruitment approaches may have resulted in wealthier individuals contacting people within their social networks who may have been of similar socioeconomic status levels. Finally, as stated above, the *Understanding Society* study was not simply focused on health but also upon wider social and economic issues. It is possible that these topics may have had more appeal to those with higher levels of deprivation.

This analysis and review showed a pattern of greater under-representation at lower educational levels. This observation is not unexpected, in the light of trends found for deprivation, because higher earners often have more education. Yet, Groves and Couper (1998) isolated education to specify that greater levels of education may be associated with increased willingness to respond due to ability to see the societal benefits of research. It would also make intuitive sense that the amount of reading and interpretation required in study materials could be a barrier to participation for populations whose educational attainment is low.

The data suggest, however, that other factors were involved in the pattern of education and response. Both *EPIC* studies used postal recruitment through patient lists from family doctors. Yet *EPIC* Norfolk was more successful at representing individuals with lower levels of education than *EPIC* Oxford. This difference may have been due to the fact that the topics were slightly different. Moreover, the older age range in *EPIC* Norfolk could have mitigated lower education, perhaps by increasing other factors known to be associated with higher survey response such as self-efficacy (Groves and Couper, 1998) since Bandura argued that middle-age until cognitive or physical decline was experienced is often a time of higher self-efficacy. *EPIC* Oxford extended the sampling frame by using vegetarian/vegan organizations. Interest in this diet may have been more relevant to those with higher educational qualifications, because higher levels of education have been observed in vegetarian groups (e.g. Gale et al. 2007). More difficult to explain were the differences observed in the general population health surveys in which the questionnaires and recruitment strategies were similar. More research is needed to understand why the WHS seemed more successful at representing populations with lower levels of education. This cannot be explained by sampling, topic or by prevalence of level 4 education in

the population because, while lower than other nations in the UK, this is only by 1% compared with Scotland and by 2% compared with England (Office for National Statistics 2011).

Regarding ethnicity, white women were more likely to be over-represented, and only women classed as 'Asian' were under-represented. The use of boost samples in *Understanding Society* was successful at recruiting ethnic minorities. However, the resultant sample could not be used to provide estimates of health risk without statistical adjustment.

Interestingly, the levels of under-representation for different age groups were similar over time within the population surveys. Achieving high overall response rates can mitigate the bias due to the 'healthy volunteer effect'. In the current climate of declining response rates, however, it is unlikely that sufficient overall response will be achieved to overcome this source of bias. Addressing under-representation may be a useful strategy to reduce the healthy volunteer effect because it is likely to bring more people from sociodemographic groups at risk (Buck and Frosini 2012) into the sample. Arguably, some of the differences between population and sample distributions were quite small. However, as noted in the introduction to this thesis the prevalence of certain risk behaviours is higher in the under-represented groups than in the rest of the population and that reported reductions in risk behaviours are driven by changes in individuals with higher socioeconomic status (Catto, 2008; Buck and Frosini, 2012). Therefore, even these small differences may translate to problematic underestimations of harmful behaviours in the women who are at highest risk.

The key strength of this analysis was the integration of multiple surveys which employed different recruitment strategies and approached different health topics. However, to achieve this broad overview, it must also be acknowledged that pragmatic decisions had to be taken to integrate such a large amount of data. Classification differences, related to differences over time and study objectives, made it difficult to compare studies exactly. For the same reason, certain attributes had to be excluded or reduced to broad categories, as in the case of SES and ethnicity. It is also acknowledged that using income and occupation as a measure of socioeconomic status is not appropriate across the entire age range studied. However, as argued in the introduction, the measurement of socioeconomic status is problematic, particularly when comparing multiple studies with data collected over several years. While education does not capture every element of socioeconomic status, it was also included alongside income and occupation to provide a fuller picture, using a measure which has been shown to be a good predictor of health behaviour (Duncan *et al.*, 2002; Shavers, 2007). A reliance on secondary data also meant that some studies did not contribute data for each sociodemographic attribute. However, the aim of this

study was to look at overall patterns and, therefore, these difficulties did not prevent the aims of the review from being met.

2.6 Chapter conclusion

The findings of this review suggest that the samples of health-related population surveys and cohort studies have not been representative of women from all sociodemographic groups in the UK. If single studies were considered in isolation, clear associations appeared between sociodemographic characteristics and participation. However, this work is useful because it has demonstrated how sociodemographics alone cannot explain patterns of response. The topic of the research, recruitment strategies and fieldwork methods could also influence who takes part in a study. Therefore, the next strand of this literature review, presented in the next chapter, looks at the evidence about the effect of different research design features, such as survey length and remuneration on response.

Chapter 3 Systematic review of randomised controlled trials evaluating strategies to improve recruitment

3.1 Introduction

The previous chapter reported a review of health-related population surveys and cohort studies which found that women aged 16 to 34 years or from lower SES categories were underrepresented compared to their proportion in the population. The review also found that methods of recruitment and data collection (or fieldwork) were important factors associated with response rates. Several systematic reviews have collated RCTs evaluating strategies to increase research recruitment. Some have focused on recruitment to specific study designs, e.g. surveys (Edwards *et al.*, 2009; Fan and Yan, 2010) and clinical trials (Mapstone, Elbourne and Roberts, 2007; Treweek *et al.*, 2010). A limitation of these reviews is that the included studies are heterogeneous as they are drawn from a wide range of disciplines. These reviews also cover a range of survey topics, not only health. Other systematic reviews have evaluated the recruitment of specific population groups (e.g. hard-to-reach adults in Bonevski *et al.*, 2014) or for a particular health intervention (e.g. recruitment to studies to increase physical activity in Foster et al. 2011). However, none of these reviews provide evidence that is tailored to the recruitment of young women from lower SES categories to a health survey.

Systematic reviews represent a convenient and reliable source of information for researchers seeking to use evidence to inform decision-making (The Cochrane Collaboration, 2011). Therefore, this type of review was chosen to investigate the breadth and consistency of evidence available inform recruitment of young women from lower SES categories to UK health surveys. The methods required to identify studies for the review needed to be specialised and innovative, in order not to miss potentially relevant studies. The search strategy is therefore described in some detail, followed by the findings with a critical summary discussing the extent to which current evidence can inform how to improve recruitment of young women from lower SES categories to UK health surveys. This review contributes to objective 1 of the thesis by identifying relevant survey design features which can contribute useful insights to the conceptual framework being developed.

3.2 Methods

3.2.1 Inclusion criteria

A scoping review was conducted in January and February 2015, but this exercise indicated that it would not be possible to identify studies which focused specifically on the target population of

this thesis. This is because studies often did not report the results for specific age groups and there was typically insufficient information to determine the SES of participants from the authors' reporting of the sample description and the sampling frames. Furthermore, few studies had been carried out on UK populations. As a result, a protocol to identify studies which included young women aged 16 to 34 years was developed since these studies could still indicate survey design features useful in the development of a conceptual framework to increase recruitment of young women with lower SES to UK health surveys. The review protocol utilised the PICOS framework (Liberati *et al.*, 2009). The inclusion criteria are summarised in Table 3.1 below:

Table 3.1 Eligibility criteria

PICOS Criterion	**Selection criteria**
Population	• Studies including adult women (16 to 34 years since these women were typically underrepresented in the studies reviewed in Chapter 2). Studies could be aiming to recruit women only or both men and women but were only included if they reported data for each gender separately. • University student populations have been excluded as representing a level of education which is less likely to be underrepresented in UK health surveys (see Chapter 2). • Studies of specific populations only (professional groups or populations with shared medical diagnoses) are not eligible because their findings may not generalise to the general population. • Studies only aiming to recruit non-responders to previous invitations or non-responders who were recruited from an existing study sample were excluded since the evidence may not be generalisable to young women with no prior experience of research participation.
Intervention	• Any intervention or combination of interventions to increase recruitment of participants to a health survey • Studies focused on recruitment to surveys which are not asking questions about health behaviours were excluded • Studies focused exclusively on retention of participants once recruited were not eligible
Comparator	• Any alternative intervention, or combination, or no intervention

Outcomes	• Response rate defined as the proportion of the whole sample who took part in the research • Sociodemographic characteristics of respondents • Completed response rate (no item nonresponse) (%) • Refusal to participate (active refusal as opposed to nonresponse due to non-contact with researchers) (%) • Referral rate of participation invitations to other members of social networks (%) • Data quality (the reporting of sensitive behaviours and levels of item non-response) • Telephone tracing rates (the number of active telephone numbers provided by the end of the study) • Studies only recording the cost or speed of response were excluded.
Study Design	• Randomised controlled trials (RCTs) only

As noted in Table 3.1, studies were only included if they aimed to recruit samples which had not refused a previous invitation or who had previously taken part in a related study. This decision was made to find which strategies are likely to increase response to a first contact for research because the strategies needed at the point of a first invitation are likely to be different. Despite the focus of this thesis on young women from lower SES categories, the population was not narrowed by social or economic category in the search. The scoping review had suggested the limited range of evidence identifying young women from lower SES categories. Also, I was concerned that the difficulty of developing an exhaustive list of proxy measures for SES would mean that search sensitivity would be damaged. Therefore, the results are reported for the studies located without SES as a search concept, but studies would be excluded upon full text screening if they were unlikely to include any women from lower SES categories. Outcomes were considered to be relevant if they measured increasing the number of useable responses returned in the study. Therefore, the outcomes related to the number of responses received, the completeness of data or increased numbers of referrals to the study. Studies which only measured strategies to reduce the cost or speed of receiving completed responses were excluded.

3.2.2 Search strategy

Four databases were identified for the search: EMBASE, Medline, PsycINFO, the Cochrane Library. These were selected because they have broad coverage of research relevant to public health.

The Cochrane guidelines (Lefebvre, Manheimer and Glanville, 2008) informed the identification and combination of the search terms to improve the transparency and validity of the search. The search terms were selected as outlined in Table 3.2. The Cochrane guidance was chosen because it provided validated search protocols relevant to this review. The list of health risk behaviours was taken from the categories outlined in Carr-Gregg et al. (2003). This source was selected because it focused on health risk behaviours in young women. These included smoking, alcohol and substance misuse, risky sex, dangerous driving, poor diet and physical activity. Searches were conducted between May and August of 2015.

Table 3.2 Methods of generating the search terms for each search concept in the systematic review

Search concept	**Method of generating search terms**
Young women	MeSH terms for women (and associated tags FEMALE and HUMAN) MeSH terms for adults (Age in years not included but checked in the title and abstract screening or full text screening) NOTE: MeSH terms for men and older and younger age categories were searched only to exclude studies without young women as per Cochrane guidance for excluding groups in sensitive search protocols. The MeSH terms were also included as keyword terms in case MeSH terms had not been applied in database records.
Recruitment	Initial terms generated by using the search strategy from Edwards et al. (2009) on methods to increase the response to surveys. The included articles in Edwards et al (2009) were read in full to identify further keywords not used by the review authors.
Health behaviours	Initial terms were the keywords in the list by Carr-Greggs et al. (2003). Articles using the listed terms in the title, abstract and keywords were read in full to identify other possible key words until no new terms were identified.
Randomised controlled trials	The sensitive search protocol in the Cochrane Handbook (Lefebvre, Manheimer and Glanville, 2008) was adopted. The terms 'drug therapy' and 'placebo' were not included as terms specific to drug trials.
Human studies	The search and exclusion protocol set out in the Cochrane Handbook (Lefebvre, Manheimer and Glanville, 2008) was adopted.

The final concepts and search terms are provided in Table 3.3. A title, abstract and keyword search was run in each database; truncation and wildcards were programmed using the codes required for each database. The full search protocol is provided in Appendix 3.1 to allow replication.

Table 3.3 Search terms associated with each concept used in the database search

Concept	**Search terms**
Outcome (increasing response/ recruitment)	recruit* particip* enrol* (response adj rate*) retain* retention respon* market* consent* accrual
Population (young women aged 16 to 34 years)	MeSH descriptor: [Female] MeSH descriptor: [Women] women:ti,ab,kw [Word variations have been searched] female* [1]
Public health topic	alcohol drink* consumpt* smok* tobacco cigar* diet* food consum* nutrition* intake weight obes* fat* "body mass ind*" "waist circumference" overweight* fruit vegetable* underweight* physical* exercise* activ* inactiv* sport* drug*

	substanc* "marijuana" cannabis* "pain killers" analges* heroin tranquilis* "sleeping pill*" steroid* barbiturate* amphetamine* cocaine hallucinogen* inhalant* "lysergic acid diethylamide" LSD ectasy condom* risky sex* dangerous driving
Study design to test the intervention (Randomised controlled trials)	"randomi#ed controlled trial" "controlled clinical trial" randomi#ed randomly trial group*
Studies involving humans only	human*[2]

[1] *Further terms relating to the male gender, older age, infancy and childhood are included in the search protocol for this concept to exclude studies only.*
[2] *Additional terms to exclude non-human animal studies have been included in the search protocol to exclude studies.*

All of the identified library records were uploaded to EPPI-Reviewer version 4.0 (Thomas, Brunton and Graziosi, 2010) in August of 2015. Automatic searches of all of the databases were maintained until the 17th September 2015, and new records were added to the initial dataset.

3.2.3 Screening

It was challenging to design the search strategy to balance sensitivity and specificity. Terms to identify randomised controlled trials (RCTs) investigating recruitment strategies also identified RCTs testing other types of interventions. For example, the term 'participation' located studies on improving response in addition to participation in activities after rehabilitation; 'response' occurred most commonly in studies reporting drug trials. Therefore, I adopted an innovative but pragmatic strategy to make the review feasible within time and available resources. This procedure (summarised in Figure 3.1) involved automated screening informed by manual screening (text-mining with machine learning) to reduce the number of articles to be screened. Text-mining is a combination of text identification and data mining. The machine artificially

'reads' the title, abstract and keywords of a set of articles which have been manually identified as includes. From this reading the system identifies, then compares and contrasts fragments of text to identify the terms, word roots or combinations of terms which appear relevant to the reviewer's choice. The system applies this information about potentially relevant text strings to new text to estimate the probability that a source will match the reviewer's query. It then brings the most relevant articles to the top of the reviewer's screening list. Here the prioritisation was used to reduce the screening burden. The reviewer continues to manually screen records from the prioritised list of articles and the machine periodically improves the prediction algorithms ('learns') using the new information provided by the reviewer's decisions (Thomas, McNaught and Ananiadou, 2011). The EPPI-Reviewer Software hosted the text-mining term extraction programs.

Manual screening in EPPI-Reviewer of titles and abstracts was carried out until 10 articles meeting the inclusion criteria were identified. These articles formed the training set to teach the machine learning system what terms to extract in the data mining. Then a machine algorithm used the learning from the data mining training to prioritise the remaining articles to be screened in order of similarity to the training set. Manual screening continued with the prioritised list until 100 records were screened without new includes, at which point the system was retrained to refresh the order in list. This cycle of screening and retraining was repeated until I had reviewed 2, 100 prioritised records. At this point, duplicate articles in the include and read full texts where the relevance of the papers remained unclear. The machine learning algorithms were retrained with the refined list of includes, and a further 1000 records were screened. No new includes were found, and therefore the screening was stopped. In total 67613 records were manually reviewed during the title and abstract screening (summarised in Figure 3.1).

I reviewed the titles, abstracts and keywords, then the full texts of the potential includes with another reviewer to check the studies against the eligibility criteria outlined in Table 3.1. . Disagreements between us were resolved by discussion.

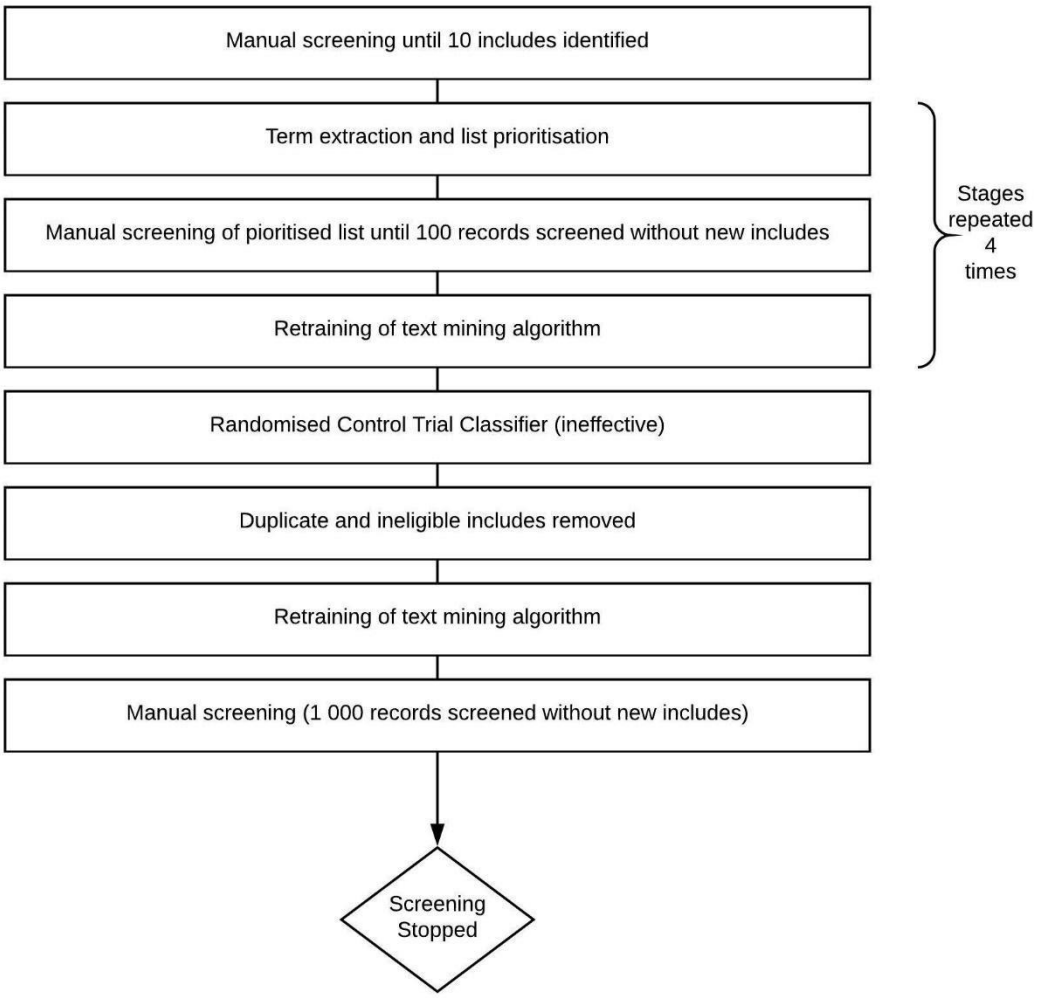


Figure 3.1 Screening strategy to identify includes using text-mining list prioritisation

3.2.4 Synthesis and analysis

The interventions were categorised according to the stage of the research process where it aimed to improve response. This categorisation was adapted from the classification strategy used by Fan and Yan (2010) in their review of strategies to increase response to web surveys. Figure 3.2 shows how the progress through a study has been divided into three stages 1) invitation, 2) data collection and 3) strategies to increase the likelihood of the completion of study tasks and of data return. Each stage in the research process has been broken down into subcategories (the rectangles in Figure 8) of features that could be altered to increase response. For example, the invitation stage could feature the textual content of messages and what rewards were offered. When discussing rewards, the term 'incentives' is used, as it is the term used in the included studies, although this is an ethically controversial term because the word implies a reward given to coerce, impair decision-making or encourage risk (Wendler *et al.*, 2002).

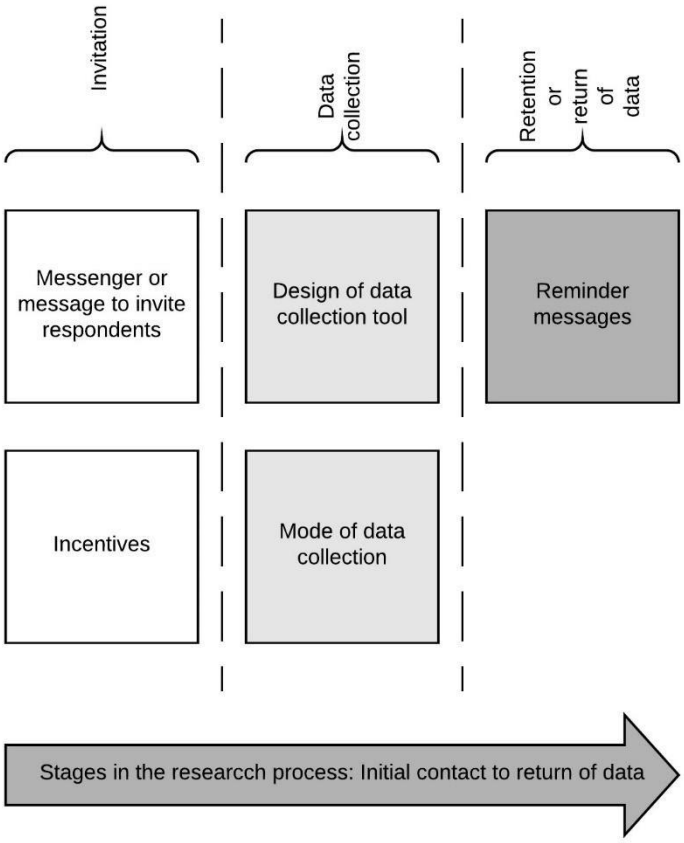


Figure 3.2 Categorisation of interventions to increase response rates in studies included in the systematic review to reflect the stages in the research process

For each included study, I assessed potential bias using domains relating to selection, performance, detection, and reporting biases, rating them in terms of low, unclear or high risk according to the criteria outlined in the *Cochrane Handbook of Systematic Reviews of Interventions* (The Cochrane Collaboration, 2011, Section 8). Meta-analyses were performed within Review Manager version 5.3.5 (The Cochrane Collaboration, 2014). A Mantel-Haenszel method was used since event rates in some studies were low. A random-effects model was selected due to the variability in the interventions, with risk ratios as the measure of effect.

3.3 Results

Figure 3.3 shows the number of records categorised at each stage of the screening process.

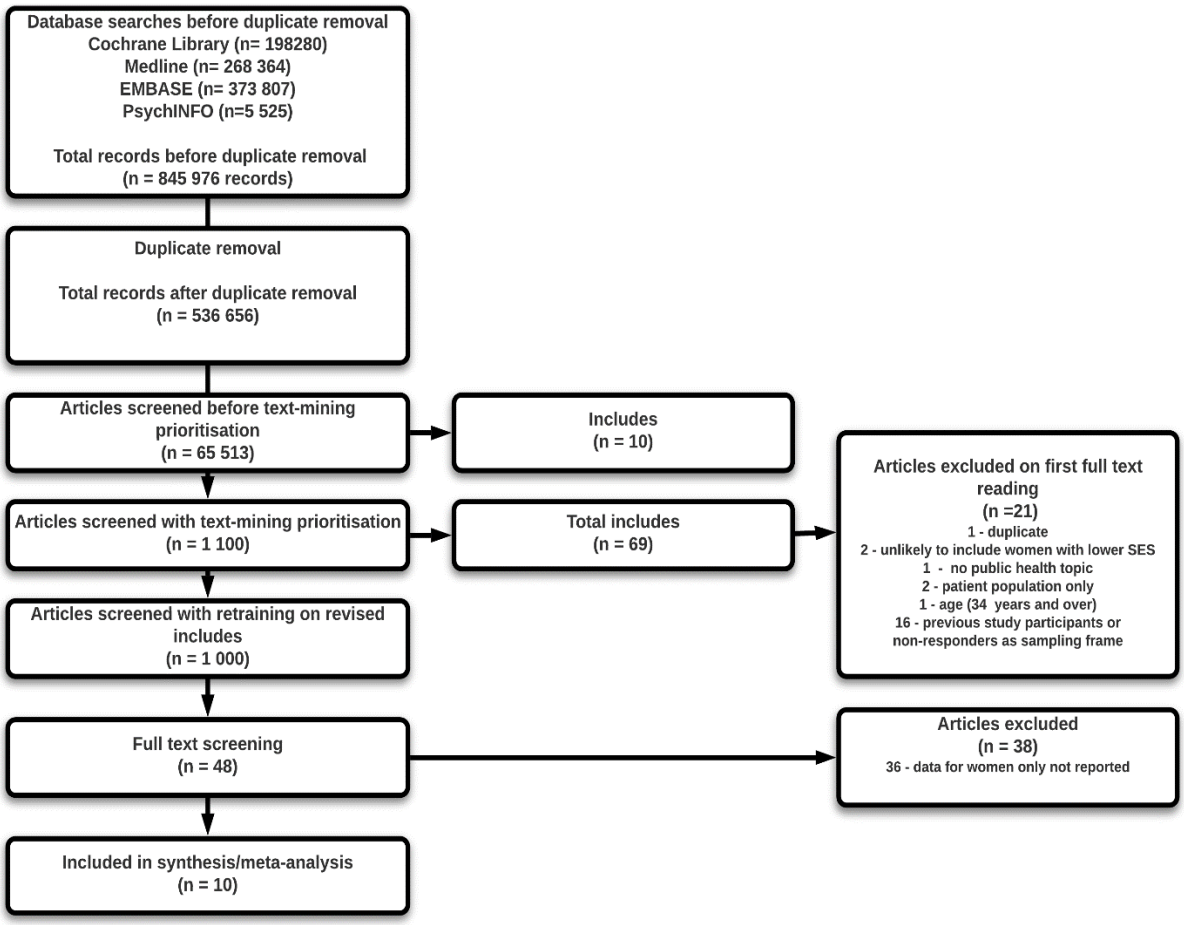


Figure 3.3 Flow diagram of study selection

3.3.1 Included Studies

The 10 included RCTs are summarised in Table 3.4. The sample composition is described for the women only and the final column indicates the topic of the questions in the health survey distributed in the RCT.

Table 3.4 Summary table of included studies describing the population, intervention, outcome measures and topic of the survey

No.	Study	Population[1]	Interventions	Outcomes	Topic
1	**Beydoun et al. (2006)**	Women, N= 1061, 18-49 years, Post-partum women, USA	Combined unconditional and conditional incentive vs conditional incentive only	Telephone tracing rates Cooperation rates	Health survey (details unspecified)
2	**Brøgger et al. (2007)**	Men and women, N= 2071, 20-40 years, General population, Norway	Mailed survey (control) vs. choice of postal or web completion (experimental)	Response rates and sample characteristics/asthma prevalence	Health survey (details unspecified)
3	**Brown et al. (2012)**	Women only, N= 30000, 21-75 years Ethnic-minority women in a weight management trial, USA	Ethnically targeted message vs. no ethnically-targeted message vs. personalisation (name) vs. no personalisation	Response rates	Weight management
4	**Dykema et al. (2012)**	Women, N= 638, 20-40 years Non-Hispanic, African American mothers, USA	No incentive (control) vs. cash incentive vs. coupon for nappies	Response rates, cost effectiveness, survey response distributions, item nonresponse.	Health survey (details unspecified)
5	**Feveile et al. (2007)**	Men and women, N= 2000, 20-60 years, Civil register, Denmark	Pen/paper vs. telephone completion	Odds of more positive responses or extreme values on 45 survey items.	Physical and mental health
6	**Kaplan et al. (2001)**	Women, N= 884, 12-21 years, Latinas and African Americans attending a family planning clinic, USA	Face-to-face administration vs. self-administered questionnaire	Response rates, sample characteristics	Smoking

7	**Liu and Geidenberger (2011)**	Women, N= 550, women of child-bearing age, African American women from Ohio birth certificate files, USA	30-minute telephone card (control) vs. $10 gift card (experimental)	Response rates, sociodemographics associated with response	Smoking
8	**Stenhammar et al. (2011)**	Men and women, N= 300, mothers of young children, on a health registry for children, Sweden	Active agreement to participate vs. Direct delivery of materials vs. Active decline to participate	Response rates, time taken to administer the participation, cost of participation	Parent and child eating habits, parental stress
9	**Tolonen et al. (2014)**	Women and men, N= 125, 25-74 years, General population, Finland	SMS text reminder about examination appointment time vs. no reminder	Response rates, day of week preferred for contact	Health survey (details unspecified)
10	**Woodhall et al. (2015)**	Women, N= 2000, 17-18 years, GP registers, UK (England)	Chlamydia testing kit supplied vs. Chlamydia testing kit supplied and £5 conditional incentive for return vs. Option to request chlamydia testing kit	Response rates, costs	Sexual behaviour

[1] Sample sizes are reported for women only.

3.3.2 Assessment of bias

The greatest sources of concern were in the areas of allocation concealment and blinding of participants/personnel (see Figure 3.4). Most of the studies reported some form of randomisation during both the sampling and assignment to study groups. However, the systems used to achieve randomisation were not always stated. Allocation concealment was rarely reported. All of the studies classed as unclear risk in terms of blinding (to reduce performance bias) were probably single (participant)-blind studies, but it was not always clear what precise information about the study aims had been given to the participants. Three studies were unclear in terms of the potential for reporting bias, only presenting selected items from some scales in the findings. A risk of bias assessment for each included study may be found in Appendix 3.2.

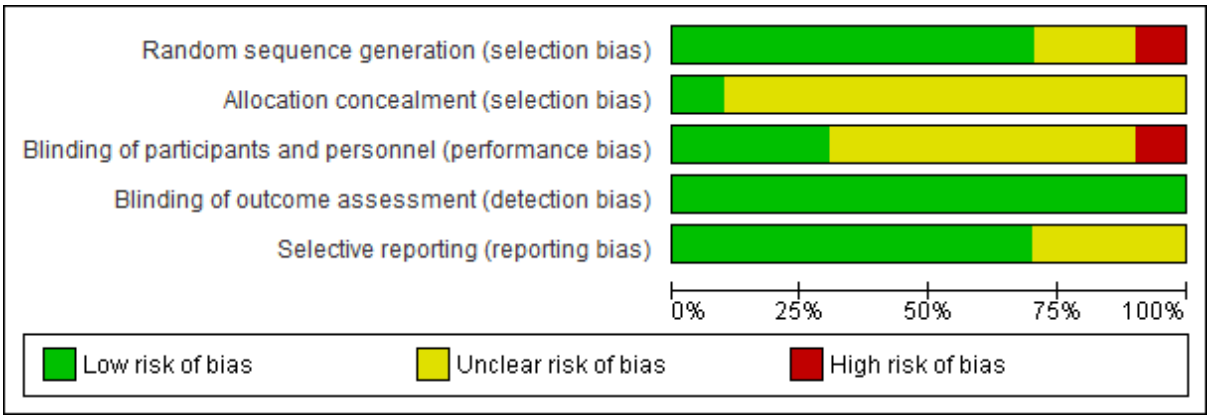


Figure 3.4 Author's (SJH) assessment of risk of bias presented as the percentage of all studies included in the review

3.3.3 Synthesis

The numbers in squared brackets, in the sections below, refer to the study numbers, as given in the first column of Table 3.4.

3.3.3.1 Populations

Sample sizes (female participants only) ranged from 125 [9] to 30000 [3]. Six studies recruited women only [1, 3, 4, 6, 7, 10]. Although limited by the search within Anglophone databases, there were few countries represented in the included articles. Five of the 10 studies were based in the USA [1, 3, 4, 6, 7], four in Scandinavian countries [2, 5, 8, 9] and one in the UK [10]. The age range covered by the studies was 12 years to 74 years. Only one study included only women within the 16 to 34-year age group [10]. Four studies recruited women who were mothers [1, 4, 7, 8]. Three studies aimed to include women from ethnic minority groups in the USA [4, 6, 7]. Two described their sample as a 'general population' [2, 9]. Two studies used registries of some kind (civil register [5] and family physician (GP) register [10]). One sampled people who were attending a particular place (a family planning clinic [6] and a further study used the sampling frame of another project, although the population had not yet been recruited to the parent study [3].

3.3.3.2 Interventions

Seven studies focused upon the invitation stage of the research process. Three studies were concerned with the presentation of the message [3, 8, 10]. Within this group, one study [3] tested the personalisation of the invitation in two ways, using the respondents' names and through a culturally specific recruitment letter. Two studies [8, 10] varied the consent method stated in the initial invitation to participate. Five studies tested incentives in different forms. Of these two studies compared offering an incentive against no incentive [4, 10], one investigated the effect of a conditional incentive compared with an unconditional (pre-paid) one [1] and two studies [7, 4]

investigated the effect of providing a voucher which could be used to replace cash compared with giving a voucher for a specific product. Within the data collection stage of Figure 3.2, no studies investigated the design of the data collection tool. The mode of question delivery was evaluated by four studies. Three of these included pen/paper self-completion (mailed or distributed by a member of the research team) [2, 5, 6], one study included online collection [2], one tested telephone interviewing [5], and one study included face-to-face interviewing [6]. Finally, within the last stage of Figure 3.2 (reminders to ensure interest is maintained or data are returned), one study explored the use of a reminder to improve the attendance at a data collection interview in a clinic [9].

3.3.3.3 Outcome measures

Response rates were the most common measure, occurring in eight of the 10 studies [2, 3, 4, 6, 7, 8, 9, 10]. The outcome was the sociodemographic characteristics of respondents in four studies [2, 4, 6, 7]. Cost per response was the response in three studies [4, 8, 10] and speed of response in one [10]. Cooperation was the outcome in one study only [1]. Measures of data quality/reporting of sensitive behaviours appeared in one study [5]. Telephone tracing rates and day of week for preferred contact were the outcomes in one study each [1 and 9 respectively].

3.3.3.4 Health behaviour topics

Four of the included studies collected data about health risks but the topics were not specified in the papers [1, 2, 4, 9]. Two studies each asked questions about the following: eating behaviour and diet [3, 8], smoking [6, 7], quality of life and stress [5, 8]. Single studies investigated physical activity [8] and sexual behaviour [10]. In addition to asking about the women's lifestyle, study 8 also asked questions about her child's physical activity and eating habits.

3.3.3.5 Effects of interventions to increase response rates

The aim of this systematic review was to identify the evidence-base for survey design features which are effective to recruit young women aged 16 to 34 years and from lower SES categories to UK health surveys. Only one study used a UK sample with data reported for women of the eligible age [10]. The study authors did not collect education level, but they did report an overrepresentation of women living in less-deprived areas compared to the sampled population and the data were not specified by any SES proxy measure. However, the effectiveness reported in the 10 studies are presented here since all of the studies involved a proportion of women who were in the target population from these studies.

Within the 10 included papers, 11 possible comparisons were identified. Many (8 of the 11) of the interventions only involved a single study. Where studies were pooled, heterogeneity was

extremely high (I^2 of 86%-97%) in all but one comparison (analysis 6 in Appendix 3.2). Nonetheless, there were some statistically significant results.

At the message stage of the recruitment process, personalisation of the invitation messages (adding the recipient's name to correspondence) did not increase recruitment (1 study, 30000 participants, RR 1.00, 95% CI 0.76, 1.31), although providing a culturally-specific message was effective (1 study, 30000 participants, RR 1.90, 95% CI 1.47, 2.45). The need to actively decline the arrival of a survey in a later mailing also increased recruitment. However, this was only true in comparison with a direct delivery condition, when the survey was enclosed with the initial invitation (1 study, 200 participants, RR 1.53, 95% CI 1.20, 1.95); it did not increase recruitment in comparison with the need to opt in (actively consent) to a study (1 study, 200 participants, RR 1.18, 95% CI 0.97, 1.44). Active consent was also not shown to increase the likelihood of response when compared against the direct delivery of a survey (2 studies, 1700 participants, RR 0.42, 95% CI 0.02, 7.08).

Using a gift card (which could be used like cash) as opposed to a voucher for a named product did increase the chance of recruitment (2 studies, 979 participants, RR 1.26, 95% CI 1.11, 1.44), as did the comparisons of conditional and unconditional (pre-paid) incentives (1 study, 2556 participants, RR 0.86, 95% CI 0.76, 0.97. Offering an incentive compared to no incentive did not show a statistically significant effect (2 studies, 2638 participants, RR 1.79, 95% CI 0.87, 3.69).

Face-to-face interviewing did improve response in comparison to pen/paper self-completion (1 study, 884 participants, RR 2.05, 95% CI 1.78, 2.36). Telephone completion as opposed to pen/paper completion did not significantly improve response (1 study, 2000 participants, RR 0.97, 95% CI 0.91, 1.02).

Only one comparison was made to ensure that someone who had shown interest in the study would remain to attend the data collection appointment. However, the use of a text (SMS) reminder did not significantly increase recruitment (1 study, 121 participants, RR 1.13, 95% CI 0.91, 1.41).

3.4 Discussion

Even though 10 studies were located which reported RCTs of survey design features to improve the recruitment of young women to health surveys, none of the identified studies reported data specifically for the target population of women aged 16 to 34 years from lower SES categories. Only one study was based on a UK sample of the right age, although this study did report an overrepresentation of women from lower SES categories in the sample. The only measures of SES

identified in the studies were deprivation level of the home address and ethnicities which were more relevant to US populations.

Despite the large number of documents identified in the search, very few were eligible for inclusion. Therefore, this review suggests that while there has been a body of research on increasing survey response, there is little available information to inform researchers how best to design a survey study to specifically engage young women to health surveys. Nevertheless, this review has been useful to highlight important gaps in the literature base. There was little research conducted with UK women and the studies did not focus only on young adulthood unless they were concerned with sexual health. SES was most often operationalised using ethnicity, and education level was not used at all. Although, ethnicity was identified as a correlate of poorer response in Chapter 2, only a few ethnicities were included in the RCTs and groups such as Asian ethnicities were overlooked. Therefore, little is known about how to improve recruitment of the target population to UK health surveys and the lack of relevant evidence to address the research question of the thesis provides support for new data collection.

At the start of the synthesis of the studies, included research was categorised according to the stage of a survey study at which the intervention was targeted. Even though, the studies were not on the eligible population, this categorisation revealed that a limited range of inventions had been trialled. Previous reviews of methods to increase recruitment have highlighted the usefulness of considering all stages of the recruitment process, from initial contact to data return (Edwards *et al.*, 2009; Fan and Yan, 2010; Keusch, 2015). Interventions which have been shown to be useful areas for attention in these earlier reviews such a survey length, question ordering, and survey formatting are missing from the literature identified in this review. The evidence has been concentrated instead upon mode of data collection, yet even here there is limited coverage. Only four modes of data collection were tested, while there is increasing use of other modes such as texting (SMS) to collect data (Lim *et al.*, 2010), and these methods could appeal to young women. In Figure 3.2, the research process was conceptualised as starting at the stage where the respondent is attending to the contents of the invitation messages. This means that it is not known how to improve the likelihood that communication (advertisements, letters, emails or texts) will be viewed. More research about the effect of the design and placement of these early contacts could be beneficial especially since there is evidence that the appearance of envelopes (Edwards *et al.*, 2007) and email subject lines (Porter and Whitcomb, 2005; Edwards *et al.*, 2009) could increase response.

3.4.1 Strengths and limitations of the systematic review

An important strength of this work is the exhaustive and comprehensive search and screening procedures for the review. As noted earlier, identifying relevant studies is a challenge when search strategies lack specificity or when the interventions are complex, as in many public health studies (O'Mara-Eves *et al.*, 2015). In this search, this impediment was complicated since the intervention of interest, namely recruitment, is a factor which is typically reported in all studies, regardless of the intervention.

The large number of identified records in the databases could have been due to an incorrect search. Therefore, the search strategy was checked for errors by an expert information specialist. Included papers, as well as articles excluded only because they did not report data for women, were reviewed for additional terms which may have improved the sensitivity or specificity of the search. However, no new MeSH terms or keywords were identified to improve the search.

Nevertheless, a threat to the validity and reliability of this review could be the choice of text-mining with machine learning to reduce the screening workload. In 2015 when this review was conducted, machine learning was viewed as a promising method to improve the ability of systematic reviews to identify and retrieve evidence efficiently, when the size of databases was increasing exponentially (Miwa *et al.*, 2014). However, text-mining with machine learning may be problematic because no single method has been identified to evaluate the number or relevance of articles missed because they were not manually screened by a reviewer (Mara-Eves *et al.*, 2015). Moreover, my use of text-mining to reduce the screening burden was based on two assumptions. These are that the studies used to train the classification algorithms are similar to those studies still to be identified, and that the screeners are not being biased by knowledge that articles presented at the top of the prioritised lists are more likely to be relevant (Thomas, McNaught and Ananiadou, 2011). It is also not possible to quantify the extent of those sources of bias. I aimed to reduce the chance of missing relevant articles by improving the training information available for machine learning by checking the relevance of the training articles through full-text screening. We also continued the manual screening of the prioritised list until no new includes were located even when additional classifiers were also applied to allow the text-mining to work on fewer concepts to increase efficiency.

3.5 Chapter conclusion

This systematic review provides a strong rationale for further research to help public health researchers to know how to recruit more young women from lower SES categories to UK health surveys. There was a lack of research conducted with this population group, despite the large body

of research on increasing recruitment to health surveys. This work has also highlighted that there is a dearth of literature on how researchers can improve the likelihood that persuasive messaging such as culturally-specific text or incentives are noticed so that they can be considered in the decision to participate. There is also little research on the best modes of data completion which accounts for the range of communication methods available to researchers today such as SMS text or other computer-assisted methods.

Therefore, in the following chapter, I shall discuss current theories which have been applied to explain response behaviour. This discussion will lead to a proposed conceptual framework which will integrate what is known about who responds, what strategies might increase response and why people choose to respond to invitations to participate in research. The aim is to propose a framework which, unlike the tests of inventions explored in this chapter, can be more responsive to the effect of different contexts and populations so that researchers have a tool which can be used to inform the design of studies.

Chapter 4 Theoretical context and the conceptual framework for recruitment of young women from lower SES categories to UK health surveys

4.1 Introduction

Chapter 2 showed how some sectors of the population are underrepresented due to healthy volunteer bias coupled with declining response rates. However, the review of response patterns also indicated that the participation of women in health studies is not simply related to their sociodemographic characteristics. How respondents are identified, and reached, as well as the topic of the research, could also explain why study samples are not fully representative of a diverse population of women.

In Chapter 3, the relevant trials were limited in number and focused on the nature of study documentation, the use of incentives and the mode of data collection. Few studies involved young women who were not university students and who had lower levels socioeconomic status (SES) and it was and difficult to draw firm conclusions since each strategy was generally tested in a. single study. Consequently, there was little clear evidence of effective strategies to inform future studies.

The aim of this chapter is to critically review the literature providing theories of response behaviour. Unlike the previous two chapters these explanations move beyond answering questions about 'who' responds and 'what' works to suggest *why* people might or might not respond to research invitations. Section 4.4 onwards specifically addresses Objective 1 of this thesis because it presents a conceptual framework that draws on relevant design strategies from Chapter 3 together with promising approaches from psychology and marketing.

4.2 Methods

A critical review, as described by Grant and Booth (2009), was carried out to integrate both theoretical and empirical studies. Five databases (Cochrane, PubMed, PsycINFO, Medline and EMBASE) were searched using the terms 'recruitment', 'response', 'improve OR increase' to identify systematic reviews of relevant articles. The initial search occurred in January of 2015. The search yielded articles (e.g. Fan & Yan 2010; Groves et al. 1992) that listed both tests of recruitment strategy and psychological explanations of response behaviour. Therefore, an iterative approach was taken where identified studies were screened for additional terms to inform new searches. As

was noted in the last chapter, the topic of improving response makes it difficult to conduct searches with high specificity because most research reports describe sampling and recruitment in their methods. Therefore, following the recommendations of Papaioannou et al. (2010) other search methods were also employed to identify relevant studies. These included reference list checking (ancestry approach) and citation searching using PubMed and Google Scholar. All searches were updated between March 2015 and December 2017 using automated searches set up within the library databases. Unstructured search strategies were also used to identify additional search terms. These included the 'Suggestion' feature within Mendeley (the bibliographic software used to house references), recommendations from academics familiar with the topic of the thesis and journal alerts from publications that were occurring frequently in searches (e.g. 'The Journal of Medical Internet Research' and 'Public Opinion Quarterly').

4.3 Theoretical explanations of response behaviour

This review of theories of survey response behaviour discusses respondent-centred theories relating to perceptions of identity, before moving on to explanations of how researchers could increase participation through exchange and persuasion.

4.3.1 Theories related to participants' perceptions of identity

When invited to complete a survey, the potential respondent enacts a role and these role identities can be tied to functions within society, category memberships (a shared attribute which motivates interactions with one group and distance from another) and group memberships (Smith-Lovin, 2003). Yet identity in survey response has received relatively little attention in the literature about survey methodology (Brenner, 2017). Social identity theories have been used to explain how respondents answer survey questions in a way to present an identity. As a result, such theories been used to explain biases in item responses, such as social desirability bias which leads respondents to over-report socially normative behaviours and attitudes (Brenner and DeLamater, 2016). When the focus is on the decision to participate or not in a survey, the emphasis has been instead on theories of self-perception.

Self-perception theory of survey response proposes that individuals will comply more readily with a request if it matches past behaviour because they internally identify themselves as a person who performs that type of action (Bem, 1972). This theory has been applied to response behaviour to explain why people who comply with a small initial request without extrinsic pressures (e.g. payment) are more likely to take part in a second task, even with a higher burden. This observation has been termed the 'foot-in-the-door technique' because the initial participation helps people to identify themselves as someone who helps other people (Reingen and Kernan, 1977). This theory

has also been used to explain why remuneration has been associated with increased item non-response. If respondents are taking part in a study to gain the reward without believing that they are someone who does research to help public causes, then they are more likely to complete the questions carelessly or to miss out items which they do not like (Hansen, 1980).

This self-perception theory of survey response seems promising for researchers because it suggests that experience of low-burden participation may be more useful to increase response than using large incentives. Such incentives are outside of the budget of many studies and which could be viewed as applying undue inducement (Dickert and Grady, 1999). Issues of self-perception may also indicate why some groups of women are underrepresented because they have not yet developed the identity of themselves as research participants. This theory would even imply that mass campaigns showing underrepresented women doing research would help to create the sense of participation as a normative behaviour in everyday life. However, self-perception presents a challenge in terms of balancing the need for response from a diverse population and data quality and it is unclear how to provide enough experience of participation to develop the identity of 'participant' while avoiding the negative impact of survey fatigue.

Nevertheless, social perception theory is still presenting an asocial view of identity with its focus on individual decision-making. However, many theories of identity development in early adulthood call for an emphasis on the influence of others. Cooley's 'looking-glass self' (Cooley, 1902) is one such conceptualisation. His theory provides a striking image of how the view of self is defined when the individual looks at others as if into a mirror. The perceived responses of those around become a reflection by which to understand their identity. Therefore, the view of self is shaped by social interactions but also by how the individual weighs and interprets the responses of others through their personal values and beliefs. More recently Cooley's 'looking-glass self' has gained renewed attention with the ability of people to present themselves both physically and virtually to others (via social media such as YouTube) and gain more channels of feedback on their self-presentation (Zhao, 2005; Jones, 2016). Given that the focus of this thesis is on women aged 16 to 34 years, the social negotiation of identity is likely to be important. Arnett (2000) particularly argues that the period between 18 to 25 years in Western cultures is one of identity exploration and other people are likely to be influential in that exploration given that the young person could be locating themselves in new social networks away from parents. Social validation (the application of social norms) is, therefore, a concerning omission from the literature on survey response. At the same time, this form of validation may also be difficult to achieve in survey research because researchers cannot name and identify people who have participated to future respondents because

of the need to maintain confidentiality (Groves, Cialdini and Couper, 1992). Furthermore, other research suggests that young people identify themselves as adult if they are adopting adult roles such as parenthood, a career or living independently. For example, Johnson and Mollborn (2009) found that people who had finished education or who were from families experiencing economic hardship were more likely to feel older and more 'adult' than their chronological peers. This could present an important influence if survey research is perceived as an 'adult' activity and researchers are aiming to recruit people who are still in education or if researchers adopt a tone in advertisements which is perceived as targeting teenagers. Therefore, identity development related to lifestage roles is also likely to be relevant to understanding response in young women.

4.3.2 Theories related to exchange

Cognitive dissonance theory (Festinger, 1957) has been used to try and explain why promised incentives are less effective than small unconditional forms of remuneration. If a respondent receives a reward for undertaking a task but does not do it, then there is dissonance which the respondent will try to resolve, either by returning the reward (which is an effort) or by completing the questionnaire to 'earn' the reward. This theory was applied to survey research by Hackler and Bourgette (1973). They found that enclosing a dollar with a survey increased response rate in comparison to a 'no-dollar' group but when the 'no-dollar' recipients later received a dollar with a reminder, their response rose to a higher level than the group who had received the incentive from the outset. Only 4% of the 'dollar' group returned the dollar, refusing to participate and none of the 'no-dollar' group returned their later reward. The authors of this study argue that a small incentive is compelling because it does not signal that the task is unpleasant and requiring sizeable compensation but does set up an unequal exchange which needs to be resolved.

Furse and Stewart (1984) promoted the cognitive dissonance theory of response behaviour because they believed that it explains individual differences in survey completion if some people are more resistant to dissonance than others. However, they also believed that the theory shifts the understanding of survey response towards a view of the decision to participate as a series of decisions which start from the choice about whether to open the envelope that is sent, through to consideration of whether to complete the survey and then whether to return it. This view of the research process is useful because it does show how respondents have multiple decisions to make and can potentially drop out of a study at multiple time-points. However, it cannot explain how the respondent makes the initial decision to open the envelope. Until they do, they will not be aware that there is remuneration inside for the dissonance to occur.

Cognitive dissonance is just one of several theories that advance explanations of response behaviour that assume that the perception of exchange and reciprocity are essential. Social exchange theory is another approach which has often been applied to survey response (Keusch, 2015). This understanding of response behaviour assumes that the decision to participate is rational and based upon an appraisal of cost and benefit (Singer, 2011). The assessment of cost and benefit can explain why incentives may work and also why messages about confidentiality do not always increase response. For example, if the content of the survey itself does not warrant the level of remuneration or assurance of confidentiality, then a respondent may query why the reward is being offered. Trust in the assurances given by the researchers could even decrease. For example, the respondent might wonder whether the innocuous answers are being sold on to a third party (Singer, 2011). Social exchange theory is appealing because it does explain why rewards may not always increase response, but it is difficult to apply to the design of a new study because it does not help the researcher to know what will act as a benefit and what will be perceived as a cost.

Appraisal of benefit and cost is also part of the Theory of Planned Behaviour (Ajzen, 1985, 1991), and this element of the theory has been applied to response behaviour (Bosnjak, Tuten and Wittmann, 2005; Heerwegh and Loosveldt, 2009). In the Theory of Planned Behaviour (outlined in Figure 4.1), the decision to do something is reliant on the development of an intention to perform the action.

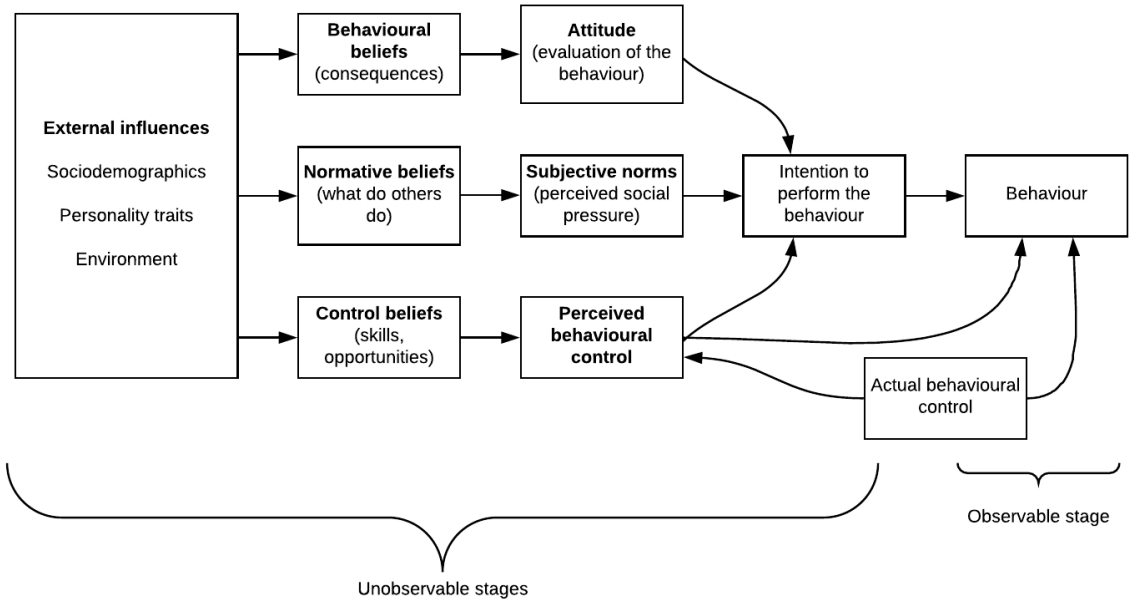


Figure 4.1 Theory of Planned Behaviour adapted from Conner & Sparks (2005)

Heerwegh and Loseveldt (2009) propose that the model's behavioural beliefs (attitudes towards the behaviour of completing the survey) are related to an individual's expectations of gain from participation. The perceived behavioural control is linked to the level of difficulty anticipated. The Theory of Planned Behaviour is useful because it helps to conceptualise the complexity of how a respondent's initial positive response to a survey invitation may not necessarily translate to completion. However, Bosnjak et al. (2005) found it necessary to extend this theory to include another element (moral obligation) to explain response behaviour more fully. The theory does not show what the costs and benefits will be, only suggesting how they might work together in the decision process.

4.3.3 The importance of trust for health survey participation

In Chapter 2, one explanation for lower participation in some population groups was tentatively suggested to be pessimism in participants' relationship with official organisations (Groves and Couper, 1998). Trust between participants and researchers and sponsoring organisations is important because participation is voluntary and potential participants are likely to weigh up the costs and benefits of participation. However, this psychosocial factor has been largely overlooked in the literature on participation in health research (McDonald *et al.*, 2008).

Galea and Tracy (2007) claimed that distrust of medical professionals could be a barrier to participation in epidemiologic studies. However, the review underpinning this assertion was focused on the recruitment to clinical trials. In Galea and Tracy's words, people were frightened of being 'experimented on' (2007, p. 646). Similarly, Sheridan et al. (2020) found that there was greater distrust in organisations behind health research in groups with lower societal power. Yet these authors also struggled to find research on how to overcome psychological barriers, like trust, to participation in studies which were not trials. The lack of focus on other commonly used research designs is one gap that this thesis seeks to fill.

Looking at participation in surveys in general (as opposed to health surveys), there has been a small amount of research on the influence of understanding the impact of trust in the sponsoring organisation. For example, Saleh and Bista (2017) found that survey response increased if the sponsor was a known authority figure or organisation. These authors used a very narrow sample of graduate students; nevertheless this work supports earlier research which showed that a university sponsor as opposed to a government or commercial sponsor was associated with higher response (Edwards *et al.*, 2009). Furthermore, local university sponsors, as opposed more distant

universities were likely to receive survey responses (Ladik, Carrillat and Solomon, 2007; Edwards, Dillman and Smyth, 2014). Groves et al. (2012) explain survey respondents' response to the identity of the sponsor in terms of social exchange i.e. recipients of a survey will draw on past and current information to evaluate the reciprocal relationship they hold with that organisation and how they will benefit from contributing their response to that relationship. This explanation highlights the potential influence of reciprocity and perceived benefit for participation. However, researchers may not feel free to limit evidence of sponsoring affiliations due to expectations from funding or academic bodies around branding. A further complication is that many survey studies use remote data collection methods, employing a third party platform to host the survey. Fang et al., (2012) showed in their experiment, how distrust of the online survey host could create an additional barrier to recruitment, even if the sponsoring organisation was perceived as trustworthy.

Saleh and Bista's (2017) research suggested that known individuals could enhance the trustworthiness of research and improve response. This is a useful finding and it is unsurprising given earlier research suggesting that gender (being female), seniority and celebrity of a signatory are sometimes associated with increased response (Edwards *et al.*, 2009). Although gender was only shown to have an effect in web-based surveys and not postal ones in this Cochrane Review. However, these findings do present a problem for early career researchers or those working outside of fields where they can draw upon impressive job titles or other credentials. It would be helpful, therefore, to further understand the nature of the trust relationships between participants and the survey sponsors to understand how to develop interventions in ways which overcome the barriers to implementing research findings on trust.

4.3.4 Theories related to the information used to persuade

An extension of the focus on costs and benefit is to understand the research process as one in which the researcher must *persuade* the respondent to take part in the survey. The following theories concentrate on how researchers can present information to increase the likelihood of recruitment.

Theories of persuasion have often considered how people process information (usually through language) to make a choice or develop an attitude (O'Keefe, 2016). One explanation which could be applicable to survey response is the Elaboration Likelihood Model (Petty and Cacioppo, 1986). In this model, there is a recognition that decisions are based on both heuristic processing (rules of thumb) and analytical reasoning. The choice between these modes of processing information is thought to be related to both motivation and individual style. For example, if the motivation to

think about a survey topic is relatively high then elaborative thinking is more likely (Groves, Cialdini and Couper, 1992). If interest in the topic is limited, the attitudes and decisions will be formed on the basis of environmental cues. These cues include the presentation style of the information, the endorsement of people respected by the viewer or the provenance of the message, for example the sponsoring organisation or messenger's qualification (Petty and Cacioppo, 1986). The choice to process information with more elaboration can also be related to dispositional factors, or a 'need for cognition' trait (Cacioppo and Petty, 1982). Tailoring messages to suit the need for high or low levels of cognition has been applied with some success to improve the uptake of screening (Williams-Piehota *et al.*, 2003) and to the number and quality of job applications (Kraichy and Chapman, 2013). According to these applications of persuasion theory, persuasive messages need to account for an elaborative processing style in which facts and figures are offered. At the same time, messages to facilitate heuristic processing, utilising cues such as visual images and information about the sponsor or emotive appeals should also be provided to engage individuals who are low in motivation or need for cognition.

Petty and Cacioppo (1986) argue that one of the cues which will attract attention and encourage a favourable decision, even without motivation or need for cognition, is the presence of rewards which are perceived as valuable (unlike the small rewards offered above in the studies of dissonance). In Chapter 3 it was shown how remuneration in the form of monetary or non-monetary incentives have been explored as a method to increase recruitment. The majority of this research has focused on the size or timing of these rewards (conditional or unconditional receipt). However, a small amount of research has also investigated how the rewards are described to potential participants, applying prospect theory (Kahneman and Tversky, 1979). This explanation suggests that people are risk-seeking when the possible gain could be substantial. This reasoning supports the use of lotteries of more substantial amounts of money in place of small rewards to all. Prospect theory also proposes that when a reward is presented as a loss rather than as a gain, it is understood to be valued more highly. For example, if the reward for participation is described as 'you can win £5 for returning the survey' it will be less motivating than the phrase 'you will not receive £5 if you do not return the survey'. This difference is because people tend to be risk-averse. However, when applied to recruitment of young adults to a Chlamydia screening study, comprising of a survey and home-testing kit (Niza, Rudisill and Dolan, 2014), unconditional and immediate rewards were more engaging than rewards conditional on the return of the data. Framing an incentive in terms of a gain was also more effective than when it was presented as a loss. Niza and colleagues argue that this difference between the theory and observed response to the incentives

was possibly due to gender differences (with men being more sensitive to gain than women) and the need to find the right type of incentive for the people who are required in the study. Therefore, it seems that motivations may differ in different groups/studies, which presents a challenge to a researcher unless they know what will be perceived as gain by the people they wish to engage.

Many of the theories described so far have stressed that the decision to participate will be related to an appraisal of benefit and cost which would suggest that the role of the researcher is to consider what benefit to offer but also how to present that information. In addition to research on introducing tangible remuneration, such as monetary rewards, there has also been some consideration about using other, less tangible benefits in the persuasion. One commonly cited reward for participation in research is the positive emotion gained from helping others (altruism). Williams, Entwistle, Haddow and Wells (2008) argue that researchers should actively include messages about altruism in advertising, using mass media campaigns to reach a broad audience and to increase the social value of research. A very recent review of systematic reviews (Sheridan *et al.*, 2020) has also highlighted altruism as a reoccurring facilitator of participation in the literature. Mein et al. (2012) found during qualitative interviews with staff involved in recruitment to the Whitehall II cohort study, that staff believed altruism to be a strong motivator for participation. Nevertheless, altruism may be less powerful than anticipated by Williams and colleagues. Mein et al. found that it was less commonly given as a reason for participation by participants than it had been by research staff. As an intangible reward, it is also easily displaced by more immediate costs, such as travel expenses (McCann, Campbell and Entwistle, 2010). Altruism is indeed problematic for public health research, such as population surveys, which is focused on preventing harm because the future dangers may not be personally relevant or immediate enough to factor into an appraisal of cost and benefit (Fry, 2008). Indeed, Sheridan et al. (2020) found that descriptions of altruism as a motive for participation were often entangled with expectations of personal benefit which complicates conclusions that altruism is the driving force for participation. Also, if costs are relatively greater for underrepresented groups, then mass approaches may simply perpetuate or increase bias by engaging already overrepresented groups.

A further research direction has emphasised the tailoring of messages which happen during the meeting between researcher and participant. For example, leverage-salience theory (Groves, Singer and Corning 2000) suggests that recruitment to surveys conducted face to face can be increased if the researcher employs cues from their perceptions of interactions with participants and from the environment in which the meeting happens. For example, experienced interviewers can notice what might concern the respondent (the survey topic, the reward) and then will tailor

the invitation to emphasise aspects that will be most likely to appeal to the respondent. From these cues, data collectors can choose to promote the information which they perceive will make participation engaging. This theory could explain why one recruitment method may not be effective with a broad demographic. However, it is less helpful for studies which need to employ mass media recruitment strategies such as social media advertising, or remote contact methods such as email or distribution of surveys by a third party.

4.4 The conceptual framework: The application of marketing to response behaviour

Taken together, research about the characteristics of participants (Chapter 2), the empirical evidence about increasing recruitment (Chapter 3) and the theories of participation (presented in this chapter) have helped to illustrate the complexity of response behaviour. The next step is to consider how to help researchers to navigate different approaches to improve recruitment, and more importantly, sample representativeness. The difficulty in identifying a solution to the problem of recruitment is that one theory cannot account for response behaviour in every research context (Albaum, Evangelista and Medina, 1998). Instead, a framework might be more useful to identify the important responses which should inform strategies to recruit more young women from lower SES categories to UK health surveys. Therefore, such a framework is proposed below which integrates elements of the theories taken from psychology which have been presented above with marketing theories.

4.4.1 Marketing as a solution?

Marketing theories have already been implemented to promote social change such as reducing unhealthy behaviours. The term 'social marketing' is often used to distinguish the application of marketing research to address a social issue from marketing in commercial contexts although many of the same concepts are adopted in each (Grier and Bryant, 2005). The National Social Marketing Centre (2016) define social marketing by eight benchmarks outlined in Table 4.1:

Table 4.1 National Social Marketing Centre Social Marketing Benchmarks (2016)

Benchmark number	Benchmark name	Benchmark description
1	Behaviour	Social marketing aims to change specific behaviours rather than only attitudes
2	Customer orientation	Social marketing uses a mix of data sources to understand the lives of the intended audience
3	Theory	Social marketing interventions should be informed by theory

4	Insight	A deep understanding of the audience's motivations is sought
5	Exchange	Social marketing aims to increase the gain and reduce the cost of adopting the socially desirable behaviour
6	Competition	aims to understand other calls on the audience's attention so that interventions can attract attention and interest
7	Segmentation	modifies messages to suit the needs of different groups within audiences
8	*Methods mix*	does not solely rely on raising awareness of an issue

What is missing from the current research into improving recruitment is a deep understanding of the lifestyles of people who do not typically take part in health research. Description of patterns of response (as found in Chapter 2) can only indicate who is and who is not likely to perform the desired behaviour (Benchmark 1). Current research about effective recruitment strategies (see Chapter 3) starts at the information/messages provided when some initial attention has been paid to the invitation (the mailing has been opened, or the poster/online advertisement has been noticed). Researchers need to be able to orient themselves towards the participants' perspective (Benchmark 2) to tailor the recruitment strategy and even the research tasks to the specific context (Hure, Smith and Collins, 2008). When researchers rely on assumptions about participants' motivations instead of asking the intended audience, there could be a disconnection between researchers and participants. Mein et al. (2012) showed such disconnection where researchers in their study assumed that the participants' motivation for study participation was altruism while this was a weak consideration for the study volunteers.

Social marketing also calls for strategies to be tailored for different groups (Benchmark 7). The theories discussed earlier, notably self-perception and cognitive dissonance were concerned with understanding the participant only in so far as to understand how to change their response to the research invitation. It can be seen from the benchmarks above that it is still important to understand theory of what will make interventions effective. However Benchmarks 4, 5, 6 and 7 advocate a deeper understanding of respondents. The aim of this understanding is not to work out how to manipulate participants' behaviour, but to understand their lifestyles and the things that will make the participation competitive because it suits their needs and interests. The psychological approaches were more concerned with suggesting nomothetic explanations of response behaviour.

Social marketing also argues for a mix of methods to encourage change. Altruism was discussed above as a behaviour that could be leveraged in persuasion. For this to be used, there needs to be greater public awareness of the need for research (Williams *et al.*, 2008). Yet Benchmark 8 calls for more methods than just increasing knowledge are needed.

Therefore, it is the argument of this thesis that a framework is needed to explore responses of young women from lower SES catgories to being recruited to UK health surveys. A framework based on marketing theories will allow a more holistic understanding of how these women's responses are shaped by their lifestyles, appraisal of the costs and benefits of participation and their relationships with research and researchers.

4.4.2 Applying marketing to recruitment

A social marketing approach to increasing recruitment treats the relationship between researcher and participant as similar to that between retailer and consumer. According to Francis and colleagues (2007), commercial marketing can be defined as 'the process of finding, winning over and retaining customers' (p. e2). This definition mirrors how researchers need to identify, reach and then engage participants and keep them engaged until the end of their participation. Francis et al. described the relevance of marketing to clinical trial recruitment in a model of five stages (Figure 4.2):



Figure 4.2 Five stages of marketing a clinical trial (adapted from Francis et al. 2015)

In the set-up stage, researchers need to gain the commitment of stakeholders and informal opinion leaders and they need to establish effective systems for the trial, just as a retailer needs to establish outlets and a need for a product. Next, researchers must plan the market by identifying segments in the target population and to establish what would be counted as gain by each segment and how to communicate this gain effectively, namely design the advertising for the product. Training for trial staff also happens in this second stage. The signalling stage involves sending out the information of the trial in a way that promotes the rewards of participation to each population segment. In the same way as retailers may have a television or social media campaign, a researcher must place advertising where participants will see it, using knowledge of their lifestyles. In the learning stage, monitoring of the market must occur and small changes need to be made to address any difficulties.

Finally, commitment of interested participants must be maintained by upgrading the offer of gain in some way, in the same way as retailers might offer rewards for continued patronage or purchasing. Francis et al. (2015) further argue that research is four fifths process and one fifth science but the process of establishing and managing a study is often overlooked or is managed by people who are qualified only in the science. Such a marketing model structures the process of research recruitment in a way to stress the importance of planning and continued attention to recruitment.

Yet, despite the similarities between commercial marketing and social marketing, as applied to recruitment, there are important differences. For a consumer, the gain is a new product which allows something to be achieved (such as increased social status) while the retailer benefits from the business but also from the potential of future custom if the consumer is satisfied. In research the researcher profits from new data and an increased interest in research which might improve recruitment for future studies. A difficulty for public health research, such as the population surveys and cohort studies reviewed in Chapter 2, is that gain for the respondent is harder to identify because potential participants may not yet be experiencing a negative impact on their lives as a result of their engagement in health risk behaviours. The benefit for the participant may be easier to establish in studies about well-known diseases that create fear, than in research that targets pleasurable practices, such as consuming alcohol. As a consequence of the limited direct personal reward, if something to do with the participation is creating anxiety, then non-participation would itself mean a benefit due to the removal of a stressful situation. The reduced anxiety could compensate for the loss of any value of study involvement. If a consumer fails to buy a product, they have lost the benefit of owning the desired item.

Moreover, considerable barriers to participation in health research can exist because there can be discomfort in discussing health with a professional. Topics, such as drug use and sexual behaviour can also carry a stigma in some communities (Fry, 2008). Owning a new product is rarely accompanied by similar discomfort. A further difference is that commercial marketers rarely use language that disengages their audience (Galli *et al.*, 2014). However, in research we may need to use terms which are anxiety-provoking such as 'data protection' or 'randomisation'. Galli et al.'s argument is that the information can be made more approachable, through market planning and segmentation.

Examples of where marketing has been applied to develop recruitment strategies are few. Two of the three studies available at the time of writing (Kobayashi *et al.*, 2013; Galli *et al.*, 2014), have adapted variants of the Marketing Mix (Booms and Bitner, 1981). The third paper (Francis et al.

2007 discussed above) adopted many of the same elements as the Marketing Mix without naming this framework directly. The Marketing Mix specifies factors to consider in the market planning stage (see Figure 4.2 above), when promoting services: product, promotion, price, place, people, process and physical environment. By suggesting how to tailor and place messages to engage intended audiences, the seven parts of this model encourage researchers to adopt a participant orientation (Benchmark 2 above), to promote perceived benefit and reduce the barriers (Benchmark 5). The consideration of 'place' requires an in-depth understanding of participants' lifestyles, and this knowledge will also guide the segmentation of messages to improve the promotion and compete effectively against other interests (Benchmarks 6 and 7 above).

Francis et al. (2007) describe a case study where the researchers aimed to design a protocol for the recruitment of 20 000 head injured patients to a clinical trial. They employed a marketing specialist from a business discipline to devise their strategy. A model was developed which had four parts: 1) building brand values, 2) product and market planning, 3) making the sale and 4) maintaining engagement. The authors discuss how this business-inspired model created a process which was planned in advance so that all staff could be selected, trained and motivated to follow the recruitment plan. The model also emphasised the need to create buy-in by participants but also supporting organisations by increasing the perceived benefit of involvement by creating a brand for the study to enhance legitimacy and the value of participation. These authors also stressed how planning was needed to reduce the cost for everyone involved by making participation fit everyday routines.

Galli et al. (2014) aimed to develop Francis et al.'s (2007) work by adding the 7Ps Marketing Mix to structure the 'Learning' phase of the original 5-stage view of marketing for recruitment (Figure 4.2) in the design of the Text2Stop study. Text2Stop was a randomised controlled trial to test the effectiveness of encouraging text-messages on smoking cessation. Galli et al. highlighted the benefit of using the 7Ps Marketing Mix for recruitment, showing that it provided a clearly defined process which informed how to monitor, evaluate and adapt their recruitment strategy to achieve their recruitment targets successfully. This process involved a constant, cyclical evaluation and redevelopment of the strategies used to reach and engage the target group. As a result, these authors identified social validation, scarcity messages (namely messages suggesting that places on the study were limited), incentives and improved advertising as the best methods to increase the benefits of participation. By adopting a marketing approach their recruitment rates more than quadrupled and the cost per person randomised fell by two thirds.

In contrast, Kobayashi, Boudreault, Hill, Sinsheimer and Palmer (2013) used a reduced marketing mix of 4Ps (product, price, place and promotion) to engage a difficult-to-reach-population of deaf individuals in a genomic testing study. This team augmented the Marketing Mix with an extra element which they described as 'Messaging' (Kobayashi et al. 2013, p. 5). Advertisements were designed to meet the current priorities of the specific deaf community invited to the study, demonstrating a deep awareness of the lifestyle of the intended audience to make the advertisement more able to compete against other interests (benchmark 6). This understanding was only possible due to the knowledge brought by research team members who were also part of this community. For these authors, the benefit of social marketing was different to Francis et al. (2007) and Galli et al. (2014). In this study the marketing approach helped the researchers to understand more about the communities involved so that recruitment was inclusive and sensitive to the concerns of potential participants.

These three successful examples show how marketing has been shown to enhance recruitment by improving the planning, monitoring and community sensitivity of strategies to reach and engage participants. However, the studies described above only touch on a factor of great importance, namely the motivation for potential participants to pay attention to information about the study. Without this initial attention, the required interaction between researcher and participant cannot even begin.

4.4.3 A description of the proposed framework

The summary of research in Chapters 2-4 identified the challenge of developing recruitment strategies to appeal specifically to underrepresented groups. In social marketing, targeting certain groups is often accomplished by tailoring messages to segments of the population with assumed common needs (Grier and Bryant, 2005). However, this segmentation presupposes that people within a segment will behave in a similar way. Commercial marketers are moving away from attempts to shape behaviour (by using persuasive messages and larger remuneration) to consider the functions that their product performs to draw in a broad audience. For example, Christensen, Cook and Hall (2009) describe a milkshake company who wanted to reach new customers. When they surveyed consumers, they found that despite differences in the customer base, most people wanted the milkshake to serve as a breakfast that could be consumed during commutes. By finding the common function for the specific product, advertising could emphasise what most people need, thereby allowing mass communication to be more effective and the milkshake packaging could make drinking easier while travelling. This approach recognises that someone will attend to

information that matches current priorities because they are actively searching for ways to achieve goals or solve problems. The value of understanding audience goals is not only a commercial consideration. Within the social cognitive approach to behaviour change, a person is assumed to interact with environmental facilitators and barriers to a behaviour differently according to their goals, aspirations, perceived self-efficacy and capacity (Hastings, 2007). The social marketing benchmarks (specifically Benchmarks 4 and 6 above) also highlight the value of understanding individuals' motivations and how messages can effectively compete for attention against other messages. Yet current strategies to increase recruitment to health research tend to assume that the research is an entity which cannot change. Consequently, the environment must be changed to increase the acceptability of health research (Williams et al. 2008) or researchers need to manipulate the cost-benefit analysis of participation to tip the balance of the appraisal favourably, as in the leverage-salience theory (Groves, Singer and Corning, 2000).

Therefore, we propose a conceptual framework that applies marketing theory to recruit more young women from lower SES categories to UK health surveys It extends Kobayashi et al.'s (2013) 'Messaging' to start from the functions that participants need research to perform. This framework (Figure 4.3) is based on a marketing framework proposed by Belch, Belch, Kerr and Powell (2012).

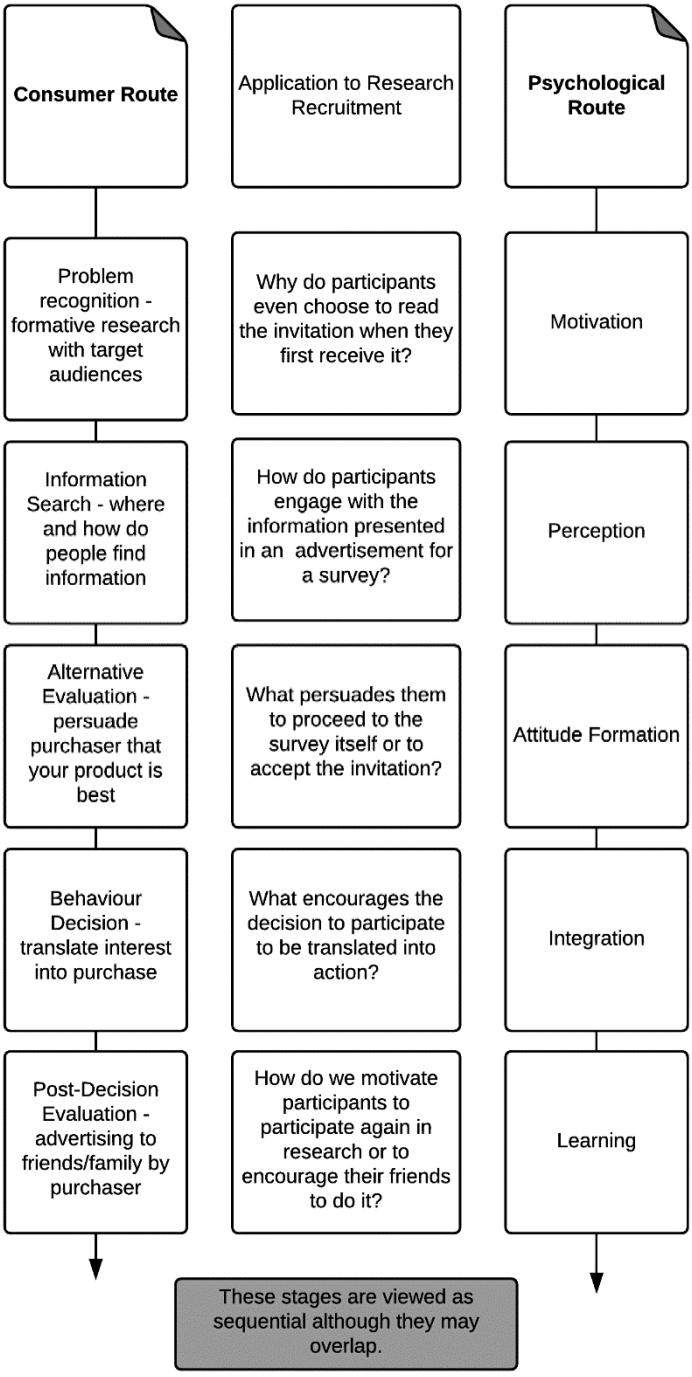


Figure 4.3 Conceptual framework based on Belch, Belch, Kerr and Powell (2012): Source (Howcutt et al., 2017)

The Marketing Mix, employed in previous studies, shows how to create a mutual exchange between researcher and participant. However, the framework in Figure 4.3 conceptualises recruitment as a decision which occurs over a series of stages (c.f. Furse and Stewart, 1984), allowing for exploration

of the period before contact between researcher and participant. As noted above and in Chapter 3 (Section 3.4), it is the focus on participants' motivations that is missing in other research to improve recruitment. The conceptual model also extends Fan and Yan (2010) conceptualisation of the survey research process (Figure 3.2) because it goes beyond the completion of a study to highlight how a positive participation experience could increase future recruitment by creating a social environment in which participation is accepted and encouraged. This extended focus on the decision is also absent from previous research on applying marketing to research recruitment.

Belch et al. (2012) proposed five stages of a consumer's decision-making process (the consumer and psychological routes in Figure 4.3). They have been applied to recruitment as described below:

Motivation – For the consumer, the first stage is to recognise a problem or function for the product to perform. There has been a move in commercial advertising to improve advertisements by finding out what task the customer-base needs a product to perform, instead of trying to segment messages so that every possible customer is persuaded that they need the product (c.f. the example of the milkshake company described above). As researchers, we may need to listen to our target population before planning a study so that we can shape research participation so that it is able to meet participants pre-existing goals while maintaining the rigor of the data collection. Current approaches often use remuneration, in the form of money or vouchers to meet a perceived need in the respondent. In other words, the remuneration creates the opportunity to fulfil a likely goal (to earn some money) while also reducing the costs of participation (the time, travel or other expense of participation). While this strategy does provide a practical exchange relationship between researcher and participant, other, more symbolic benefits may also be influential in the decision-making process (Bagozzi, 2013). For example, the chance to talk informally about health with someone who could provide advice, or to have a reason to meet with friends may be preferred to cash rewards. A knowledge of what people want to achieve when they are likely to encounter an advertisement for research will also offer a better understanding of the competition for attention (benchmark 6 above). Participation is a voluntary behaviour, so people can *choose* not to participate. Researchers' advertisements need to attract both attention and interest before any efforts to communicate messages about cost and benefit can affect the decision-making process.

Perception – According to the conceptual framework, the second stage is the information search. The difficulty for both retailers and researchers is that it is simple for an audience to ignore information that is not perceived to be relevant. Retailers and researchers must, therefore, increase the availability of the information to the senses so that the customer/participant is more likely to

attend for long enough that key messages are perceived. Researchers must once again understand current functions being performed by the target audiences so that crucial information is displayed in a place that it will not only be seen but also considered. For example, a poster which is near a water cooler is more likely to be read because the person has to be stationary in that place while they pour the water. An advertisement in a corridor may not be noticed to the same extent because people are passing by quickly, intent on reaching their next destination. It is then also imperative to consider how the information is interpreted when it has caught attention. Theories such as the Elaboration Likelihood Model (Petty and Cacioppo, 1986), described above propose that this information search is influenced by an individual's processing style but could also be changed as a result of a person's motivation or ability to think about facts and reasoned arguments. If the burden of research participation is low, in terms of time commitment or difficulty, or if the viewer wants something immediate to do to relieve boredom, the opportunity to make a quick decision may be preferred over a lengthy evaluation of evidence or information. The complex interplay between a person's cognition and current goals may mean that it is difficult to engage whole audiences with one approach. Once again, it is the in-depth insight derived from knowledge of the population's lifestyles and motivations that can show the researcher where (to reach the senses) and how (information style) to share messages about the research invitation.

Attitude formation – After the consumer has perceived the advertising for a product, they need to be persuaded that a purchase will perform the required function in their lives. As noted in the eight benchmarks for social marketing (benchmark 5), persuasion needs to understand the specific benefits of participation so that these can be emphasised in advertising. Similarly, the costs must also be known so that they can be reduced. Appraisal of benefit and costs may be tied to changing influences. Barden terms this changeability as 'a series of occasions' (2013, p. 64) because the same information could be presented on different occasions and a different decision made, according to the current functions that the individual wishes to perform. This changeability may explain why strategies, persuasive within one study, may not be effective in another. Therefore, as Galli et al. (2014) also suggest, constant monitoring of recruitment patterns and consultation with potential participants are needed to react dynamically to participants' needs.

Integration – Within this stage in the consumer's decision process, the consumer acts upon the initial interest, buying a product. In research, this is a critical stage where the participant moves from interest to contact with the researcher, and the research must also maintain sufficient engagement that the participant will complete any study tasks. Earlier the Theory of Planned Behaviour (Ajzen, 1985) was described as relevant to response behaviour because it includes

elements related to how an individual makes an initial decision that a behaviour (i.e. responding to a survey) is the right action. However, it is also relevant because it proposes that there is a stage between the initial choice to act and the action itself, which is the formation of an 'intention'. In the conceptual framework this is termed 'integration' because this is the stage where motivation and attitudes come together to form a response which is positive enough to lead to a behaviour (the effort to contact the researcher or to start the study). Even when the cost-benefit exchange has prompted a positive response to an advertisement, practical barriers can easily overcome less tangible benefits such as altruism. McCann and colleagues (McCann, Campbell and Entwistle, 2010) found that initial inclination to participate in a randomised controlled trial could be weakened by later considerations, particularly if the first perceived benefits were for others (altruism) but later costs of participation were to themselves. Once again, however, the researcher will need to gain insight about a population to understand what barriers to turning interest into contact may exist, so that they can be reduced as far as possible. The removal of potential burden or discomfort for respondents will be particularly valuable if the study cannot offer an immediate and personal reward for the participation, as is often the case in public health studies where the participant does not suffer from a problem that the study data could help to solve.

Learning – For the consumer, the final stage represents an evaluation of whether the product has been effective to perform the required task. For the research participant, this involves an appraisal of their participation experience. It is likely that this evaluation will include communication with others. Indeed, retailers rely on such peer advertising, as can be seen from advertising strategies employing social media networks (Nicholls, 2012). It may be useful for researchers to adopt similar approaches, since a research participant may know precisely the function that someone in their social networks would like to perform at a given time. Strategies could include forms of chain-referral sampling (snowball or respondent-driven sampling), or peer promotion of an advert, either by word of mouth or by reviews and sharing via social media platforms. Positive evaluations of participation experiences may also reduce the barriers created by the fear of research, or the low social value in certain communities placed upon helping official organisations. Peers may also be able to point out the benefits that potential participants may not have considered due to the unfamiliarity of participation, and which researchers did not include in advertisements because they did not know what would be relevant to their audience.

4.4.4 Ethical considerations of applying marketing

The application of marketing to increase the likelihood that more young women from underrepresented groups will agree to participate in a health survey could raise questions of ethics.

Social marketing has been criticised because it has targeted some groups more than others, has prompted change in groups already contemplating change rather than in hard to reach groups, and has employed fear appeals and incentives (Brenkert, 2002; Eagle, 2009). The application of marketing strategies has been ethically controversial for some because of associations with marketing in the commercial sector. Also, the integration of psychological theories, like social exchange, could be criticised for effectively using a person's default behaviours to create gain at a population level while limiting an individual's freedom (Rebonato, 2014).

The current application of marketing to behaviour is different to commercial uses of marketing. The focus is on developing a social exchange which is mutually beneficial both at a population level (in terms of improving the ability of data to reduce social inequality) and at an individual level by understanding more about what individual women wish to achieve through participation. In short, the focus is on changing the research so that it is more interesting and manageable for women in their busy lives because it fulfils pre-existing needs (c.f. Francis et al.'s (2007) strategies to make participation fit into existing routines). There is still a recognition that participation will be a burden in terms of time, convenience, and discomfort. However, social marketing promotes compromise as opposed to gain only for the marketer (Hastings, 2007). In targeting information, some groups have been excluded in other social marketing campaigns because of poorer literacy (Eagle, 2009), the proposed framework is different because it is being used to identify the best methods of presenting information in ways that will be accessible to a broader demographic. Some of the research discussed in this chapter and in Chapter 3, does explore the usefulness of rewards for participation. The use of remuneration (incentives) is problematic but it should be remembered here that, unlike in commercial transactions, the person issuing the reward is not directly benefitting from the exchange i.e. a retailer will profit from selling a product to a customer, however a charity or government agency funding research does not directly financially benefit from the exchange (Brenkert, 2002). Paying respondents for their time could be viewed as market exchange to coerce. However, in the case of women in underrepresented groups they may be ethically condoned because participation could incur costs in terms of childcare, travel or time away from other activities that could earn them money. Therefore, Dickert & Grady's (1999) explanation of incentives as fair wage and reimbursement rather than part of supply and demand is more relevant.

4.5 Chapter conclusion

Explanations of response behaviour have focused on self-perception and the cost-benefit exchange that participation might afford. Persuasion theories have added to knowledge about how to

increase recruitment by consideration of how information is presented. Yet there is insufficient evidence about what factors in young women's identity development, lifestyles and trust encourage or discourage of participation in a health survey. The application of marketing conceptual framework contributes new knowledge by directing researchers to consider the period before initial contact and after study completion. It also allows a more holistic approach to increasing survey response by encouraging greater insights about the responses of specific population groups. In this way, it may be possible to find out why costs and benefits exist for young women from lower SES categories, and not for others to tackle the differential non-response described in Chapter 2.

Chapter 5 Methodology and methods

5.1 Introduction

The previous chapters have documented the underrepresentation of young women with lower socioeconomic status (SES) in cross-sectional data on health behaviours. A consequence of this underrepresentation is that large-scale data about their health and health behaviours is less available for women who could be at increased risk of poor outcomes due to the social determinants of health to which they are exposed. Statistical methods to improve the representativeness of the data are possible but rely on assumptions which may be invalid. Therefore, a better approach is to improve the engagement of a representative demographic in cross-sectional studies such as health surveys.

However, it has proved difficult to increase the participation of young women from lower socioeconomic status (SES) categories in health surveys. Little research has been undertaken to establish what might encourage or discourage this sector of the population to participate in such studies. Much of the research presented in the previous chapters has been quantitative and has contributed information about what strategies of questionnaire design are likely to increase recruitment and possible theoretical explanations for response behaviour. Still, what is missing is an understanding of the current factors which are likely to encourage or discourage survey participation by young women from lower SES categories. Consequently, a qualitative research design has been selected to refine the applicability of the conceptual framework, proposed in the last chapter, to the recruitment of young women from lower SES categories to UK health surveys. Such a design has been selected over quantitative methods to facilitate an exploration of how young women perceive research participation and which factors are likely to encourage them to take part in a survey study about their health.

This chapter opens with a discussion of the philosophical positions informing the design of the research. A summary of the overall structure of the two studies follows, before the methods employed for each study in turn are described. The aim of Study 1 was to apply the conceptual framework (Figure 4.3 in Chapter 4) to explore the responses to recruitment materials and questionnaires about health, health knowledge and health behaviours, using research recruitment materials provided fur discussion for the first time during data collection. Study 2 aimed to explore these responses using the actual experience of receiving a health questionnaire survey in the post.

5.2 Philosophical positions adopted in the research

5.2.1 Ontological position

Ontology refers to the belief about what makes up reality, what exists and how the different components of reality interact (Blaikie, 2009). My intention in conducting this research was to understand the subjective responses and experience of participants when invited to take part in a health survey. Consequently, I have taken a constructivist ontological position to explore the data from the participants' perspectives. There are many 'realities', and each individual reports what is true to their experience, which is their own reality.

5.2.2 Epistemological position

Epistemology describes theories of knowledge. It concerns the nature of knowledge and provides a rationale for judging the value and legitimacy of knowledge and evidence(Blaikie, 2011). In so doing epistemology addresses the 'relationship between the knower or would-be knower, and what can be known' (Guba and Lincoln 1994, p.108). In this research, I adopted an interpretivist approach, making the assumption that participants' knowledge is constructed through interactions with other people and the social and physical environment. This position is in contrast to the evidence presented in the earlier review chapters in which positivist stance has been adopted to establish causal explanations based on empirical research.

5.3 Overall design of the primary data collection

Following this positioning of the research, the methods used are predominantly qualitative. As demonstrated by the different types of data and research presented in Chapters 2, 3 and 4, previous attempts to understand survey response have taken three directions:

- evidence about which sociodemographic groups are associated with lower survey response,
- evidence about changes to the design of survey invitations, design and distribution which are associated with increased response,
- evidence of cognitive processes which could influence responses to an invitation to take part in a survey study.

Each of these three directions lends itself to quantitative methods. In contrast, the aim of the primary data collection in this thesis is to understand and describe what encourages and discourages young women from lower SES categories to take part in UK health surveys about their health, health knowledge and health behaviours so that they provide responses and return these to the researchers. Therefore, a qualitative research design is now needed to give access to the

context-specific meanings to provide a richer understanding of participants' responses to being invited to take part in a health survey, than can be derived from a questionnaire alone.

Study 1 employed focus groups and Study 2 used two questionnaires followed by semi-structured interview methods. The first questionnaire in Study 2 was to provide a real experience of doing a health survey and the second allowed a larger number of women to communicate their responses to being invited to a health questionnaire and to inform the later interviews. The flow chart in Figure 5.1 shows how the data collection was split into these two studies, each with a stated aim. The first study had two phases of data collection and the second had three phases.

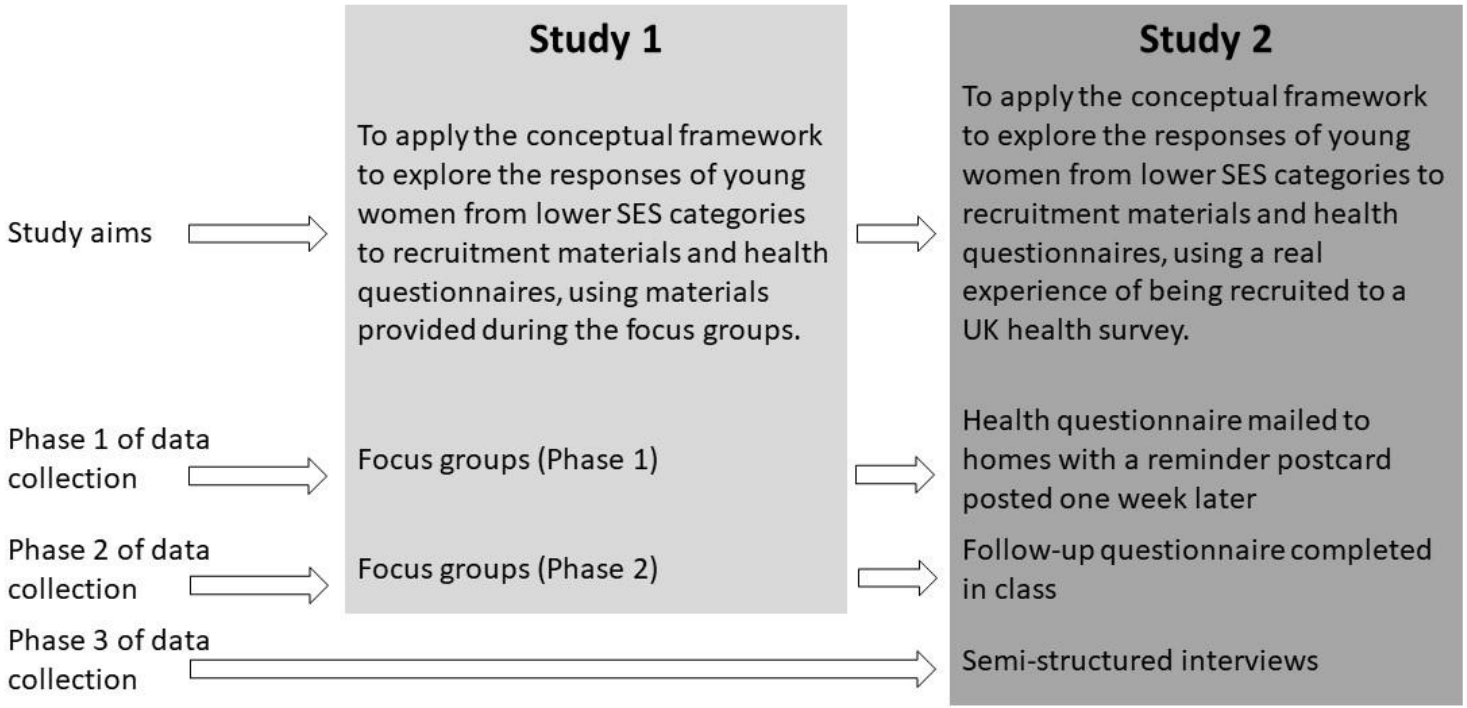


Figure 5.1 The aims and phases of data collection for Study 1 and Study 2

As can be seen from Figure 5.1, the aims of each of the two studies were different. In Study 1, the questions asked in both phases of the focus groups required the participants to imagine how they would respond to an invitation to take part in a health survey. Therefore, the aim of Study 2 was to provide richer information about young women's beliefs and decision-making by providing an authentic experience of actually being invited to complete a health survey.

5.4 Study 1

This study has two phases of data collection using focus groups. The two phases of Study 1 addressed the same research question, but it was not possible to cover all of the topics for discussion in one set of focus groups. Therefore, I split the conceptual framework (Figure 4.3) into two phases of focus groups. In the first phase, I grouped the 'motivation' and 'perception' stages of the conceptual framework since they both referred to the period of recruitment before potential participants had made any commitment to the proposed research. In the second phase, I grouped the final three stages of the conceptual framework (attitude formation, integration and learning) because these three stages represented the period after some commitment to the study had been shown.

5.4.1. Participants

The inclusion criteria for the first phase of study one were gender (female only), age (between 16 and 34 years) and with educational achievement of school-level qualifications levels 2 and 3 equivalents (secondary school qualifications). Women who had achieved educational level 4 or higher were excluded. According to the United Nation's Convention on the Rights of the Child (UNICEF, 2019) people aged up to 18 years could be classed as children. However, the majority of population surveys and cohort studies in Chapter 2, included participants aged 16 years and over in their adult surveys. Therefore, these younger adults are included in this thesis and classed as women rather than children. Highest educational level was used as a proxy for socioeconomic status (Section 2.2 for a discussion of this decision).

The inclusion criteria for the second phase of Study 1 were the same except for the age range which was narrowed to 16 to 24 years. The analysis of the data from the first phase of focus groups supported the need for more in-depth focus on a narrow demographic. This younger age group was selected since they were particularly underrepresented in the analysis outlined in Chapter 2. This younger group is also particularly important to engage in health research to improve pre-conception health, a period which has been highlighted recently as a reachable, teachable moment in the lifecourse for both individual and community level health promotion. See Section 7.1 for a fuller discussion of the rationale to change the eligibility criteria after the first phase of focus groups.

5.4.2 Recruitment

The recruitment strategy involved two stages: the engagement of organisations where it would be possible to meet young women and recruitment of eligible young women within each organisation.

5.4.2.1 Engagement of organisations

I approached Further Education Colleges, small businesses and Local Authority Children's Centres because these were places frequented by young women and offered accessible venues for the focus groups.

One Further Education college volunteered support for the first phase of focus groups. Managers at this college also contacted other local colleges leading to five colleges that hosted focus groups for the second phase. These were based in Buckinghamshire, Berkshire and Oxfordshire and represented a range of locations (city, town and rural settings). Each supporting Further Education college was offered two free lectures to thank them for their help in hosting the focus groups.

Fifteen local businesses were approached for the first phase of data collection and two volunteered support. A national law firm shared the study information with all female staff in junior support roles. One group of women came from a disability charity. All female staff met the eligibility criteria and were invited to the study.

Two Children's Centres agreed to host focus groups for the first phase of data collection. However, the group from only one of these was included in the analysis because it emerged that some members of that focus group did not meet the eligibility criteria. The centres also provided childcare. Referral by a colleague at Oxford Brookes University gained me access to an evening social group made up of women who had met at a Children's Centre but had continued to meet in a member's home. Two mothers in this group offered to share participant information sheets and posters with friends. A further focus group was organised by these two participants and held at the same home.

5.4.2.2 Recruitment of individuals

The review of literature presented in previous chapters related to recruitment to survey studies. It was necessary to draw on literature on effective strategies to recruit to focus group research since a different method, within a distinct research paradigm was being used for the data collection. Common recommendations in the literature suggested the importance of employing strategies to invite women in ways which would respect their interests and needs of both individuals and organisations which could control access to them. The strategies which have been applied in the current study are summarised in Table 5.1.

Table 5.1 Recruitment strategies for focus groups suggested by existing literature and applications to the current study

Recruitment strategy from literature on recruitment to focus groups for health research	**Application to the current study**
Recognise that topic interest may not be sufficient to recruit; stress other reasons for participation (MacDougall and Fudge, 2001; Dyas *et al.*, 2009)	Messages in the participant information about helping women and being a woman, whose ideas count; remuneration offered and the opportunity to leave a less enjoyable activity (e.g. tutorial session) to participate in the study.
Follow up interest quickly and personally (MacDougall and Fudge, 2001; Krueger and Casey, 2014)	Emails and SMS messages sent to people who had volunteered within 24 hours and again on the day before the focus group.
Speak to 'experts' who know potential participants before recruitment (Aroian, Katz and Kulwicki, 2006; Dyas *et al.*, 2009)	Researcher spoke to a manager of Children's Centre (who was herself eligible for the study) and with pastoral tutors at one FE College (one of whom was eligible for the study) to check the study documentation and strategy.
Posters in the environment to increase awareness of the study (Wilson and Orians, 2005; Dyas *et al.*, 2009)	Posters were displayed in organisations prior to personal contact by researcher or managers.
'Cold calling' (uninvited contact via telephone or email) should not be used (Wilson and Orians, 2005)	Personal invitation by someone known to the participants was made first and then the researcher made contact.
Tailor approaches and focus group venue to fit the needs of different sampling frames (Wilson and Orians, 2005; Dyas *et al.*, 2009)	Contact was made using face-to-face meetings or email as required for the host organisation. The location of the focus groups was chosen to allow easy access to fit into participants' lifestyles and childcare as needed.

5.4.2.3 Sampling strategy

The organisations recruited to the study fell into three categories: education, workplaces and meeting places for mothers, it seemed that the sampling strategy had created 3 samples. I decided to use this segmentation to explore where there were similarities and differences

between groups since the Social Marketing Benchmarks (National Social Marketing Centre, 2016) maintain that a 'one size fits all' approach is unlikely to be effective to engage everyone within a population (Benchmark 7 , Table 4.1). The Social Marketing Benchmarks specify that segmentation should be based on a range of data including evidence of differences in behaviour; segmentation should not rely on geographical or demographic data alone. A review of data from national surveys and commercial data sources was conducted (Kantar, 2013; WOOt! Media, 2013; Department of Media Culture and Sport, 2014; Ofcom, 2014; Office for National Statistics, 2014). This review showed that there was a difference in how younger adults accessed information, and used time and money compared to older adults but also that the 16 to 34-year age group was heterogenous. However, a limitation of the data sources was that the age group was broken down into 10-year age bands, which reduced the ability to fully explore differences in the age group to inform the segmentation for the current study. One exception was a marketing study by wOOt! Media in which the company investigated how young adults, aged 16 to 34 years, were spending time and money because marketers were finding this age group challenging to engage with advertising campaigns. The marketing company reviewed purchasing data from over 1000 UK young adults (both male and female). Of this initial sample 18 young adults were recruited as peer-researchers to record the advertising that they encountered in everyday life. These 18 young adults also set up social media accounts to collect ethnographic data about reasons for purchases and responses to advertisements from their social networks. The availability of ethnographic data strengthened the usefulness of the wOOt! Media work for evaluating the similarities and differences in the data since ethnographic data is viewed as particularly useful in the Social Marketing Benchmarks (National Social Marketing Centre, 2016). The *wOOt! Media* (2013) findings suggested that the time and resource use, and priorities of adults aged 16 to 34 years differ according to transitions through three key life stages, as outlined in Table 5.2

Table 5.2 Descriptions of the three life stage categories proposed by wOOt! Media (2013)

wOOt! Media life stage category	**Description of life stage**
'All about Me'	People who are single and without children, often living with family. This group has little responsibility. Purchases reflect that personal interests such as music or sport have priority.
'All about Us'	People who are working and studying but do not have children. They may be cohabiting or living in shared accommodation. This group is moving into independence financially. Purchasing suggests that the priority is spending time with others as more money is spent on social activities such as drinking and eating out.
'All about Them'	This group typically has children and may be working in addition to their caring responsibilities. In this group, purchasing behaviour shows a greater emphasis on the needs of others and also on the desire to establish a home.

The organisations who had volunteered to support the recruitment and focus groups for this study, seemed to mirror these categories, which lent support for the use of the different types of organisation to segment the focus groups. The inclusion of students in further education (FE) fit with wOOt! Media's 'All about Me' category because they were in education and typically living at home with parents. Unlike schools, however, FE colleges provide predominantly vocational courses rather than preparation for Higher Education and could therefore, be more likely to offer the young women career pathways from lower SES categories (Association of Colleges, 2017; Langford, Willmott and Fletcher, 2019). The sampling from businesses reflected the 'All about Us' category in so far as this group was becoming financially independent as they were in work. Finally, the Local Children's Centres (community health and social groups for mothers of young children in the UK) were able to reach mothers as per the 'All about Them' lifestage category.

5.4.3 Data collection for Study 1

5.4.3.1 Rationale for the use of focus groups in Study 1

Morgan defines focus groups as:

> *A research technique that collects data through group interaction on a topic determined by the researcher.* (Morgan, 1996, p. 130)

Focus groups were initially preferred over individual interviews to suit the population under study. It is a method which has previously been used with young women to explore recruitment to quantitative surveys because it enabled the researchers to gain the young women's beliefs about how to recruit them to health surveys from their insider perspective (Tavener *et al.*, 2016).

Focus groups were also selected to empower participants to explore their ideas more freely because the participants are in the majority (Wilkinson, 1999). Such empowerment of the participants was particularly important since the focus groups with the students were held in a place where older adults typically hold authority, even though the ethos of Further Education is to recognise the emergent adulthood of the students (Langford, Willmott and Fletcher, 2019). Bosco and Herman (2010) further argue that focus groups reduce the distance between researcher and participant because they allow the research to be made between all actors in the group. This reduced distance was important because it enabled the research to become more participatory and consultative than other methods such as interviews (Bagnoli and Clark, 2010; Bosco and Herman, 2010). Furthermore, focus groups are particularly appropriate for research with groups of women from lower SES categories (Madriz, 1998). The sharing of ideas within the group can enable women to feel sufficiently validated that the group context can foster self-disclosure, important when they perceive their views to be unimportant or unique to them. It should be noted that other researchers working in Further Education in the UK have also selected the focus group method for this specific context. For example, Langford et al. (2019) chose focus groups as they believed that they would be able to reach larger number of students because students would attend as part of friendship or tutorial groups.

The interaction between group members was not only needed to support the expression of ideas but also to provide insights which would be more difficult in a one-to-one conversation between researcher and a participant. Thoughts and experiences, which may be otherwise implicit or inferred are more likely to be verbalised in a group discussion, to clarify ideas for the benefit of other group members (Morgan 1997). Group responses to the words of one participant may also reveal the range of opinions within a group, and this is important in understanding shared and idiosyncratic aspects of the research process. A further benefit of focus groups, is the ability to observe how individuals talk to those around them about the topic under discussion (Kitzinger, 1994).

Despite the value of focus groups for working with young women, there are certain difficulties with using this method. There is a danger that the focus group discussions will

not replicate young women's everyday talk with other women when deciding to take part in a research study. An argument against this position is that the aim of the focus groups is not to replicate real life but to access a range of opinions which would not be voiced without the artificial focus of the discussions (Smithson, 2000). Furthermore, focus groups may only reflect the dominant voice in the group (Smithson, 2000). It is debated whether it is helpful to use group members who know each other outside of the research (Rabiee, 2004). Here I decided to use the groups of women who were acquainted to reduce the heterogeneity of opinion so that the collective voice would be more likely to reflect that of the individuals (Krueger and Casey, 2014). At the same time it is more likely that unauthentic views would be challenged by other group members, since they knew each other (Kitzinger, 1994). Finally, in choosing to use the focus group as the unit of analysis, the findings will lose some of the variation in opinion which could exist in the groups. This is made even more problematic by grouping multiple groups under other headings such as 'college students', 'women in work' or 'mothers' (see Section 5.4.4). To limit the impact of this analytical decision, a greater number of quotations than is often seen in qualitative reporting have been provided to illustrate the different voices which supported a shared finding.

5.4.3.2 Consultation work to develop the recruitment materials

The materials for recruitment to the first phase of focus groups were developed in consultation with the leader of a local Children's Centre to ensure that the wording was sensitive, accessible, and not intimidating. The appearance of the materials was also checked by two Further Education tutors (one of whom was eligible for group participation). After this consultation, the text was reduced; bright colours and images were used; and the materials were not put into envelopes which would give the appearance of a mailing by an official organisation such as the tax office or social services. The materials for the second phase of focus groups were similar to the first, since the first phase of focus groups had indicated that the design of the posters and reduced text and images in the information sheets were engaging to the target population. Appendices 5.1 to 5.4 provide images of the study materials agreed after this consultation.

5.4.3.3 Development of the topic guides for the focus groups

The aim of the focus groups was to use the conceptual framework to explore the responses of young women from lower SES categories to recruitment materials and health questionnaires, using materials presented for the first time during the focus groups (Figure 5.1). Most of the host organizations stipulated that the focus groups needed to be limited in length to one hour. In the colleges this was due to timetabling constraints; for working and mothers' groups the limit was necessary because of the women's travel and childcare arrangements. As noted in section 5.4, I split the conceptual framework (Figure 4.3) into two phases of focus groups.

In the first phase, I grouped the 'motivation' and 'perception' stages of the conceptual framework. The first phase of focus groups explored the following questions:

- How would the young women define themselves?
- What activities would participants choose to devote their time to?
- What were their understanding of what researchers and research participants are like?
- What were their responses to the recruitment materials and health questionnaires and how would they improve them?

The second phase of focus groups grouped the 'attitude formation', 'integration' and 'learning' stages of the conceptual framework. Discussions focused on the following questions:

- What would young women's responses be to an unexpected invitation to complete a health survey on their social media timeline?
- What were the participants' views on how to present information in a participation information sheet, survey consent and survey (online and paper versions)?
- What were their expectations about what topics would appear in a health survey and their responses to the phrasing of questions?
- Which methods would participants use to share an invitation to participate within their social networks and who would they invite?

The questions are linked with a series of activities which were designed to facilitate discussion, listed in Table 5.3. Appendix 5.5 shows how the focus group schedule was developed in relation to findings from previous research and data presented in Chapters 3 and 4. The topics were explored through a mix of open-ended questions and activities. While materials for the tasks within the groups were developed from findings in previous literature, the tasks were conversation-starters only and not a quasi-experimental manipulation of variables. Moreover, the activities were used to maintain interest (Colucci, 2007). The activities are described in Table 5.3 and the complete focus group guides may be found in Appendix 5.12 and 5.13.

Table 5.3 Activity-oriented tasks used to initiate discussion in each stage of the conceptual framework

Phase of Focus Groups	**Conceptual framework stage**	**Activity**

1	Motivation	• Only open-ended questions were used to explore this stage of the conceptual framework (Questions 1-3)
	Perception	• Ranking of four posters (Appendix 5.6) and two videos (Appendix 5.7) in terms of attractiveness and participants' willingness to look at the study advertisement to find out more information about participation (Question 4)
2	Attitude formation	• Selection of emojis to describe emotional responses to a mock Facebook advertisement (Appendix 5.8 and 5.9) (Question 5) • Identification of features of hard copy and online participant information for fictitious health studies which would encourage or discourage participation (Appendix 5.10). Participants used blue stickers to indicate 'bad' features and green stickers for 'good' features (Question 6) • Creation of a list of topics (on cards) which participants would expect to appear in a health survey (Question 6) • Ranking of the above list in terms of acceptability to participants (Question 6)
	Integration	• Paired then whole group discussion of a hard copy survey (with official return envelope) and an online survey hosted on the Qualtrics survey platform (Qualtrics, 2014). Images of these materials can be found in Appendix 5.11. (Question 7)
	Learning	• Participants selected three counters from three categories of person within the participants' social networks ('friends', 'family' and 'people you know but who aren't friends'). The selection of counters was to indicate which groups of people with which the women would share an invitation to take part in a study that they themselves had completed. The counters could be from any number of the categories of people in the participants' social networks. (Question 8)

5.4.3.4 Materials used in the activities in phase one of focus groups

Four posters and two videos were used in the first phase of focus groups. The four posters (Figure 5.2) included different features that literature suggested would be useful in

persuasion to allow participants to give their views on what engaged them and what created barriers to their reading of the information. The use of literature to inform the design of the materials was also to ensure that the materials were similar to those which researchers might produce after a search of the literature to improve the design.

Poster 1



Poster 2



Poster 3



Poster 4



Figure 5.2 Images of posters presented to participants during the first phase of focus groups (full size versions are in Appendix 5.6)

The style of the text content was varied. Facts and figures were communicated in posters 1 and 2; quotations from people (to create story-based appeals) were a feature of poster 3 and there was little information about the study in the final poster. These variations were to satisfy different information processing styles linked to the Elaboration Likelihood Model discussed in Chapter 4 (Williams-Piehota *et al.*, 2003). Research described in Chapter 4 (Reingen and Kernan, 1977; Hansen, 1980) suggested increasing the perception of potential participants as people who would take part in a study. Moreover, Hure, Smith, and Collins (2008) argued that professionally designed logos had been helpful in their recruitment because they created the sense that the research was important enough to have its own branding. Images were also different in the posters, with pictures representing a young woman who could be viewed as from a similar age range to participants (posters 2 and 3). Poster 1 included a group image, and a logo was employed in poster 4 in place of images of people. Evidence aggregated by Edwards et al. (2009) also suggested that the use of official logos would increase response. Therefore, Oxford Brookes University logos were included in three of the four posters (posters 1-3), but it was omitted on poster 4 to explore whether no organisational logo was preferred. Colour was also varied between the posters. A qualitative study with young adults had found that primary colours, such as those used in the UK government's 'Change 4 Life' campaign, could signal that young children were the intended audience, thereby reducing the attention and interest of people who perceived themselves to be adults (Newcastle Link, 2012). Consequently, a bright green and red (poster 3) was used for one poster while more muted colours appeared in the other posters. Lastly small additions were made to posters to provide more scope for the conversations. In poster 4 there was a comment that other people had participated in the study. This addition was to promote a greater sense of security and also the impression that participation was socially acceptable, since social norms have been shown to be influential in recruitment to research (Frew *et al.*, 2014). Poster 4 also included an image of the monetary incentive following the usefulness of this identified in the systematic review presented in Chapter 3.

In addition to the four posters, focus group participants were also shown two videos; still images to illustrate the styles of the video are provided in Figure 5.3. The participants were invited to discuss whether they were preferred to the posters in the previous activity. These were selected to explore whether this communication mode would be more appealing to young women. Research within the field of human resources recruitment has shown that regardless of information processing style, people would respond more positively to a video in which the actor was using warm expressions, good eye contact and smiling (Kraichy and Chapman, 2014). A search of YouTube videos (search terms 'participant and research'),

performed in September 2015, demonstrated that many videos used by healthcare organisations to recruit to health research were using monologues/dialogues which are serious and often in unfamiliar clinical settings. Therefore, the actress replicated the style of other recruitment videos with a plain background and by talking in a serious way about her participation experience, with little eye contact. The second video showed the same actress in her home, drinking coffee and talking in a more animated way, with sustained eye contact. The differences in style were to stimulate conversation about which style was preferred and why. The stills below (Figure 5.3) demonstrate the difference in presentation. The script was broadly the same in each video but delivered in a way which fitted the style of the background.

Video 1 stills: Plain background and less animation and eye contact



Video 2 stills: Non-clinical background and sustained animation and eye contact



Figure 5.3 Video stills of the two recruitment videos made with an actor

Participants were asked to rank all posters in order of preference before the videos were introduced (to break up the viewing time). There followed a semi-structured discussion about the reasons for the ranking of all of the materials.

5.4.3.5 Materials used in the activities in phase two of focus groups

There were five activities in the second phase of focus groups (Table 5.3). The activities were piloted with two groups of FE college students and the amount of reading required was

reduced following their feedback. In the first task participants responded to a mock Facebook advertisement for a health study (Appendix 5.8). Emoji images were selected because they are commonly used to represent emotion in online communication, fitting the question about how the participants would respond if they saw the advertisement on their Facebook Timeline. There are cultural differences in the use and interpretation of some emojis (SwiftKey, 2015); consequently, emoji faces were used to provide a starting point for the conversation rather than more abstract symbols (Appendix 5.9). The materials used in the second task are reproduced in Appendix 5.10. These were the Participant Information Sheet used for the current study and also an online consent based on a survey used in an earlier study (Foxcroft *et al.*, 2014). I also used the survey from that study to create the stimuli for the exploration of the integration phase (Appendix 5.11). This choice was because the survey had originally been designed for 18-34-year-olds and included questions about a range of lifestyle behaviours (drinking, smoking, physical activity and fruit/vegetable consumption). To introduce online completion methods to the young women, I reproduced the survey in Qualtrics (Qualtrics, 2014) and showed the consent and questions on a 7-inch tablet. Counters in the final task represented different groups of people for the discussion about the social networks that women would use when sharing advertisements for research.

5.4.3.6 Conduct of the focus groups

Following Morgan's advice (1997, p. 43) 6-10 participants were recruited for each of the first three focus groups in phase one of data collection. However, these plans resulted in a student group that was too large to allow sufficient time for everyone to speak within the available time. Therefore, I aimed thereafter to recruit 4-6 women for each group.

A digital audio recorder was used to record the focus groups verbatim. An assistant moderator was present, whenever possible, to take notes to facilitate observation and note-taking for transcription. Where no assistant was present, I took short notes during the discussions, and after every group, I created fieldnotes to capture both my responses to the reflexivity questions (see below) and also my impressions of group dynamics and the responses to the discussion topics.

5.4.4 Data analyses

5.4.4.1 Transcription

All focus groups were transcribed by me using InqScribe (Inquirium, 2013). I followed Gale et al.'s suggestions regarding transcription (Gale *et al.*, 2013) prioritising verbatim content over codes to indicate features of speech such as pauses or stresses.

5.4.4.2 Framework analysis

Framework analysis was devised by Ritchie and Spencer in the late 1980s and is associated with social policy research and the development of health interventions (Ritchie and Spencer, 1994). This analytical approach employs a system of synthesising which creates a balance

between information reduction and links to the original data. Other methods of organising thematic analysis can sometimes fail because they break up the data so much that the overall flow is lost (Smith and Firth, 2011). Five stages are commonly described for the framework analysis approach. These are summarised in Figure 5.4 (Ritchie and Spencer, 1994; Spencer *et al.*, 2003; Rabiee, 2004).

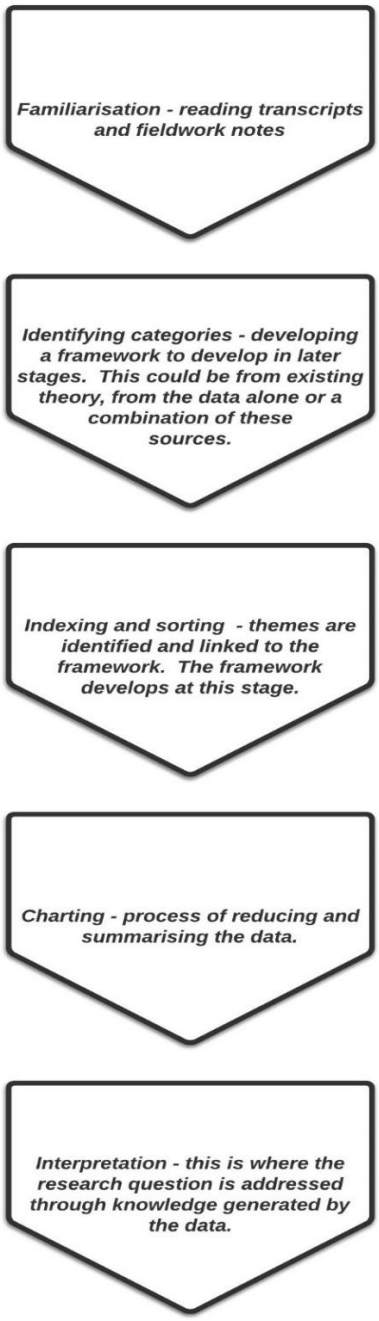


Figure 5.4 Summary of processes in framework analysis

Framework analysis and Braun and Clarke's reflective thematic analysis (2006) are the two commonly adopted versions of a thematic analysis. While there are commonalities between them, they have a different emphasis on the organisation and development of a thematic

interpretation of the data. Table 5.4 summarises the stages within each approach to illustrate the similarities and differences between the two types of thematic analysis.

Table 5.4 Stages in two types of thematic analysis

Thematic analysis	**Framework analysis**
Familiarizing yourself with your data	Familiarizing yourself with the data
Generating initial codes	Identifying categories
Searching for themes	Indexing and sorting
Reviewing themes	Charting
Defining and naming themes	Interpretation
Producing a report	Producing a report

It can be seen from the table that both analytical approaches start with a familiarisation with the data. This entails reading and hearing the data multiple times. This stage may also include the transcription (Braun and Clarke 2006). Both approaches also end in a more interpretive stage where the initial codes are presented, the analyst working with their own values and assumptions. Braun and Clarke (2016) critique the use of thematic analysis to simply identify themes as if the analyst only needs to notice what is 'emerging' from the data; instead they call for an 'organic' approach (p. 741) where the analyst makes sense of the patterns in the data, while reflecting on the fact that their interpretations arise from their own experiences as well as those of the participants. In the same way framework analysis, in the interpretation stage, requires the researcher to step back from the individual codes and extracts of data to look at the messages which address the research question (Spencer *et al.*, 2003). Within this process Spencer et al. (2003) argue that defining categories or themes is an essential part which points to another similarity between the two thematic analysis approaches. However, it is the third and fourth stages of each analytical process which highlights the different focus of each. In Braun and Clarke's thematic analysis, the emphasis is on the development, definition and checking of themes, while in framework analysis the focus is on organising the data so that patterns in the data can be explored across and within groups. Indeed, Braun and Clarke maintain that thematic analysis only 'minimally' organises data (2006, p.79). Therefore, while the common endpoint of each approach is 'thematising meanings' (Holloway and Todres, 2003, p. 347) the amount of organisation and the emphasis on patterns in the data are different.

5.4.4.3 The application of framework analysis in Study 1

Framework analysis was, therefore, chosen as the method for analysing the qualitative data because it allowed the organisation of the data to be initially shaped by the existing theory underpinning the conceptual recruitment framework outlined in Chapter 4. At the same time new knowledge coming from the focus groups and interviews could also point to responses which were relevant to answering the research question. Framework was also preferred over other forms of thematic analysis, since it was important to see the patterns in the data, particularly in the first phase of focus groups where it was possible to group the participants into subgroups (lifestage categories). The matrices in framework analysis (see Table 5.5 for an example), facilitated the identification of patterns between and within subgroups and individual focus groups or interviews.

The analysis was conducted as described by Gale et al. (2013) drawing upon the worked example supplied by the authors. One working matrix was developed for each of the five stages of the conceptual framework outlined in Chapter 4 (Figure 4.3). Each focus group was a case in the matrix. The choice of using each focus group as the unit of analysis was challenging because there were some differences between the life stages in the first phase of focus groups, yet some women, notably in the women in work and mothers' groups, drew on multiple identities and sometimes spoke in ways which were more similar to other life stages. Therefore, I consulted a framework analysis research group, and it was decided that the group generation of data should be prioritised over the analysis of individuals. It was noted in the data that the women often contributed a few words each and passed the conversation between them, completing sentences or ideas jointly. My field notes also identified the importance of silent members of the groups who would sometimes encourage others to speak with nods or smiles. Splitting these groups into individuals for the analysis would have lost this group generation of information.

Framework analysis also offers a hierarchy of analysis in which the researcher can move sequentially from data management to descriptive analysis, and then to explanatory analysis (Spencer *et al.*, 2003; Swallow *et al.*, 2011). I chose to aim for a descriptive analysis in this research. This decision was because objective 2 of the thesis was to identify and describe participants' responses with a view to identifying ways to recruit more young women from lower SES categories to health surveys. Therefore, the analyses are presented as descriptions followed by the implications of the findings for designing future health survey studies. This is not to say that there is no interrogation of the data to develop higher-order descriptions of factors related to complex motivations and perceptions. However, it was not necessary to abstract the findings to create an overarching theory to explain the participants' meanings or behaviours.

To ascertain the credibility and dependability of the codes derived from the previous literature, a member of the supervisory team independently coded a sample of four of the nine groups involved in the first phase and four of the eight groups in the second phase. We both used the codes identified before the analysis and also added new codes as relevant to the data. We then compared the codes we had generated. We disagreed in the case of the naming (rather than the application) of two of the codes. The first of these was 'activities in free time' (see Appendix 5.14 for all of the codes created in the initial data management). The supervisor had developed a code called 'activities for leisure time'. We looked at all of the extracts associated with the code and recognised that not all of the participants' statements related to leisure although we both used the code in the same way; therefore, the original code name was preserved. I had originally named a code 'fear' but following review of all of the extracts in the initial matrix, we reached a consensus that 'fear' was too strong an adjective to capture all of the feelings expressed so it was re-named 'safety and trust'. The revised matrices were applied to the data by electronically linking highlighted sections of the transcripts to short summaries in the matrices. I was concerned that partitioning and reducing the data in the way suggested by Gale et al. meant that I could move too far away from how participants talked about their decision to participate. At the same time, I needed to abstract meanings rather than simply providing an account of individuals in the focus groups. Therefore, I did depart from their method in one respect: the summaries were short, direct quotations rather than an approximation of the participants' words (in-vivo codes). This decision was made to provide the essence of what participants said while staying close to how they communicated their ideas. At this point we also shared our analysis with a research group familiar with framework analysis, to help us to identify patterns in the data through discussion with people who were seeing the matrices for the first time. The same supervisor as before assessed the credibility and dependability of the coding in second phase of focus groups. She selected four transcripts for independent coding before comparison with my coding. There was little to add to the a priori framework since codes were broken down into sub-codes after interacting with the data multiple times (through hearing and reading the transcripts). Codes were not added. Therefore, there were no disagreements to resolve.

An extract of one of the analytical matrices is presented below to illustrate how I organised the data for the analysis, and an example of the attitude formation matrix is provided in Appendix 5.15. The 'Q' notation (see Table 5.5), after some fragments, refers to when one summary links to multiple quotations.

Table 5.5 Partial framework matrix for the 'Perception' stage of the conceptual framework (note that it is possible to scroll down to view more extracts within NVivo)

	A : Barriers to processing	B : Features that motivate processing
1 Occupation = Student	**Lack of attention** I feel like I probably wouldn't even look at it anyway. **Identity** it never really applies to me. But yeah, if it did I would do it. **Too much writing** Number 4. I feel that with the other ones, you have, if you saw it you might feel that if you stood to read it then you'd have to be stood there for a lot longer, but if you stood to read number 4, you'd get the information quickly and then carry on QQQ Bullet points - too much text Rather than waffling on about a load of percentages and stuff. **Too much time (video)** I don't know if I'd watch it the whole way through. **Colours** They don't complement each other. I don't like the green either. **Boredom** I think it's more attractive to us	**Group identity** ...quite a few people have already signed up already and so I would really go and sign myself up. They're girl colours. **Colours** They're girl colours. I just put bright colours, snappy and not a lot of writing. **Text** I would use Arial, I think I like that one. not a lot of writing. The space, is attractive rather than the other ones got loads of writing. Catchy And obviously you've got one picture in the middle, dead centre and then there's like hardly any information... there's information but there's not like loads like paragraphs. I think that the telephone and email should be at the front [holds up PIS]. Like you have the boxes and that are all breaking it up a bit rather than paragraphs. Not crowded

During the interpretation stage, I moved to a higher order of abstraction by writing the bold headings from the matrices and some extracts which appeared particularly influential into a large, hand-drawn mind map to help me to see connections and groupings of the extracts in each matrix. A heading was then created to summarise each group. For example, as it can be seen in Table 5.5, there were several references to design features such as colour and text in the posters. The information under the headings 'Too much writing', 'Text' and 'Colours in Table 5.5 was linked in the mind map and summarised as detected elements. A table was then created for each stage of the conceptual framework which allowed further grouping of these detected elements to allow further abstraction into key dimensions. These tables are provided in Chapter 6 and 7 and the detected elements and key dimensions are illustrated using descriptive accounts with supporting extracts from the focus groups.

5.4.4.4 Evaluating the credibility, dependability, and confirmability of the framework analysis in Study 1

According to Noble and Smith (2015), one of the central critiques of qualitative analysis is the lack of transparency and measures to ensure the trustworthiness of the analysis. A further challenge for framework analysis is that there is the potential for tension between the

interpretivist epistemology and the use of theory in the analysis. Collins and Stockton (2018) argue that an equal and thorough use of both a qualitative methodological rigor and focus on theory can be helpful to provide a comprehensive answer to a research question. Nevertheless, prioritising inductive methodology over theory can result in a mechanistic use of the qualitative method without theory development; prioritising theory over the inductive methodology can lead to the discussion of theory which has not been sufficiently informed by the data.

Therefore, I applied the Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines (Tong, Sainsbury and Craig, 2007) to ensure that I was recording the research process in sufficient detail to provide transparency about the influence of theory, data and method, what Lincoln and Guba (1985) term an 'inquiry audit'. Following this last source, I also sought to establish credibility (akin to quantitative validity), dependability (consistency of analysis) and confirmability (the degree to which respondents, not the researcher, are shaping the data and interpretations).

To improve the quality of the data collection, I conducted three focus groups for each life stage category in the first phase and eight groups in the second phase of data collection in this study. This number of groups was to increase the likelihood that a rich representation of beliefs would be gained but also to improve the credibility of the findings through persistent observation and prolonged engagement (Lincoln and Guba, 1985).

The credibility of the sampling strategy was also checked. For the first phase of the data collection, I met with a member of the supervision team after five focus groups had taken place. She adopted the peer-debriefing role of a 'critical friend' (Lincoln and Guba, 1985) to challenge the credibility of my arguments regarding the decision to view underrepresented women as three distinct groups. She further checked the validity of this decision by independently reviewing a sample of transcripts. A similar procedure was adopted for the second phase. An independent researcher, experienced in qualitative research, checked the rationale for the sampling by taking the critical friend role and asking for me to justify my decision multiple times.

5.5 Study 2

The aim of study 2 was to further refine the applicability of the conceptual framework using the actual experience of being invited to complete a health survey with young women aged 16 to 24 years at Further Education colleges.

5.5.1 Consultation work for the recruitment of participants

Upon discussing the research with other researchers in the field, it was noted that a potential limitation to the data collection could have been the eligibility criteria in the Participant Information Sheet (PIS; Appendix 5.2). The criteria were expressed as 'Are you aged 16 to 34

and don't have a university degree'. This educational criterion created concern that this might have given the signal that the researcher did not see the participants as intelligent, impacting on the relations between me and the participants at the start of the focus groups. To check the likelihood of this concern, I conducted some consultation work with two groups of young women at a FE college in Buckinghamshire, comprising nine women in total. I checked the views of young women who would be eligible to the study in three ways:

1. With an unguided question to explain initial thoughts to the wording in the Participant Information sheet for who was needed for the study. The young women in this advisory group each wrote down their initial thoughts to the wording and then read these out to the group before discussing similarities and differences in opinion.
2. Participants in the advisory group were asked to rate their liking on a scale (0 for disliking the wording; 10 for loving the wording). They were asked for their reasons for the rating and methods to increase their chosen score.
3. The participants were specifically drawn to the difference between the positive wording of age and the negative wording of educational level and asked how they felt about the difference between the expression of the two criteria.

Other questions about the PIS were also asked to reduce the chance that the students were led in their responses because they saw that this question was particularly important. None of the women stated that they believed that the researcher did not respect them in terms of their intelligence or background, although one woman was concerned that the wording would lead women with lower self-esteem to feel targeted by researchers. In both groups the young women expressed the belief that it was important to talk to women without a degree because they could have extra pressures on their mental health relating to problems they faced, such as struggling to make a living. Both groups also believed that eligible women would have fewer opportunities to maintain good health. Some women in each of the two groups stated that they did not have either a positive or negative response to the wording used in the eligibility criteria. In response to the second question stated above, one group suggested that eligibility criteria should not be stated. Ineligible volunteers could simply be turned away. This same group further suggested that I should simply not highlight the education statement in a different colour to make it less obvious. The second group of young women believed that the wording of the eligibility criterion for education should be changed to 'who haven't gained a university degree'. This change was because the word 'don't' was perceived as aggressive and the language used by parents and tutors when they were criticizing the young women.

5.5.2 Participants

The inclusion criteria for Study 2 were gender (female only), age (between 16 and 24 years) and enrolment in a level 1, 2 or 3 in a Further Education College. Once again, educational level was used as a proxy for socioeconomic status.

5.5.3 Recruitment

Recruitment was again carried out in two stages: engagement of organizations followed by engagement of individuals.

5.5.3.1 Recruitment of an organisation

One FE College Group in Oxfordshire which had not participated in the previous study or in the earlier consultation was approached to reduce the burden on colleges which had already helped with the research. This college volunteered to distribute questionnaires and to allow entry to the college to meet young women in class and for interviews. The FE College Group was given a financial payment to cover the expenses of staff time and postage to mail the health questionnaire and reminder postcards to students' homes.

5.5.3.2 Recruitment of individuals

Eligible women were identified by the admissions department of the college. The administrators selected cohorts from nine programmes of study from six vocational departments: art and design, performing arts, service industries, events and tourism, health and social care, and business studies. All young women aged 16 to 24 in these class groups were included.

5.5.4 Data collection for Study 2

5.5.4.1 Rationale for the data collection methods

The design had three stages: (1) a mailed health questionnaire, (2) a self-administered survey to be completed in class, and (3) a semi-structured interview (Figure 5.5). In Study 1, participants were relying on their imagination of what it would be like to receive an invitation to participate or a questionnaire in the post or online. The design of Study 2 was to provide a real experience of being recruited to a health survey to facilitate participants' reflections about their decision-making about completing and returning a health questionnaire. The order of methods and timeline for the data collection are outlined in Figure 5.5.

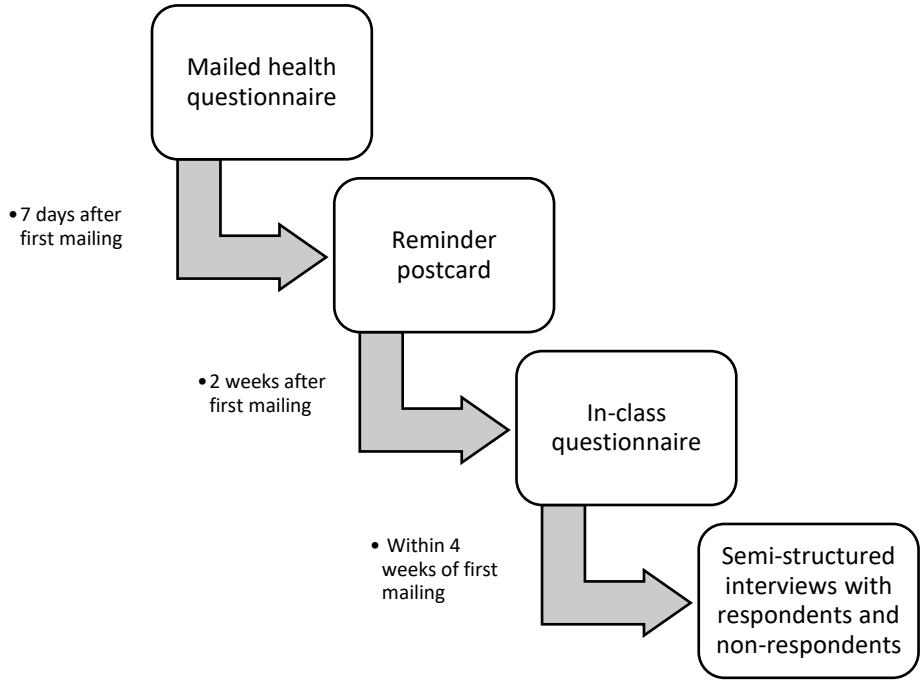


Figure 5.5 Schematic of data collection stages and time between each stage

5.5.4.2 Development of the questionnaires

The mailed health questionnaire was the International Health and Behaviour Survey, chosen because it comprised general health knowledge and health behaviour items which had been validated with 18 to 30-year-olds (Wardle and Steptoe, 1991). Since the survey had been created with university students some years ago, the wording used in the questions was checked by a small advisory group of women who were studying at a different Further Education college. Some changes to the layout of the question items were suggested (such as increasing the space between options in the matrix items) but no changes to the wording were needed to make the questions easy to understand and the advisory groups did not highlight any health questions as outdated or unnecessary. The only comment about question wording was that the sociodemographic questions about wealth and education were difficult when the young women lived between two households or lived in single parent or same-sex parent families. However, they did not suggest that the questions should be changed. The host college for the research objected to the collection of postcodes, therefore only the first half of the postcode was collected. Unfortunately, this stipulation made the data less useful because the IMD could not be calculated.

The in-class survey was written specifically for the study. It was designed to allow quick responses for both responders and non-responders to the mailed health questionnaire to increase the amount of information available to address the research aims of the thesis. Therefore a series of multiple-choice items were provided to ask whether respondents had taken part in the mailed health questionnaire, their reasons for that decision and the stage in the recruitment process that they could recall making the choice about whether to complete and return information about their health. The options in these questions related to all of the

stages suggested in the conceptual framework that participants might be lost, i.e. before they had even looked at the envelope contents, after first impressions of the contents through to completion of the study. The flow of the in-class questionnaire allowed participants to answer only questions relevant to their response to the mailed health questionnaire. Open text boxes also provided to allow participants to express ideas that the previous questions had not captured. See Appendix 5.16 for an image of the survey booklet. Once again, the presentation and wording of the questionnaire was checked by the same advisory group of Further Education students. As a result, two items (four and five) were shortened. The length of time taken to complete the surveys was checked to ensure that time stated in the consent information reflected the length of time for eligible women. The final surveys were then further evaluated by 7 experts in survey design to ensure that no further improvements could be made. No changes to the questionnaire items were required.

5.5.4.3 Development of the interview schedules

Two schedules were developed: one for women who had chosen to complete and return the mailed health questions (responders) and one for women who had not chosen to respond (non-responders). The schedules were semi-structured and provided one question and some supplementary questions which could be used to deepen or redirect discussions (Appendix 5.17). The areas addressed in the interviews (with both respondents and non-respondents) were as follows:

1. factors which encouraged them or dissuaded them from completing or returning the survey.
2. important points in the decision process (at what point did they stop reading the study information and did the survey).
3. organizations they would help with health research and why they would help these groups.
4. how they judge their experience and whether they think that others would gain from participation.

The structure of the interviews was designed to help the participants to explore their responses at each point of encountering and exploring the recruitment materials and the questionnaire for the mailed health questionnaire. These stages related to the first four stages of the conceptual framework (motivation, perception, attitude formation and integration) since participants could be lost to the study at these points. Participants were also encouraged to discuss the social influences on their decision to understand more about whether peer recruitment might be a useful approach (the learning stage of the conceptual framework). The resultant schedules were reviewed by the supervisory team and piloted with two eligible women from the college which had hosted the other consultation work. One woman was interviewed for each individual schedule (for respondents and non-respondents)

and the pilot interviews were audio-recorded. The interviews were heard by two members of the supervisory team. It was noted that responses were often short and factual. Therefore, extra prompts were devised to encourage all participants to provide deeper answers to the initial questions for each area outlined above.

5.5.4.5 Procedure

The college posted the mailed health questionnaire to eligible students' homes in plain white envelopes, without any branding. The college also posted the reminder postcard (Appendix 5.16) one week later to the same students. The students could return the questionnaires through the post (a pre-paid return envelope was provided) or they could complete online using a QR code or URL to access the questions hosted in the Qualtrics survey platform (Qualtrics, 2014). The participants in Study 2 completed the in-class questionnaire during a timetabled tutorial session at their FE college while I was in the room to answer questions. The first 3 interviews were conducted in the college but the national lockdown for the Coronavirus pandemic meant that the remaining interviews had to be completed over video conferencing software.

5.5.5 Analysis of quantitative data from the in-class questionnaire

Online responses were exported from Qualtrics to SPSS v25 and the data from hard copy responses were manually added to this dataset. The manual additions were checked by a second person to ensure that threats to validity through human error were minimized. Descriptive statistics were performed in SPSS and may be found in Chapter 8 (Sections 8.3). The data from the mailed health questionnaire are not reported since the health data are not relevant to the aims of this thesis.

5.5.4.6 Analysis of the qualitative data from the open text items in the in-class questionnaire

There were two opportunities for respondents to specify answers if the answer options did not capture their experiences and one open text item to ask how the postal recruitment method could have been improved. A coding framework was developed following the method outlined in O'Cathain and Thomas (2004). I created an initial coding scheme after reading the comments and this was agreed with another member of the supervisory team. The developed coding structure was then abstracted further to align with the conceptual framework since the framework stages captured the codes effectively. These findings are outlined in Chapter 8 (Section 8.3). The data from these items informed some of the prompts in the subsequent interviews about the reasons for starting but not completing questionnaires and about the reasons for helping some organizations and not others.

5.5.4.7 Analysis of the qualitative data from the interviews

The aim of Study 2 was to gain an insight about how young women had responded to a real experience of receiving an invitation to take part in a UK health survey. The interviews took the respondents through the different stages of receiving the mailed health questionnaire at

home, opening the letter, exploring the contents, and comparing this experience to other times that they had completed questionnaires in the past. The interviews were quite structured as a result; therefore, framework analysis was appropriate to manage the data. As per Study 1, I was aiming for a descriptive account rather than an explanatory one, although I did want to move to higher-order descriptions through a process of abstraction. Therefore, for this study, I worked through a series of stages with a second researcher independently mirroring the stages on a subset of the interviews to check the credibility and dependability of the analysis. The aim of each stage was to gradually abstract the categories in the data, so that progressively higher-order categories could suggest what the young women's responses were when they were asked to participate in a health survey. Following the method outlined by Smith and Firth (2011), each interview was transcribed and read several times. Another member of the supervisory team and I identified initial in-vivo codes by reviewing each line of four transcripts. The in-vivo codes were entered into a coding matrix which allowed initial abstracted codes and early categories to be identified. Smith and Firth's method was useful because it prompted us to include a column to summarise preliminary thoughts about what extracts of the transcript were about, thus beginning the abstraction of data from an early stage in data management. Table 5.6 provides an example of this part of the process.

Table 5.6 Example coding matrix developed from one interview

Interview transcript: Responder 4	**Description (in-vivo codes and initial abstracted codes)**	**Preliminary thoughts on what this is about**	**Initial categories**
Response to receiving envelope			
'I never get mail addressed to me, so it was, like. Exciting!	**'I never get mail addressed to me'** **Excited to receive mail**	Exciting to get mail addressed to me	Interested/excited to receive mail
I wasn't doing anything else. I was watching a movie; I might as well do two things at once.	**Wasn't doing anything else. . . watching a movie so I might as well do both at once** **Not doing anything else**	Completing a questionnaire does not take my full attention	Time/space to complete questionnaire
Normal Saturday activity – hockey in morning, I do nothing in the afternoon, basically. So yes, I just did it.	**I do nothing in afternoon . . . so I just did it** **Not doing anything else**	Completing the questionnaire filled time on Saturday afternoon	Time/space to complete questionnaire

This coding matrix was applied to further transcripts and some categories were grouped into broader categories and similar categories were eventually identified as initial categories to create a coding index (see Table 5.7 for an example). The coding index created by both

people working with the data were compared so that there was a clear record where there were differences to resolve through discussion.

Table 5.7 Extract from the coding index developed to resolve differences between coders showing the index for the participants' response to receiving a letter in the post

Initial Codes (SH)	**Initial Codes (MB)**	**Initial Categories (SH)**	**Initial Categories (MB)**	**Preliminary thoughts on what this is about**
Response to receiving the envelope				
Feels like an adult in her own right	**Feels important, adult**	Being seen as an adult	**Feeling important, adult**	Receiving post sent specifically to her made her feel important, adult
Making a decision for herself		Exercising agency		Instead of having her parents choose whether she does the activity, she can choose for herself and this is enjoyable.
	Positive attitude to questionnaire		**Willing to complete the questionnaire**	Was prepared to complete questionnaire
Intentions not implemented	**Easily distracted**	Intention and action	**Easily distracted**	Good intentions but too easily distracted to other activities

From this point on I adopted the stages outlined in Spencer et al. (2003) since Smith and Firth provided insufficient information about how to move from categorization to greater levels of abstraction for the later stages of data management. The coding index provided a list of topics which could be sorted into a hierarchy or thematic framework. This framework is provided in full in Appendix 5.18, but an extract is provided below in Table 5.6 to illustrate how the ideas were ordered in different levels of specificity.

Table 5.8 Extract of the topic framework showing one of the six topics

1. Response to receiving the envelope
1.1 Initial response to receiving the envelope
1.1.1 Feeling adult, important
1.1.2 Making own decision (Exercising autonomy)
1.1.3 Not interested
1.1.4 Excited, cool
1.1.5 Surprised
1.1.6 Stressed, anxious
1.2 Reasons for opening the envelope
1.3 Reasons for not opening envelope or discarding envelope unopened
1.4 Response to being selected to receive the survey
1.4.1 Response to focus on young women at college
1.4.2 Responses to personalisation of envelope
1.5 Other

The thematic framework was applied across two interviews by both analysts, changes were made after difficulties with the framework were noted by both researchers and discussed. The entire dataset was coded in NVivo 12 using the thematic framework to identify where different extracts of text appeared to relate to the same concept. Framework matrices were then developed using the main topics in the thematic framework (in bold in the thematic framework and in table 5.6) to form the columns and each interview became a row. In the analysis conducted in Study 2, details about what each section of text was about were recorded. This step allowed a greater level of interpretation to be achieved, something which had proved difficult in Study 1 when the young women's words were used to summarise data.

Still following Spencer et al.'s (2003) method, the summaries in each cell were studied to identify elements, namely the responses that young women were communicating in their talk. The elements were identified with constant reference back to the framework matrices and transcripts and, as can be seen in the extract presented below (Table 5.9), snippets of the participants' talk were included at this stage to keep the analysis close to the data.

Table 5.9 Extract taken from the detection of elements table

Interview	**2.1 and 2.2. Initial response to the accompanying documents)**	**Detected elements**
1 NR 4	Initial confusion and then stress 'a little bit freaked out' because the contents of the envelope was not the letter she had anticipated. Interest was lost when the personal connection to her experience lost.	Confused about reasons for contact Made anxious about unanticipated contact Loses interest quickly if contents do not seem relevant
3 R 3	Positive reaction. Values being able to make an informed choice about participation. Values the chance to stop if she chooses. Felt empowered to have been asked 'this is something that I could do'. Sign of getting older.	Values agency/choice Feeling empowered Gaining entry into adulthood
4 NR 5	Initial interest was lost when the contents did not appear a priority after quick inspection. Little attention was paid to the contents. Presents a collective response for her peer group 'It was random we weren't against it.'	Quick decision made about priorities Feeling busy is an acceptable reason to present

The final set of tables produced for the analysis grouped the detected elements within a topic into dimensions. These dimensions were higher-order categories which labelled the main responses of the women to each stage of receiving a health survey at home and making a decision about participation. An example of this stage is provided in Table 5.8.

Table 5.10 Table to identify key dimensions from the detected elements (numbers in brackets refer to the interviews which provided the best illustration of the element)

Detected elements for 3.5 Concerns about being judged	**Key dimensions**
Speed as influential as intensity of questions (NR 4)	Evaluating the burden of participation
Needs to justify answers (R 1) Concerned about negative stereotypes being applied (NR 3) Answers not fitting with researchers' expectations (NR 6)	Worried about other people's expectations
Not wanting to appear different without giving a reason (R 1) Wanting to conceal answer from peers (NR 5) Wanting to conceal extent of health issues (NR 1)	Fitting in
Concerned about how information about them will be used (NR 3) Some women's health topics are embarrassing (e.g. Periods) (NR 2) Mental health as taboo (R 4)	Feeling embarrassed and fearful

Lastly, descriptive accounts were developed for each topic. The key dimensions for each of the six topics were again grouped to organise the data so that the responses to the following questions could be developed for each topic:

Description: How do the women respond at each stage of receiving the mailed health questionnaire?

Interpretation: How do their responses encourage or inhibit continuing with the questionnaire?

Implications: What do their responses mean for designing future surveys to engage young women from lower SES categories?

5.6 Reflexivity during data collection and analysis of Study 1 and 2

To consider the impact of how I may have been perceived by participants and of my own beliefs and experiences, I maintained field notes shortly after each focus group or interview and I added to these notes during the analysis of the data. The COREQ guidelines (Tong et al., 2007, p. 352) were used to shape my reflections in these notes. These questions are set out in Table 5.11. The COREQ guidelines are reporting instructions rather than a method for reflexivity but this source was chosen because these guidelines encourage the researcher to consider the data collection from three main viewpoints: the relationship established before data collection, the participants' knowledge of the research and the impact of the researchers' experiences and values. The guidelines informed questions which I answered to interrogate the data collection and analysis.

Table 5.11 COREQ guidelines (source: Tong et al. 2007 p. 352) and questions posed by researcher immediately after data collection and during analysis

COREQ guidelines	**Questions posed after each data collection session**
Relationship established Was a relationship established prior to study commencement?	What did participants know about the study before attending? Had they met me or only heard about me from a community champion?
Participant knowledge of the interviewer What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	How did I introduce myself in the initial question of focus groups? Why did I choose the description of myself? Did I augment this prior to the group starting or during the discussion?
Interviewer preconceptions, characteristics and background Bias, assumptions that the researcher may have brought to the discussion Reasons and interests in the research topic and this population	What are potential sources of bias about this group (including the impact of using the particular host organisation)? What did I expect before starting the group? Why did I choose this group for the research? Why did I select this topic of research?

5.7 Ethical approval and procedures for Study 1 and 2

Oxford Brookes University Research Ethics Committee gave approval for the study. The approval letters are given in Appendix 5.19. In Study 1, the focus group participants gave their initial consent to me, to a member of staff, or to the person who had issued the invitation (see Tables 8 and 9). In Study 2, informed consent was indicated in writing apart from for the video interviews where consent was provided orally, and audio recorded. In three focus groups, there were women who had lower levels of functional literacy. In these cases, a member of staff from the host organisation supported the reading and completion of the consent. Participants in both studies received a brief information sheet to signpost them to organisations related to health behaviours (Appendix 5.3). Shopping vouchers were also provided on the day and at the start of the group so that participants were immediately

recompensed for any costs incurred. Focus group participants received £15 but interviewees received £10 since the length of participation was shorter and there were no travel costs.

5.8 Chapter conclusion

This chapter has discussed the methodology and methods used to collect the primary data of this research. The two studies described in this chapter, illustrate a development in terms of both the depth of data collected and also my application of methods to conduct framework analysis. The findings from Study 1 are presented in Chapters 6 and 7 and the findings from both the quantitative and qualitative analyses in Study 2 are in Chapter 8. The understandings gained from the reflexivity process are described in Chapter 9.

Chapter 6 Focus group findings for Study 1: Motivation and perception

6.1 Introduction

The aim of this thesis was to understand and describe the factors which encourage and discourage participation in UK surveys on health, health knowledge and health behaviours by young women from lower SES categories. Chapter 4 outlined a conceptual framework which captured how a participant might respond to being invited to complete a questionnaire about health, health knowledge and health behaviours? In Study 1 this conceptual framework was used to explore the lifestyles of young women from lower SES categories, the activities that might compete for their attention and their responses to recruitment materials and health questionnaires.

The findings from Study 1 of the focus groups are presented in two chapters. The current chapter describes and discusses the findings regarding the motivation and perceptions stages, highlighted in Figure 6.1. In Chapter 7 the findings related to the attitude formation, integration and learning stages of the conceptual framework are presented.

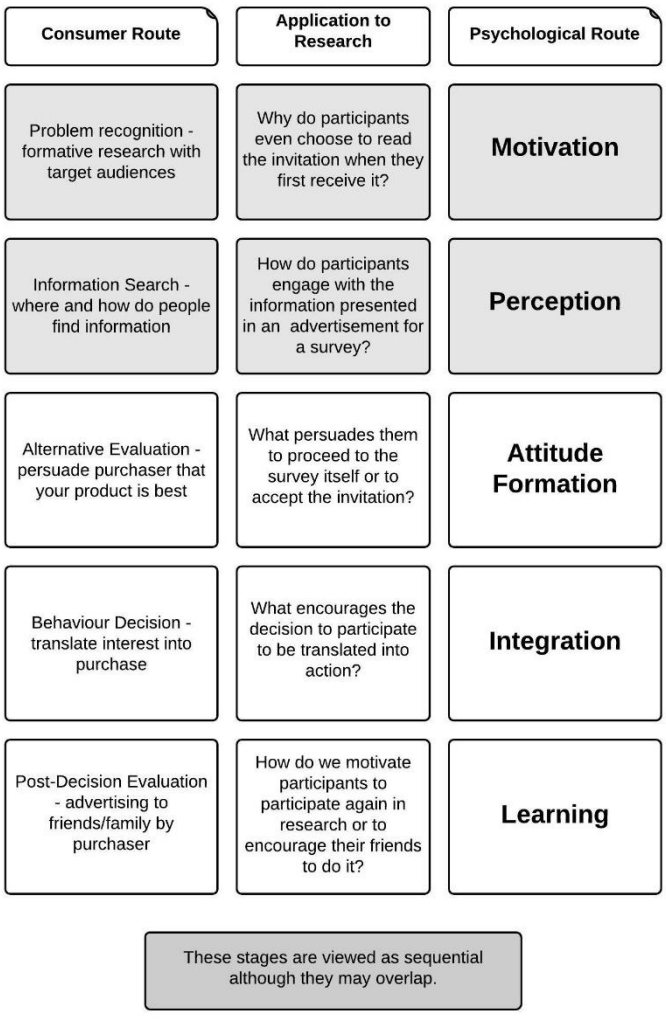


Figure 6.1 The conceptual framework: Motivation and perception phases highlighted

6.2 Composition of the focus groups

Ten groups were conducted to explore the motivation and perception stages of the conceptual framework. One focus group was excluded from the analysis because two of the focus group participants did not meet the inclusion criteria for educational attainment level.

The remaining nine groups comprised 49 participants from three sampling frames: Further Education college students, women in work and mothers of young children. The sociodemographic composition of the focus groups is summarised in Table 6.1. The students came from childcare, hair and beauty and make-up vocational pathways (student groups 1,2 and 3). The women in workplaces were from administration offices in a law firm (working groups 1 and 3) and playworkers at a centre for children with disabilities (working group 2). The first mothers' group (M1) was from a Children's centre, the second and third groups (M2 and M3) were informal social groups which had originally formed at Children's Centres in the local area.

Table 6.1 Cross tabulation of the sociodemographic characteristics of the nine focus groups in phase 1 of Study 1

	Age				Main work role				Highest educational level achieved			Relationship status		
Group label (abbreviation used in the analysis)	Group size	16-20	21-25	26-34	Education	Caring Role	Work	Unanswered	2	3	Unanswered	Single	In a relationship	Cohabiting or married
Student 1 (CS1)	8	8	0	0	6	0	0	2	0	8	0	5	3	0
Student 2 (CS2)	11	10	1	0	9	0	0	2	1	9	1	5	6	0
Student 3 (CS3)	4	4	0	0	4	0	0	0	4	0	0	1	3	0
Women in work (WW1)	4	2	1	1	0	0	4	0	2	2	0	0	3	1
Women in work (WW2)	4	0	0	4	0	1	3	0	2	2	0	0	2	2
Women in work 3 (WW3)	5	1	3	1	0	0	5	0	0	5	0	0	3	2
Mother 1 (M1)	6	0	2	4	0	6	0	0	3	3	0	2	0	4
Mother 2 (M2)	4	2	0	2	1	0	3	0	1	3	0	2	0	2
Mother 3 (M3)	3	0	0	3	0	0	2	1	0	3	0	0	0	3
Total	49	27	7	15	20	7	17	5	13	35	1	15	20	14
% of all participants	100	55	14	31	41	14	35	10	27	71	2	31	41	28

6.3 Motivation stage of the conceptual framework

The 'motivation' stage of the framework seeks to capture how the participants' existing priorities for their time/attention, and beliefs about research guide their response to their first sight of an invitation to participate.

The focus group questions centred around the following areas:

- The use of free time - a key feature of successful marketing is the tailoring of a product to the current needs of the audience when they encounter the advertising (Maibach, 2002). A greater understanding of lifestyles could also show where young women might encounter the advertising if mass media methods were used.
- Motivations for attending the focus group followed by participants' beliefs about why they might do a questionnaire or structured interview on health - this line of questioning was to help participants to use a current and familiar experience to start a conversation about reasons for doing a health questionnaire (an unfamiliar situation for many focus group members).
- Identity and perception of research/researcher – according to social marketing (Section 4.4.1), consumer (participant) insight is needed to tailor invitation messages to satisfy the expectations and to address the concerns that participants may have.

6.3.1 Framework analysis: Motivation stage

The analysis of the matrix developed for the motivation stage of the conceptual framework suggested 14 detected elements which could be grouped into four dimensions. Three of these dimensions represent factors which could create barriers for participation; the fourth presents an opportunity to make involvement in a study more likely to receive attention and interest. Table 6.2 shows how the detected elements were categorized under four dimensions.

Table 6.2 The detected elements which informed the abstraction of four dimensions relevant to the motivation stage of the conceptual framework

Dimensions	**One approach (recruitment strategy) does not fit all**	**Power imbalances could deter participation**	**Research provoking anxiety**	**Providing escape from everyday activities**
Detected elements	Spending free time: Wanting to spend time with peers	Situating themselves as people without power	Believing that the invitation might not be trustworthy	Wanting escape from boredom

	Spending free time: Wanting to pursue hobbies or interests	Situating themselves as less knowledge than others	Experiencing anxiety about what participation would involve	Seeking a break in routine
	Spending free time: Needing time alone after being available to others	Understanding the researcher as a stereotypical scientist or inquisitor	Feeling nervous about meeting a stranger	Valuing entertainment
	Feeling pressure due to demands on time (feeling busy)			
	Weighing up the rewards of participation			

Each of the dimensions are outlined below through descriptions relating to each of the detected elements with supporting quotations.

6.3.1.1 One approach (recruitment strategy) does not fit all

This dimension was identified primarily from the discussions about how the young women would choose to spend free time to understand what they might want to do when seeing the invitation and the competition for participants' attention. Questionnaire completion would take time away from these other activities.

Lifestage differences in the priorities for spending free time (wanting to spend time with peers, on hobbies and interests, or alone)

The participants in the three student focus groups seemed to prioritise spending time with others. Group activities (such as eating or shopping) or seeing friends and family were enjoyed. Even when spending time alone, there was a sense in two student groups (CS1 and CS3) that social connection was still sought because there were frequent references to using mobile devices and social media to see what other people were doing and to communicate with friends and family:

> *K: Like Facebook you've got Messenger to talk to people and Instagram we can like look at different people's posts, stuff like that.* **[CS1]**

> *S: My family live quite far away so like the video calling and stuff like that are quite good…* **[CS3]**

Women in the work focus groups did also enjoy spending time with other people, but in contrast to the college students, the women in two of the three focus groups for

this life stage (WW1 and WW2) also valued time away from others when choosing what to do with an hour of free time:

> *K: I would sit in a bath with my Kindle and a glass of wine… That's it. Just chill.* **[WW1]**

> *HY: I'm so anti-social. I have to spend all my minutes slash hours, slash days with people that when I get an hour to myself, no-one's getting in that! [laughs] That's my hour!* **[WW2]**

Hobbies such as exercise or music, were also mentioned more frequently by women in work than by the other groups. Activities included walking, music, fitness, gaming, and reading. These interests also guided their choice of television, books, and social media. While students used media to share time with others, the women in work employed these platforms to find information related to their interests (such as fitness below), to follow celebrities, and to find entertainment. When discussing what people were doing via social media, the intent was to watch, and in some cases, to imitate people outside of their social networks

C: Yeah, it's like, like I follow like quite famous people or like for me I follow a lot of fitness girls, a lot of them and just look at new workouts and stuff like that. It sounds really nerdy [laughs]… That's and for me that's, obviously I see them doing that thing and I want to do it because obviously because I see them do it and people liked it, so... **[WW1]**

This use of social media contrasted with the students' communication and connection with friends and family. The women appeared to be moving away from needing the social network as a reference to evaluate their identity and to shape their use of time, to more independence and choice of activity.

For the women with young children, there was a common need to spend time alone. Women wanted to shop, go to the gym, read or bathe on their own:

> *C: I love going to the shops on my own…To go to Waitrose, just to buy a pint of milk and a loaf of bread and just to choose...*

> *H: [Overtalking] to look round every aisle.*

> *C: To look at chocolate bars and think, which one am I going to choose?* **[M1]**

S: It's just that feeling that you can get out of the house without taking everything with you. Like...

J: That's a nice feeling, you don't have to plan anything, you just go. **[M2]**

Yet some mothers also craved the company of other people even though they spent their days with their children. Adult company was viewed differently.

T: ...I get really, really lonely. Like today I've just had me and my son all day ... I've called my husband about three or four times at work during the day...I have to fill my day with people around me. **[M3]**

However, none of the women in the mothers' focus groups talked about wanting to spend time with family members, such as their partners, when choosing how to spend a hypothetical free hour. Partners were not mentioned when discussion was around relaxing or having fun. The need to be with other mothers could have been created by the shared membership of the focus groups. However, the influence of the focus group sampling frame was not seen as clearly in the other life stages and therefore the wish to be with other mothers could be relevant to how marketing is tailored for mothers.

The data therefore suggest that a barrier for questionnaire completion could be related to the fact that currently young women receive the invitation to many survey studies at home and questionnaire completion is a lone activity. Methods to allow completion during group, social activities might be helpful to engage students and mothers (such as the use of phones or tablets in locations where the women will be spending time together). Similarly, methods to complete questionnaires during exercise, music festivals or similar places where the women pursue interests might reach more women at the working life stage. However, the existence of differences between the life stages does imply that using one completion method for all women in the 16 to 34-year age is unlikely to optimise recruitment.

Feeling pressure due to demands on time and feeling 'busy'

The women in both student and mothers' groups talked about being busy. Work, study, travel and helping to look after younger siblings were the reasons why students felt that time was limited. In one group (CS1) the college students struggled to imagine people like them having a free hour in their day. Consequently, they described research participants as people different to them. A further group (CS2)

struggled to say what they would do in free time because they found the concept of 'free' time as irrelevant to them as they were needing to juggle education and other commitments. The participating students were in full-time college programmes:

> *K: [People who take part in research] They've probably got more, a bit more like free time than we have-* **[CS1]**
>
> *J2: I'd just sleep if I had an hour.*
>
> *Interviewer: So, you don't watch telly at all, it's not your thing.*
>
> *J2: I don't have time. I spend all the time sleeping. I work for 40 hours a week so.*
>
> *Interviewer: Ok?*
>
> *M: So, time off it's just, I go back to bed so.* **[CS2]**

However, there were still differences between life stage categories because the mothers' discussion of being busy was characterized by expressions of guilt. During the talk about how participants would use free time, mothers also expressed the feeling of pressure to get things done (even if they were not recruited from mothers' groups as in the case of WW2 below):

> *A: … I can't sit down during the day.*
>
> *H: I feel guilty.*
>
> *A: I do, really guilty and if I did sit down, I would be 'Oh yeah, that's got to be done'. I can't do it.* **[M2]**
>
> *A: No. No. Um, I don't know [how to fill an hour of free time] because there's always jobs to do!* **[mother of a young child in WW2]**

This feeling of pressure to do jobs may suggest that appeals to give up spare time for the research participation may clash with social norms around how mothers should spend their time.

Weighing up the rewards of participation

When the conversations moved on to the reasons for taking part in research, there were differences between the mothers and the other two life stages in what had engaged their interest in the invitation to participate in the focus groups and in their previous experiences of questionnaires and research studies. The financial remuneration (vouchers) was the primary reason for the participation by college

students and the women in work, although other free items would also have been attractive:

J: Voucher.

G: That was mine [reason for participating] as well.

J: I think it's probably everyone's

Interviewer: Pretty much everyone's. Ok C?

C: Chocolate

J: It was just that we got given something for our participation. **[CS2]**

E: There was vouchers…. Thought I'd get that out there [general laughter]! **[WW1]**

Monetary remuneration was not typically discussed as the reason for taking part in the mothers' focus groups. In two of the mothers' groups (M1 and M3) the agreement to take part came before the voucher was considered:

B: I think that it was the last lines of R's text. Before I'd even got to that line I was thinking 'Yeah, you know, I'll come around and do it.' and then I was like 'Oh and I can get a voucher! Double bonus!' **[M3]**

Spending time with the other members of the mothers' social groups was also described as a motivation for participation in the current study. While helping is mentioned in the following extract, this only comes after the mention of 'getting together' and it is the social opportunity which is picked up by a later speaker:

C: …it's a nice way to get together and to help out as well. [sounds of agreement].

A: Good answer.

H: And to meet with other mummies I thought was quite nice. [sounds of agreement].

I liked that idea. **[M2]**

V: To be honest it's nice to just leave the house sometimes without your children. And just have a bit of time when they're not at your feet and just with other adults and just have a conversation. **[M3]**

Once again, the emphasis is on seeing other adults rather than simply being with other people because the mothers have the children at other times.

6.3.1.2 Power imbalances could deter participation

When discussing the women's perception of researchers and research, there was evidence that an imbalance of power was perceived which revealed a lack of confidence which was expressed as feelings of being vulnerable or inadequate in the research situation. Such feelings of vulnerability could present a serious barrier to participation.

Situating themselves as people without power or less knowledge than others

The students in two groups created distance between themselves and other groups of people in a way that suggested that there was a hierarchy of power in which they were at a lower level of power than other people. In one group (CS1) this comparison was made between people who do volunteer to take part in research studies; in the other focus group the comparison was between themselves and the researcher:

> *S: They've got quite, maybe a bit more life experience than like we have.*
> *Interviewer: Ok, interesting?*
> *E: Yeah like they've experienced life more than we have.*
> *S: They understand the importance of like having a voice and taking part and why.* **[CS1]**

> *C: What you want to get out of us and you're sort of out to get what you want out of us.*
> *Interviewer: Ok?*
> *J2: Manipulateable. [Participant laughter]* **[CS2]**

In the first of these extracts (CS1), research participants were viewed positively, with the power of having a voice, or an ability to speak up in society. Yet, the women in CS1 were distancing themselves from this type of person by suggesting that these participants differed to themselves because they would be people with life experience and time. The implication of the contrast between research participants and the speakers is that the young women were not seeing themselves as people who would take part in research. In the second quotation (CS2), the women were describing research participants as people to be used by researchers. The focus groups are

identifying as research participants, but the negative language suggests that researchers will use their position to use participants for their own ends.

Two groups of the women in work defined research participants by comparing them to researchers. In both groups, they were described as less knowledgeable than researchers.

> *K: I guess when you think about researchers you think that they are know-it-alls because what can you tell them that they don't really know.* **[WW1]**
>
> *A: I don't really know how to put it. Um... maybe someone [describing a researcher] who would use words that I maybe don't understand so much?*
>
> *L: Yeah like high vocabulary, something that I don't understand.* **[WW2]**

One of the two mothers' groups (M1 and M2) who discussed their identity as participants also suggested that the research and researcher would place them in a position of discomfort by the way that they would ask 'clever' questions:

> *H: On the way here I was slightly worried that it would be, really quite, oh dear I did say to you [points to friend] 'well I did have a wine' [laughs]. All these clever questions but, no, I didn't really think that I knew exactly what was going, going to be said or anything.* **[M2]**

Understanding researchers as stereotypical scientists or inquisitors

The distance between researcher and participant was also evident when the women were asked to outline how they would describe a researcher to another person. This was a difficult question for the women to discuss, given that a researcher asked the question. However, all focus groups in this phase of data collection started with an initial stereotypical image of a researcher as a scientist, a "Person with a coat and a clipboard" (CS1), but the women swiftly became more expressive on this topic. For example, in the following extracts (CS2 and CS3) the descriptions of researchers are negative, tied with fear or the sense that researchers would be very driven to complete their research:

> *CT: Like stuck in their ways sort of thing. Like just get their research done, that's it.*
>
> *Interviewer: Ok, so they're only interested in…?*
>
> *CT: They wouldn't ask us about anything else. Just their questions.*

Interviewer: Ok? Anyone else got any views? You look like you've got an idea there.

J2: I think nosey. Well they know what they want to find out, so they are going to try to get it, worm it out any way.

Interviewer: Ok, so you think that maybe as I'm sitting here, I might have some ideas about...

C: What you want to get out of us, and you're sort of out to get what you want out of us. **[CS2]**

S: Cos I think people think when it says 'researcher', it's like a clipboard.

J: They don't know what to expect.

S: Like you, if you think of a researcher you just think clipboard, pen paper and you feel quite like intimidated by the word, by the word itself. To know what the person looks like is quite handy. **[CS3]**

The mothers also described researchers in negative terms, again suggesting a researcher's focus upon their own ends. The use of the term 'demanding' could intimate that there is a perceived hierarchy of power in which the speaker expects a researcher feels entitled to answers. However, in one group, one woman had participated in a previous study and this experience shifted the group's opinion:

L: I can imagine them being kind of abrupt, demanding answers like, on the spot, sort of thing and that would make me all flustered and say 'No'.

Interviewer: Ok?

A: I took part in a research, well the same one that you did 'Into Bio' study when I had [child's name]. Um... I had to go and have scans every. That's why I took part because you had scans every 4 weeks wasn't it? And they were all lovely, there was no pressure to do anything or, they, you know, they got what they needed from the, but they were, I mean I didn't find them abrupt or anything like that. And I certainly don't find you abrupt or [laughs].

Interviewer: Ok? So, um, you...

L: Interested in people. **[M2]**

In the working groups, there was also a sense that researchers were holding more power than the participants when they drew on similar discourses about appearance and cleverness. However, in one group this was framed as something positive:

K: But then I also think that you are the voice of the people.

Interviewer: Mmm-huh?

K: Cos you do this research to make, to turn things around, don't you, you know.

[WW1]

These stereotypical images of researchers may not appear to be relevant to questionnaire studies, but it should be remembered that questionnaires can be administered by a researcher in the form of a structured interview or researchers may provide information about themselves in the invitation information with written questionnaires, thus linking the data collection to a person.

6.3.1.3 Research provoking anxiety

The relevance of trust for survey participation was discussed in Chapter 4, Section 4.3.3. Anxiety about participation was expressed in a wider range of ways than anticipated in the existing literature. For the focus groups, concerns about their safety presented a considerable barrier to paying attention to and responding to invitations to participate. Participants voiced their concerns during the women's discussions about what happens in research and when they first looked at the advertising posters described in Section 5.4.3.4. The women were worried about threats to their personal data (relevant to all modes of questionnaire completion) and they were keen to protect themselves from anxiety caused by meeting a researcher (in face-to-face completion) and answering questions (in the case of telephone and face-to-face completion).

Believing that an invitation might not be trustworthy

There was considerable mistrust across the groups about the authenticity of information within unsolicited contact, and the safety of responding. This worry was expressed more in the student and working groups than in the mothers' groups, however, a single approach to recruitment would still appear problematic for the researcher because there was not one type of contact that was seen as safe across multiple groups. Within two groups (CS2 and WW1) it was email that was mistrusted:

G: A lot of people email, and I never check my emails.

E: Not email. I think it's spam. **[CS2]**

Interviewer: Some of you said that if it [invitation to participate] came to our personal email, I would think it was spam.

E: Yeah, I would delete it. [sounds of agreement]

K: Yeah. So much dodgy things isn't it going around so it being through work and coming from our HR manager we were like, you know that it's secure and it's true sort of thing, you know? **[WW1]**

It is notable that in the second of these extracts (WW1), the contact could be made to feel safe if shared by someone who was known and trusted, such as the manager.

The trustworthiness of social media was also debated by students and the women in work. Previous expectations about different forms of communication also created a mistrust of advertisements, as illustrated in the CS2 group below. Here the students were advising the researcher about where to place advertising posters to catch young women's attention:

J1: I'd just think it's spam.

E: If it was on Twitter I'd scroll past it but Facebook...Yeah. Cos they seem to have much more like ads for rubbish. [Sounds of agreement]. Whereas Facebook it's more like news articles, stuff you'd be more interested in. Whereas Twitter's just....and it's easier to just scroll past things on Twitter, right, you just swipe up.

A: Facebook's like more legit stuff. [Several agree]. I think that there's a lot of, not scams, I mean like, rubbish on Twitter and you don't ever know if it's right or wrong really. **[CS2]**

Yet while Facebook was trusted in CS2, other groups were more sceptical of this platform:

C: Well, it would catch my eye more, if I see it popped up on my Facebook, stuff like that. But I'd still be wary, I think if it was on Facebook. **[WW1]**

A: I think that if you came to us and gave us like an iPad with it on. I would do it. But if it popped up on my Facebook, I'd just think, oh it's just junk. [sounds of agreement] I'd just ignore it; I'd just rush past it. **[WW2]**

The student groups focused on their concerns about different communication platforms, but the working groups went further to discuss how researchers could

provide reassurance. It was notable that endorsement by recognised medical institutions was particularly trustworthy for the women in work life stage:

> *A: But if they [the local healthcare centre] did have a Facebook page, I would follow it. And if it came through that then I would definitely think that it was, um, not spam, do you know what I mean. I would think that it was real, and I would, sort of, be more likely to take part if it came through that [sounds of agreement].* **[WW2]**

> *Interviewer: Ok. So, what kind of evidence would help you feel reassured that it is not a scam?*
> *C: If someone was from the NHS or something and had a badge.*
> *H: If it was a leaflet in a GPs like.*
> *Interviewer: Ok. So, if you...*
> *H: If I saw it in the doctors, I would trust it.* **[WW3]**

Therefore, to reduce the barrier created by unsolicited contact, the use of known and trusted individuals and organisations would be valuable. Alternatively, mass media campaigns could be used to heighten awareness that research is happening so that contact is not entirely unexpected. It is also important to recognise that the young women used their existing understandings of communication and organisations to judge the authenticity of invitations to participate. These existing understandings may create a problem for researchers if they are not aware of the value judgements about communication and organisations used by potential participants.

Experiencing anxiety about what participation would involve

The sources of anxiety, after the initial response to the invitation, concerned how people would feel about meeting a researcher and how they would be made to feel during their involvement. It was noted above that when describing a researcher, the focus group participants sometimes used strong language inferring that they would be intimidated because researchers would be trying to "worm" information out of participants (CS2) or to manipulate people for their own ends (M1). Two of the three student groups (CS2 and CS3) expressed anxiety about meeting a stranger and they believed that being able to be in a group was important. Their discourse implied that being together would provide confidence, even when the topic of the conversation was sensitive, and this could be a barrier for survey studies.

CT: You don't really want to go in a room when you don't know each other. If you're like talking about personal things. If you're with friends, then you'll probably do it. **[CS2]**

S: Plus, you are more like, you have the stands in college during like lunch and break and I don't know, it's a bit... more like pressure when they just like kind of staring at you. Cos when you walk past and they kind of look at you, expecting you to speak to them, but then that makes you not want to speak to them. I don't know, if someone comes to you, it's more comfortable because you're in a group of friends, you don't feel as awkward and... ***[CS3]***

Interestingly, before the focus groups themselves, the students always gathered a small distance from the room and entered together, with the exception of one group (CS1) where one member was late and had to enter alone.

Feeling anxious about meeting a stranger

One group for each of the three life stage categories (groups CS1, WW2 and M3), voiced concerns about safety that went beyond the way in which the researcher would treat the participants, instead there was an idea that it might not be physically safe to make contact or meet a stranger. The context of this quotation was whether the focus group participants would be willing to meet a researcher for face-to-face questionnaire completion in a coffee shop or other public place:

A: I think that now that I have met you, I'd be happy to meet you one to one… You seem very nice. [general laughter] Although I think that if it was a first meeting one to one, I might be a bit anxious about it. **[WW2]**

This anxiety about meeting a researcher was echoed in one of the mothers' group (M3). Not only did this worry relate to meeting a stranger but going to a place alone would provide multiple sources of anxiety:

T: See I'm going out. I can't go out by myself. Like I mean if I've got my son and that's helped me to become more confident… I think it's nice in a group but I'd prefer someone, if I was doing it by myself, I'd prefer someone to come to me than for me to go out and meet somewhere because I would get quite anxious about driving somewhere, getting there on time. **[M3]**

Moreover, a participant in one of the mothers' groups was unhappy to be in the room unless her friend was present at all times, even though her friend was not eligible for the group and sat in silence throughout the discussions.

For two groups of women in work (WW1 and WW2), the sources of anxiety were how they would feel when questions were asked. Strong, negative language was used to describe a one-to-one interview situation and the descriptions were contrasted against the more 'relaxed' focus group:

> *C: I think a group's more relaxed. One to one you feel like that person is just grilling you. Personally.* **[WW1]**

> *A: And a bit sort of put on the spot 'What if I don't know the answers to the questions or my answers aren't correct?' [laughs] That sort of thing. This feels quite relaxed.* **[WW2]**

Indeed, the extracts above (WW1 and WW2) did seem to suggest that the experience of being in a focus group was seen more positively than an interview. However, it must be remembered that the focus group members had a current experience of being in a focus group, but a structured interview may be something that they had never done before.

Previous experience seemed to reduce fears about participation for the women at work. This took two forms in this group. In one group (WW1) a participant drew upon her knowledge of research methods gained from AS-level psychology, but another group was interested in further research participation after the current experience of being in the focus group for this study (WW3).

6.3.1.4 Providing escape from everyday activities

The motivation stage of the conceptual framework was built upon the marketing idea that successful engagement of an audience could be generated if the product (here the participation) fits an existing aim (see Chapter 4, Section 4.4.3). In addition to the stated reasons for participation which have been mentioned above, the functions for research fell into two further categories: escape from boredom and escape from routine. An awareness of such reasons could help researchers to time and place advertisements for research so the invitation is competitive against the other activities available at the time.

Participation as an escape from boredom and from routine

Research participation was attractive because it offered the opportunity to escape boredom in two ways. Firstly, it offered an experience which was new and consequently intriguing; secondly, participation would allow the young women to avoid activities which they knew would not be interesting. This need to do a different activity could be useful for survey studies which are conducted via structured interviews or which require participants to complete a survey at a set time. Novelty could also be highlighted in the advertising to increase the appeal of participation.

The appeal of a novel experience was expressed by both the college students (CS1 and CS2) and women in work (WW2 and WW3). The students spoke about the idea in quite simple terms as a straightforward gain in their cost-benefit appraisal about whether to take up the invitation to take part in the focus group:

> *Interviewer: Does anybody else have a different idea? A different reason that they came today?*
>
> *F: We never took part in a research before.* ***[CS1]***
>
> *Interviewer: But are there any other reasons why you thought, 'Yeah, alright I'll do that!'?*
>
> *E: Never done it before.*
>
> *Interviewer: Something new?*
>
> *E: Yeah.* **[CS2]**

The attraction of novelty was echoed in two of the groups for women in work (WW2 and WW3) although they expressed this idea more fully than the students in saying that they wanted to know what research was. Moreover, this interest was discussed in terms of finding out what would be involved in being in a research study and if they could do what was asked of them:

> *H: Well I didn't know anything apart from that it was a questionnaire [referring to being asked questions rather than the data collection tool]. What it really involved so I kind of suppose the interest of what it actually was.*
>
> *L: I was interested to see what you had to talk about and what we could answer.* **[WW2]**

R: I don't think you ever really get given opportunities to do stuff like this otherwise, but I would have never had the opportunity to sit in and do some research. It's like being part of a study and stuff. [Sounds of agreement] **[WW3]**

The above quotations from WW2 and WW3 do suggest that it will be helpful to stress in advertising that participants are being asked questions as part of a real research study which may be unlike other questionnaires that they have done in the past.

As suggested at the start of this section, the attraction of participation was also related to the opportunity to avoid something which was known to be boring. The ability to escape from boring activities arose when the two student groups were explaining how a researcher could invite other students:

Interviewer: Well, you know I came into the classroom on Tuesday, clearly you guys were really keen to do this group now before Christmas.

K: Yeah.

H: Yeah, probably, like, near the holidays then and stuff, so like Easter-

K: Yeah when we're fed up.

H: When we're finishing off stuff. **[CS1]**

The following extract also demonstrates how the break in routine can be a reason why participation in research could compete against other commitments. Questionnaire completion may be consequently be attractive if it can be managed in place of a routine, disliked activity. It should be noted that the students' dislike of the career-focused tutorials was well known by tutors at the college and so this information could be readily available to researchers.

A: …people are more interested to get involved in something new.
S: Yeah.
A: I mean out of their college routine. If you see what I mean.

Interviewer: When people come?

A: Yeah.

S: Tutorial can get a bit boring. It's like the same kind of stuff every week, so...

Interviewer: So, it's quite nice if you've got a different person coming into the room.

J: It breaks it up and is something different, cos, um, our tutorial lessons they're all about building your career and CVs and interview skills and things like that. **[CS3]**

In the above extract (CS3) the appearance of another person who is new is another factor which could engage the college student participants.

In contrast, the mothers' groups did not talk about the appeal of something novel. They spoke instead about wanting to escape from boring activities, generally housework as in the following extract:

C: If we hadn't [have come to the focus group], what else would we be doing?

H: Probably washing or... **[M1]**

However, for the mothers there was a further sense that they wanted the opportunity to avoid their usual caring responsibilities to do something for themselves. The first extract below comes from the women's discussion of how they would spend free time, but the second was where a participant was explaining about when she believed that researchers should plan to talk to mothers:

K: Being out on your own…Just chilling out.

S: It's just that feeling that you can get out of the house without taking everything with you. Like...

J: That's a nice feeling, you don't have to plan anything, you just go. ***[M1]***

B: In the evenings would be… because it's a nice break, not having to put the kids to bed. **[M3]**

The small differences between the lifestage categories in terms of what would make an invitation to participate attractive suggest that researchers must develop a detailed understanding of young women's lifestyles at the time of the study. Knowledge of the activities that potential participants would like to avoid and also the timings of these activities, could help researchers to make questionnaire completion provide a competitive alternative for their attention and time by

designing a study so that questionnaires could be done in place of a disliked alternative. This type of design would be easier for reaching women at work or in college routines. Asking participants to complete surveys when they are not engaged in these more boring tasks, may reduce the appeal of participation.

Valuing entertainment

The social marketing benchmarks (Table 4.1) suggest that an insight into the competition for attention is essential to know how to shape the product (participation) and frame its advertising so that it appears to be a good use of time and resources. Therefore, the focus groups were encouraged to discuss what they would choose to do if they had some free time to use. When the working groups discussed their use of available time two of the three focus groups (WW1 and WW3) seemed to be seeking entertainment and an escape from boredom.

> *E: Exactly, it's just a little bit of escapism, you're not really looking to take part or I'm not looking to do anything when I'm on social media. Apart from stalk people usually. [general laughter].* **[WW1]**

The attractiveness of something entertaining was echoed by participants in WW3 when they made suggestions about how a researcher could make participation more attractive. Their idea was to mimic the existing use of quizzes by retail advertisers to encourage the advertisement to be shared with others:

> *J: Especially if you had it on your page so you could have a monthly quiz on your Facebook page and then people will share that more because…*
>
> *AM: With other people, yeah.*
>
> *AL: And then you could go back to check to see if you have won the quiz at the end. I know that I would [Laughs]. I'd be on there every day to see when it's going to be drawn. I know I'd be on there all the time.* **[WW3]**

Once again, an understanding of lifestyles could show how to make research provide entertainment or 'escapism' (WW1) which would mean that the participation could compete with other calls on young women's attention that they find online. Finding a way to make online survey completion more entertaining could overcome the problem of asking young women to do the health survey when they are not going to be doing a boring activity.

6.4 Perception stage of the conceptual framework

Following consideration of aspects of 'motivation' to participate, discussion in the focus groups then turned to the second stage in the model which was termed 'perception' (Figure 6.1). This stage was explored by asking participants to collectively discuss and indicate their order of preference for some advertising materials for participants (four posters and two videos). The activities are outlined in Chapter 5 (Table 5.3) and they were introduced to maintain participants' interest and to support women who may feel less confident about answering questions (see Section 5.4.3.3). The women also discussed where they believed advertisements should be placed to reach an audience of young women like themselves.

6.4.1 Framework analysis: Perception stage

Review of the framework analysis matrix for the perception stage of the conceptual framework indicated that there were four dimensions which could help researchers to design study advertisements which would be noticed and read for information. The four dimensions (the first row of Table 6.4) were identified in the interpretation stage of the framework analysis through an abstraction from the detected elements listed below each dimension.

Figure 6.2 The detected elements informing the dimensions relating to the Perception stage of the conceptual framework

Dimensions	**Researchers need to create trust**	**Researchers need to make participants feel wanted and valued**	**Researchers should not make participants bored**	**Information about participation must fit into busy lives**
Detected elements	Finding cues that an invitation cannot be trusted	Feeling connected to other women	Disliking doing the same thing for too long	Needing time to stop and look at information
	Being wary of advertisements which do not seem professional	Feeling included because diversity is represented	Preferring eye-catching materials	Wanting privacy to respond
	Using the survey sponsor to evaluate trustworthiness			Knowing where women spend their time

6.4.1.1 Researchers need to create trust

Young women were wary of unsolicited contact or advertising, and this mistrust presented a barrier to responding to such contact. Participants at across the life stages were suspicious of such communications and looked for clues that the advertisement was not genuine.

Finding cues that an invitation cannot be trusted

An actress (aged 17 years) had been chosen for the videos as a way of making the young women feel welcome and not intimidated by a researcher communicating the message. This assumption was made following the suggestions by Dolan et al. (2011) that a messenger was more likely to be trusted and followed if it was perceived to be similar to the audience. However, this was not the response that occurred in any group when the videos were watched. The strongest negative reaction occurred in the student groups. This was in part due to the actress's appearance and accent but, notably, the use of a script in two of the groups (CS2 and CS3) hinted to them that the contents were not to be trusted. In CS3 it was the actress that was blamed for making the script seem unnatural. The discussion in the following extract implies that any content that appeared scripted would appear false, regardless of who was delivering the words because the words appeared to have been supplied to the actress rather than being her own response to participating in a research study:

> *Interviewer: So, you would prefer someone to just...chat [rather than work from a script]?*
>
> *K: Yeah, cos otherwise you can tell it's been set up. You could just make up another one of those...*
>
> *Interviewer: I mean sometimes the NHS use ones where a doctor's interviewing a participant in a hospital instead? How would you feel about a video like that?*
>
> *J2: You would know that it's been scripted though. I wouldn't believe any of it.*
>
> *K: Yeah.* **[CS2]**

Yet in other student focus groups (CS1) it was the combination of the actress's lack of eye contact and the script that created annoyance and mistrust:

> *R: I don't like the way she like, her facial expressions and her the way she I don't know.*
>
> *M: Yeah, her mouth [Participant laughter], her mouth! Her mouth really annoyed me the way she did things, some things.*

H: And she didn't have very good eye contact in any of them,

R: Obviously she was reading or something, if you want to read something then hold it up so that you can just read it. **[CS1]**

Again, the focus group participants were looking for a genuine view of a research participant in what they saw. Consequently, the impression that the speaker in the video was an actress rather than a real participant led the young women to believe that the intent in the video was to deceive them.

In the same way, the women in work believed that the video had something about it that was not genuine. In two of the focus groups (WW1 and 2), the concern went further that the script and the actress's expressions made them feel that she was being forced to do something against her will, as in the following extract where the videos made one group member anxious and angry:

HY: I actually felt sorry for number one. Her video, I felt like I worried more for her.

A: I did see you smiling.

HY: Yeah and in the bit where she's kind of talking about social media and not giving, not giving away too much but we live in a social media world where everyone shows their dinner through You Tube and the other end of it etc. So for me it didn't seem in touch with young people, as I say and it just kind of, I felt that she was being a bit misrepresented, or youth was being a bit misrepresented, should I say in the first one because surely they're not that sad and miserable about everything. **[WW2]**

The mothers' response to the videos was much less wary but still the actress made one group (M3) feel that the advertisement was not to be trusted. Again, it was the eye contact that created unease. As was often the case in this particular focus group, the participants tried to propose a solution to the problem of making the advertisement more trustworthy:

T: Having an actual one of researchers in the video with her. Just to talk about it as well because having her there by herself, it just didn't look as friendly or as open and you're taking her word for it as a 17-year-old girl and she's just flicking her eyes around a lot, whereas, if she has someone to talk to...I think it would

look a lot more like people might be willing to do it, it might look a lot more safe. **[M3]**

As noted above, the actress was chosen to make a more interactive and less intimidating approach by someone who would be like the potential participants. Nevertheless, it was easy for the video to prompt strong reactions and to send unintended messages about the authenticity and even the kindness of the research team.

Being wary of advertisements which lack professional design

The focus group participants also looked at the static advertisements (the four posters) to discuss what features encouraged or discouraged their attention on the information within them. Again, the women searched for clues that the research was not to be trusted. The source of concern in these materials was related to the images and to the overall design (the choice of colour, layout and print quality). All nine groups chose poster 4 (Figure 6.2) as their preferred advertisement.



Table 6.3 Poster 4 chosen by the participants as the preferred advertisement for participation

A striking aspect that appeared in multiple focus groups across the working and mother life stage categories was the contrast between appealing design and something that reminded them of school. This comparison was made in two mothers' groups (M1 and M3) and in all three working groups. On each occasion in the working groups it was poster 3 (Appendix 5.6) and for the mothers, posters 2 and 3 that provoked this negative response. As can be seen in the extracts below, it was the colours and layout that created the impression of a school project or display:

> *E: And you know the big poster boards at lower schools.*
>
> *K: Mmm.*
>
> *C: Yeah. I was going to say that it kind of looks like something from school or for primary school children [laughs].* **[WW1]**

H: It looks quite quickly done. Yeah. I don't know.

HY: It doesn't feel like loved does it?

H: No offence, it looks a little bit like school, like something done at school. Like make a poster about this. **[WW2]**

A: I think that it's [poster 3] something that has been done at a school. Like a school child has put together, write a little project. **[M2]**

The comparison with school implied that there was a lack of professional design behind the advertisements. If anyone could produce the materials in the same way that teachers or students could for a school project or display, then it was suggested that the posters could be fake.

The selection of images could also reinforce or reduce the impression that the advertisement was to be trusted, as can be seen in the following extracts taken from the group's discussions during their ranking of the four posters:

C: They look like Facebook pictures... from about 2009! [laughs]

E: Yeah they don't look like real people and neither do these.

K: I really don't know why. Yeah it makes it just seem fake almost.

N: And this one's really pixelated so it looks like it's just been googled.

K: Yeah. They do look like Google images as opposed to… **[WW1]**

R: And obviously it [poster 3] has come from actual people. You know.

Interviewer: Ok. So that's really interesting. So, the pictures make a difference?

Z: Mmm. **[M1]**

Again, images needed to appear both professional and of real participants and researchers to create trust. Researchers using stock images in their posters may be creating an unintentional barrier to attention on other details about the study which are trying to persuade people to volunteer. Interestingly, the student groups all disliked the images of people, describing them as like "random selfies" (CS1) or noting that they simply didn't like faces in advertisements (CS2 and CS3). However,

they did not suggest that these made the advertisements seem fake, only less interesting.

Using the survey sponsor to evaluate the trustworthiness of the advertisement.

During the focus groups the women were encouraged to advise about which features to include. To increase the trustworthiness of an advertisement and to encourage someone to take part in research, two student groups (CS1 and CS3) and one group from each of the other life stages (WW3 and M3) recommended adding the university logo:

> *S: But if you put like Oxford Brookes University... [She points to the logo on poster 3]*
>
> *Interviewer: Right?*
>
> *S: I don't think you're going to think it's a virus.*
>
> *Interviewer: Ok. So, logos are quite important do you think?*
>
> *S: Yeah.* **[CS1]**

However, for one of the mothers' focus groups, there was further debate about whether the use of logo would alleviate this type of worry or whether the logo would create fear through its formality:

> *V: I think the opposite. I noticed the other three had it on, but actually I think that is almost less formal without it on.*
>
> *Interviewer: Yes.*
>
> *V: And I think that looks better without it because as soon as you see that logo, I don't know, maybe it's just connotations but, I think it's better without it.* **[M3]**

Therefore, there could be a tension between an official, professionally designed appearance to reassure about a study's genuineness, and the potential for intimidating young women who are nervous about the formality of a research study.

6.4.1.2 Researchers need to create the feeling that participants are needed and valued

The dimension of being wanted in the research took two main forms, namely the women wanted to know that they were needed and that they were valued.

Feeling connected with other women

Several focus groups referred to the value of making a design which would clearly

identify that the research was interested in them as women. For two groups (CS3 and M1), women's health was an important focus for research. For these groups it was therefore essential to make the advertising materials, be they posters or the video, speak to female identity:

> *J: In a way if it was something that was catching the attention of a woman, I don't know, something like some lights in the background or, a nice view or a pink cushion or something like that.*
> *S: Yeah, yeah, like a background. I know it's just the background but that kind of counts.*
> *J: Yeah. Like beauty bloggers, they sit there with their pink bedding with pots and potions on the side. It's like a fitting environment for.... what they're talking about.* **[CS3]**

Feeling included because diversity is represented

A further group (WW2) argued that the advertising had to 'sell' the participation to the target group:

> *HY: Because if we are selling women a conversation with women then I kind of felt that it lost its mark with the picture at the bottom. Maybe if it's a group of women of different ages and stuff like that kind of feel.* **[WW2]**

For this last group, the image in poster one of a group of people was more appealing than pictures of single individuals. It was similarly important in a further two groups that the actors in videos were representing a wider range of women so that they could represent them fairly to suggest that everyone would be welcome in the study. One actress could create a clear barrier through an accent or feature of appearance that annoyed the viewer:

> *J: You need the diversity as well. In comparison to the awkward slightly shy girl and then the err little bit posher slightly stuck up girl, no, you are already separating your target audience.* **[WW3]**
>
> *B: Then it's more like an honest account because if you've got different people... saying things you've, you can get more of a sense. Even if they were all actresses or actors, depending on what the study was, you've got a different way of people speaking, if you had someone who was quite well spoken and people were like*

'Oooh, I'm not too sure, maybe it's going to be a bit stuffy.' It's ah, you would feel that more like you could fit in. **[M3]**

The youth of the actress in the video was also discussed as a cue that older women were not the ones wanted in the study. She was referred to as a 'grumpy teenager' throughout by one mother's group (M3) and her perceived attitude disengaged the audience from her words:

T: I didn't like it. I thought that it was for younger people. Because of them there [points to image]. I didn't even read the 16 to 34 years. I thought 'Oh it's for people under 20.'. **[M3]**

Interestingly, the students' reactions to the video and images were not about feeling relevant to the study, but more personal about the appearance of people within them. This finding could be related to the fact that the actress was more similar to the student groups in age. Once again, the findings in this dimension present a challenge to researchers. The focus group participants are looking at a range of elements within the advertising materials for evidence about the study, and their place within it. It appears easy for researchers to intend one message and to send another. The young women also identified a wide range of features that were engaging or a barrier to their attention. This finding may again suggest that researchers wanting to recruit more young women into their studies may not be able to use mass media recruitment strategies to gain wide coverage. Instead, researchers may need to design studies which can reach specific groups of particular relevance to a research question.

6.4.1.3 Researchers should not make participants bored

During the analysis of the motivation stage of the conceptual framework it was observed that young women seemed keen to avoid feeling bored (Section 6.3.1.4). This idea recurred later in the focus groups. The dimension was relevant to discussions regarding what young women liked and disliked about the materials in the focus group activities, but also in their talk about where advertisements for research should be displayed.

Disliking doing the same thing for too long

All groups discussed the amount of text in their choices about which posters they preferred. Two of each of the three groups for each life stage category (groups CS1 and 2, WW1 and 3 and M2 and 3) were bored by longer sections of text:

K: [Poster 4] You've got the information needed.

Interviewer: Ok.

K: Rather than waffling on about a load of percentages and stuff.

S: No-one's going to stand and... read all of that, well I wouldn't.

E: Yeah.

S: Like you'd walk past it. **[CS1]**

E: Too much text.

K: It's boring. Yeah but there's no more text on there than there is on there (comparing posters 1 and 2). I think.

Interviewer: So why is that one looking more boring than that one.

K: It seems, I don't know.

N: It's all in one clump and the white against the black is really...

K: Yeah.

N: Like old. So, it's all in one clump and it doesn't look like you can read it one. You can't, yeah, your eyes don't get drawn to it. **[WW1]**

V: Again, and obviously that [Poster 4] is my favourite because you could literally stand, glance at it, for maybe three or four seconds and pretty much get what, what is going on. You've got the odd words that drop out. Especially down the bottom where you've got 'B'Counted!' 'Research' 'Women'. So, it's there, it already tells you exactly what you are sort of looking at and you could get the details off, off that, within a few seconds and know what it's all about and you'll remember it but these two again [posters 1 and 3], very text heavy, I wouldn't remember it. I'd glance at it and think [sighs] 'I can't be bothered and stand and read it.' and it's, there's just nothing there to grab you. There's, it's just boring. **[M3]**

It should be noted that the impression of too much text could be reinforced if writing was presented in a block. The dislike of the text could also be reduced if key elements were easy to pick out. In fact, the use of Word Art was valued in two groups (WW1 and M1) because it provided an interesting activity:

C: I think it's more interesting to obviously look at the heart and look at the different words like, it doesn't just stand out what words are in the heart you've

got to pick them out do you know what I mean. It's more interesting to look at. **[M1]**

This finding, therefore, implies that methods to make the posters a form of entertainment could increase engagement with them, although this could risk making the research seem less important.

In the same way as too much reading was disliked, all groups but one (M3) felt that the videos were too long. This impression may have been increased by the fact that both videos were watched together as estimates of their length were overestimated as in this extract:

Interviewer: Ok. When you say shorter. How long have I got? If I'm making a video...

J: Like a couple of minutes. Tops.

Interviewer: Couple of minutes maximum? Each one of those was two minutes long. So was that about right or too long.

J: I'd say for the second one, but because I didn't enjoy the first one as much it probably would...

S: It felt like longer. **[CS3]**

The implication was that someone talking for two minutes was not able to maintain interest. The young women's experience of other videos may present a challenge for researchers in terms of the kind of visuals that could compete with research invitation clips. They are commonly viewing short vlogs or videos with celebrities or humour.

E: I think that most of the videos on things like Facebook and stuff are probably just a few seconds long and they're either something to do with music or something funny or have some partially clothed beautiful person [laughs]. Would be what I would say would be the three things that you need to make someone watch it. **[WW1]**

Therefore, research recruitment videos may not provide the same, quick entertainment to engage them.

Preferring eye-catching materials

Moreover, potential participants have so many sources of entertainment at their disposal. If researchers cannot hold attention right from the outset, then it will not matter how worthwhile a study might be, it will be overlooked in favour of something else, as eloquently explained in one group:

> *H: I think that there's so much choice of what you view online now, if anything doesn't, you know, if you get bored of it, even for just a second, you can just click on it and look at something else and then it's just gone so...* **[WW2]**

Many of these barriers to drawing attention to advertisements could arguably be anticipated but the focus group extracts also show how the marketing emphasis on gaining consumer insight is valuable. The knowledge of sources of entertainment which are more effective at drawing attention is essential for understanding the best styles of communication with potential participants.

Colours were also discussed as something that would draw attention to the posters, but which could also create a barrier by making the viewer feel bored. The colours were more important to college students and women in work than to the mothers:

> *K: I just put bright colours, snappy and not a lot of writing.*
>
> *Interviewer: Ok. Cos there's bright colours in 3 as well?*
>
> *R: They're boring colours so... [Nodding and sounds of agreement]*
>
> *H: They don't complement each other do they, like the red the green and blue, they don't complement each other do they?* **[CS1]**

> *AL: So, this one if it's straight to the point. I know where to go and what it's to do and if you get, you know a gift or something at the end of it, then I would be probably more inclined to look at this one. Whereas I feel like number 2 and 1, are just a bit long-winded and boring?*
>
> *E: Textbook.*
>
> *AL: Yeah, I know that they've got colour on and stuff like that and I think they're a bit more boring and I'm sort of a short person. But equally I think that number 3 tends to be quite good because of the bright colours. But again, I feel like that's slightly too long.* **[WW3]**

It is noteworthy that the image of textbooks was used twice by women in work (groups WW1 and WW3). In each occurrence, the suggestion was that schoolbooks were boring and old-fashioned. This is reminiscent of the dislike of some of the posters on the grounds that they looked like a school project (Section 6.4.1.1).

6.4.1.4 Information about participation must be accessible in busy lives

All groups mentioned that information needed to be brief, informative and easily accessible. This was partly because of a dislike of reading, as was discussed in the section above. However, some women went further to explain how the need to access information quickly related to their lifestyles.

Needing time to stop and look at information

In one group from each life stage category (CS2, WW3 and M2) the women talked about how posters needed to be placed where they would stop still long enough to read them. In the first extract below the need was for a chance to stop and look at the information. This was the concern for the student and working focus groups. However, for the mothers it was the length of time required to read the advertisement:

> *C: I'd say that the worst place to really put them would be in the classroom because no one would ever think about reading them.*
>
> *J1: Or a corridor. Cos I just walk straight past.*
>
> *C: If you think about the number of times that we're rushing to get out of our lessons because we're right like slightly running behind or...* **[CS2]**
>
> *H: I think that maybe before [child's name] I might have read this out and about [poster 2]. But with a child, with a child. No mum is going to have time to read that quickly on the go…*
>
> *L: But there is a lot of text to read. Unless your doctors is running late and you can read that.* **[M2]**

The mothers in a further group (M3) suggested that researchers should provide a shortened version for immediate consumption but a longer version (similar to posters 1 and 2) to allow potential participants to inform themselves at a time when they had more freedom to concentrate.

All groups, regardless of lifestage category, suggested that the backs of toilet doors would be a useful place to put advertisements, particularly those with larger amounts of text to read:

> *J1: I think posters in toilets. That might seem really odd [sounds of agreement from others].*
>
> *C: Yeah. I do as well.*
>
> *J1: But I'm sat in the toilet and the poster on the back of the door, I'll read it.*
>
> *E: I read them out to you don't I! [Participant laughter]*
>
> *J1: Well that's where I'm most likely to read them.* **[CS2]**

According to one mothers' group (M3), the advantage of this location would also mean that there was privacy for people who were embarrassed about their participation. Even though this idea only occurred in one group, it is relevant because it could even suggest that responding could be a socially stigmatized behaviour:

> *V: To me everyone goes to the loo, everyone goes to restaurants and pubs so it, it seems like one of those places where you get the most amount of people looking at it of that particular bracket where they can have a minute or a couple of minutes and no-one's going to know what they're doing.* **[M3]**

Indeed, other places where potential participants might be waiting were seen as useful in all groups. Ideas included doctor/ hospital waiting rooms, supermarket and petrol station tills, bus stations/stops and the back of bus seats. This waiting did not need to be in a physical place, the waiting for an online video to start could also be an opportunity as explained by this group:

> *H: Well, I think, I also watch a lot of You Tube videos…And there's lots of adverts before them and lots of bloggers do endorsements and things like that and sometimes I don't watch them because they're very, very obvious, like the endorsements but then sometimes, either if you don't have to skip the advert and it's not, if it's not too long that I can go and do something,*
>
> *Interviewer: Yeah.*

H: I'd sit and just, not endure it, but you know, watch it. Um... then it would actually sink in, probably. **[WW1]**

Knowing where women spend their time

The mothers' groups and one working group (WW3) suggested further places such as community centres and maternity units. Nevertheless, in each case they were aware that these venues would only work for specific groups of women; for example, women who are under medical care.

6.5 Interpretation of the focus groups' responses

In Chapter 4, Belch et al.'s (2012) marketing framework was proposed as a relevant conceptual framework which could be used to explore factors encouraging or discouraging recruitment of young women from lower SES categories to UK health surveys. Therefore, this discussion starts with an evaluation of the extent to which the findings from the focus groups support the contribution of marketing to recruiting more young women from lower SES categories.

6.5.1 The contribution of marketing for recruitment to research

Previous research applying marketing theories to research had applied versions of the Marketing Mix (Booms and Bitner, 1981). When applied to research recruitment, the model conceptualises participants' decision to take part in a study or not, as a complex cost-benefit evaluation which researchers must leverage (c.f. the signalling stage in Francis et al. (2007), Figure 4.2). The relevance of this cost-benefit evaluation was seen in the focus groups when women considered the value of the voucher against the inconvenience of the research or chose research because it allowed some form of escape but were still anxious about the risks of participation. The Marketing Mix also emphasises the need to consider how the product (research) and people (researchers) are perceived by participants. In the discussions, previous knowledge of the researcher or of research made expectations of the current study more positive. The Marketing Mix also emphasises the importance of communication channels/ location and the experience or (people and process) that the women might have when seeing advertisements or make contact. Differences in how the young women would choose to spend time would suggest that different places may be more effective for displaying advertisements, another factor that was noted in the earlier application of marketing to recruitment by Francis et al. (2007). For example, to reach college students, places where they spend time with others (in person or virtually) would be good locations to advertise a study, while gyms and music festivals would be more effective with women with greater independence and work responsibilities.

Nevertheless, as argued in Chapter 4 Section 4.4.2 , the Marketing Mix is insufficient for understanding recruitment. This marketing theory overlooks that the decision to take part in

research may not be made by an individual, without reference to others. In the focus groups, women were influenced not only by their own cognitions but also by their group membership and their perceptions of social norms (such as being a 'good mother'). Kobayashi et al. (2013) did highlight how group membership might inform researchers about the best messaging to use to stress the benefit of participation. Still, their work only went as far as what to include in invitation messages and did not consider how the decision to participate is made. Furthermore, this earlier research, in common with the other attempts to apply marketing to recruitment, does not fully address the fact that attention must be drawn to the advertising materials or other attempts at researcher contact. More attention is needed on how advertisements for research can fit into current activities to increase the likelihood that invitations will be noticed and receive attention. This finding goes beyond the focus of Francis et al. (2007) on the placement of advertisements.

The participants (see Section 6.4.1.4) also emphasised that the jobs that they were performing at the time of seeing the advertisement could influence what they were prepared to read and whether they felt free to respond. This influence of context further reinforces the value of a marketing approach to recruitment since it is reminiscent of marketing theories summarised by Barden (Chapter 4, Section 4.4.3) as a 'series of occasions' in which current situations or 'occasions' in which the decision is made are influential on the choice. This choice could be whether to contact a researcher, but it could also be whether to pay attention to the details of advertising for research. As researchers, we therefore need to place advertisements where the location and time of viewing are likely to give people the opportunity to think about participation.

The focus groups also demonstrated how many roles women are undertaking in their lives and how being busy was a source of self-categorization and validation. Belch et al.'s (2012) framework has contributed a useful element for exploring their responses to being invited to a health survey. The conceptual framework incorporates a stage before contact with the researcher to explore more fully what tasks people might want to undertake to achieve their roles in line with their personal and social identities. The belief is that people are more motivated to notice information that matches their current priorities. In contrast, the Marketing Mix model of marketing considers the placement of advertisements but concentrates less on the motivation to process the information within them. The greater emphasis on considering the involvement of the viewer in the messages features strongly in leverage-salience theory (Groves and Couper, 1998). Low involvement, namely the lack of perceived relevance of the invitation, could, they argue, lead to heuristic processing (c.f. the Elaboration Likelihood Model discussed in Chapter 4), so persuasive messages in information-heavy advertisements might be less useful. Consequently, marketing contributes a useful emphasis that if it is not possible to shape the research to fit participants' priorities

then other methods of advertising, such as direct researcher contact, might be a better strategy to engage participants.

Nevertheless, researchers are faced with a significant problem if they do need to tailor advertisements and participation to fit existing priorities and needs. Population surveys rely on mailings on a mass scale and household sampling using methods such as postcode allocation are not able to identify who will receive the invitations. In well-funded projects, it is possible to find out who is receiving the invitation through the use of canvassers who can speak to recipients. Access to sufficiently personalised data about household members could be too limited to optimise message and incentive tailoring, particularly with the advent of stricter data security measures in the UK (Information Commisioner's Office, 2018). The focus groups have demonstrated how there are differences in the factors which may encourage or discourage participation across even within the narrow age range of 16 to 34 years. Therefore, the application of marketing to increase recruitment may be more suited to projects which do not rely solely on mass media recruitment, where it is possible to use the right methods and messaging with the right people.

6.5.2 The importance of identity development in the competition for attention and the perceived rewards of participation

The use of organisations to reach young women for the focus groups did result in groups which were largely different in terms of the level of independence and responsibilities for others. A notable distinction between the life stage categories was the way that the women would choose to spend their time. The wOOt! Media categories (Table 5.2 in Chapter 5) seemed to suggest that the college students, with their limited independence and responsibility would be focused on their individual interests while the women at work would prefer spending time with others over other activities. However, in the focus groups these two aspects seemed to be reversed, with the students seeking time with peers while the women in work would choose social media, reading and other activities which linked with their interests, such as the gym or music. The differences between the life stages also extended to the women's descriptions of their identities. The need to be with others, displayed by the college students, could be mirroring a stage for these women where the self-concept is still developing and derived from reference to others, as argued in Cooley's Looking Glass conceptualisation (1902). For the students, the 'others' were those close to them such as friends and family, while the women in work were looking outside of their networks and using people such as celebrities as models to emulate. The identity for the mothers was also socially constructed but in this life stage the women drew on understandings shared in the group about what it meant to be a 'good mother'. These shifts from a reference group to the centrality of perceived 'adult' roles are in line with sociological views of identity development in young adulthood (Benson and Elder, 2011).

Therefore, consideration of identity development could be a useful addition to our understanding of how young adults judge whether participation in research would confirm or damage their self-concept and standing within the societal structures which are important at a given time. Once again, this interpretation of the data creates a problem for using mass mailing techniques to choose recipients for study invitations because it is not possible to tailor advertisements to specific life stages. It may be particularly difficult to make the tailoring right for women with lower socioeconomic status. Johnson and Mollborn (2009) have argued that young adults who are from families experiencing economic hardship are more likely to feel older and have older life stage responsibilities than their chronological peers. Assumptions about how to recruit young women which is based on age alone, therefore, may send signals that the research is not relevant to the recipient of the invitation. It may be that sampling needs to be through organisations which are used by women at the different life stages, like the approaches used this data collection. This allows for invitation materials to be matched to the life stages of potential participants with current information about what will be important to those women. As noted in Chapter 4 (Section 4.3.1), this emphasis on participant identity and the motivation to notice an invitation to participate is a key contribution of this research to theory on recruitment since self-identity and roles in the adult world have been overlooked in previous literature.

6.5.3 Self-perception as someone who takes part in research

Also, in Chapter 4, it was shown that self-perception is a factor which has been explored to increase recruitment (Section 4.3.1). This earlier research applied the 'foot in the door technique' (Reingen and Kernan, 1977) whereby it was shown that if a participant viewed themselves as someone who 'participated in surveys' they would be more likely to participate in future invitations. Yet the language used by the focus group participants in the current study distanced the focus group participants from people who would take part in a research study. The young women suggested that people who would participate would have more free time and life experience. Durantini et al. (2006) and Dolan et al. (2012) argue that to be effective, a messenger of something which requires the adoption of a new behaviour should be as similar as possible to the recipient of the information. It was this research which led me to use an actress within the target age range of the study and who was a college student. Yet my attempts to provide a messenger who was similar to the women was difficult to achieve as the women were quick to locate differences between the actress and themselves that were not obvious during the design of the materials. In fact, the students who were closest to the actress in age and life stage were the harshest critics. The focus groups' response to the video and images do emphasise the danger of researchers' assumptions. However, involving more young women in research planning to reduce reliance on such assumptions will necessitate more time and resources at the start of studies.

6.5.4 Familiarity with researchers in response behaviour

The research presented in Chapters 3 and 4 of this thesis was largely focused on how to change the participant's behaviour by altering the contents of the invitation message, the incentives, the design of the survey and completion methods, or the use of persuasive techniques. Little attention was paid to the researcher's behaviour or relationship with the participants beyond the researcher's selection of persuasive messages in the leverage-salience theory (Groves, Singer and Corning, 2000, see Section 4.3.4). However, in this focus group research, anxiety about participation was strongly expressed in all life stages. The source of the anxiety was sometimes linked with perceived differences in power or knowledge between researchers and participants. When discussing their perceptions of researchers, all groups drew initially on stereotypical images of the scientist in a white coat with a clipboard. Yet as soon as there were people in the group who had experience of researchers as approachable people, the group opinion was swayed towards a more positive view of researchers and the research that they were trying to complete. This observation in the focus groups implies that researchers should be more visible to hard-to-reach participants so that there is less reliance on stereotypes or inaccurate images. Such a shift away from stereotypes requires information to be easily available about researchers and this could be problematic if only quick processing of information is possible (Bodenhausen, 2005). The need to make decisions quickly will result in the use of quick and dirty heuristics rather than realistic information. Therefore, researchers involved in UK health surveys should be more visible in daily life, perhaps through media accessed by young women who are hard to reach in research. Yet, such a strategy would call for a longer-term approach to conducting research than is current practice.

6.5.5 The focus group findings and the literature on decision making and persuasion

Section 4.3.4 outlined literature relating to persuasion theories from cognitive psychology which have been applied to survey participaton. Dual process theories such as the Elaboration Likelihood Model (Petty and Cacioppo, 1986) were viewed as particularly relevant because the theories stressed that information would be processed in different ways according to both the context in which the decision was being made but also the processing style of the individual. In terms of the perception stage of the conceptual framework, the women were using peripheral cues to make their decision but clearly wanted detailed information as well. Time and place altered what they wanted. They could process more if they were in the toilet or waiting in a boring place. Mothers, more than the other life stage categories, wanted to select when they thought about the invitation, for example preferring to look when they were not supervising children. The importance of current activities is in contrast to the research presented in Chapter 4 (Section 4.3.3), where the 'need for cognition' was viewed as dispositional rather than situational (Cacioppo and Petty, 1982). At the same time, it was difficult to ascertain whether processing style was differing between people since

the data were generated as groups who regularly drew upon group identity, such as motherhood, in discussions. At the same time, there was the impression that some women wanted to make snap decisions because research was useful to them to fill empty time. Strategies for fast access to studies could be beneficial for short studies where immediate completion could be offered, but this would carry ethical implications regarding offering a 'cooling off' period when taking consent (Wiles *et al.*, 2005). This means that the dual processing styles outlined in theories such as the Elaboration Likelihood Model, are useful because they show how processing styles may be influenced by social context and competing calls on attention. Consequently, advertisements need to provide opportunities for both quick access to important details while providing opportunities for more reflection where possible.

The dual process theory discussed above, and the theories of response behaviour outlined in Chapter 4 focus particularly upon immediate cognitions and how they impact upon behaviour. Yet it was clear from the groups that past experience (such as dislike of school or knowledge of vlogs) are used to interpret and evaluate a current advertisement. These associations between the past and current situations fit with research to suggest that decision-making can be affected not only by processing style but by the role-playing or mental imagery to anticipate consequences and simulate the unknown (Moulton and Kosslyn, 2011). Galea and Tracy (2007) have suggested that anticipated negative consequences of participation in health surveys are an important explanation for declining response rates in epidemiologic studies. According to these authors the anticipated consequences have derived largely from past cases where participants, particularly in marginalised groups, have been mistreated by researchers. In the current focus groups, it was striking how central such concerns were to the women. Anxiety about the genuineness of the invitation seemed to influence both motivation and perception stages of the framework as the women sought to protect themselves from negativity by finding cues as to the researcher, procedure, and their own value. Again, this observation points to the need for researchers to be more visible as approachable individuals to counteract existing beliefs which are more readily available to potential participants.

6.5.6 Inclusion of two modes of communication in the methods for the focus groups

Focus group discussion was stimulated through open questions and by asking participants to respond to stimulus materials (videos and posters). As indicated in Chapter 5, the video was included to find out whether the young women would find static or video advertisements more accessible and attractive. Braverman (2008) had argued that an audience not concerned about health would be more likely to be drawn to a message delivered aurally as opposed to written information. Yet, in this study the information within the videos was not considered because participants were distracted by the style and accent used by the actor

during delivery, even when a friendlier approach was used, to see if this was more effective than a more formal style of presentation (Kraichy and Chapman, 2013). In this research, both videos were disliked for different reasons and these primarily centred around the unnaturalness of the actress and her differences to the viewers. Therefore, an important finding is that the young women seem to look for reassurance through signals that they fit into the group of people sought for the research.

6.6 Implications: Implications of the findings for research recruitment planning

6.6.1 Extension of the conceptual framework for research recruitment

Figure 6.5 outlines the implications for planning research recruitment, relating to the data collected using the motivation and perception stages of the conceptual framework to explore responses to recruitment materials and health questionnaires in the focus groups. The shading in the figure is to differentiate the implications which relate to each of the two stages of the conceptual framework.

Consumer Route	Application to Research Recruitment	Findings from the Focus Groups	Implications for Research Recruitment
Problem recognition - formative research with target audiences	**Motivation** Why do participants even choose to read the invitation when they first receive it?	1. One size does not fit all - life stage differences 2. Power imbalances deter participation 3. Trust - messages from untrusted sources will be ignored 4. Group membership and identity is important	1. Preparatory work and involvement of participant groups are needed to understand the barriers and the exchange 2. Researchers should be more visible; advertising needs to emphasise how researchers need participants; group completion methods could allow greater security 3. Involvement of trusted people in the community, celebrity endorsement may be useful to increase social value of research; peer recruitment, meetings or videos with researchers, could help create relationships for trust 4. Involvement of participant groups to understand group membership and identities (e.g. motherhood) and how these influence goals, lifestyles and language
Information Search - where and how do people find information	**Perception** How do participants engage with the information presented in an advertisement for a survey	1. Design used to assess authenticity and eligibility/relevance 2. Advertisements will be read when women are bored and have opportunity to respond 3. Women feel busy	1. Funding is required to ensure professional design; pilot work can increase understanding of designs that speak to women's identities; more than one design might be required 2. Place advertisements where women are waiting and can respond privately; pilot work to understand how women use communication methods to fill 'empty time' 3. Language suggesting that women have free time should be avoided; participation should fit with other activities; make information quick to access (reduce text and bullets); make response method quick

Figure 6.3 Development of the motivation and perception stages of the conceptual framework with suggestions to translate the framework into a recruitment strategy

The strategies suggested in the final column of Figure 6.3 prompt researchers to plan future studies with attention to three main areas:

1. Work to make research more trustworthy and accepted – increase the visibility of researchers in young women's everyday life, perhaps by working more closely with community organisations where they access services and information.

2. Work to understand participants' perspectives – understand how research and research advertising can fit into potential participants' current activities so that persuasive messages about the benefits of participation are seen and fit what women might be wanting at the time of seeing the information.

3. Conduct preparatory work to understand more about the personal and group identities of different groups in the target population. In this way researchers might avoid the appearance and contents of study materials which annoy participants or signal that they are not wanted in the research.

6.6.2 Additional implications arising from the focus group data

The application of the conceptual framework has provided some useful strategies to consider in the planning of a recruitment strategy. It could be argued that these could be relevant to all samples and not only to young women from lower SES categories. However, the analysis in this chapter has also provided some useful insights about why young women from lower SES categories might be more challenging to recruit than other population groups. During this phase, the issue of perception has shifted from viewing it in purely cognitive terms, where the individual responds to informational input according to their style of processing or interest in the topic. Instead, this research highlights that young adulthood is a time of life stage transition which can mean that the response to an advertisement or even how it is noticed is not the same for all women within the 16 to 34-year age range.

An important new contribution of these focus groups to the literature of survey response behaviour is the greater focus on perceptions of the researcher. The findings in the focus groups do not only suggest that the researcher as someone who persuades the participant; researchers can also become a barrier to participation if there is a reliance on stereotypical images of researchers which can easily be negative. More experience of researchers and their work could promote a sense of relationship which reduces anxiety associated with perceived hierarchies of power. If it is not possible to create relationship prior to a survey study, it would be beneficial to find ways to allow participants greater time and support to process information about the study so that they do not fall back on stereotyping in their decision-making (Bodenhausen, 2005).

6.7 Conclusion

The focus groups have identified two main findings for the recruitment of more young women from lower SES categories to health surveys. Firstly, even though the role of identity has been overlooked in previous literature on recruitment, it appears to be influential on how

these women respond to being invited to take part in a research study. Young adulthood is a time of transition and even within the narrow age range of 16 to 34 years, the women may want different things from participation and have different barriers to participation. They may also look for different sources of reference (perceived group and social norms) to evaluate whether they should take part. As a result, this research supports the pattern seen in Chapter 2 of this thesis that it could be more difficult to recruit young women aged 16 to 34 from lower SES categories to complete UK health surveys, if a single, mass recruitment strategy only is used. Secondly, the women were often anxious about requests to participate and the anxieties related to concerns about the authenticity of the request for information and worries about what participation would be like. While trust and anxiety have been considered in previous studies, these factors have not been studied in relation to survey research.

Therefore, the next chapter begins with a discussion of how the findings from this chapter do suggest that one recruitment approach will not optimise recruitment of all young women from the target population. This issue is addressed by narrowing the focus of the thesis data collection to a subgroup of young women from lower SES categories.

Chapter 7 Focus group findings for Study 1: Attitude formation, integration, and learning

7.1 Introduction

The second phase of focus groups focused on the next three stages of the conceptual framework (highlighted in Figure 7.1). This data collection continues to address Objective 2 of this thesis, to use this conceptual framework to identity and describe the responses of young women from lower SES categories to recruitment materials and questionnaires about health, health knowledge and health behaviours.

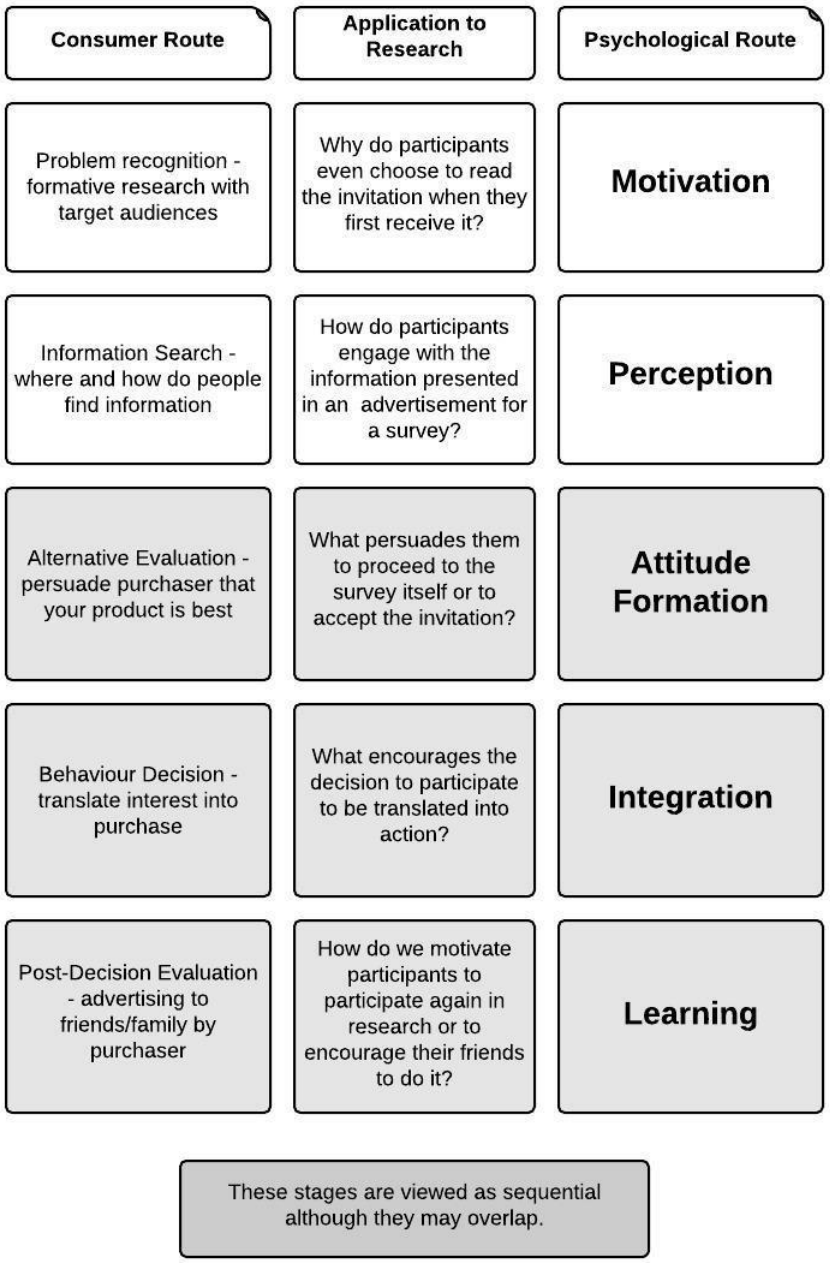


Figure 7.1 The conceptual framework: Stages explored in the second phase of focus groups

The activities within the focus group were designed to take the participants from the forming a belief about the invitation, through decisions that are made when they have shown commitment to survey completion, to how they might respond to requests to help the researcher after they have experienced the participation for themselves.

The eligibility criteria for this phase of focus group were narrowed to only one of the life stages adopted in the last Chapter, to student groups only. This change was for three reasons:

i) The first phase of focus groups (Chapter 6) has demonstrated that 'one size does not fit all'. The difference between the lifestage groups, even within the 16 to 34-

year age range, indicated that it may not be feasible to optimise recruitment for all underrepresented young women with a single recruitment strategy.

ii) Women in the women in work lifestage were mothers in two cases and women from the mothers' groups sometimes balanced work and motherhood. During the focus group discussions, the women in the work and mothers' life stages sometimes appeared to fit other lifestage groups relating to their multiple roles. This complexity of roles was not observed in the college student focus groups. Therefore, it is more likely that findings from this work will be transferable to other FE college student groups.

iii) Young women aged 16 to 24 years are a key public health focus for primary and secondary prevention interventions in the face of concerns about rising mental health issues in young women, preconception health and the effects of increasing social inequalities (Priest *et al.*, 2014; McManus *et al.*, 2016; Hagell, 2017). FE supports many women with lower socioeconomic status in the UK but it is a setting which has been largely overlooked in health research (Langford, Willmott and Fletcher, 2019). Therefore, FE colleges ae a sampling frame which could facilitate recruitment and engagement efforts for health interventions, as argued by Langford et al. but also for research such as health surveys.

As a consequence, the remainder of the data collection will focus on this narrowed population in Further Education, as these colleges serve many young women from lower SES categories. The college setting is still important to the focus on young women from lower SES categories since this educational setting reaches women of the right age group with 17.93% of adults aged 16 to 24 years are in FE education (Association of Colleges, 2019a). This statistic represents a larger proportion of 16 to 18-year olds (35%), as opposed to 25% in schools and 8% in employment. Furthermore, this 35% does not include young adults doing apprenticeships through FE colleges (Association of Colleges, 2019a). Therefore, FE colleges represent a valuable context in which to reach younger women. FE colleges also represent a good way of reaching young women with lower socioeconomic status. Free school meals is a measure of family deprivation used in UK educational systems and 16% of college students as opposed to 8% of school students aged 16 to 18 years were receiving free school meals at age 15 (Association of Colleges, 2019a). These data are an underestimation since they do not capture students from families receiving financial and housing support who do not sign their children up to free school meals.

7.2 Focus group composition: Phase 2 of Study 1

Women were eligible if they were aged 16 and 24 years, studying vocational pathways at a FE college. Eight groups were conducted at the students' colleges. The vocational pathways of

each group, with the sociodemographic characteristics are reported in Table 7.1 to provide context for the focus group findings in this chapter. Unsurprisingly given the sampling frame,

the majority of the focus group participants were in the younger age band, with level 2 education and they described their main work role as education. There was a more even representation in relationships status with just under half the group stating that they were single, and half were in a relationship. No participants were married or cohabiting.

Table 7.1 Crosstabulation showing the composition of the second phase of focus groups in Study 1

			Age group		Main occupation		Education (highest level achieved)				Relationship status			
	Group size	Vocational pathway	16-20 years	21-25 years	Education	Work	No formal education	2	3	Unanswered	Single	In a relationship	I prefer not to say	Unanswered
Students (CS4)	5	Hair and Beauty	5	0	2	3	0	5	0	0	2	3	0	0
Students (CS5)	5	Childcare	4	1	5	0	0	4	1	0	4	1	0	0
Students (CS6)	4	Childcare	3	1	4	0	0	4	0	0	1	3	0	0
Students (CS7)	9	Media make-up	9	0	8	1	0	6	2	1	3	5	0	1
Students (CS8)	7	Art	7	0	7	0	0	7	0	0	5	2	0	0
Students (CS9)	4	Media	4	0	4	0	0	4	0	0	3	1	0	0
Students (CS10)	6	Hospitality	6	0	6	0	1	5	0	0	2	2	1	0
Students (C11)	5	Tourism	5	0	1	4	0	4	1	0	2	3	0	0
Total	45		43	2	37	7	1	39	4	1	22	20	1	1
% of all participants	100		96	4	82	18	2	87	9	2	49	44	2	2

7.3 The attitude formation stage of the framework

In this stage of the conceptual framework (see Figure 7.1), the focus is on how the participant moves from an initial interest in participation to a decision to take part in a study. The focus group participants were asked to take part in four activities to initiate discussions about how they select and use information to make the decision about whether to commit to participation or not. Participants were also asked about what they perceived to be the benefits and costs of participation to suggest what might be persuasive, once a potential participant has shown initial interest in the study. This line of questioning was informed by the emphasis on these factors in marketing (see Sections 4.4.1 and 4.4.2 of Chapter 4). The focus group activities are outlined in Chapter 5 (Table 5.3).

7.3.1 Framework analysis: Attitude formation stage

The framework analysis indicated that there are three dimensions for researchers to consider when considering the design of invitations to participate in a health survey. These dimensions were developed from ten detected elements as outlined in Table 7.2. The dimensions identify three main areas needed to persuade young women from lower SES categories to take part.

Table 7.2 Detected elements which informed the three dimensions identified as relevant to the attitude formation stage of the conceptual framework

Dimensions	**Gaining trust in the face of anxiety about the research**	**Convincing participants that they are the ones needed for the research**	**Creating mutual benefit through participation**
Detected elements	Experiencing uncertainty that promises of incentives will be fulfilled	Recognising that their age group/ generation make a unique contribution to the health profile of society	Perceiving the costs and benefits of participation
	Having concerns about security of social media	Wanting their methods of communication to be respected	Having expectations about what a health survey would be like
	Having concerns that the data will not be stored safely	Needing to feel valued as women	
	Being afraid that participation will lead to being judged		
	Securing reassurance/		

	evidence that the research and researchers are genuine		

7.3.1.1 Gaining trust in the face of anxiety about the research

Five detected elements were identified which related to the young women's anxiety about research participation. These detected elements suggested that young women were expecting unpleasant or unintended things to happen as a result of their involvement, including promises not being fulfilled or information being taken or lost. There was also a sense that young women were expecting negative judgements to be made about them by researchers.

Experiencing uncertainty that promises of incentives will be fulfilled

It was noted in the first phase of focus groups that young women were concerned about being deceived or harmed in some way (Section 6.4.1.1). This dimension reoccurred during discussions of the invitations to research and the participant consent information. Even though it was evident in the first phase of focus groups that incentives were motivating, in this phase the students saw incentives as a promise that would not be fulfilled. The risk associated with offers of money was discussed in a way that suggested that the dangers of online advertisements were common knowledge because the women did not need to have experienced scams for themselves to feel concern. In the first extract below (CS5) the focus group participants were responding to the Facebook advertisement but in the second they were looking at the participant information sheet which suggests that the mistrust is not only associated with social media communication:

> *X: You know how sometimes, you read, it might be different if you just got given this, but like say on social media, you read something on social media or you can like win like £500 it might not feel like realistic or that it's going to happen, it could be a scam kind of thing.* **[CS5]**
>
> *O: Some people give out fake vouchers, I'm not saying yours is but could be fake.*
>
> *Interviewer: Yeah. It's alright they're not fake…*
>
> *O: They photocopy it and stuff and make it look real and then you go to the shop and they're not real. …It's not happened to me before, but I am saying.* **[CS9]**

For one group the statement on the participant information sheet that vouchers would be given on the day was, therefore, reassuring but this could present a problem for remote methods of data collection:

C: I like it that it says, the £15 voucher on the day so that you are not going to get sent it and you never get sent it. Kind of more, it looks at bit more real. **[CS6]**

Originally the offer of the monetary incentive on the day was included in the materials for discussion (Appendix 5.10) because survey studies might involve structured interviews in clinics as well as questionnaires to be completed with the need for travel or childcare to be paid for by participants. However, in the discussions this detail was viewed as reassuring that promises would be fulfilled.

Having concerns about the safety of social media

The students in CS5 (extract above) were wary of the safety of social media. This dimension was echoed in three further groups (CS4, 6 and 11). The students were knowledgeable about the danger of clicking on unsolicited links and this knowledge had the power to influence choices about behaviour. Here the students in two groups are discussing the inclusion of a link to an online survey platform:

R: … you see some people post it [social media] and you click on it and press on it and it takes you to something else.

Interviewer: Yeah?

C: Yeah like pop ups and stuff.

R: Yeah and like adverts and I'm like, I was here to do this and not watch an advert. [CS4]

E: I wouldn't click on it because I wouldn't want too much information taken from my Facebook account. And there's the viruses that you sometimes get. Sometimes you click on things and they take you to really dodgy websites. Then from there can give you viruses and stuff. **[CS11]**

The participants were not only thinking about viruses but also about several, complex ways that technology can manipulate what people see, for example through redirection and pop-ups.

Having concerns that the data will not be stored safely

In the same way as the women were concerned about the danger of personal information being used by third parties, they were also anxious about how contact details and survey data might be stored and used after the research. In three groups (CS6, 7 and 9) there was a sense that researchers may misuse or share personal details. It should be noted that these data were collected before the introduction of General Data Protection Regulations (GDPR) in the UK and now there is even more information available on data security. For the focus groups, more

information was required about why the data needed to be stored for years after the study and the women needed reassurance about the safety of this storage:

> *C: You put like confidential everywhere else but like in this bit it says um, the information, we will be careful. That makes me feel a bit like uneasy. But if you just put confidential there. It might have been a bit, better.*
>
> *Interviewer: Ok. Good to know.*
>
> *H: Worry about what you'd do with the information. But we will be careful, it doesn't sound right.* **[CS6]**
>
> *S: Here, where did it say, here you wrote that you're gonna, um, you are going to store the information for ten years. And do what with it? That's what you haven't wrote. Why are you going to store the information about me? And are no details will appear about you on Facebook? I am not really on Facebook so why would it appear. [Participant laughter] That doesn't make sense to me. I am not being rude or anything.* **[CS7]**

My field notes made at the time of the groups also highlighted that in two focus groups (CS7 and 9) it was the students from ethnic minority groups who were particularly concerned about storage of identifiable data and in both focus groups; they were very anxious to protect their home addresses.

Being afraid that participation will lead to being judged

The focus group participants in five groups (CS6, 7, 8, 10 and 11) were also afraid of being negatively judged by someone who they perceived to be in authority (either through profession or age). The following extracts, taken from the discussions about the preferred method of completion of a health survey, also suggest that the behaviour of the researcher can help to allay these fears:

> *B: I think when you're asked a question, you know when you go to the doctor's and they are very bitchy and stuck up…They ask a question and you're like 'I'm not even going to tell you because you're bitchy.'. I like it when they are more like nice and like cool. Then it makes it easier…When they don't act like judgemental.* **[CS10]**
>
> *A: In a doctor's room, you are just sitting there, and you've got a bed over there, a thing over there. And you're a bit like [Sounds of agreement]. Not in there to talk.*
>
> *S: It depends on the person. It's like, if you're going to ask me, I think, in order for me to feel comfortable, you don't need to give that environment. You make me feel awkward*

talking about it, if you talk to a person, so if I talk to you, yeah, and you, sort of make like, yeah like....

E: Judging.

S: Judging me. Like that sort of thing, that would make me feel really uncomfortable talking to you about it. So, it's how the vibe with you is like, sort of. I don't know how to say it. **[CS11]**

Furthermore, it can be seen in both extracts above (CS10 and CS11), that the image of a doctor was contrasted against someone who will make the young women feel comfortable to talk.

Seeking reassurance that the research and the researchers are genuine

In the face of anxiety about the research process, the focus group participants were searching for information to reassure them about the authenticity and value of the research. The students in four focus groups (CS5, 6 ,9 and 10) looked for features of the design of study advertisements and materials to suggest that the information had been produced professionally and was not done cheaply (because the research was not significant), or as part of a scam:

Interviewer: So, what makes you think that it [the online advertisement] looks genuine?

E: Um, there are links [pointing to university logo]?

Interviewer: Yeah?

E: And it just looks very professional.

Interviewer: So, you're saying more colour [on the printed survey]?

N: Yeah, just more a design put behind it. That like time and actual effort has gone into the survey. Not just doing it for like a waste of time.

Interviewer: So, it needs to look like I've...

N: Yeah just more, it doesn't have to look like that but just more of a design behind the survey. **[CS9]**

Therefore, the logo appears to reassure recipients of the advertisements and colour was important in two groups (CS9 and CS10). Printing that was not perfectly straight (CS10) or typographical errors (CS5) were signs that the advertisement was not to be trusted.

The identity of the researcher was also important to suggest that participation would be safe to trust. When asked to comment on what the researcher should say about themselves in participant information, the women in three groups (CS7, 10 and 11) were reassured by the

researcher's qualifications or experience in conducting the research:

> *D: Well you say that you're a psychologist. So automatically that gives the impression that you understand the brain and the way people act, so that means that, I studied psychology last year for a year, so that automatically gives the impression that you are more likely to understand how things are happening, why you are feeling the way that you are, if that makes sense, which kind of creates an aura of trust.* **[CS7]**
>
> *E: Maybe telling me that you've done it before with previous students or stuff like that, so that I know that you're a bit more qualified.*
>
> *Interviewer: Ok.*
>
> *E: To have that talk.*
>
> *J: Yeah. Something to do with, some sort of attachment to it. Whereas if you said to me...*
>
> *H: Like a beauty therapist.*
>
> *J: No.* **[CS10]**

In fact, in CS7 the qualifications were more important than seeing a photograph of the researcher. This interest in professional experience was curious in the light of the observation, noted above, that some professional groups made the women feel less able to talk about their health. Also, I had not provided information about the researchers' experience or qualifications in the materials that the participants were discussing in the focus groups. However, this is information which could be easily added to survey invitations and information sheets.

7.3.1.2 Convincing participants that they are the ones needed for the research

Three detected elements were relevant to this dimension, telling researchers to convince the young women that they are the ones needed for the research. The college students seemed to categorise their identity as different to other adult groups (with their own methods of communication) and yet they did present some solidarity with other women. At the same time, they appeared unsure of themselves and in their ability to contribute to a research study.

Recognising that their age group makes a unique contribution and wanting their methods of communication to be respected

It was anticipated from the literature review that an understanding of identity and self-perception would be useful to inform researchers how to make health study parrticipation fit young women's sense of self (Chapter 4, Section 4.3.1). In this phase of focus groups, the young women often described their identity in terms of age. This identity shaped how they expected to access information. In three focus groups (CS6, 7 and 9), reading and writing, as opposed to

using mobile phones were seen as something that older people do and therefore, online completion would be more appropriate:

> *LE: I'd be more likely to do it on a phone than put it an envelope with work.*
>
> *LT: It seems old-fashioned. [Sounds of agreement]*
>
> *D: Our generation are all on phones aren't they?* **[CS7]**
>
> *J: But like that, people our age group, now when we look at stuff like that [Consent information], especially when things are on paper as well. You don't. You go 'Oh I don't want to do that.'* **[CS9]**

However, this stated preference for the phone does not extend to a telephone conversation as was meant in telephone completion in the research reported in Chapter 3, because of fear of being 'recorded' (CS6) or the intimidation created by talking to a voice without being able to see the person (CS4).

The awareness of differences between age groups meant that, if surveys were not designed for a particular age and lifestyle, a feeling that the participant was not wanted or needed was created. An age range, in the information introducing a study, that covered all adult years was noted in three groups (CS5, CS7 and CS11) as a barrier to participation. Feeling special and not grouped with women of other ages, appeared to be needed:

> *K: Also, because it says between 16 and 85. That's a big gap.*
>
> *Interviewer: Yeah?*
>
> *K: You don't feel as special as if it was 16 to 25.*
>
> *C: Why because your nan could participate as well. [General laughter]* **[CS5]**
>
> *L: If you want younger people to answer the question then maybe you should just put their age. Cos, it says 16 to 85. If I saw that I'd be like 'No, mum you can...'*
>
> *Interviewer: Ok. So, because of that long age range, you'd be like I can't be bothered.*
>
> *D: You should do the study exclusively for younger women because then people would think that they are more likely to relate to...* **[CS7]**

Needing to feel valued as women

In addition to feeling that they were eligible, the focus group participants also valued messages in the advertising materials (achieved through wording and images/memes) that would suggest that they, and what they had to say, were important. This message of empowerment was closely

tied with the focus on women in the study information. The appeal to their identity as women seemed to be particularly motivating in the two groups quoted below:

> *Interviewer: You like the heart?*
>
> *H: Is it all about women and that? It kind of...*
>
> *C: It is like 'You are woman whose ideas count', it kind of makes you feel empowered like. 'Yeah I can!'* **[CS6]**
>
> *M: What does stand out is the front 'Oxford Brookes really needs you.' and 'You're a woman whose ideas would count.'. That actually does stand out in a way because you've got the, you know the heart and everything and you know women. In society, today people tend to judge us in a way, and they like to use us as objects sometimes. But like it like it actually, I'd actually take part in this because it is more colourful and it's in different colours so you would actually understand it.* **[CS8]**

In another group (CS9) the women were similarly drawn to the 'We can do it!' meme (see Appendix 5.10) because it created an empowering message.

7.3.1.3 Creating mutual benefit through participation

The application of a marketing approach to increase recruitment has highlighted the importance of understanding the cost and benefit appraisal which occurs when someone is asked to make a decision about use of time and resources, as happens when researchers ask participants to participate in a health survey. Two detected elements identified in the focus group data were relevant to the appraisal of costs and benefits. Both of these demonstrate how researchers need to be aware of how both benefits and costs are constructed by the young women they want to recruit. The data suggested how the young women sometimes held incorrect understandings of research which led them to anticipate rewards and difficulties which influenced their decision-making

Perceiving costs and benefits of participation

Marketing theory has highlighted the value of understanding how the costs and benefits of participation are evaluated (Chapter 4, Section 4.4.2). The focus group participants were not asked specifically about remuneration but in every group they remarked upon the offer of vouchers within advertising materials. In three of the focus groups (CS5, CS9 and CS10), the discussion of the money was related to a balance between the time and effort required to complete the study. There was disagreement between groups and even within one focus group (CS9) about whether the unconditional incentive (£15 was offered for survey completion taking

15 minutes) was sufficient for the task. The belief that participation would be boring was particularly demotivating:

> *Interviewer: Ok. So, winning money, that got your attention straight away. Do you think that was a good amount of money?*
>
> *B: Yeah… For fifteen minutes to do something then yeah* **[CS10]**
>
> *Interviewer: For kind of the voucher that I put on there. Would that be fair?*
>
> *H: Not really. Just because the way that I am, I just get bored of stuff after a while. It's just...*
>
> *Interviewer: Fair enough.*
>
> *H: Yeah.*
>
> *X: There's lots of reading and concentrating.* **[CS5]**

In the extract from CS5 boredom is associated with the need to read a lot of text. This is reminiscent of the discussions about the poster stimuli in Chapter 6 and a similar idea reoccurred when the women discuss the presentation of the survey materials in a later activity.

While the monetary rewards were influential for two groups (CS6 and 11), a less tangible reward, in the form of the opportunity to use participation as a way of talking about health concerns or gaining help, was also attractive. The women in these focus groups wanted either the opportunity to talk to a health professional, access to online help or the opportunity to ask for help by responding to a written question:

> *S: I don't really know how to answer that.*
>
> *H: Maybe, like have videos so that you can like help yourself and you can talk privately.*
>
> *Interviewer: Yeah? Ok? So, you'd quite like it to be, you know, with someone who could like help you if you needed. Is that what you're saying?*
>
> *H: Maybe a number to call or something.* **[CS6]**

When deciding about participation the focus group participants also seemed to be considering the value of participation in terms of whether their involvement would be interesting. Initial impressions from the outside of the questionnaire or the first consent page could signal that the participation itself would be boring or require a lot of time or effort. The following two extracts are comments made as soon as the focus group participants picked up the paper copy of the survey:

C: One thing. It's not very colourful.

K: No.

Interviewer: Not very colourful. Very plain. Yeah.

R: People are going to think, 'What is this?' and they'll chuck it in the bin. **[CS4]**

E: If I looked at this, there's a lot on the first page [Sounds of agreement] and that's just the first page, so what's inside. How much do I have to read to do all your questions?

H: That's a brilliant point E.

E: If you put all that on the first page, you could put that 'This is just to inform you' you don't have to.

H: If you want you could put your actual information on the back or it, so that if someone was more interested in your questionnaire, they can have more information, if that makes sense.

E: It just seems a lot for a first page. You want something to attract them, but most people who'd looked at that would be like 'That's a lot to read!'. Before we've even started. [Sounds of agreement]. **[CS11]**

It can be seen from these two extracts that the impressions were generated both through the colour and layout of the information but the need to do a lot of reading was, once again, a barrier to the formation of a positive attitude about the study.

Having expectations about what a health survey would be like

The focus group participants listed topics that they would expect in a health questionnaire and to rank these in terms of the level of discomfort that might be felt when answering questions on them. The activity was used to explore how the topic of the survey appraised by the young women following the finding in Chapter 2 that different topics could encourage or discourage participation.

Diet, weight or eating was mentioned by all of the groups. The topic of mental health was listed in all but one of the groups (CS10) as a topic that they would expect to see in the questions about their health. When mental health was considered it was described as a topic which would be difficult to discuss. For example, in group CS7 the women separated mental health from physical and psychological abuse in their original list of topics, but they struggled to say which would be more difficult to speak about and there was the fear of not being believed:

E: [Mental health would be ranked as uncomfortable to discuss], cos some people are embarrassed about it.

S: You might have conditions that no-one know of.

D: There's a big stigma with mental health especially at the moment cos, a lot of kids. I know that you get this a lot with Tumblr, a lot of kids who like romanticise about it so when people actually come out to speak about it, there's a big fear that people won't take them seriously and maybe people will just be like 'Oh you're just lying about stuff like that.' **[CS7]**

Lifestyle factors such as alcohol drugs and sexual health were also included in all of the lists. However, drinking alcohol and taking drugs were typically rated as less difficult to discuss than mental and sexual health. In this group it was particularly noticeable that talking about their family medical history was more uncomfortable than discussing potentially illegal activities such as drug taking:

Interviewer: … So, sex, periods, mental health. Is that alright with you ladies? You can disagree. Family history next.

C: Drugs and alcohol before food.

Interviewer: Drugs and alcohol before food. **[CS4]**

The dislike of discussing family was mentioned in another group (CS6). It was the complexity of their family situation and being judged by outsiders that could discourage participation:

H: You might not want to talk about your family, you might be like if you don't really see your mum or your dad [Sounds of agreement]

S: Especially if you are at college. You might think that if you say something about your families. They'll think you don't have anything. **[CS6]**

As can be seen from the inclusion of family medical history in the extract above, the topics considered by the young women as topics which might be included in a health survey study were wide-ranging. These included discrimination against women [CS6 and CS10], transport used to reach college (CS8) and pet ownership (CS8).

7.4 The integration stage of the framework

The framework's integration stage (see Figure 7.1) represents the final step between interest in an invitation/advertisement and actual participation in a study. The Theory of Planned

Behaviour (Ajzen, 1991) outlined in Chapter 4 (Figure 4.1) was particularly relevant in the planning of this part of the focus groups because it considers how someone might decide to perform a behaviour but may still not carry the decision through to a behaviour. The term 'integration' was, therefore, retained from the original marketing model because it suggests that the positive attitudes formed in the previous stage of the framework must combine with an action, namely the participation.

To explore this framework stage, the ranking and listing activity described in Section 7.3.1.3 is relevant because it is likely that, in the case of a paper administered survey, participants will flick through the pages to investigate what the questions are. The appearance of some topics could therefore present a barrier at this point. In addition to this sorting activity, the focus groups were shown a paper and online survey, together with information about the return of complete questionnaires. The young women then evaluated the appearance and content of the questionnaires and also discussed how return method would influence their decision about completion.

The aim was to understand responses to the official appearance of the paperwork since previous research has highlighted how paperwork can generate both stress (Mein *et al.*, 2012) or boredom (Groves, Singer and Corning, 2000) for participants. It was further important in this phase to investigate participants' response to the length of surveys. If too short, participants could feel that their responses lack value (De Vaus, 2002). On the other hand, if the survey is too long or complex, it will also reduce the value of rewards of participation in appraisal of cost and benefit (Mercer *et al.*, 2015). Other features which could increase perceived study burden were also explored during these focus group activities, relating to the design of the survey tool in response to the gaps in the research discussed in Chapter 3 and the findings in Chapter 6. These features included how questions were displayed (number of questions per page, scrolling in online surveys), booklet size and artistic design of an online survey. There has been considerable research looking at features of survey design (see Keusch (2015) for a review). However, much of the research on online platforms is dated and therefore not necessarily able to reflect how young women currently interact with information on digital devices or the capability of contemporary survey software. Therefore, the current study adds to previous work by giving women from underrepresented groups the opportunity to verbalise their responses to features of length, colour, design, mode of completion, layout, and question topic.

7.4.1 Framework analysis: Integration stage

The detected elements identified through the framework analysis suggested three dimensions relating to things which participants need to turn interest into actual participation. These are

represented in Table 7.3 below. Each of the dimensions highlight how the young women are actively searching information and using it to reassure themselves and to present themselves accurately.

Table 7.3 detected elements which inform the three dimensions associated with the integration stage of the conceptual framework

Dimensions	**Searching for signals that participation is for them**	**Wanting to represent themselves accurately**	**Needing to feel secure during their participation**
Detected elements	Looking for clues as to whether they will enjoy participation	Feeling different to other age groups	Overcoming concerns about confidentiality and anonymity
	Searching for signals that they are not needed for the research	Wanting individual lifestyle choices to be recognised	Wanting to connect with the researcher to know that they are genuine

7.4.1.1 Searching for signal that participation will be boring or not relevant

When the focus group participants explored the health questionnaires, they often flicked though all of the questions and they were happy to talk about their impressions even without looking at all of the pages. However, their discussions afterwards suggested that they had been looking at the questionnaire to decide whether they would want to answer the questions. In particular, the data suggested that they were looking for signals that participation would give them some enjoyment and that they were the right people to answer the questions.

Looking for clues about whether they will enjoy participation

It was noted in Chapter 6 that young women perceive themselves to be busy, with many calls on their time. In this phase of focus groups, it was evident that the young women were not prepared to give up a lot of time for their participation. Here the women in four groups (CS5, CS7, CS10 and CS11) discussed the size, weight, number of questions and amount of reading when they were asked to provide their initial responses to seeing the online and paper questionnaires. They also went beyond the appearance of the materials to talk about the content of the questions to determine how boring or time-consuming the study was likely to be. In CS10 the focus group participants picked up the questionnaire booklet and weighed it in their hands and even placed it in their bags to see if it took up too much room:

> *C: I think that if it's smaller then people are going to look at it more because it doesn't look so, big. Doesn't look like there's so much stuff on it that you must do.*
>
> *K: And I wouldn't make the booklet so, thick so that you think 'Oh my god what is this?'.*

C: This one's quite thin.

EM: It just looks more better in a booklet.

Interviewer: Yeah? So, a booklet's good, not too thick, not too heavy [K is balancing the booklet on hand]. Is that what you're…?

K: I don't care how heavy it is, just not too thick. Otherwise people are going to think 'Oh my god, there's so, many questions to answer!' **[CS10]**

See Appendix 5.11 for an image of the survey used. It was presented to the women as an A5 paper booklet.

Negative appraisals could, therefore, be made quite quickly using features such as the layout of the survey before the women even attended to persuasive messages that might appear at the start. For one group (CS7), even having to turn pages was demotivating because it would take even more time and effort; for another (CS5) it was the amount of black text that indicated that they would have to do a great amount of reading. This finding suggests that survey length, a feature which has been tested empirically by some researchers (see Chapter 3, Section 3.4), is a factor that must be minimised as far as possible but that it is not the only feature of the survey to consider.

One or the groups (CS11) was also irritated if they perceived that their time was being wasted because the questions were repetitive or unnecessary:

C: There's a lot of questions.

A: Yeah. Like the same topic questions like how often do you have more than 6 units on one occasion, how often do you drink... how often in the last year have you not been able stop... and then there's more. It's just like repeat questions.

C: ... on the topic. **[CS11]**

It was, however, unclear whether the focus groups' response to similar questionnaire items was related to being bored or to feeling that their time was not being sufficiently valued.

Searching for signals that the women are not needed in the research

Question relevance was also important to signal to respondents that they are the people wanted by the researchers. Three groups (CS6, 7 and 11) felt that questions about income were only relevant to older adults:

L: For our age, I think it's [the question about household income] a bit private.

LD: I would miss that one out.

E: I think that this is aimed more at mums.

M: Yeah.

E: I'd just give it to my mum like L said.

S: Housewives and stuff. **[CS7]**

Interestingly. It was not only the fact that income was viewed as a topic which was outside of their knowledge, the young women in CS7 were also repelled by the numbers themselves in this question because they 'hadn't passed maths yet' and because the values were too high or 'so much money!'. Clearly this single question had the power to send multiple messages which could terminate participation, even after someone had started to fill out a survey.

As the two extracts above show (from CS7 and CS11), the assumption in two of the three focus groups, was linked with the belief that their mothers would be the ones who would be more appropriate people to complete the questionnaire. In Chapter 6, age appeared to be an important feature of identity which shaped expectations of behaviour. Here the young women seemed alienated because the researcher had not focused the questions specifically for their lives. Moreover, the extract from group CS7 above, implies that women are drawing on an image of a research participant as someone at home. A similar description of a research participant was seen in the first phase of focus groups (CS1: 'Like if they're at home with a child or something, then they might want something to do?'). This finding further supports the difficulty of engaging young women who are hard to reach in population surveys without specific tailoring of the materials for this group. That tailoring could present difficulties for studies where comparisons between older and younger women are sought.

7.4.1.2 Representing experience accurately

The women were eager to look at the questions in the questionnaire booklet and often rushed to these without looking at the longer text of the participant information first. The format and wording of the questions prompted a great deal of discussion and annoyance in all of the focus groups. The sources of irritation were related to how the women did not feel understood or respected.

Feeling different to other age groups

In addition to the feeling that their age group was different to other adult groups, the focus groups sometimes discussed how it was important that questions could allow young women to fully represent their experience. For example, multiple-choice options caused confusion in

three groups (CS5, C8 and C10) and annoyance if the options were not exhaustive or if the correct way to express their activities was unclear:

> *X: Most of them are like one answered questions, but like for question 4, I am employed part time and I'm a student. So, is that a one answer question or two?*
>
> *C: You'd just tick both of them.*
>
> *X: But the rest of them are just one answered aren't they so I'd feel like...* **[CS5]**
>
> *M: But I don't drink and there's no option for you to tick if you don't drink.*
>
> *EJ: How would you know how many units you have as well.*
>
> *Interviewer: Ok. We did put that information in because nobody knows. I mean I work in alcohol and I don't know. Is that helpful to you or...?*
>
> *N: Probably missed.*
>
> *EJ: And this one doesn't have enough options for sports.* **[CS8]**

In the first of the two extracts above (from CS5), there was a hint that the women were concerned about answering a question wrongly. This was brought out by two other groups: in CS6 the women were concerned that the survey would be returned if errors were found and CS11 wanted someone nearby who could help if the respondents ran into difficulty.

Wanting individual lifestyle choices to be recognised

Likewise, the question formats needed to allow full and accurate answers to be provided. The following extracts imply that the respondents might feel uncomfortable if they feel unsure how to navigate a survey (CS10) or that the researcher was not interested in knowing important details, viewing the respondent as an individual (CS11):

> *J: Like M said, there should be an option for those people who don't like drink. Because I don't drink. And this question would probably be liked skipped and especially if you did that online, you'd probably like scream at you on your phone, you've got to like fill out this section and if there's not an option then, you'd…*
>
> *M: You are going to feel quite uncomfortable.*
>
> *N: If you've got to put down that you drink when you don't drink. You are not giving the full information.* **[CS10]**

E: At the end of each section I feel like you should have a big box where you can add additional comments. Cos, I like adding extras on questionnaires like that. So, that you can add a bit extra on your answers. If your answers don't...

A: I don't know. People don't open up that way. Cos when you are doing surveys it is 'this, this or this'. There is other. Everyone's different and we all have our own experiences and our own opinions. And like even me, H, S, C and even E. We are all different and it is easier to talk through things than write it all down. **[CS11]**

The participants in the above extract (CS11) suggest that a questionnaire format limits their ability to express themselves fully. The preference for different response methods is explored further below. Here the desire to complete open text boxes is surprising given that the women do not want participation to be time consuming.

7.4.1.3 Feeling secure during participation

Two detected elements were identified in relation to this dimension. One was that researchers needed to overcome the young women's concerns about confidentiality and anonymity and the second was that participants needed to believe in the authenticity of the research to trust that the information was only for the stated purpose of research and that they would take care with the participants' data.

Overcoming concerns about the confidentiality and anonymity of data

Across all of the groups, no single mode of completion was preferred over all other methods. Concerns about the security of their involvement led participants to be refer to two threats, namely the loss of confidentiality and anonymity, and the authenticity of the research. This second issue in particular has been seen in other stages of the conceptual framework (see for example Sections 6.4.1.1 and 7.3.1.1).

Fears were expressed about all forms of completion in terms of who would gain access to information about the survey participants. In the following extracts the women were concerned about a telephone interview, pen/paper self-completion with postal return and online completion via their mobile telephones:

C: There could be millions of people in the background listening [if the research is conducted on the telephone].

R: And if something goes through the post and it gets lost. Then they might have your information. [Sounds of agreement]. **[CS4]**

Interviewer: What if I was to use a survey on your phone or... How would you feel about that?

H: No.

B: No because everyone can see that, even if it is confidential. Imagine if it went to the wrong person or the wrong person saw it.

H: And your name and you are talking about drugs and sex and shit.

J: Yeah. No, I wouldn't. I wouldn't put that sort of thing on a, not even if it was an email to a doctor. **[CS10]**

As was noted earlier, the young women have a keen sense of how data can be lost or shared without people's knowledge, and they apply this understanding to involvement in research.

Wanting to connect with the researcher to know that they are genuine

Respondents are often assured of the anonymity or confidentiality of responses to encourage response (De Vaus, 2014) and this was important for young women in groups CS7 and CS10. However, for some of the young women in this study, the distance of the researcher increased the likelihood that the study was not real, and that additional information was being gathered about them in the background. Two preferred the idea of being able to talk, face-to-face, with someone with whom they felt comfortable:

R: I think doing it in person might be better. [Sounds of agreement] Cos then you can actually get their…

C: It's more personal as well. They'd know that they're not being scammed.

Interviewer: When you say 'in person' would you be happy with a phone call? Or actually meeting the researcher?

R: Probably meeting the researcher.

I: On the phone's a bit intimidating kind of like, you don't know who you're speaking to. [CS4]

E: I wouldn't do it but in a way, it's a bit more...

J: But they can track your emails.

E: I know but they don't, sometimes you don't feel comfortable talking about it.

J: But then you can write it down so that you know that it is real because you are with someone. **[CS10]**

Within these focus groups, the need for reassurance about the authenticity of the research seems to be valued more highly than the chance to remain anonymous.

In contrast, it was also apparent in this stage of the focus groups discussions that research could at times be considered a safe place to talk and reveal sensitive information and the opportunity to talk with the researcher appeared to be valued in three of the focus groups (CS5, CS6 and CS11). This finding could be relevant if researchers can choose between pen and paper or face-to-face administration of a survey. In two of these, it was the act of being able to talk to the researcher about sensitive issues that was valued, as can be seen in this extract where the participant is talking about who would benefit from participation in a health study interview:

> *A: Maybe my cousins, cos they're younger, they are more nervous. So, they don't usually talk about this stuff, they're not very open. So, I feel like it would benefit them. To be open. At least if they did it they'd feel a bit more comfortable talking about it. Cos, they are a lot younger and reserved unlike me. Like all of our friends we are all on top of each other but that's not a bad thing but sometimes it's just. It's not, not good. It's nice that when you're with friends you can get things out. Cos, they can help you.* **[CS11]**

In the above extract the women see the talking as a beneficial process. Yet, in group CS6 a questionnaire was seen differently as a convenient way to ask someone to make later contact for a talk about health problems. These three groups, therefore, show a positive perception of health research but one in which the line between research and advice is blurred. Again, anonymity will be sacrificed if help is offered/needed.

7.5 The learning stage of the framework

The learning stage of the framework was explored by asking focus group members to select three counters from piles representing three groups within social networks: family, friends, and acquaintances. Each counter was to signify someone who they would consider inviting to take part in a health study. The counters could be from the same or different groups, depending on the three individuals they imagined as possible recipients of the research invitation. This activity was devised to facilitate the discussion while reducing the risk that participants would reveal personal information about people outside of the group. Discussions then explored factors that would hinder or facilitate the sharing of invitations to participate in a health survey, the reasons for sharing and how the young women would pass study details to other people. Previous research on this area has been predominantly quantitative, judging the efficacy of chain-referral by response rates. The qualitative design employed here was to explore how and why chain-referral could impact on survey distribution and response.

7.5.1 Framework Analysis: Learning stage

After reviewing the framework matrix for the 'learning' stage, the coded extracts indicated six detected elements which were abstracted to form three dimension relating to factors which participants might weigh up when asked to share an invitation with other eligible young women

in their social networks (Table 7.4). The dimensions relating to this stage of the conceptual framework again present the young women as active thinkers and they also illustrate the importance of how they evaluate the costs and benefits of participation for themselves and others.

Table 7.4 Detected elements and dimensions relating to the learning stage of the conceptual framework

Dimensions	**Choosing the right people to receive the invitation**	**Sharing the information with less effort and awkwardness**	**Evaluating what they and their friends will gain from further involvement**
Detected elements	Selecting people who would be likely to follow through and do the questionnaire	Finding the quickest way of sharing the information	Sharing invitations so that friends and family gain from participation
	Choosing people who would be likely to have the skills to do the study	Finding a natural way to pass on the invitation	Valuing the opportunity to share an experience with others

7.5.1.1 Choosing the right people to receive the invitation

The participants appeared to be keen to ensure that if they passed on the invitation to participate to someone else that they person would be likely to help with the research and would be able to contribute because of pre-existing skills or knowledge. Two detected elements were identified in the data: selecting people who would be likely to follow through and do the questionnaire and choosing people who would be likely to have the skills to do the study.

Selecting people who would be likely to follow through and do the questionnaire

When discussing how they would decide who to talk to about study participation, the women in all focus groups would select people who would be likely to do the research. For example, in five focus groups (CS4, CS5, CS6, CS9 and CS11), the women expressed concern that they could not ask people who would not listen or follow through and do the research:

> *I: Would they [people at college] be interested though?*
>
> *R: If you're not friends with them, they'd be like 'Oh, there's no point.'. If you're not friends with her, they'd be like 'Oh I don't like her so, I'm not doing, why would I listen to her and all that.'*
>
> *R: But your friends would actually listen and...*
>
> *K: Like your family would.* **[CS4]**

E: I just put family because I think that friends would back out of stuff. So, like they might make you look bad. Family you know that they will do it.

Interviewer: Ok. Yeah. Good point. Yeah. S?

S: I picked one of each because, mmm, people you don't know, your family and friends, they could say something different because they don't want you to know it. You know what I mean? **[CS11]**

The above extract from CS11 shows how family might be chosen over friends as more likely to accept the invitation. This idea was also expressed in another group:

'Cos if they're friends, they'd be like. Cos like, I've got friends that can open up to you, so they'd be like 'No' sort of thing'. **[CS9]**

This finding presents a problem for researchers seeking to use peer-referral to recruit wider networks of young adults. Methods such as respondent-driven sampling are supposed to engage new groups that the researcher cannot access through the reach of a participant's social networks (Heckathorn and Cameron, 2017). These networks could be limited in the case of young adults if they keep invitations within family networks who are likely to share many characteristics (such as socioeconomic status or health behaviours).

Choosing people who would be likely to have the skills to do the study

In three focus groups, the people considered to be likely to help had an interest in health. In two of these groups, this interest came from a career in a health-related profession:

S: I think I'd be more comfortable telling my friends and family. I know that my family and friends would do it. Cos my nan used to work in like, she used to work for mental health in the [hospital name] … She used to work in there for a receptionist, so I think that she'd probably do it. **[CS6]**

S: I'd be specific to who I'd choose in my family… Like the ones that, without sound harsh, that are educated that care about their health and stuff. **[CS7]**

M: Cos my aunty's a midwife, I'd ask her. She's work for healthcare anyway. I'd ask my cousin who does mental health and I'd ask my uncle who's a GP. Yeah because I've got quite a lot of people who are into this kind of stuff. You know health, information and help. So yeah. **[CS8]**

Interestingly, the extract from CS7 above also suggested that recipients of the invitation to participate were selected because of their perceived capacity to answer the questions. This was echoed in a further group (CS8). A work colleague was specifically considered because of her

intelligence and this intelligence seemed to be linked with the belief that she would be interested in helping with the study:

> *J: And then there's a woman that I work with called D. And she's very intelligent and likes helping and doing surveys and answering questions and things like that so... she's a green because I only work with her so. I probably wouldn't go out with her, but I'd definitely tell her to do this because she would be someone who I think would be definitely interested in doing it.* **[CS8]**

Again, the selection criteria imposed by the people sharing the advertisement could present a difficulty for researchers wanting to recruit samples more representative of the general population.

7.5.1.2 Sharing the information with less effort and awkwardness

All groups except one (CS9) expressed initial willingness to tell others about the research when the suggestion was first put forward to the focus groups:

> *Interviewer: I'm not going to do that, but would you be happy for a researcher to say, 'Could you ask people you know?'*
>
> *I: Yeah.*
>
> *Interviewer: And if it was a health survey, the topics that you laid out for me, would you still be happy?*
>
> *R and C: Yeah.*
>
> *I: Cos like we've done it now and we know the type of questions that are going to be asked.* **[CS4]**
>
> *C: It wouldn't bother me [to ask other people to take part in a study].*
>
> *A: Yeah, I wouldn't mind sending a link to people.*
>
> *K: I think because we've had this time to like get to know you and your study and stuff. Not that we are more invested. It's not just that you are passing someone on the street and you don't know them and... it's better* **[CS5]**

In both of these extracts above, it was familiarity with the research (and the researcher) that would facilitate the support of past participants. The connection with the researcher and familiarity with what participation would involve seemed to encourage them to continue their involvement by passing on the invitation to others. However, this initial willingness easily disappeared if there was any difficulty. Therefore, two detected elements were identified in the

focus group discussions: the women suggested that they needed to find the quickest and a natural method of passing on the invitation to participate in a health survey.

Finding the quickest way of sharing the information

After the positive initial response, the barriers to sharing an invitation became apparent as the focus groups began to choose their counters and discuss the logistics of how to share invitations. The women often talked about the extra effort required to share an invitation. In addition to finding a quick way to pass on the study information, the focus group participants were also searching for an easy way to initiate the conversations about participation. The use of social media was therefore appealing to four of the focus groups (CS5, 6, 7 and 8) because it was convenient both for the past participants to get the invitation to a wider network but also for the respondents to gain easy access to the study:

K: Also, you have group chats on 'What's App'.

C: That's a good idea. And Facebook.

K: I'd probably just write it on the group. Like what my friends did for my surveys they wrote 'Hey guys, could you help me fill this out? It'd be really appreciated'.

C: Especially if it online you'd send them the link. **[CS5]**

M: Yeah it will, the link would be perfect so that people could easily click it and do the survey.

Interviewer: Yeah anything else?

C: Facebook. Twitter.

Interviewer: Ok. And that [sharing invitations via social media platforms] would be easier than face to face or would it just be another way?

C: Just another way. Also, cheap as well. **[CS8]**

However, in two of the three groups who considered using social media, there was a belief that this kind of online sharing would not work. There seemed to be a suggestion that another motivation such a personalisation or pressure would be needed in addition to a link.

H: I'd probably send the link more than three people. I'd know that if I sent the link to three people, they probably wouldn't press it sort of thing.

Interviewer: Ok.

K: Unless you made them! **[CS5]**

Interviewer: Why wouldn't you share it with them, do you mind me asking?

H: I don't know. I'd only share like funny things. Like on Facebook I just share funny things. Nothing like personal or anything like that. Pictures but that's...

S: But if she was your friend though, wouldn't you share it. Because it is like to help them.

H: Just tag them, I wouldn't share it. **[CS6]**

The personalisation, suggested in these extracts, provides further support for the idea that social media campaigns that are sent out without such tailoring could be less effective because recipients 'probably wouldn't press it, sort of thing!' [CS5]. This finding supports the value of peer-referral because it currently would not be feasible or ethical for researchers to gain sufficient online data about potential respondents to personalise invitations well.

Finding a natural way to pass on the invitation

Six groups imagined that their main mode of communication would be a face-to-face discussion (CS4, CS5, CS7, CS8, CS9 and CS11). In four focus groups this was because it was seen as a natural way to share the information. The ability to bring up the topic naturally or without a special attempt to start the conversation, also seemed more important than the category of people approached. For example, in the extract from CS6 below, people who were not well known would be invited if the college environment made it natural to start the conversation and the in the following extract, it is the place where the participant lived that would influence who was approached:

H: I'd just like, obviously with friends you're just like talking and everything and you'd just bring it up.

K: And when we go back into class and everything. Obviously, all our friends are going to be 'What did they say?' and you can like talk to them about it.

H: Yeah, recommend it to them…

S: Yeah, if it was at college then I would be, but if it was at home. If it was at college, I'd tell people that I wouldn't really talk to but...

C: Going on the bus... 'Hey!'. [General laughter] **[CS6]**

This final remark implies that asking someone to pass on invitations to people outside of social networks would be unsuccessful. Unease about starting conversations about research would limit who would receive the invitation, again making it more challenging to recruit a broad demographic to a survey study.

7.5.1.3 Evaluating what they and their friends will gain from further involvement

The focus group participants were looking for the rewards to be gained for helping the researcher further with a health survey. They looked for gains for their friends and family but also for the gains that they could have from sharing an experience with someone in their social network.

Sharing invitations so that friends and family gain from participation

The focus group participants were keen to help the people in their social networks by sharing the study invitation. The women in three groups (CS4, 7 and 8) seemed to think that the vouchers/prizes would motivate others just as they had been attractive to them:

> *S: I would tell them how important it is first.*
>
> *Interviewer: Ok. So, you'd talk to them face to face? And go 'It's really important!'*
>
> *O: If it's important but if not then... I'd be like...*
>
> *M: You'd win something!* **[CS8]**

However, non-monetary rewards were also given as a reason for sharing the study information with other people. In both of the extracts given below, the focus group participant was keen to help other people in their social networks to gain a positive experience from the participation:

> *Interviewer: What else would you tell them? To persuade them.*
>
> *K: Like they're really good, really helpful. They're really fun things.*
>
> *R: Could we go along with them? If they don't feel comfortable going by themselves.*
>
> *Interviewer: Ah ok. Like I've been before So, I'll come with you. Just like reassure them.* **[CS4]**
>
> *E: ...I'd rather like make someone's day and like with people I don't know.*
>
> *Interviewer: Ok. So, you think that taking part in a research study like this would be helpful for people?*
>
> *E: For people who can't get help. Definitely.* **[CS11]**

Again, in this last extract, there is the idea that research can be a source of help with health concerns and that the help provides encouragement to take part.

Valuing the opportunity to share an experience with others

The motivation to share the invitation could also be for the mutual benefit of a shared experience. There was the suggestion that this sharing was an important part of relationships

with others. In two groups, this importance was related to the desire to be able to share the experience of doing the questions as other aspects of life are shared:

> *J: I chose a family member, so it would probably be my mum. Because it's my mum and I tell her everything. So, she'd probably be alright with doing it and I'd probably choose my best friend from where I live. Um, just because she's my best friend and I would just ask her to do it for me.* **[CS8]**
>
> *Interviewer: Your cousin. Why would you pick these people to ask?*
>
> *E: I'm just very close with my sister, so. If I do it, I'd like her to do it too.*
>
> *Interviewer: Ok. Cool. Yeah? Any other reasons.*
>
> *B: They do you favours, you do them favours, I don't know. I just like to do... if I do things like this, I prefer, if I'd have to bring other people, I'd bring people close to me to do it with me.* **[CS10]**

It was noted in Chapter 6 (Section 6.5.5) that young women might prefer to complete a questionnaire or structured interview with others. This last extract (CS10) also shows how the study invitation could be shared because there was some expectation that the relationship would mean that the invitation would be accepted. Just as the women seemed to want to do the questionnaire well, they also appeared to want to be successful in any undertaking to recruit others. This idea was also noted above in the findings about how the focus group participants would choose people to approach.

7.6 Interpretation of the focus groups' responses

The aim of this second phase of focus groups was to explore young women's beliefs concerning the final three stages of the conceptual framework. These stages comprise what persuades young women to move from viewing information to choosing to participate (attitude formation), what encourages them to do study tasks after the decision has been made (integration), and their views about inviting others to take part (learning). In this section the framework analysis dimensions and detected elements are discussed in relation to important factors which have been identified in the data.

7.6.1 Identities and recruitment strategies

The importance of both participants' and researchers' identities was identified in the discussions relating to the attitudes formation and learning stages. In particular, the dimensions of gaining trust (Section 7.4.1), whether young women feel that they are the ones needed in the research (Section 7.4.2), and the signals that they search for in the study materials (Section 7.6.1)

7.6.1.1 Identity defined by age

In the second phase of focus group the sampling included only women aged 16 to 24 years from only one life stage (education) but still the responses to questions and activities showed differences which the young women themselves attributed to age. The age range in the women included in these focus groups was narrow. Yet, in the women's talk, a difference of only one or two years but represented differences in terms of social networks, communication and what information should be provided in advertisements to engage and include them. As noted in Chapter 4 (Section 4.4.1), the message of the Social Marketing Benchmarks is that it is important to adopt a consumer-insight to understand what will engage people's attention and interest. The differences highlighted here emphasise the usefulness of a marketing approach because one recruitment message is unlikely to attract all young women from lower SES categories to the invitation to participate. The systematic review in Chapter 3 showed how the invitation messages could be important in the design of a recruitment strategy but the tailoring of the invitation message was confined to meeting differences in culture (ethnicity). Differences in expectations and needs relating to age were not investigated in relation to recruiting young women. If survey researchers are able to work with organisations such as FE colleges where young women are spending time, it may be possible for different invitations to go to narrow age groups. However, this tailoring will present more of a problem for researchers who aim to distribute the survey via email. General Data Protection Regulation (GDPR; Gov.UK, 2019a) limits the use of email addresses by organisations to use personal data to electronically send information on behalf of third-parties, particularly when information such as age and gender is also needed. Postal distribution may also be limited because some organisations are extending their protection of data to cover this method of contact, even though it is not specifically prohibited by the GDPR. The need to understand quite specific expectations of different groups of women will also present difficulty for remote, mass media methods of recruitment to surveys where information about the young women is unavailable. Immediate cues, such as participant's dress or expressions, cannot be employed to make judgments about what information will conform to idividual or social norms, as highlighted as useful in theories of response such as the leverage-salience theory (Groves, Singer and Corning, 2000). More nuanced understandings of identity and related barriers and facilitators for recruitment may only be possible to develop in smaller scale studies than the population surveys of large cohort studies reviewed in Chapter 2.

7.6.1.2 Identity and sense of entitlement to participate

Another recurring observation in the data was the importance of the women's identity for their sense of their entitlement to participate in health studies. Cues, such as included age-ranges, material design and language could easily send wrong messages that others would be preferred

respondents. Messages confirming the value of responses by underrepresented women are therefore likely to be needed, when trying to engage individuals with lower social capital or socioeconomic status because previous experiences (from school or in the media) may support a perception that they are not the best people to answer the questions. This attitude could arise from a belief that they do not have sufficient ability or enough life experience to share with researchers, an idea that was also seen during the exploration of the motivation stage of the framework. Feeling relevant to the communication has been associated with greater response to social marketing messages (Wilson, Hall-Phillips and Djamasbi, 2015). Once again, this finding reinforces the idea that study documentation that is aimed at a broad adult population may not allow clear enough messages about the importance of young women's contributions to be communicated.

The questionnaire items themselves were analysed thoroughly by the young women during the groups and a common evaluation was that certain questions, notably one about household income, signalled that the content of later survey items would be not relevant to the young women. Importantly, the focus group participants further suggested that asking about money would drive them to pass the survey onto an older member of their family if they did not directly dispose of it.

7.6.1.3 The identity of the researcher and their organisation

The identity of the supporting organisation was discussed in the focus groups because the standing of a survey's sponsor shapes how the credibility of the invitation is appraised. The majority of focus groups participants were persuaded by the use of the university logo which is in line with previous research on online communication between organisations and individuals (Wilson and Lu, 2008). Although, it must be remembered that the university logo was not always liked in the first phase of focus groups and so some effort to understand participants' relationships with organisations might be advantageous. Lower trust in survey sponsoring organizations has been associated with lower response (Groves, Singer and Corning, 2000; Fang, Wen and Pavur, 2012) and therefore, the representation of the survey sponsor must be piloted with relevant groups of young women.

It was also evident in the discussions that people were keen to find out about the position of a researcher within an organisation and about their experience and profession. Further research by Wilson and colleagues underline that trusting in the integrity of the messenger (in this case the researcher) is associated with increased response to social marketing appeals (Wilson, Hall-Phillips and Djamasbi, 2015). The findings here, therefore, suggest that methods to provide more information about the researcher could be useful to increase response to public health surveys. However, this presents a problem for self-administered data collection methods

where it would not be feasible for researchers to meet all respondents personally. Furthermore, increasing the rapport between participants and researchers could increase response rates but while also threatening data quality. Reliance upon interviewers to collect survey data could reduce the ability to compare across the sample because of loss of standardization if interviewers leave agreed structured interview scripts in response to sensitive or distressing answers to questions (Beatty, 1995). Therefore, it is essential that researchers consider how communication technologies (such a video, interactive voice technology and embodied conversational agents such as interactive avatars) could be a useful area for future research as a way of reaching a broad demographic, creating a full introduction to the research and some social connection while still maintaining some comparability across interviews/surveys.

7.6.2 Features of survey design to increase the sense of the relevance and security of the study

In Chapter 3, it was highlighted how previous tests of strategies to increase survey response have identified features of survey design which are influential on survey response, although research with young women from lower SES categories is limited. The data in the second phase of focus groups have provided some relevant insights for designing future health surveys.

7.6.2.1 Mode of questionnaire completion

The extracts quoted within the findings from the integration stage of the conceptual framework showed that there were differing preferences about completion mode (paper, web survey and telephone) and that some of the women advised multiple modes of completion. The completion mode can create practical barriers such as the initial survey link or interviewer's call being screened out because unknown or unsolicited contacts are routinely ignored. Dillman and colleagues noted this problem in 2009 (Dillman, Smyth, Jolene and Christian, 2009) but screening technology has advanced quickly in recent years. Therefore, researchers need to check with mobile phone and email providers what information could be displayed on screens when calls are made and basic mobile telephones (which will only show the number to the recipient). Moreover, postal completion was not a convenient method of sending out the survey or returning it. Young woman did not always open envelopes and rarely communicated by post, so could not combine survey return with an existing task such as posting another letter. This increased effort would suggest that web surveys are more in tune with how young adults want to communicate, an important consideration in survey response (Schober and Conrad, 2015). However, web completion could be associated with well-known internet scams such as phishing and click-bait and as noted above, online distribution of the survey link is limited by the new data protection regulations in the UK. To increase trust in a study's authenticity, more pre-study, personal contact could be used though multimedia methods if personal contact between researcher and participants is not possible.

7.6.2.2 Anonymity for research participants

The systematic review in Chapter 3 did not reveal any studies where young women's anonymity was studied as a factor in health survey response rates. The research on the efficacy of anonymity in other populations in surveys is mixed (Murdoch *et al.*, 2014). The use of qualitative data in the current study was useful for exploring why anonymity might not be as useful a strategy as anticipated. The women did seem to want the chance to answer questions about their health without fear of consequences at college or elsewhere. At the same time, they also felt concern that data collection methods could be used to steal personal information, if promises of anonymity are not kept. Therefore, it might be beneficial, in some research studies, to offer group completion methods, such as a 'survey café' where groups can come together in informal setting but each complete study tasks on their own. Such settings could allow the researcher to be present to personally reassure while still offering the anonymity of private questionnaire completion and multiple responses being returned at one time.

7.6.2.3 Providing support during completion

A further outcome of this work could be to challenge researchers to think more carefully about completion mode so that participants feel more supported in answering the questions and barriers such as low literacy could be reduced. The data revealed that women were worried about making mistakes (with negative consequences) or being unable to have help to answer if needed. Therefore, technologies which could provide easily accessible and immediate support with questions (e.g. a live chat link or interactive voice resource) could increase confidence in starting the survey. Keusch (2015) calls for greater research into how web survey completion can increase response because he argues, that most research has focused on more traditional methods of completion such as paper or telephone response. The systematic review in Chapter 3 did not find any research which investigated the support for participants during completion. More technologies exist now, which more closely match young people's patterns of communication (Schober and Conrad, 2015), which could make even remote completion more accessible and supportive. These should now be explored further to fill this gap in the literature on survey design. The use of technology could also help respondents who want survey participation to be a way of accessing help, as was found in the data. Participants may be given the opportunity to ask for advice and could be signposted to the right sources of information using text mining algorithms in a similar way to how bots are being used to provide automated but tailored CBT via SMS texting (Fitzpatrick, Darcy and Vierhile, 2017).

7.6.2.4 A 'fun' appearance

In addition to completion mode, the appearance of the survey as a whole and of the questions was often considered in the young women's discussions of the paper and web survey provided. The women called for an appearance that suggested that the survey would be accessible and fun

(images were suggested as an engaging feature). Again, this element of the design of a questionnaire was not identified in tests of strategies to improve survey response in Chapter 3, but it fits with the young women's dislike of being bored which was evidenced in the first phase of focus groups. There has been some research with general adult samples to suggest that features such as advanced graphics, e.g. logotypes, are associated with increased interest in survey questions (Manfreda, Batagelj and Vehovar, 2002). However, in Manfreda et al.'s studies, the use of complex graphics reduced completion, when respondents were paying for the connection. Therefore, the use of this type of visual appeal should be balanced against the likelihood of access to free internet, particularly if researchers aim to recruit women.

As was noted in the attitude formation phase the women seemed to be using features of the early part of a survey (informed consent, size, weight, question layout) as cues for the demands and burden of the survey. Therefore, a suggestion from this work could be that researchers consider how much information they load onto the first visible page of the survey and also the size of the questionnaire. Once again, it is likely that participants will use mental simulation based upon current experience of similar situations to help them to navigate the unfamiliar experience of participation in a research study (Moulton and Kosslyn, 2011). Since the young women in both phases of focus groups were drawing on negative experiences tied with school as a comparison to the study materials they were discussing, it will be important to consider the design to avoid such unfavourable appraisals.

7.6.2.5 Asking sociodemographic questions

The difficulty of choosing the right measure to describe young women's socioeconomic status was discussed in Chapter 2 (Section 2.2). Research in this area has typically focused on the relevance of different measure to represent participants (Braveman *et al.*, 2005; Shavers, 2007) but according to the focus group participants, these questions could create a barrier to questionnaire completion. Questions which were outside of the students' knowledge made them feel that they were not the intended respondents. Those which were related to wider families, such as the postcode request to calculate the Index of Multiple Deprivation (IMD), created fears about how data would be used, notably in marginalised groups such as students from ethnic minorities. De Vaus (2014) advises that it might be more effective to follow common survey design advice to place sociodemographics at the end of the survey to increase the likelihood of response to the sensitive questions. Yet this kind of participant manipulation could be viewed as ethically questionable. Instead more research with young women from hard-to-reach social groups is needed to find more precise, yet sensitive proxy measures to use.

7.6.2.5 Violating expectations about the topics of the questions

Previous research on decision-making suggests that an individual may imagine what will

happen in an unfamiliar situation. The construction of the situation could influence the choices made (Moulton and Kosslyn, 2011). These expectations could cause unnecessary barriers (if those subjects are not included in the study). They could also cause individuals to drop out of the research if those expectations are violated in some way because trust in the honesty/authenticity of the process could be reduced. The lists of health study topics identified in the listing activity in the focus groups are interesting because they show how subjects ranked as uncomfortable were surprising since topics often named in ethical guidelines as sensitive were not always ranked most highly. For example, substance misuse is an example of a sensitive topic for research in the current Oxford Brookes University, research ethics code of practice (Oxford Brookes University, 2016, section 10a). Yet for the participants in the current work, it was mental and sexual health that commonly caused higher concern. Public involvement in research design is becoming a requirement and this research underlines why that work may be useful, particularly since some topics which young women were concerned about (such as family medical history) may not be interpreted as needing particular care without participants' input at the design stage of a health survey.

7.6.3 Barriers to chain referrals of invitations to participate

7.6.3.1 Researchers' limited understanding of communication methods

The young women's discussions about how they would talk to others about research have underlined the importance of involving participant groups in the research design. Their comments often provided useful insights into their modes of communication and social networks. For example, there is a body of research into the use of Facebook for communication (for a systematic review see Whitaker, Stevelink, & Fear, 2017) and some research on the usefulness of Twitter (O'Connor *et al.*, 2014). However, the young women in this study were talking about sharing studies via WhatsApp groups and were less positive about the usefulness of the social media tools commonly investigated in research on recruitment, notably Facebook. Similarly, some research is exploring the use of text messaging to contact respondents and for collecting data (as discussed in Chapter 3), but the women had precise reasons for using this mode of communication (namely urgent contact) which may not fit with research participation. When asking young women to share our adverts, researchers should provide a range of mechanisms for sharing the advertisement so that participants can select the approach for their social network.

7.6.3.2 Concerns about self-efficacy

It was also interesting that the initial willingness expressed by the women, when asked about sharing a hypothetical invitation to take part in a health study, was easily broken down upon reflection and discussion. The source of this demotivation seemed to be concerns about self-efficacy (ability to start conversations and to persuade others and also agency to choose to help

the researcher) and fears about how they will be judged by others. Multiple models of behaviour change include 'self-efficacy' as a factor which is required to try something new and difficult, including the Theory of Planned Behaviour outlined in Chapter 4 (Figure 4.1), although the precise nature of the relationship between self-efficacy and behaviour is poorly understood (French, 2013). Researchers should therefore make it clear that they do not hold participants responsible for the decisions of the people they invite. It might also be useful to generate easy ways for current participants to share their involvement in the research, for example by asking organisations involved in study recruitment to provide opportunities to report back to others about what they have been doing or by offering small rewards for receiving an invitation as well as for the participation so that participants feel that they have a reason to bring up the topic in conversation or in their online networks. However, these kinds of approaches may be problematic if the questionnaires are on topics which carry a social stigma.

7.6.3.3 Problems for researchers with chain-referrals

While there are difficulties for the respondent in sharing invitations, peer referral might also present problems for researchers. The women in the focus groups often seemed to be selecting respondents on the basis of proximity, to reduce effort and increase opportunity for conversations, but also because of perceived qualities such as an interest in the topic or intelligence. Researchers seeking samples representative of diverse populations may therefore still struggle to access certain underrepresented groups (such as those uninterested in health because they are engaging in risky behaviours). However, proponents of network sampling methods (where peers invite others from their social networks) argue that allowing peer-referral to undergo several waves, to increase the distance between the initial seed, can ensure better sample representativeness (Middleton *et al.*, 2015; Heckathorn and Cameron, 2017). Moreover, network sampling techniques have typically been associated with the need to recruit hidden or hard to reach populations where there is no clear sampling frame (Heckathorn, 2011). The findings here suggest that such methods would be slow and costly for researchers aiming to reach a broad demographic of young women from lower SES categories. More direct methods (i.e. researchers approaching relevant groups more directly) might be more time-effective but chain-referral does overcome some of the problems of communicating the invitations in the right ways to people outside of the immediate sampling frames that researchers can access.

7.7 Implications of the data for designing future survey studies

7.7.1 Extension of the conceptual framework for research recruitment

The findings and their implications for research recruitment strategies are summarised in Figure 7.2. It should be noticed that some of the implications for research recruitment are possible to implement in both large-scale and small-scale survey studies; some such as methods to improve trust, may be more suited to smaller studies where personal contact and message tailoring is possible.

Consumer Route	Application to Research Recruitment	Findings from the Focus Groups	Implications for Research Recruitment
Alternative Evaluation - persuade purchaser that your product is best	**Attitude Formation** What persuades them to proceed to the survey itself or to accept the invitation?	1. Trust - young women are informed about scams 2. Unprofessional design/errors and location of advertising can signal a scam 3. Young women do not perceive surveys to be for them 4. Fear of lack of agency/repercussions if errors are made 5. The wrong remuneration is offered so the exchange is not reciprocal	1. Create opportunities for participants to associate the research with a person, offer immediate incentives and official rating of authenticity such as links to a review site; involvement by bodies such as colleges can cause concerns about information sharing; negotiate shorter periods to keep data and outline fully how information will be used and stored 2. Professional designers should create all materials (including survey) 3. Design should clearly signal that young adults are needed (images, design, wording) 4. Support response with ability to provide feedback, answers to participant questions; stress need for young adults and ability to choose when and how to complete participation, stress right to withdraw 5. Involve young women in design of the study so that the right exchange, participation experience is offered
Behaviour Decision - translate interest into purchase	**Integration** What encourages the decision to participate to be translated into action?	1. Large amount of text/long survey signals boring participation 2. Questions can tell women that they are not wanted 3. Young women want to represent their experience 4. Confidentiality/data security concerns young women	1. Keep consent short and use bullet points and images (although be aware of access issues for participation without free wifi), keep survey short; reach the health-related questions quickly 2. Pilot work to check that questions are accessible and relevant; age bands should not be too wide 3. Ensure answer options are exhaustive and do not signal that question is not for young women 4. Provide multiple modes of completion so that women can preserve their confidentiality in a way that reassures them; clarify why data must be stored and how it will be used, respecting young women's knowledge of how information might be lost or abused
Post-Decision Evaluation - advertising to friends/family by purchaser	**Learning** How do we motivate participants to participate again in research or to encourage their friends to do it?	1. Respondents may select people who they would perceive to fit the study 2. It may be difficult to intiate the invitation 3. The request could cause anxiety 4. Young women do have reasons to share studies with others	1. Plan for multiple waves of chain referral to improve sample representativeness; do not rely on this method alone 2. Provide images or cards that could be easily shared in person or online; involve young women to find out how they use different forms of communication 3. Stress agency at all stages; limit number of suggested requests or allow respondents to choose how many requests that they make 4. Pilot work needs to understand the functions that young women believe that research can perform in their lives

Figure 7.2 Summary of issues identified in the second phase of focus groups and possible solutions for researchers

The conceptual framework has shown itself to be a useful way of thinking about recruitment because it highlights how persuading a participant to move from interest to action is complex. These data have also shown that chain referral might be useful but could be stressful for participants and could also present a challenge for researchers aiming for a sample representative of a broad population. All in all, the application of marketing concepts to recruitment has highlighted several areas such as understanding the complexity of the cost benefit analysis, trust in the messenger and the importance of tailoring the 'product' or survey experience to the identity and expectations of the participants.

Providing an incentive, as explored extensively in research on recruitment (see Chapter 3) is not enough to encourage participation. The costs and fears around survey completion also need to be minimised to increase the chance of response. There has been research on the usefulness of reducing the length of a survey, but the costs were much more extensive, encompassing the sensitivity of the questions and the women's enjoyment of doing a survey. The incentive itself could take the form of providing the chance to access confidential health advice or even to allow people known to the women to access that advice. Researchers should provide methods to check the study's authenticity and the chance to see the researcher in images could be enough to reassure young women about the study and the expertise and kindness of the researcher. Using clinicians who are doctors or intimidating for another reason could also be a barrier and so thought about how to introduce the researcher is important. The young women's discussions about data security also revealed how the focus group members had a wide-ranging understanding of the sources of threat from the internet and social media. Researchers may need to update their own knowledge of these risks but also not assume limited knowledge on the part of young adults. Moreover, the discussions suggest that more work needs to be done to change the image of surveys as something for older people with free time to increase the likelihood that young women will perceive themselves as survey respondents (Reingen and Kernan, 1977). Improved identification of young women with research participation could perhaps be achieved through a fuller use of media strategies to communicate the value of young women's involvement in health survey studies.

These focus groups have also suggested greater complexity in the learning phase than might be anticipated by the conceptual framework. Previous participants could be able to deliver welcoming and affirming messages, as individuals perceived as similar to the recipients have been shown to be better messengers than people who are seen to be socially different (Durantini *et al.*, 2006). However, chain referrals may result in biases relating to how participants select who to invite to participate. Therefore, multiple waves of chain referral may

be needed to counteract such biases, as occurs in respondent-driven sampling (Heckathorn and Cameron, 2017).

7.7.2 Additional implications arising from the focus group data

At the end of Chapter 6 (Section 6.6.2) it was noted that the focus group data provided some useful findings to add to the conceptual framework to create a useful tool for researchers designing their survey recruitment strategies. Nevertheless, the data also demonstrated why young women from lower SES categories might be particularly challenging to recruit. In this phase of focus groups, the complexity of identity development for the focus groups participants is also a recurring element. The discussions in sections 7.6.1.1 to 7.6.1.3 underline how the women define themselves against different reference standards including socially defined categories of age as well as social norms of their classmates. At the same time, the young women's concern to be able to represent themselves fully in their answers suggests a desire to be seen as a unique individual.

A further finding in the data was that the women had a negative outlook. They were expecting bad things to happen, such as being asked invasive questions, promises of incentives to be broken or a scam, negative judgements or abuse of the information provided. Pessimism of participants from lower SES categories has previously been related to previous poor treatment by official organisations (Groves and Couper, 1998). However, the young women's pessimism seemed to be more generalised and related to things that they learn in school and college (such as the need for caution over unsolicited contacts), past experiences or simply to things that they had heard in the group such as scams affecting other people. Indeed, the official sponsor or the job role of the researcher were used as reassurance about the trustworthiness of the research invitation in these focus groups.

7.8 Conclusion

The data and discussions in this chapter have pointed to some design features of surveys which could be helpful t0 increase response by making participation easier to fit into lifestyles and more enjoyable. Yet this chapter has also reinforced the findings from Chapter 6 by highlighting the importance of identity development. In addition, some of the findings suggest that barriers to participation may be created by the young women's lack of confidence in their abilities and feelings of poor self-efficacy. The following chapter presents the findings from Study 2 in which the young women in FE colleges were provided with a real experience of being invited to a UK health survey.

Chapter 8 Findings for Study 2

8.1 Introduction

The aim of the second study was to identify and describe the responses of young women from lower SES categories to recruitment materials and questionnaires about health, health knowledge and health behaviours (Objective 2 of this thesis).

As described in Chapter 5 (Section 5.5.4), data were collected in three stages. A health questionnaire and supporting documents were mailed to the home address of all the young women in level 2 and level 3 qualifications at a FE college group with two widely distanced sites. Over the following four weeks, the young women were invited to take part in a semi-structured interview on their response to receiving it. This provided the young women with the real experience of receiving a mailed questionnaire on health, health knowledge and health behaviours and subsequently provided me with the opportunity to explore their experiences on receiving the questionnaire and supporting documents. A second questionnaire, asking for the point at which they had decided to respond or not to respond to the mailed questionnaire, and the reasons for their decision, was administered to students in their classrooms at the FE College three weeks after the first mailing. I was present while they completed the in-class questionnaire so was able to collect the questionnaires from both responders and non-responders to the mailed health questionnaire.

8.2 Questionnaire 1: The mailed health questionnaire

The first questionnaire was mailed to 489 young women from the following departments in two Further Education college campuses: art and design, media, business and tourism, event management, hairdressing, beauty, performing arts, health and social care and early years childcare. Two methods of completion were offered: pen and paper and online (via a web link or QR code).

A total of 37 questionnaires were returned, a response rate of 7.6%. Pen and paper self-completion was the most common method with 25 questionnaires returned via the pre-paid envelopes. The web link was used by 9 respondents and the QR code by 3 respondents.

8.2.1 Sociodemographic and health characteristics of respondents to the mailed health questionnaire

Table 8.1 presents the characteristics of the sample who returned the mailed questionnaire. More than three quarters were aged 16 or 17, none had children, and all lived with their parents at home. The majority of respondents reported family ownership of more than one car, and

parental education to college/university level. They viewed their health and satisfaction with life positively and few reported currently engaging in a risky lifestyle.

Table 8.1 Sociodemographic characteristics of respondents to the mailed health questionnaire

Characteristics	Categories	Number (%) (n=37)
Age	16 years	13 (35%)
	17 years	16 (43%)
	18 years	4 (11%)
	19 years	4 (11%)
Perceived wealth	Quite poor (within the lowest 25% of your country in terms of wealth)	2 (5%)
	Not very well off (within the 25% to 50% range for your country)	12 (32%)
	Quite well off (within the top 50% to 75% range for your country)	23 (62%)
Family car ownership	No car	2 (5%)
	One car	11 (30%)
	More than one car	24 (65%)
Maternal education	High school/secondary education	17 (46%)
	College/university	20 (54%)
Paternal education	High school/secondary education	15 (41%)
	College/university	20 (54%)
	I do not know	2 (5%)

8.2.2 Semi-structured interviews with respondents and non-respondents to the first mailed health questionnaire

Fourteen interviews were conducted with women aged 16 to 19 years of age from a range of programmes in the Further Education colleges (Table 8.2). Five of the 37 (14%) respondents to the first questionnaire provided their contact details for an interview. The other nine interviewees were young women who had not responded to, or returned the mailed health questionnaire, but who had supplied their contact details to the researcher at the end of the in-class questionnaire (see Section 5.5.4.1 for details).

Table 8.2 Age and programme of study of participants at the interview stage of Study 2

Identifier used in the thematic analysis	Age in years	Programme of study
Responders to the mailed health questionnaire		
R[a] 1	17	Health and social care
R 2	18	Early years childcare
R 3	17	Business
R 4	19	Art and media
R 5	17	Hair and beauty
Non-responders to the mailed health questionnaire		
NR[a] 1	18	Events and tourism
NR 2	19	Business
NR 3	18	Performing arts
NR 4	16	Business
NR 5	17	Art and media
NR 6	19	Performing arts
NR 7	18	Art and media
NR 8	17	Events and tourism
NR 9	16	Hair and beauty

[a] R = Responder to the mailed health questionnaire; NR = Non-responder to the mailed health questionnaire

8.3 Findings of the framework analyses of interviews

The methods used to analyse the interview data are reported in Chapter 5, Section 5.5.4.7.

Six overarching topics were identified. Three were based on the responses to the three stages of opening the 'pack' sent to the young women by the FE colleges:

1. Response to receiving the envelope in the mail
2. Response to the contents of the envelope (invitation letter, privacy statement, and health information leaflet)
3. Response to the questionnaire

Three further topics were cross-cutting influences of the interview participants' prior experience and continuing values on how the young women responded to the recruitment materials and mailed health questionnaire:

4. Previous experiences of questionnaires
5. Participants' values
6. External influences

Topic 2 and Topic 3 overlap to some extent since both relate to how the young women responded to what was inside the envelope which included a number of supporting documents as well as the health questionnaire. It was unlikely that all participants would have read the documents in the same order, if they had read them at all, and their responses in the interviews may have encompassed both the health questionnaire and the supporting documents. It was also evident that they had given up answering questions at different points in receiving the envelope and looking through the contents (Figure 8.3). However, the two topics were kept separate because the findings from each topic made distinct contributions relevant to the design of future research on young women's health.

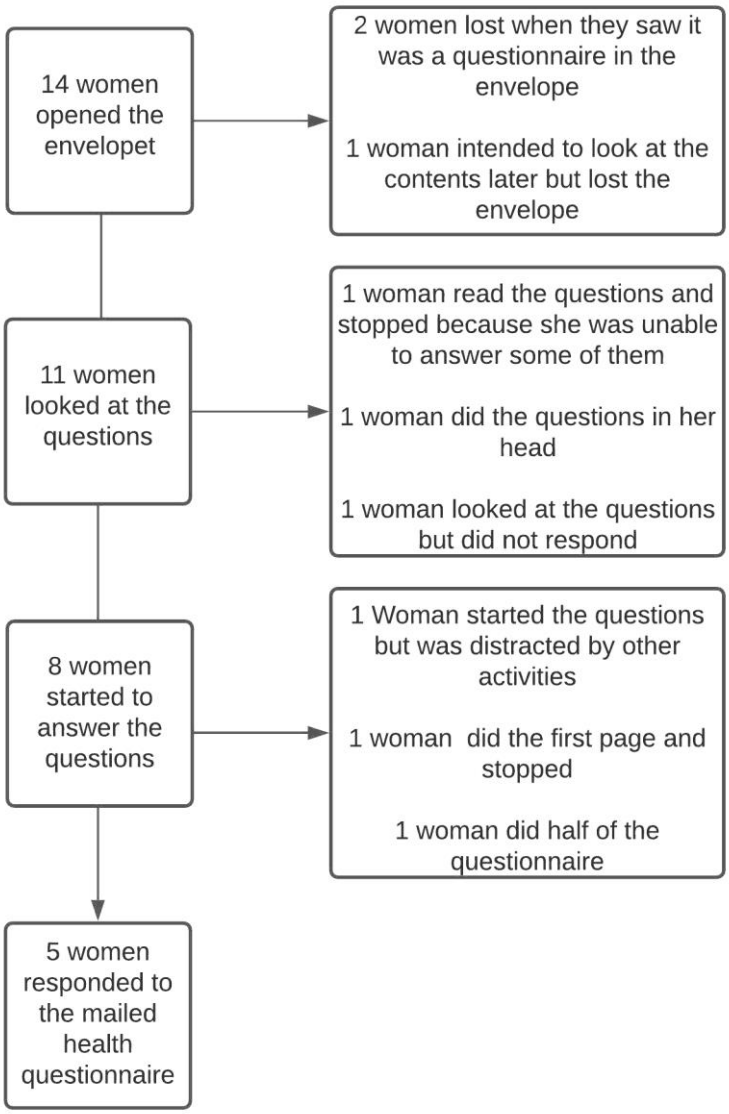


Figure 8.3 Flow chart showing the point at which interview participants were lost in the mailed health questionnaire

At the end of this section of the chapter, the implications of the interview findings for designing questionnaires more likely to engage young women are outlined. Each topic is described and after each topic, there is a section that explores the factors that encouraged or discouraged participants to complete the questionnaire.

8.4 Responses to the components of the 'pack' mailed to college students' homes

8.4.1 Topic 1: Receiving the envelope in the mail

Responses to receiving the envelope with the health questionnaire and other documents in the mail were largely *emotional*. Participants described a range of feelings which can be grouped into three main areas: (1) negative responses including anxiety, confusion, dread of bad news

and/or a sense of threat, (2) more muted responses including surprise at the new and unexpected situation of receiving an envelope addressed to them personally, and (3) positive responses, including excitement and a sense of empowerment at being recognised as an independent person ('an adult') whose views and experience were important and valued.

8.4.1.1 Negative responses

Perhaps unsurprisingly, it was largely non-responders who expressed anxiety at the arrival of the envelope. This negative response was created by both the arrival of the envelope itself and by the way it was personalised, using their full name and address. Several young women described previous experiences of receiving a letter (as the young women referred to the envelope) from important, official organisations such as a bank or hospital, which often contained bad or distressing news. It was in this context that they interpreted the unusual and unexpected experience of receiving an envelope addressed to them at home:

> *Yeah, I mean, when it comes to my house, and I get anxious anyway, because I've been in and out of hospital and everything, so it just, it gets me anxious every time I get a letter from a health place or anything. It's just anxious... It is because of my past like, I don't normally get good news but it's okay. I got used to it over the past like 13 years*. **[NR 1]**

> *Well, I wasn't expecting it, but I was a bit worried about it. So, I was like, "Oh, a letter. Not a good sign.".* **[NR 4]**

In the excerpt above, it was the *unexpected* contact which created unease. The lack of understanding about what was happening was worrying and this response was frequently expressed in the interviews. For example, **NR 5** questioned, 'Is it just to me?', suggesting that being singled out from others was worrying. Another participant was confused because she had not known about the study:

> *At first, I thought it was for the wrong person. I was very confused. Because it was very odd. I don't usually get letter from people you don't know, or it could be spam.* ***[NR 6]***

This interview participant may have been unnerved at the thought of 'spam' associated with online communication, although the mode of communication here was different.

Personalisation was also a significant cause of anxiety because the young women had not been informed about or expecting to see their own name and address on the envelope. For some, this may have hinted at 'Big Brother', a menacing, unseen figure who surveys all:

> *When it is sent to home, we're like, 'No'. We don't know why. I think it's just like, I think we said that it's weird just to get it sent to our house, but we didn't know that anyone had our information.* **[NR 1]**

I was a bit confused at first, where it had come from, what it was about, how did my details get given out… I couldn't have done much after, if they did, but I was just, yes, a bit concerned. – "Okay, how has this been sent to me? When was this arranged?" type of scenario. So, it was just a bit more panic, my details have gone out, my name, my address and all that. **[NR 2]**

Non-responders seemed troubled that their personal information had been used without their permission and some seemed to feel threatened that others might know where they lived, as if their personal space had been invaded. In the excerpt above **NR 2** described her response as 'panic' expressing her concern that someone had used or shared her personal information.

8.4.1.2 Neutral responses

A small number of both responders and non-responders reacted in a more neutral way, conveying only some surprise at receiving a letter although it was not their usual mode of contact:

I think I'd just come home from college, and I saw a letter addressed to me. I was like, "Okay, that's rare I get a letter". ***[NR 7]***

I mean, my family collected it and they just called me over because it had my name on it. And I was like 'That's weird'. I don't really get many letters. **[R 5]**

Such neutrality, however, was the least common response to receiving the envelope.

8.4.1.3 Positive responses

By contrast, some young women were excited by the sight of their name on the envelope, which seemed to suggest that they had been recognised as adults, whose views and experiences mattered:

As I'm older, I am now being asked not through my parents but through myself to do things. [**R 3**]

I don't get many letters with my name, it's usually my parents, so that also caught my eye. I was like, "Oh, I don't usually get letters," so that was quite, yes, it was interesting for me, which is probably why, even more, I looked through it. **[NR 1]**

This pleasure was described by all but one responder (**R 5,** who preferred email contact) and by of some of the non-responders. However, their excitement and pleasure at receiving the envelope addressed to them individually did not necessarily lead to them completing the Health Questionnaire, as the excerpt below illustrates:

> *I did at first think, "This is interesting. I've never got something like this that's just addressed to me." Like a survey, or something … Yes, it's a neutral kind of, "This is interesting. I'd like to read it." But yes, I think then I just put it down and thought I'd come back to it.* **[NR 5]**

Non-responders may have been pleased to receive the envelope, but that was not enough to translate into completing and returning the health questionnaire.

8.4.2 Topic 2: Looking through the contents of the envelope (invitation letter, privacy statement, and health information leaflet)

Responses to the contents of the envelope were more diverse, including both *anxiety* and a sense of *empowerment*, as well as *efforts to make sense* of what was being asked of them and why, and concern over *how to manage the volume of information* in front of them.

8.4.2.1 Anxiety and empowerment

As in the previous topic, the *unexpected* arrival of the mailed questionnaire triggered *anxiety.* Even after they had started to explore the contents of the envelope, the young women were left with questions about why it had been sent to them and with concerns about how an unknown university had come to have their home address:

> *It's like 'why's this got sent to me?' So, it was a bit like out of the blue… I think it was just that it was weird coming from a university I've never been to, never thought about or anything. It was like 'How do they know me? How come they've sent me this?' It is a bit out of the blue.* **[NR 1]**

> *It [a warning] would have made us a bit more aware, as well, like "Okay, you can get a survey, you don't have to fill it out, but if you want to you can, it's there." But I would have known it was coming, so I would have known what to [expect]- Instead of opening it and being like, "What's this?"* **[NR 2]**

Because she could not see a connection with the university which could explain the contact, **NR 1** felt uneasy about continuing to look at the contents of the envelope. Her question "How do they know me?" suggests she was worried that she was being watched or concerned that some kind of mistake had been made:

> *I don't know. Because I don't think I have any connections with Brookes. So, I just thought, "Oh, that's very strange. Is this right?"* **[NR 5]**

By contrast, **NR 3** was flattered by contact from a university and welcomed it:

I kind of felt more important actually. When a university messages you, especially when you are in college, it makes you feel a bit more important than just… I don't know. I liked it… I don't know how to answer, apart from the fact that I felt like I was important. **[NR 3]**

Other participants framed their sense of importance in terms of *empowerment* and enjoyed the chance to be seen as independent from their parents:

Yes, because I feel, growing up, no one is ever given, really, a choice. Even as a teenager, your parents still make decisions for you, and even when I was in my final year at school, all of my letters and that were being sent to my parents about me. So now that I've come to college and now I am nearly 18, I'm slightly getting my own stuff delivered to me by my name and my parents really aren't involved in what my teachers need to tell me. **[R 3]**

This sense of incipient adulthood is also reminiscent of the young women's responses to having a letter addressed to them and not to their parents, and to a sense that they could exercise autonomy in choosing whether or not to engage with the questionnaire.

It's just nice to have that offer. It's like, "Okay, you don't have to do this," you don't feel forced to do it, or you don't feel guilty for not doing it, at the same time. So it's just that nice balance in between, where you're like, "Okay, so if I want to do it, I can do it." **[NR 2]**

However, providing this young woman with a choice and a chance to 'do the right thing' did not lead her to complete the questionnaire.

8.42.2 Efforts to make sense of what was being asked of them

Some young women continued to remain uneasy about the unexpected contact from Oxford Brookes University and tried to manage their unease by searching for an explanation. Geographical proximity of the university seemed sufficient to reassure some:

As it's for a university, I probably would do it, but as I know Oxford there would be a higher chance for me doing it at Oxford, doing a questionnaire from Oxford. **[R 2]**

I think just because it's so close to home, and they're doing research into something that's important, that I could possibly help them with, and it would be important to look through it. **[NR 9]**

By contrast, other young women constructed more elaborate accounts to explain why they had been singled out and how the researchers may have obtained their personal details:

Then, I was like, "Well, my brother went there. I wonder if it's because I am of that age." Basically, it was just linked to university, my thoughts. I was just thinking, "Is it because they're trying to entice me to come in because they know my brother?" **[R 4]**

Yes, well, basically, because I applied there last year, for an art foundation course, I thought it might have been related, that they might have kept my email and then just had me as a contact, so something related to a course…. Because I thought that would be the only connection to me, that they had me on some kind of database. **[NR 8]**

8.4.2.3 Managing the volume of information

The number of documents in the envelope sent to the young women was identified as a further challenge to potential participants. For some of the young women, *the volume of documents* was overwhelming, and they sought strategies to manage it. These included selective reading, skim reading, close reading or not reading at all.

Selective reading was pragmatic, with the young women picking out documents without reading anything from start to finish. Text in bold or a different colour drew their attention and when they identified a document or section of a document as something they needed, they were prepared to give it fuller attention. The participants who used selective reading felt confident in their methods to manage information. One young woman, for example, talked about it as if it were her usual practice:

For me, if I receive a letter from somebody, I read the first line of the letter to see what it regards, and like, that's sorted it. With that [the privacy statement] I was like, "Oh, data." Then that didn't concern me, so I didn't care. The bit in blue stood out, so I read that before, without even reading any of that. Then I read that [participant information leaflet], because I was like, "I'm filling this in, so this is probably a good idea." **[NR 3]**

Other participants described their approach in terms of *skim reading* the documents. However, the young women who did so rarely remembered the contents of the documents, though they were able to recall what they had looked at:

I probably just looked- I remember looking at the booklet, I remember skim-reading the letter… Yes, I remember seeing that, yes. I think I remember looking at it, but I just kind of thought, "Okay, it's links to help, okay, I don't need that, discard it," type of thing… Yes, again, I probably just skim-read it [the privacy statement] if I did. I can't remember. **[NR 2]**

I think I read quite a bit of that, or I skim read through it…. I think I did open it up. I do remember opening it up, and I did look at the pack, but I can't really remember what was on it. **[NR 9]**

Those who had responded to the invitation to take part in the study and returned the completed health questionnaire adopted the strategy of *close reading* and indicated that they had read the documents carefully before answering the questions. One responder (**R 3**) had decided to read

everything as a sign that she was in control and was making an informed decision on her own behalf.

> *I feel like a young adult now than just a kid. I have more responsibilities and I get to choose my own things to do, which is quite nice…. Obviously, now that I'm in that age group, I was quite invested in the letter. I read the whole thing and then saw, obviously, the questionnaire, and it said, 'if you would like to'. Because it was quite formal and quite informative, I knew what I was signing myself up to, which is why I decided to do it.* **[R3]**

In this excerpt, emphasis is placed on her ability to make choices as a sign of being an adult.

Finally, some women were happy to say that they had *not read any of the documents*. They did not go as far as to say they had not opened the envelope but were comfortable to say that they had not engaged with the contents of the envelope at all:

> *I think I did open it. I don't know if I- if it was a- was it a booklet or something? I can't remember.* **[NR 5]**

> *I didn't see clearly what the questionnaire was about. I don't think I was paying that much attention to it… I definitely didn't realise it was about women's health, because I think if I had, then I would have been more inclined to fill it out.* **[NR 7]**

However, **NR 7** showed some regret that she had missed important information which would have made her more likely to have completed the questionnaire. Similarly, another participant said that she had missed information that might have encouraged participation:

> *But I would have definitely done it online, had I seen that [topic of the questionnaire] … I literally just skimmed through a few things at the start. It was not great, to be honest.* **[NR 8]**

8.4.3 Topic 3: Response to the questionnaire

The questionnaire was the largest and most important document in the pack. The young women's accounts in the interviews suggested that they responded to the questionnaire in three different ways: (1) they *appraised the costs and benefits of completing it;* (2) they *lost interest or were distracted* from completing the questionnaire; and (3) they took the opportunity *to present themselves in a particular way* through how they responded to the questionnaire.

8.4.3.1 Appraising the costs and benefits

The young women described flicking through the contents of the questionnaire to assess what participation would involve and whether the questions would be boring, invasive, or difficult:

I kind of looked at it and I was like, "Okay, this is going to get a little bit boring." (Laughter) No, I thought it was like, "Okay, it's quite repetitive, I've gone through [some] however, I don't want to go through anymore," and I just kind of put it down. **[NR2]**

"Oh, it's going to be about sex, it's going to be 'do you use contraception every time you have sex' scenario." But it's more of just a 'do you smoke? Yes? No? How many? Do you drink? Yes? No? How many? Do you eat a balanced diet?' Say someone opened it, they might have thought, "Okay, I don't really want to talk about how heavy my cycle is," or what have you. **[NR3]**

*It was well-organised, it was easy to read, the questions were [not] too, "Oh, my God, I don't know what that means." It was just, it seemed like something that would've been relatively easy and quick to do. Not too intense and slow or anything***. [NR 4]**

Casting an eye across the questionnaire also provided the opportunity to evaluate *how much effort* would be needed to complete it. Negative appraisals related to the hassle of posting the questionnaire back to the researcher:

Probably posting it [discourages participation] because you'd have to find a letterbox or a Post Office. Like, an email would have probably been easier, because you can just reply straightaway. **[R 1]**

It's just quicker to do it online, because if I have to use the post, I'll forget to bring it with me but online it's instant. **[R 5]**

Time taken to complete the questionnaires was also evaluated: multiple-choice questions were preferred because they provided a quick response and 'less to process' (**NR 8**):

*If it was 'questions and answers' where you have to write long paragraphs, then probably wouldn't have done it, if that makes sense. Because it was quick, it was easy to do. [**R 1**]*

However, as R3 commented, multiple-choice questions could require more thought when the options provided did not include one that reflected what the women wanted to say:

What I find with some questionnaires where I get given a multiple-choice question is that I'm only told to answer one, but then all of them apply to me. I'm figuring out and questioning, going, "Which one do I choose because they all occur to me?" So having the multiple choice mixed with, obviously, the questions that you could write yourself was quite nice to me. **[R 3]**

The time needed to complete the questionnaire was also appraised in relation to other assignments which the young women needed to get done:

I'd just handed in my assignment, so I kind of had the whole evening [to complete it]. But if it had been, like, the week before, I wouldn't have had time, or the week after or anything… I don't know. Like maybe if I had it somewhere I could see it, maybe. But otherwise, I think if I was really busy, I would have just looked at it and gone, "Huh. Maybe later." **[R 2]**

But that was the worst time for me to fill it out, because then I'd realised after that … I had quite a lot of stuff to do… Well, for me it was more important stuff, because I had deadlines. **[NR 6]**

Conversely, completing the questionnaire would not take priority over their academic work because there was no deadline and no consequences for non-completion of the questionnaire:

I think it depends because, with the assignments, we find that it's necessary to do them. If we don't, obviously we face consequences for it. I think because it was so open-ended, that going through the posting it back, answering everything… It's not hard to do, it's just something that a lot of people put off and just, "I'll do this tomorrow," and then it just doesn't happen. **[NR 8]**

The timing of the arrival of the questionnaire was also important in the decision to complete the questionnaire. If it arrived when the young woman was looking for something to fill some time, then engagement appeared to be more likely:

I really had nothing to do, so it gave me something to do. **[R 3]**

I am just a bit tired and I saw it on the table and I don't really have to move around for it or do anything so I just thought that it was quite interesting so I would just do it. **[R 5]**

In this last excerpt from R 5, the questionnaire provides a benefit by providing the reason to sit down after a busy shift doing manual work.

Some young women reported that the questionnaire had provoked them to think, sometimes described in terms of 'getting the brain to work':

Then, after doing it and, obviously, answering all the questions and using my brain to figure out everything, I had a sense of, "I need to be getting on with my coursework now," and then felt quite proactive in my work. **[R 3]**

For other young women, both responders and non-responders, the questions made them think about aspects of their life from a new perspective. In both extracts below, the use of written forms of communication rather than the more usual conversations about health evoked a different way of thinking:

It [seeing the questions] makes you reflect on yourself and how you're feeling. You don't really write about what you're feeling or answer questions about how you're feeling much in life, so yes. You obviously have verbal communication with your friends or family, or something. But yes, it's quite interesting. **[NR 5]**

When you're actually stopped and you see it on paper and it's not just in a conversation with your friend, who knows you so well, or this or that or whatever, it's a whole different perspective because it's something so unusual. Yes, what a questionnaire can do to you, I guess. **[R 4]**

Some women also valued the questionnaire as a vehicle to talk to their parents about their health:

It got me and Mum on the conversation of how active I am, and my diet and stuff, which is weird, because now whenever we go shopping, which unfortunately now is not so great because we can't be oh so picky about it, but now we sort of look at it a bit more and be like, "What would be a healthier way to do this?" **[NR 3]**

Yes, because I obviously try and keep it to myself, so it was nice talking to my parents about it. **[R 2]**

Others were reminded that they were more knowledgeable and healthier than they had previously thought:

I remember reading it whilst I was doing it, talking to my mum being like, "Filling this in I'm realising that I'm actually quite a healthy person." I consider myself sometimes quite lazy, but actually when I weigh it all up, I'm not. **[NR 3]**

It brought me back to that, "I do know something. I do know this, and I know more than I thought I did." **[R 3]**

8.4.3.2 Losing interest or being distracted

However, some participants found that they struggled to maintain interest, even if they had initially been willing to participate in the study. In the extract below, the two participants were easily distracted by other more important or interesting activities:

I did, I had a pen. I was kind of like ready to start doing it all, and it didn't quite happen… typically just college work, if that makes sense. It's just something that I know I have to do, there's a deadline there, so I just do it, and I make sure I do it. For the most part it's just being the typical thing that kids do, it's playing games on the computer. **[NR 8]**

My dog barked at the door, so I think I let her out. Then I was like, "Do you know what? I really fancy playing my game on the computer." Then I think I just played my game on the computer, and then by that time it was three hours later, and I was meant to be having dinner. **[NR 3]**

Other participants were overtaken by competing activities or lost the questionnaire or were just 'lazy':

I got halfway through the questionnaire. The problem with my household is, if you start filling something in and you put it down to the side it goes missing. **[NR 3]**

I think I began the first page and then I stopped, and then I kind of forgot about it. Then, yes, it just kind of stacked up in my pile of paper. I did begin it, but I didn't finish it, no. **[NR 6]**

Because most kids are really, really lazy. It's awful, but a lot of it is just, if it's not done right there, then I'm not going to do it. And that goes for a lot of people, I think. So yes, I think so. **[NR 8]**

8.4.3.3 Presenting an identity

The last excerpt from **NR 8** justifies not doing the questionnaire by explaining that this is how 'kids' behave; she aligns herself with others sharing a particular group identity. In contrast, responders to the mailed health questionnaire described their responses as more considered and careful:

Obviously, I understood it because I read into detail about everything, but I know that some people don't read every line and just skim over it, so they probably don't understand everything. **[R 3]**

Yeah just trying to put it more accurate. Because some people might misunderstand the question. **[R 5]**

These responses also suggested that they perceived themselves as good at completing questionnaires and see it as 'playing to their strengths'.

By contrast, another participant portrayed herself as vulnerable, damaged and worried that they would be judged harshly by others (**NR 9**):

I was recently diagnosed with anorexia, so I [didn't know] how to answer them without [being] weird or being quite [confusing] with someone that receives the questionnaire back… No, I just thought that maybe my contribution wouldn't be much use. It's a different view, how say, a regular teenager might answer about meals. **[NR 9]**

NR 9 also hinted that being different from 'regular teenagers' created anxiety, a worry which was echoed in other interviews.

At the same time, some women initially seemed to expect that the questions would indicate that researchers held negative stereotypes about college students:

> *I remember talking to my mum being like, "I mean I hope they don't think that students at College just drink and do drugs all the time... But I didn't feel personally attacked, because I was like, "Okay. They want to know me as a person, as a student in college, they want to know how healthy I am." That's fair enough.* **[NR 3]**

One young woman described responding to questions as a way of 'setting the record straight' [**R4**] about who the young women are and what is important to them. Therefore, a benefit of participation for this responder was the ability to counter any incorrect assumptions made by the researchers.

8.5 Cross-cutting influences on responses to the questionnaire

Three cross-cutting influences were identified, including: (1) their previous experience of questionnaires (2) their current values and (3) external factors.

8.5.1 Cross-cutting influence 1: Previous experiences of questionnaires

Most of the young women had previous experience of completing questionnaires, largely 'satisfaction' surveys from retailers but also requests for 'feedback' from their College, the NHS and other organisations. Their accounts of their experience suggested that past experiences could colour how an invitation to take part in a health questionnaire was appraised. While questionnaires had negative associations for some young women, they could also see potential benefits for themselves or their college. Their accounts of previous experiences of questionnaires also suggested that establishing relationships with individuals or organisations could be a powerful factor encouraging them to respond.

Some young women had previously had negative experiences of questionnaires which could discourage them from completing another questionnaire. One reason for this was that completing a questionnaire was boring, as described by both a responder (**R 3**) and a non-responder **(NR 8)**:

> *They go, "Do you think your teachers are doing the right things?" "How do you think that?" After the 15th one, I was like, "I can't do this anymore. I'm getting so bored." I was trying to give full answers, but my brain was not having it.* **[R 3]**

I think I'm having a load of GP surveys coming through recently, and I think I've just got to a point where questionnaires are just- I'm so fed up with them. I've probably had about five or six come through now. **[NR 8]**

Boredom was attributed to both the repetitive nature of the questions **(R 3)** and the large number of questionnaires repeatedly sent to them by organisations seeking to increase the number of responses to their questions **(NR 8)**. Conversely, participation was more likely when questionnaires were quick and not repetitive:

If they [questionnaires] pop up on Instagram or something and they are, 'What do you think about this? Tell us what you think,' I tend to just do those quickly. **[NR 4]**

No, it [the mailed health questionnaire] was kind of different sections but it didn't feel like that I was on it for ages, because I've done some surveys where I've been there, it felt like hours, but that one didn't. **[R 5]**

Other participants reported that they had resented being required to complete questionnaires for their school or college and regarded the way they had been presented as lacking respect:

It was kind of like thrown in our faces. I would have done it, and I did do it, obviously. But if it was maybe like, "You can do this, blah, blah, blah," but it was more like a, "Do it." **[R 1]**

Conversely, some young women had seen that their responses to the questionnaire could bring about change **(NR 9)** and could also provide direct benefits to themselves:

There's a chance, because it means that your voice is heard at college, and you have a say in your own education, which I think is important… For example, we've got new bins…. so that was good. I think we all benefited from that, and that was probably brought up in a questionnaire or in feedback. **[NR 9]**

Sometimes it will be for my own benefit. If it's like, 'Complete this survey for 10% off your order,' and I'm like, "Okay, well there's nothing wrong with saving some money. Why not?" **[R 4]**

These accounts suggest that it is possible for young women to bring about change by expressing their views and concerns in questionnaires from their college and by completing satisfaction surveys from retailers and other commercial organisations.

8.5.2 Cross-cutting influence 2: Current values

In making their decision on whether or not to respond to the questionnaire, the young women drew on three sets of values related to *a desire to help the researcher (and others)*, their *moral and ethical beliefs*, and their *presentation of self.*

8.5.2.1 Desire to help

The desire to help was frequently mentioned and participants were typically concerned about whether they had been helpful in the interviews, as if helping was a value which influenced behaviour regardless of the task. Responders elaborated on several reasons for helping. For example, **R 3** wanted to make a change for others, while **R 4** recognised that she had gained satisfaction for herself:

> *Definitely, because I feel like some of the answers that I give back can, maybe, help with future research or, maybe, with people in the future.* **[R 3]**

> *I suppose, a sense of fulfilment. I felt like I did my part, almost, for that day. Like I helped somebody else out and that made me feel good, obviously.* **[R 4]**

The desire to help was also enhanced if a personal connection was made between the participant and the person or organisations sending the questionnaire. This was reminiscent of the way women talked about completing questionnaires for retailers or the tutors for whom they felt some loyalty. The women in the following excerpts, both non-responders, had held only a brief meeting with me in a classroom setting but nonetheless wanted to help me by participating in an interview:

> *I just feel like that now I've met you giving my information like benefits you but also benefits me because it makes, it like gives awareness of what other people feel about health stuff.* **[NR 1]**

> *After you came in, I'm like you're really friendly, you've got a nice little approach, I didn't mind… It's for research, it's helping you. Just after I'd met you, you were very friendly and that, and I was like no, I didn't mind.* **[NR 2]**

Others attributed their non-response to lacking confidence that they could contribute usefully to the research:

> *I'm not sure really what you were looking for, but I just thought, I wasn't sure how helpful I would have been by doing it, so that's why I didn't do it. (Laughter)* **[NR 2]**

In this case the desire to help created a potential barrier if participants perceived that their involvement would not in fact be helpful.

Recognition of the effort put into producing the study documents could also engender a sense of reciprocity and a desire to support the researcher by answering the questionnaire, though not all managed to do so in practice:

> *There's quite a bit of paper, so I was like, "They obviously spent their time and effort to make this, so I'll answer it because they want it to be answered because they spent a lot of time making it."* **[R 2]**

> *I was just intrigued what it was actually about, like what was in it, because it was quite chunky, got quite a few bits in, so I was, "Okay, I'll have a look at it."* **[NR 6]**

For other women, the desire to help prompted them to look at the contents of the envelope but this was not sufficient to lead to response. In the following excerpt the participant indicated that the geographical proximity of the sponsoring organisation created a duty to explore the contents of the envelope further. The interest created by seeing the involvement of a local organisation was mentioned by several interview participants:

> *I think just because it's so close to home, and they're doing research into something that's important, that I could possibly help them with, and it would be important to look through it.* **[NR 9]**

Therefore, while the desire to help appears to provide some benefit of participation, from positive feelings from contributing and from reciprocity. These feelings were lost in the face of anxieties and they were not always able to engage with the study through to completion.

8.5.2.2 Ethical or moral values

When discussing responses to questionnaires in the past, some women described the ethical or moral values which informed their decision-making. These values were illustrated in the way that the women expressed views about how certain behaviours are right (or polite) and others are not:

> *I wouldn't want to waste the paper that had been printed out.* **[R 3]**

> *When you have an envelope with your name on and it's full of all this information and stuff, it would almost feel so rude if I didn't. I wasn't doing anything else. I had no excuse. So, I should just do it. That's how I saw it anyway.* **[R 4]**

In these excerpts, **R 3** and **R 4** once again suggested that an equitable exchange may encourage women to participate in research. Nevertheless, **R 4**'s words do suggest that if something else was pressing then, she may not have completed the questionnaire.

In discussing their moral and ethical values, the young women also presented key aspects of their identity. **R 3**, for example, cited her Christian values as underpinning her desire to help:

> *I've joined a religion, so I've felt like – as the Christian way goes, obviously – helping my fellow man. So, when I can, even if it's something small, I like to help somebody. Even if it doesn't go anywhere, as long as I help somebody in some way.* **[R 3]**

Others presented themselves as independent and autonomous individuals in the context of discussing whether or not to complete the questionnaire:

> *I know that most people my age will, maybe, refuse to do it or just throw it to the side and can't be bothered, so I was like, "I feel like I should be one person if nobody else will."* **[R 3]**

> *Some charities are not, some of them can be quite dodgy in my experience. [Laughter] So I'd probably do a bit of research about the charity before I filled out their survey. I've had experiences when I used to live in London when they would just take the information that you've given them, and they wouldn't use it for the research but they would just use it to like use your information and sell it and stuff.* **[R 5]**

Responder **R 3** presented herself as different from her peers through a sense of duty towards the researcher, whereas the second participant, **R 5,** presented herself as admirably cautious in scrutinising the sponsoring organisation's background. It is notable that she used her former life in London to suggest that she had more life experience on which to draw. Therefore, it seems that when the young women gain a positive feeling from acting in accordance with an identity that is important to them, then they may be encouraged to participate. In contrast, some of the interview participants talked about representing women as an important consideration for them. Both of the students in the excerpts below were non-responders to the mailed health questionnaire but they felt that women's health and women's rights were important topics, but they were not as clear as **R3** and **R5** above, that this was as an identity that was personally valued:

> *I don't know how to word it. It's just showing people that people are all thinking the same thing and making people aware of how if people aren't being considerate [about women's rights]. Or not asking the right questions, or not asking especially the right people…* **[NR 6]**

> *Well, I think that at the moment, there's a huge sense of solidarity between girls and women, so I think they would just have wanted to do it [questionnaire on women's health] because of the big drive to connect girls at the moment, I don't know.* **[NR 8]**

Therefore, identity and group memberships appear influential to encourage participation, but it appears that these need to be personally relevant and important to the women if they are to prompt completion of a mailed health questionnaire.

8.5.3 Cross-cutting influence 3: External influences

The external influences on young women's decisions to respond to the interview fell into three categories: *social influences* (friends and family, and social norms), *college systems and teaching*, and *incentives*. These external influences could encourage participation by reducing anxiety, increasing enjoyment and/or increasing the benefits of participation. However, external influences could also create barriers to questionnaire completion by offering activities which drew them away from completing the mailed health questionnaire.

8.5.3.1 Social influences

The young women appeared to enjoy completing the questionnaire in class alongside their friends. One participant (NR 4) contrasted the in-class questionnaire and the mailed health questionnaire, preferring the former as it had provided 'a nice time to sit down and do it with everybody' . It also provided an opportunity for the young women to agree among themselves that they would complete the questionnaire in a way which was neither invasive nor thoughtless:

> *It was our tutor said that you were coming in. Then literally every single girl went, "Oh, did you fill that in? I didn't fill that in." They said, "No, I didn't fill that in either." "I thought it was stupid." Or "I thought it was invasive." Or "I just didn't really consider it." But then as soon as you spoke to everyone, everyone was like "Actually, I don't see what all the fuss is about.".* **[NR 3]**

This group of women appeared to gain confidence from those around them, but could also be swayed by a single 'leader':

> *No, they'd just be like, "Well, if my friend has done it, I don't see why I can't." I mean performing arts is very much a herd. We are a group of sheep. If one person does something, we all do it.* **[NR 3]**

Yet, by using home addresses to send the mailed health questionnaire, it was likely that women would not immediately have the support of peers to provide reassurance. However, some women talked about how they consulted parents to find out if they should complete the questionnaire and for help with answers:

They [parents] found it quite good that people are asking about females and questions and stuff like that. They found it quite good, actually, that it's a good thing to do. **[R 2]**

Outside of named individuals, some of the women did use perceived social norms or what 'everyone' would be like as a way of justifying their responses to seeing the length of the mailed health questionnaire. Unfortunately, such social influence could discourage participation:

"This is actually annoying." Just because we have stuff to do. But, you know, I think that's most people in society. But yes, even if it was 15 minutes or 20, I think that's fine. That's a good length. **[NR 5]**

Everybody's looking for convenience. It doesn't matter if you've got 12 hours to spare, or if you've got 30 minutes. Everybody looks for convenience. Hence why companies like McDonalds do so well, because how easy is it to just decide to have a fast-food dinner or whatever? **[R 4]**

8.5.3.2 College systems and teaching

College systems and teaching about data security played an important role in both reducing and raising concerns about maintaining confidentiality and data security in completing the questionnaire. On the one hand, the interview participants felt reassured that the college systems would protect them. The security guard at the front desk of one college was famous for checking individuals' identity and had prevented me from entering the college before security documents had been checked, even with the endorsement of members of staff:

But like, I wouldn't need you to be like, "I have got a verified email." I wouldn't need that specifically. I mean first of all to get into our lesson you would have needed to go past Ian [name changed], and he doesn't let anyone get past without a lanyard so you must have done something right. **[NR 1]**

On the other hand, the college was also instrumental in alerting the students to potential breaches of data security. In the first excerpt provided below, **NR 3** felt she was being monitored by the college information technicians, which made her cautious about how she interacted with the researcher. In the second excerpt **NR 6** attributed her caution to the information she received in classes about information security:

If I'm having a direct conversation with you, I want to have a direct conversation with you. I don't want people listening in and hearing over the conversation, which is exactly how I feel about college email. At the bottom of every single email it says, "Be careful what you say, because our college IT people are monitoring these emails." **[NR 3]**

But obviously… we're taught to be very cautious of what we share and stuff. But I think when you came in, I was like, "Okay, she's here. She's a person." **[NR 6]**

This professed awareness of online systems and threats to personal information reflected the knowledge and concerns shared by participants in both stages of the focus groups in Study 1.

8.5.3.3 Incentives

Lastly, the researcher herself influenced the decision to participate in the health survey with the use of *incentives*. Participants showed surprise at being offered a voucher at the end of interviews even though this information was provided both verbally in class and in writing at the end of the in-class questionnaire. This surprise was particularly evident when the interviews had been moved online. One participant talked about the need for a voucher as something that would motivate women younger than her and she distanced herself from being motivated by money:

I really don't know. Because like personally not coming from, I don't come from like younger people than me. And this is going to sound like really harsh. I would just do it because like when you tell some person to do but most of the ones who've done it because they would want the voucher…. Maybe some people will maybe they won't. But as teenagers nowadays, they just want money. **[NR1]**

However, the vouchers were still motivating when the study intensity of the task required was perceived as substantial as non-respondent **NR 8** explained:

It was a factor for me doing it because I'm interested in the topic hugely… but sitting down and I find it quite overwhelming, like having a call or having someone face-to-face, asking you questions. It can be quite intimidating. So, I think yes, having that extra incentive does encourage people to do it. **[NR 8]**

The language that this student used was striking. Here she talked about being 'overwhelmed' and 'intimidated'; elsewhere she said that doing research for the first time was 'scary'. Such descriptions point to her anxiety at taking part in an activity for the first time.

8.6 In-class questionnaire 2: Questionnaires completed in class

Four tutors allowed me to come to their classes to distribute the second questionnaire to their students. I attended 14 sessions involving 188 students (34% of the original sample) at the FE colleges.

A total of 168 (89%) women completed the in-class questionnaire. Blank questionnaires were returned by 13 students and 7 refused to take part. Of the 168 respondents, 10 (6%) had

completed and returned the mailed health questionnaire (8 by post and 2 online), another 46 (27%) students had started the mailed questionnaire but did not return it, 31 (18%) did not recall receiving the questionnaire and 81 (48%) did not want to answer the questions in the mailed health questionnaire.

8.6.1 Sociodemographic characteristics of respondents and their response to the in-class questionnaire

The respondents were aged 16 to 21 years with a mean age of 17 years (SD = 1.15) and represented the range of departments involved in the original mailed health questionnaire, including business, art, hair, beauty, childcare, tourism, health and social care, media and performing arts.

8.6.2 The decision to complete or not complete the mailed health questionnaire

Participants were asked to indicate whether they had completed the mailed health questionnaire, then directed to a fixed-choice item which listed the points at which they had made their decision on whether to participate or not. A further question asked them to choose reasons why they had completed and returned the mailed health questionnaire or not. Respondents could also provide short open-text responses if the answer options were not relevant (Appendix 5.16). The responses were categorised according to the stage of the conceptual framework. These stages were operationalised in consultation with a member of the supervisory team as summarised in Table 8.2. This same supervisor independently coded the open text responses. Differences arose through the difficulty of separating attitude formation and integration stages, but these were resolved through discussion.

Table 8.3 Coding scheme for the stages of the conceptual framework

Stage of conceptual framework	**Operational definitions for coding responses**
Motivation - Why do potential participants even choose to read the invitation when they first receive it?	Decisions to engage with initial invitation were made on the basis of beliefs, values or needs which existed before any information was viewed
Perception - How do potential participants engage with the information presented in an advertisement for a survey?	Decisions to engage with the materials presented were based on their appearance but not on the persuasive messages
Attitude formation – What persuades them to accept the invitation and proceed to the questionnaire?	Decisions to read the documents and to begin the questionnaire were based on reading persuasive messages in the information

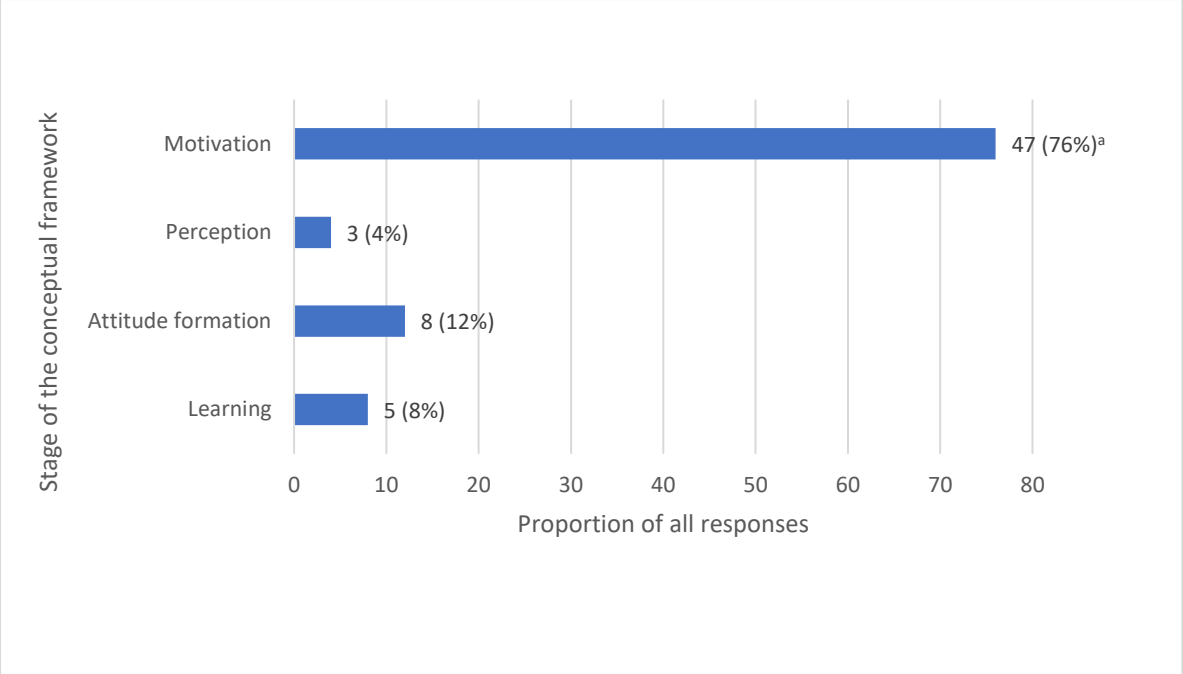
Integration - What encourages the decision to participate to be translated into action?	Decisions to complete the questionnaire were taken, and the questionnaire was completed and returned
Learning - What motivates participants to participate in subsequent studies or to encourage their friends to do so?	Decisions to complete the questionnaire were influenced by other people who had already participated and provided a role model for others

*8.6.2.1 Responses concerning the decision to **respond** to the mailed health questionnaire*

Ten young women reported that they had decided to respond to the mailed health questionnaire. The reason most commonly given for doing so was wanting to contribute to health research, with 8 (80%) of those who returned the first mail indicating this reason. The desire to help organisations such as the sponsoring university (4 (40%) respondents) and the college (3 (30%) respondents) were also given. Two young women (20%) indicated that peer-pressure had played a role in encouraging them to respond. These responses suggested that the young women had made decisions on the basis of what felt right to them rather than by engaging with specific, detailed information provided on the documents in the envelope.

Their quick decision-making was mirrored in their response to the question regarding the point at which they had decided to respond; half of the respondents said that they had decided as soon as they opened the envelope. The remaining women indicated that they had read some of the materials (part of the invitation letter or the questions) before choosing to be involved. Two women decided to respond only after they had received the reminder postcard.

As indicated in **Figure 8.2**, the reasons provided for responding to the questionnaire related primarily to the motivation stage.

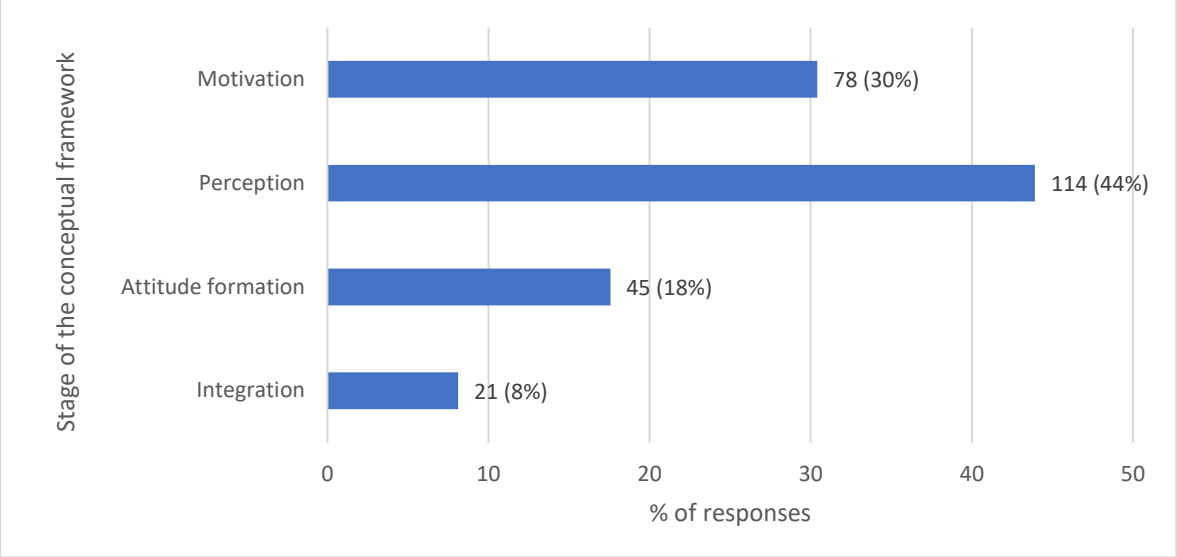


[a] The 10 respondents could choose more than one response (total responses = 63). The number of responses at each framework stage were used to reflect that some students had multiple reasons for their decision.

Figure 8.1 Number and proportion of responses to questions concerning the reasons for responding to the mailed health questionnaire

*8.6.2.2 Responses concerning the decision **not** to respond to the mailed health questionnaire*

Many more young women (n = 158) provided reasons for not completing the questionnaire. The most commonly stated reasons were a dislike of questionnaires (44, 28%), concern that questionnaires were too long (40, 25%) and the view that their answers were not needed for the research (24,15%). When the self-reported reasons were linked to the stages of the conceptual framework it appeared that the decision to not participate was predominantly made early in the recruitment process as set out in the conceptual framework. **Figure 8.3** shows that most decisions were made at the motivation and perception stages, before the young women had engaged with the content of the information about the study and the messages designed to persuade young women with lower SES to take part.



[a] The 158 respondents could provide more than one response (total responses = 258). The denominator used in the figure is the number of responses so that more than one reason could be acknowledged if provided by the respondent.

Figure 8.2 Self-reported reasons why the mailed health questionnaire was not completed/returned

Similarly, of the young women who reported that they remembered when they had decided whether or not to participate, 95 (60%) stated that they had decided not to participate as soon as they opened the envelope, reflecting minimal engagement with the information provided that was noted in Figure 8.2. A further 52 (33%) explored the materials to some extent by reading the invitation letter or looking at the questions.

The patterns seen in these survey responses were explored in more detail in sections 8.3 and 8.4 above.

8.7 Implications of the findings from Study 2 for the design of future questionnaire surveys

8.7.1 Implications of emotional responses

Previous research into survey response behaviour (such as that outlined in Chapter 4) has largely considered participants' decision-making in cognitive terms. That is to say, the researched explained the decision to participate based on how people make decisions based on the type of information used or the responses to persuasive techniques. For example, the Elaboration Likelihood Model (Petty and Cacioppo, 1986) suggests that people might pay attention to the content of information if they have the ability and willingness to think about the information. Without such motivation, peripheral cues (e.g. the appearance of materials, such as an advertising poster or the questionnaire) are likely to be more persuasive. Yet, in this research the young women who completed the in-class questionnaire and took part in the interview made decisions about participation with little attention paid to the materials sent to

them. Their responses were often based on emotions such as anxiety, surprise or enjoyment which could be sparked by simply seeing the envelope in the post or a logo on a letter, or the number of pages to read, with little connection to the actual request to participate in a questionnaire about health, health knowledge and health behaviours. Moreover, in line with the conceptual framework which sees the potential participant as actively searching for information which fits current tasks to be performed (see Section 4.4.3); the young women consumed the information selectively, often hunting for specific details to confirm to refute their concerns.

Consequently, their emotional response influenced what information was read and what information was overlooked. This finding suggests that researchers need to consider how to make the first contact with participants attractive and convincing so that their initial responses are positive and likely to encourage engagement with messages to persuade. For example, the initial negative responses relating to receiving the envelope or seeing the university logo, could be reduced by providing advance notice (e.g. a postcard or SMS text) that letters will be sent to their home address and an explanation of the way that the young women have been identified to receive the questionnaire, so that they are neither surprised nor distressed when the mailing arrives.

8.7.2 Implications of identity, self-perception, and self-esteem

The young women's perceptions and presentation of themselves, their identity and their self-esteem have been central themes running through Studies 1 and 2 (see Sections 6.5.2 and 7.6.1 in addition to this chapter). However, there has been little consideration of identity development in the literature on survey response behaviour, although it appears to be a key preoccupation for the young women in this research. As is common among adolescents, the young women seemed to be exploring possible identities, along the lines of Cooley's Looking Glass Self (Cooley, 1902) or Goffman's Presentation of Self in Everyday Life (Goffman, 1959). The complexities of how completing a questionnaire can help establish the young woman's self-perception in reference to different social groups may mean that the priorities of this group (such as providing the opportunity to be seen as more adult than peers) may be different to those of other adults. Such differences may help explain why 16 to 24-year-olds are particularly difficult to engage in UK health surveys. For example, this transition between adolescence and adulthood may give young women permission *not* to complete a questionnaire if they feel uncomfortable about doing so. Some women were encouraged to engage with the materials because the mailing affirmed their adult identity. However, if invitations to participate appeal to the young women as adults and the recipient is unsure about study involvement, then they may rationalise a refusal to participate by favouring their identity as an adolescent, presenting themselves as easily distracted or without experience to offer. Appeals to other aspects of their

identity, such as their values and identity as women or college students, may be necessary in addition to approaching them as adults.

There was also evidence that the young women were uncertain of how others perceived them. Just as the focus group participants drew on stereotypes of researchers, so the interview participants sometimes expected the researcher to stereotype them or judge them harshly. Therefore, it is essential to make the reasons for collecting information more evident to the young women, perhaps by presenting key messages in bold, or a different colour or by using a different modality (such as verbal communication) to work with the ways in which they read information selectively and quickly. The interview participants also initially lacked confidence in the way they managed their health but felt a boost to their self-esteem when the questions suggested that they were treating their bodies well. Recognising what the young women did well in regards to their health could also provide a persuasive message, in a way similar to how Kobayashi et al. (2013) framed invitations to participate in terms of what communities wanted and needed (Section 4.4.2 of Chapter 4) .

8.7.3 Implications of young women's appraisal of the costs and benefits of participation

This research has highlighted a number of concerns that young women had regarding how difficult, invasive, or unsafe it would be for them to complete a questionnaire on their health, health beliefs and health behaviours. However, as was the case for the focus groups some of the benefits highlighted by the interview participants could also be anticipated, for example the value of receiving financial rewards or important health information.

Nevertheless, the interviews have contributed a new insight into the cost benefit analysis which has implications for the design of future studies. Most marketing theories argue that reducing the costs and emphasising the benefits of the desired behaviour (for example, the fifth Social Marketing Benchmark outlined in Section 4.4.1) lead to increase purchasing. In the case of recruitment of young women from lower SES categories to UK health surveys, the costs of participation, such as the risk of misuse of personal data or harsh judgement of their competence, can be avoided by not completing the questionnaire. In contrast, the interviews showed how several benefits of an invitation to complete a health questionnaire do not necessarily require the participant to respond to the questions and to risk judgement or risks to their security by returning the completed questionnaire. Reading the questions could be sufficient provide the opportunity to think in new ways and to talk to others about health, which is something that the young women appeared to enjoy. An important message from this research is that, to improve recruitment to health surveys, the costs of participation, which arise due to their anxieties about what is involved, need to be reduced as far as possible. Ensuring that the young women are informed about the study well in advance of a questionnaire arriving

is also important, as is information on why the study is important and why/how they were identified to be sent a questionnaire.

Providing a more informative introduction to the research, including ethical and data security, would also help to reassure the young women that their data were secure and that the researchers respected them. If recruiting young women at FE colleges, this introduction could be achieved by researchers meeting women in college or using other methods to talk to the women and be seen by them (for example via video conference or even recorded video). Tutorial sessions such as those used for the in-class questionnaire could also be used to provide education about what is involved in planning and conducting research, so that women's concerns can be addressed. For other groups of young women from lower SES categories, this introduction could be managed through contact with other organisations where young women meet or video recordings where this is not possible. Other costs of participation such as the length of participation and competing deadlines could be managed by defining a shorter timeframe for data collection (perhaps using SMS text or messaging apps) to fit survey completion more easily into the young women's routines. Collaborating with gatekeepers could facilitate planning and suggest times to avoid distributing surveys, such as during periods of heavy assessment. However, in view of the findings in Chapter 3 (Section 3.3.3.5) and the theories around social exchange (Section 4.3.2) it is unlikely that offering incentives which are contingent on the return of a questionnaire will increase engagement with the study substantially.

8.7.4 Implications of relationships with people and organisations

Although theories of exchange have focused primarily on the use of incentives or other rewards to promote survey response, reciprocity has also been considered in previous research on survey response, for example, in the discussion of cognitive dissonance in Chapter 4 (section 4.3.2). In this research, however, relationships with both organisations and individuals appear to be influential. A brief meeting with the researcher, a sense of local community in the willingness to help local universities, as well as longer-standing relationships with businesses or social causes, appear to be sufficient to create a relationship in which mutual loyalties are established.

Both reciprocity and the young women's self-perception as individuals who are important contributors to research could be enhanced by providing more visibility for sponsoring organisations in FE colleges. Such visibility could be achieved though collaborations between the college and sponsor, such as guest lectures, visits and study support.

Colleges can also provide important support for data collection. The young women's anxieties about being involved in research could potentially be reduced by providing teaching on

research methods, ethics, data security and governance systems, and how participants can reassure themselves about a study's authenticity. The young women in this study suggested that seeing the researcher in some way as a person is helpful to gain their confidence. The interview participants were keen for the researcher to come into class, but they also suggested other ways of 'putting a face to who is doing it' (**NR 4**) such as fact files. This suggestion mirrors the value placed on the researcher's qualifications and experience in the focus groups, Section 7.3.1).

8.8 Conclusion

This study has provided a range of new insights into how young women in FE colleges respond to a genuine experience of receiving a UK health questionnaire. In particular, it has allowed an exploration of the beliefs and responses of both non-responders and responders to a mailed health questionnaire.

The low response rate to the mailed health questionnaire has provided further robust evidence that it is currently difficult to recruit young women in FE colleges to complete health questionnaires. However, those who did respond provided valuable insights into the way they interpreted and acted on receipt of a postal questionnaire. Going into their college and addressing the young women face to face improved the response rates but this was very time consuming and hampered by gatekeepers. The in-class questionnaire suggested that there was not just one point at which young women could choose whether to participate but most decisions were made without engaging with the information provided with the invitation, such as the invitation letter and privacy statement. The findings of both the qualitative interviews and the in-class questionnaire showed how important it is for researchers to understand young women's expectations and goals at the time they are first contacted.

The findings of the interviews lend support to each stage of the conceptual framework. The young women gave up engaging with the envelope and its contents at several stages, particularly the motivation and perception stages, even after some had shown a commitment to the study (the integration stage). The qualitative interview study has generated a better understanding of how information is accessed (perception stage), how information can encourage or discourage participation (attitude formation) and how group dynamics may or may not work to increase response rates in young women at FE colleges.

The following chapter will look back on all data collected in Studies 1 and 2 to reflect on how the relationships between me, the participants, and supporting organisations have impacted on the findings. This chapter will also draw out additional findings from field notes made at the time of the data collection.

Chapter 9 Reflexivity and learning from field notes

9.1 Introduction

This chapter describes my reflections noted before, during and after each phase of focus groups (Study 1) and after the interviews (Study 2). Additional observations about practical issues which are relevant to the research question of the thesis are discussed in Section 9.3.

9.2 Reflexivity

Although the COREQ guidelines (Tong, Sainsbury and Craig, 2007) are a reporting framework, the questions provided in the guidelines were useful in encouraging me to reflect on how participants responded to me and how my behaviour and values impacted relationships with participants and data collection. These questions also encouraged me to reflect on feeling and reactions and motives which could impact on the research from both my own and my participants viewpoints. A summary of the questions used to guide reflexivity is provided at the end of Chapter 5 (Table 11).

9.2.1 Relationships established with participants before data collection

I did not have complete freedom in the methods I could use to establish a relationship with the participants because necessary restrictions were imposed by the supporting organisations. At times I was limited in the amount of direct contact that I could have before the focus groups and interviews. This issue was complicated by the coronavirus pandemic which limited my meetings to online contacts only.

I had much more personal contact with the college students in both Study 1 and Study 2 compared to my meetings with women from work and in mothers' groups. These participants asked more questions about the research. I attended college classes to introduce the study in and followed up my visit with text messages to maintain contact. After the initial meeting in class the college students appeared more comfortable to approach or text me with questions about the study or to ask if they could bring friends. In one focus group (CS2) and most of the interviews, the women described the language I used in the face-to-face meetings and the text messages as reassuring and that I would be kind to them. This finding ties in with the discussions in both studies that meeting me could encourage participants to trust me. Indeed, it was interesting that students who had not responded to a mailed questionnaire in Study 2 were happy to take part in an interview after the first meeting with me when I distributed the in-class questionnaire. When I was not able to meet the students personally, it was much harder to

overcome their hostility and anxiety to participate. The topic of the research was described incorrectly by some tutors introducing the study. This created barriers which needed to be removed before the students would talk comfortably. These barriers then limited the amount of in-depth information which could be generated in Study 1 when the focus groups were limited in length by the college timetable.

To reach eligible women in work, I asked a trusted manager to identify eligible women and to make the initial contact, but I asked each interested woman to contact me directly, to check eligibility before the session and to introduce myself before the group was timetabled. I also did not want managers to know who was taking part, although many participants contacted their managers to volunteer and forward the emails to me. All of the women in work chose to use email to communicate with me after volunteering. In two of the three groups (WW1 and WW2), it was the person who had made the initial invitation on my behalf who was named, during the focus group discussions, as the motivation to participate. In two groups, one of the participants had been recruited by a friend because lift-sharing made it easier for both women to take part together. For these participants, it was the relationships with the managers and colleagues which encouraged participation rather than a direct relationship with me.

With the mothers' groups, I asked someone known to the group to recruit. The more indirect approach was necessary because it was difficult for me to gain access to Children's Centres due to security requirements. The strategy also gave the women a 'go-between', since I had been warned that contacting official organisations related to health or welfare would provoke fear due to some women's past encounters with professionals during proceedings such as benefits assessments, custody or child protection cases. Seeing me play with the children before the group at the Children's Centres seemed to reassure some women that it was safe to meet me. At times, the mothers spoke to me only when the children had included me in their play. During the focus groups held with mothers' groups in homes, I provided a tea for an informal conversation before the research started. The women used this opportunity to find out about my work, but they were more interested in my family life. They had come through an invitation by the group leader, but they also seemed to want to connect with me as part of their group before the research began.

9.2.2 Participant knowledge of the researcher before data collection

I was aware, from personal experience and from reading (e.g. leverage-salience theory in Groves et al. 2000), that recruitment to focus groups for Study 1 was likely to be more successful when it was tailored to the specific needs of each participant. During the first activity (when focus group members gave their names and a fact about themselves to establish something about identity), I found that I naturally changed my introduction to fit the setting and what I had

learned about the women during our prior conversations. For the college groups, this presentation of identity was pre-planned because I was anxious that my former role as a tutor would create a barrier. However, I thought less about how to approach the remaining groups because I was less closely tied to those settings.

For the college students I used my current work and interest in their health; for the women in work, I talked about my work and my family; with the mothers, I mentioned my children, their ages and my previous work with young children. A source of difficulty arose from my previous role as a teacher. It was challenging to conduct the students' focus groups in a way that devolved power from me to the group. This issue was particularly noticeable to me, due to our use of classrooms (one of which I had used myself for teaching). I perceived this struggle most of all during groups where there was some hostility to the questions, and I felt that I was adopting more frequently the role of teacher. The balance of power felt much more equitable with the women in work and mothers' groups and I noticed that I explained less during these focus groups.

In the focus groups, of women in work, I knew the managers of each establishment, but I did not mention this. Upon reflection, this could have been because I did not want to align myself with the organisation so that the women felt that they could talk freely about their work. In the two law firm groups, the women did feel comfortable to mock their organisation (although with loyalty to their firm). In the remaining organisation, I had met one of the group members in the past who seemed very keen to highlight a relationship with me in front of the group. I dealt with this by making it clear to the group that it was through my 'other life' as a parent of a child with a disability. In the mothers' groups, I had mentioned that I used to be a children's entertainer. This made everyone laugh, but after the focus groups I realised that my choice of introduction could have been related to the need to establish that children might be comfortable with me as a way to gain the mothers' trust.

9.3 Observations from field notes: Barriers and facilitators to recruiting more young women from lower SES to UK surveys

I recorded fieldnotes at all stages of my work with organisations and with the participants themselves . These identified several practical considerations which indicates factors which might create barriers to successful recruitment and data collection in health surveys.

9.3.1 Working with gatekeepers to reach underrepresented young women

Since I was using existing organisations (FE colleges, workplaces and mothers' social groups), it was not possible to avoid involving senior people in those organisations to gain access to potential participants and the young women themselves may have perceived these gatekeepers or 'intermediaries' (Rose, Redsell and Akister, 2017, p 35) as hierarchically superior. Working

with gatekeepers can lead to sample biases when only those known to the gatekeeper or perceived as less vulnerable are approached to take part in a study (Ellard-Gray et al., 2015). Intersectional invisibility can lead to some participants becoming marginalised and hidden from sight when gatekeepers do not perceive them to fit the eligibility criteria outlined by the researcher (Purdie-Vaughns and Eibach, 2008). Hierarchies within organisations could also limit potential participants' sense of freedom to refuse or withdraw participation, if they feared reprisals for doing so. It can be difficult to avoid involving gatekeepers in positions of power when working with organisations to recruit participants, particularly when involving settings such as schools or Children's Centres which have safeguarding responsibilities. Nevertheless, involving the organisations was useful for this research to reduce some of the important barriers to research participation such as resource problems for participants such as paying for travel to research location or the costs of childcare, since the organisations provided time within normal work hours, a place to hold focus groups and childcare facilities. Moreover, data reported in Chapters 6 and 8 suggested that, without the endorsement of trusted individuals or organisations, the authenticity of invitations to participate in a study would not have been trusted.

In Study 1, my prior relationship with some of the gatekeepers was beneficial to recruitment. In the college where I had worked, the participant information sheets were shared among potential participants to describe and explain the research, as I had requested. I was also able to meet with the young women to answer questions without tutors being present to influence them. I also felt more relaxed when working in these colleges because the rooms were familiar, and I was not observed by tutors. The other colleges distributed the participant information sheets and also summarised the information in their own words without discussing the project with me first, which created problems for the research. In one college department (hosting two groups), a misleading representation of the research was passed to students and they clearly expected sensitive questioning about health. As was noted in Chapter 7, violating participants' expectations could disrupt comfortable communication and hinder trust between researcher and participant. The participants in these two groups sometimes interrupted the line of discussion to ask when questions on their health were going to be asked. These breaks in conversation made it difficult to explore an earlier point fully because the engagement of the group was lost. I also noted that I responded to this hostility by talking more to explain the reasons for my questions and that this had reduced the ability of the groups to communicate their ideas further.

It was frustrating that I had less early contact with the women in the second phase of focus groups. Nevertheless, it also provided a useful insight into the ways in which my relationship

with a college could change data collection by giving participants warning of what would happen to help them to feel comfortable. Without prior visits to classes, I could not be sure whether some women had been excluded by gatekeepers from the invitation to the groups. Nevertheless, tutors did discuss students' specific mental and physical health needs with me and several women with specific needs attended the final focus groups. The willingness of the young women to discuss these needs and for tutors to leave me alone during the focus groups with these more vulnerable students seemed possible because the tutors recognised my past role in FE.

The gatekeepers in workplaces and the Children's Centres were managers and it was not possible to exclude the possibility that the women felt coerced to take part. However, I tried to reduce the involvement of managers as far as possible by providing opportunities for volunteers to contact me directly rather than through their managers. Indeed, I had expected that the women would want to communicate directly with me so that their participation remained more private. Yet I was surprised to find that all of the women in workplaces and the Children's Centres chose to communicate with me through the manager rather than directly. Moreover, my initial concerns about coercion appeared to be misguided since the women discussed the managers with liking and respect, but were also happy to mock them, which suggested that they felt comfortable with their relationship with them.

The two college sites supporting Study 2 had no previous experience of collaborating with researchers. Consequently, they allowed me to deliver all of the communications about the study, so the protocol was followed correctly. The senior manager of the college group which representing both colleges, was engaged by the research proposal when I was able to demonstrate that I saw FE as a valuable sector which had been overlooked in research on young women. She motivated tutors to support the work but not all contacts responded to her requests to invite me to the classes. This prevented me from continuing data collection with a large number of women. Thus, researchers seeking to recruit from FE colleges need to be clear how they align with the priorities and responsibilities of the college staff, so that they can build the trust that will give them the freedom to work with participants in the way which works best for the research. They also need to engage with as many members of staff as possible so that the access to participants is increased through a greater number of possible personal contacts with staff members who work directly with eligible women. The participants may have perceived that their tutors were invested in the study, but I always met them without tutor involvement and it was made clear to the women that their involvement or non-involvement in the study would be hidden from the college. Again it is not possible to exclude the idea that the students may have felt coerced to participate because of the involvement of people who held authority in

the college, but it was encouraging that some women refused to take the in-class questionnaire or walked out of the class when they were given the choice to withdraw. Other women took the questionnaire but returned it blank. However, some women who took part in an interview talked about trusting the college to protect them and to maintain standards of confidentiality.

9.3.2. Some women have limited agency in their everyday life

It was difficult to persuade colleges to allow the students to opt out of a focus group without requiring them to attend the scheduled lesson (which was generally a subject known to be disliked by the students, such as employability tutorials). During one group, the students were ordered, without warning, to attend a training session organised by the principal, which would mean that they had no break. I was mindful of this lack of choice in their college routines and was careful to ensure that the young women had a chance to withdraw after the tutor had left the room.

Comments within the focus group discussions and interviews highlighted that greater freedom to choose an action was important to the young women. In two focus groups the women protested when they felt that the language used in study materials were in some way coercive or telling them what to do. Another group, (**CS6**), discussed how my own comment at the start of the group that they could use any language that worked for them was a sign that I respected them. The consultation groups before Study 2 disliked words such as 'don't' which sounded like parents or teachers telling them how to behave. Several interview participants (see Section 8.5.2.1 in Chapter 8) seemed to see exercising choice as a valued expression of adult identity.

These observations made me think that offering greater freedom could make participation in research more rewarding for young women used to a lack of agency in their everyday lives. The young women's response to language is also valuable for the phrasing of participant information that accompanies health surveys. At the same time, their unfamiliarity with exercising autonomy in everyday life could be problematic for survey research since this unfamiliarity could add to the anxiety created by doing something for the first time (Section 8.5.3).

9.3.3 Functional literacy

One of the Children Centre managers had warned me that I would need to consider literacy for some of the mothers, and materials had to be read for focus group participants in two of the settings. Due to my knowledge of college entry criteria at the time of data collection, I had assumed that the college students would have sufficient functional literacy to read the study information leaflet and consent form without assistance. However, this task was difficult for some women and they employed strategies to avoid asking me for help. These included quietly asking other people what they thought about the statements or by pointing to statements while

asking the researcher to explain why the information was included. For this reason, I never asked the women to respond to written materials without first giving them time to talk about the activity materials in pairs or small groups. It was noticeable, however, that some women disengaged from the tasks very quickly and in one focus group and one interview the participants said that they could not do the activities because of a diagnosis that impacted upon their reading, although they did respond to the documents and joined the conversation. In other focus groups and two interviews, the reading difficulty was attributed to their age as if the participants were simply not accustomed to being presented information in that way. In Study 2, several participants had struggled to understand the meanings of words in the mailed health questionnaire asking for help from parents or leaving notes on the questionnaire. The word 'heredity' was particularly problematic. Two women said that they would not participate in a questionnaire due to dyslexia, even though they did complete the in-class questionnaire to provide their contact details and they were happy to be interviewed. These observations about functional literacy are important to the findings because, as I had erroneously made, there could be assumptions about the accessibility of survey scales, particularly those which have been validated for use with young women. Strategies to reduce reading in survey studies could be useful to improve both engagement and informed consent in these groups.

9.3.4 Reassuring participants that their participation is valued and safe

Some of the women described their enjoyment of their participation or appeared to enjoy taking part in the focus groups and interviews. However, this enjoyment was not confined to participating in the focus groups since the women in two groups asked to be allowed to fill in the questionnaires which they had been using in the discussions. This is a positive, if unexpected, finding from this study. It suggests that if researchers can convince young women that their responses are valued and safe, it should be possible to recruit more participants to complete and return health questionnaires. This kind of enjoyment may also be communicated to other potential participants if peer-recruitment is used.

9.3.5 Use of communication technologies

The women in the focus groups talked about when and how they would not use different forms of communication. For example, in one discussion the participants explained how they used social media at night which meant it was unlikely that they would start a new activity later because they would be tired and trying to relax. Researchers may therefore struggle to contact potential participants if they are unaware of the mode of communication to use to invite participants or to help them to share an invitation to a health survey with people in their social networks. Moreover, a repeated topic in the Study 2 interviews was the unease created on receiving an envelope with their name and address on it. Interview participants indicated that an online communication would be more appropriate for their age group and also less intrusive

into their personal space. Previous research outlined in Chapter 3 suggested that personalisation of invitations was an encouragement to participate. In this research, however, the personalisation of the envelope excited some young women but raised concerns about surveillance, among others.

9.4 Conclusion

My reflections in this chapter have highlighted how my own personal experience as a teacher changed how I interacted with participants and how organisations and individuals trusted me. Overall, these reflections and observations suggest that the organisations responsible for the welfare of these women may need considerable input from researchers to create a relationship which is mutually beneficial, facilitating access to participants where it is possible to meet women before surveys are distributed. Young women in FE college and other women from lower SES categories are not averse to completing health questionnaires but they may need support to manage activities which are challenging or unfamiliar, such as reading for meaning and exercising agency. Researchers need to be cautious about making assumptions about how women cope with information presented in questionnaires and how they communicate in day-to-day life.

The following chapter will provide a final discussion of the findings from Study 1 and 2 and an evaluation of the response to the research question provided in this thesis.

Chapter 10 Discussion and Conclusions

10.1 Introduction

The research question addressed in this PhD thesis was: how can public health researchers encourage more young women from lower socioeconomic status (SES) categories to participate in UK surveys about their health, health knowledge and health behaviours?

The aim of this thesis was to understand and describe the factors which encourage and discourage participation in UK surveys on health, health knowledge and health behaviours by young women from lower SES categories.

There were two objectives:

1. To develop a conceptual framework that draws on relevant survey designs and theories from psychology and marketing to improve the recruitment and continued participation of young women from lower SES categories to UK surveys on health behaviours.
2. To use this conceptual framework to identify and describe the responses of young women from lower SES categories to recruitment materials and questionnaires about health, health knowledge and health behaviours.

This chapter draws together the findings from Study 1 and 2 by describing what each of the studies contributed to addressing to the research question. The theoretical and practical implications of the research are then discussed, followed by an evaluation of the work and suggestions of future research. The thesis ends by summarising the contribution that this work makes to how researchers can recruit more young women from lower SES categories to UK health surveys.

10.2 Summary of findings

The analysis of the focus groups in Study 1 identified six broad factors which may encourage or discourage participation.

- **Self-perception** – Young women are more likely to participate in a survey if they see themselves as someone whose contribution is needed and valued for the study. The young women are likely to pass the questionnaire to another woman whom they consider as having more life experience, time or an interest in health unless they are reassured that they are the best person to provide the responses.

- **Perceptions of research** – Young women are more likely to complete a questionnaire if they are confident that doing so will not have unintended and unexpected outcomes, such as disclosure of personal information. They are more likely to engage with the questionnaire if they view doing so as providing an escape from boring activities, or as enabling them to engage in a novel experience or as allowing them to do something that is important to them, such as spending time with others.
- **Perceptions of researchers**– Young women who are not familiar with research and researchers could be discouraged from participating if they draw on stereotypical views of researchers as inquisitors. In stark contrast, they may also view researchers as people who can give a voice to young women from lower SES categories, which could provide a reason to complete a questionnaire.
- **Identity presentation** – Young women are concerned about seen as different to other women, with their own needs and concerns. Their attention to recruitment and questionnaire materials is likely to be limited if the materials are perceived as directed at people who are younger, older, or different from themselves in some other way.
- **Unwritten rules of communication** – Young women use communication platforms (such as social media channels) or methods (e.g. texting or social media messaging) for specific purposes which are shared with peers but may not be understood by researchers. Recruitment materials may not be trusted or given attention if the wrong communication method is used.
- **Methods to manage large amounts of information** – Information needs to be provided in an interesting and attractive way to look at and must provide details which are readily accessible. Large amounts of reading will discourage the young women from paying full attention to the information. Women are more likely to spend longer on absorbing information about a study if they are bored and other activities are not available.

The analysis of the interviews in Study 2 has extended this understanding by exploring how these perceptions and behaviours shaped responses when young women from lower SES categories were faced with the real experience of being invited to complete a health questionnaire. The perceptions and behaviours identified in Study 1 were also found in Study 2. This second study provided richer information about how self-perceptions and perceived identities prompted emotional reactions to receiving mail in a personalised envelope and being invited to complete a health questionnaire. These perceptions helped to engage some women and but disengaged others. Study 1 showed how the young women preferred to access important information quickly in their busy lives (see Section 6.5.5). Study 2 provided more

information about how they prioritised the different calls on their attention and the strategies that they used to navigate materials which typically arrive with a research questionnaire (Sections 8.4.2 and 8.4.3). The understanding of how young women appraise information about a study was suggested in Study 1 (see Section 6.5.5 in particular), but in Study 2 it was possible to identify specific additional factors which are likely to increase participation in health surveys, including reciprocity, relationships with people and organisations, lifestyle factors and personal values (Section8.5). Lastly, the importance of identity relating to age and lifestage was a significant finding in Study 1 (see Sections 6.5.2 and 7.6.1). The same preoccupation with negotiating and presenting identity was also highlighted in Study 2 (Section 8.7.2). This was seen in the young women's adoption of both adolescent and adult identities to explain their decision to respond or not to respond to the mailed health questionnaire.

Therefore, Study 2 added further credibility to the findings from Study 1. In addition, Study 2 extended understanding of how the young women's decision to participate, and importantly not to participate, in a health survey is shaped by emotions, relationships and their transition from adolescence to adulthood.

10.3 Implications for theory development

The current research has contributed new knowledge about the important stages of recruitment which must be considered in planning survey studies. Moreover, this work has highlighted why young women and particularly those from lower SES categories may be difficult to reach and engage in health surveys.

10.3.1 The stages in the recruitment process

In Section 4.4.2 of Chapter 4 it was argued that marketing has contributed a theory of recruitment as a process which starts at the planning stage of a study and continues throughout a study to after involvement in the study has ended. Marketing has also demonstrated the value of constant monitoring and adaptation of recruitment strategies. The findings from Study 1 and Study 2 have supported the view that participants can be lost at multiple stages in the research process. Therefore, reliance on strategies which only intervene at only one of these stages, such as those tested in the RCTs summarised in Chapter 3, are unlikely to be sufficient on their own.

The findings from the current research have extended previous marketing views of recruitment, emphasising the influence of pre-existing expectations and goals on the response to being invited to take part in a survey study. In previous research Francis et al. (2007) and Kobayashi et al (2013) argued for market insight to tailor recruitment strategies effectively. However, this thesis research has provided more information about how successful recruitment of young

women from lower SES categories may be hindered by more than the use of the wrong messages. The current research emphasises the complexity of pre-existing expectations, cognitions, and emotions for young women from lower SES categories.

The conceptual framework developed in this thesis also includes the stage of evaluating the experience of taking part in a survey, which has been missing in previous studies. Such experience could influence response to future invitations by reducing anxiety and increasing confidence in the ability to contribute. Previous literature on improving recruitment to research has sometimes advocated the use of chain referral strategies to increase response by hard-to-reach groups (see Section 4.4.3). By exploring participants' view of the process, the current research has also provided information on how to make chain referral easier for participants and on the potential barriers to sharing study invitations (Section 7.5).

10.3.2 Recruitment of young adults

Adolescence and young adulthood are commonly associated with the exploration of identity (Arnett, 2000a) and this exploration may be different for young women from lower SES categories (Johnson and Mollborn, 2009), as was outlined in Chapter 4 (Section 4.3.1). Although the impact of identity exploration on survey response has largely been overlooked in the past, its importance in response behaviour of the target population of this thesis was not unexpected. Indeed, identity was defined in many different ways by the women in Study 1 and Study 2, indicating that young women were transitioning between adolescent and adult roles. For example, they argued that they needed different recruitment methods and were easily distracted because they were not yet adults. They also disliked materials that looked like they belonged in school and they enjoyed being recognised as an adult when they received a personalised envelope through the post. Often the women moved between adolescent identities to suit the needs of the conversation. The complexities of self-perception and presentation of identity appear to be among the reasons why younger women may be particularly underrepresented in research. Researchers may struggle to position advertising messages to appeal to an identity which is changing, and young women can rationalise nonresponse by drawing on norms associated with either adolescent or adult identities.

In both Study 1 and Study 2, there was also evidence that low self-esteem was a barrier to participation. Participants expressed anxiety about being able to meet the demands of a study in a way which would contribute something useful and which would not lead to negative judgements by others (See Sections 7.3.1, 7.6.3.2 and 8.8.2). At times, the interview participants also expressed the belief that they were unhealthy until they had seen the questions and reflected on how they treated their body (Section 8.8.2). Twenge and Campbell (2002) argue that there is a small but significant relationship between 'the individual's view of self (self-

esteem) and society's primary view of the individual (SES)' (2002, p. 59). These authors argue that this relationship is strongest during young adulthood, suggesting that convincing participants that they can complete a questionnaire and are needed in the research may be a particular challenge for the recruitment of young women from lower SES categories.

In Chapter 3, it was argued few strategies to distribute the questionnaire had been investigated and these were reliant on technologies which do not reflect the ways in which young women communicate. None of the included studies investigated common forms of technology such as SMS texting or social media messaging services. Discussions in Chapter 8 suggested that technology-mediated forms of communication (e.g. email, social media platforms) were more common modes of communication (Section 8.5.1). The focus group and interview participants wanted quick access to and completion of questionnaires and variety in the questions to hold their interest. The latest OfCom statistics on adults' media use (OfCom, 2020) suggest that the social media sites which offer fast and frequent communication such as Snapchat and Instagram are the ones used frequently by 16 to 24-year olds while other older groups tend to use other platforms. This suggests that modes of communication which can offer quick access and response with varied modes of presenting questions and collecting information are likely to be the ones which are particularly favoured by the age group focused on for much of this thesis.

A further important findings of this research, which has not been considered in previous literature, is that the young women in the focus groups and interviews demonstrated that they had a detailed knowledge of how their communication methods could be open to abuse. This knowledge made them cautious about clicking on hyperlinks or responding to unsolicited invitations. They also used knowledge of different platforms for information such as different social media sites or even features such as pop-ups and clickbait to direct their responses to contact by researchers. Discussions of online risks were particularly evident in the college students' talk, as one participant explained clearly 'we're taught to be cautious of what we share and stuff.' [**NR 6**], suggesting that barriers created by technical knowledge of scams may be particularly relevant when recruiting college students.

10.3.3 Young women from lower SES categories and low trust and pessimism

In Chapter 4 (Section 4.3.3) it was argued that one of the factors important to survey response is trust in the people or the organisation associated with the study (McDonald *et al.*, 2008). Some explanations for why trust might impact on survey response were outlined in that chapter, such as the belief that official organisations contribute to a person's difficulties (Groves and Couper, 1998) or that people who like the potential participants have suffered in the past at the hands of researchers (Galea and Tracy, 2007). The importance of fears relating to the research and trust was identified many times in Studies 1 and 2 of this thesis. However, particularly in Study 2 it

was possible to see some of the ways in which the young women constructed trust, for example, by bringing to mind connections that they might have to a sponsoring organisation to explain why it was reasonable to send information to them (see Section 8.4.2). Trust was also engendered when an individual from the sponsoring organisation was known and liked or if a relationship already existed with an organisation (such as geographical proximity or family connections). Therefore, while creating trust has been highlighted in previous research and also included in the conceptual framework (in the motivation and attitude formation stages), this research has also provided insight into factors which could create a foundation for trust between the research organisation and the recipient of an invitation to part in a study.

Related to trust in some ways is the influence of pessimism in the decision about whether to complete a health questionnaire or not. Pessimism has been studied in terms of the relationship between the potential participant and the organisation behind the research. As noted in the last section and in Chapter 2 (Section 2.5), Groves and Couper (1998) proposed that one explanation for lower survey response in people with lower social power and status is that they may not trust the organisations that they help will be responsive to their needs. In the current research, there was evidence that young women sometimes saw research as a vehicle to have a voice in societal issues that are important to them (Sections 6.3.1 and 8.5.1). In the current research, pessimism was evident in the young women's sense the reasons for what happened to them were more likely to be bad than good. For example, in Study 2, some women associated receiving letters with bad experiences, or they were expecting people to have given away information about them or to be deceiving them, judging them or stereotyping them in negative terms. While these expressions of pessimism are unsurprising given the evidence of a strong negative association between SES and pessimism, this research has been able to show how such expectations could form considerable barriers to participation in surveys about sensitive topics such as health.

10.4 Practical implications

Following the analysis reported in Chapters 6, 7 and 8, the conceptual framework has been extended to add two further columns which apply the marketing approach to create practical strategies to increase survey response by young women from lower SES categories (Figure 10.1).

Consumer Route	Application to Research Recruitment	Psychological Route	Summary of findings from Study 1 and Study 2	Strategies for research recruitment
Problem recognition - formative research with target audiences	Why do participants even choose to read the invitation when they first receive it?	**Motivation**	1. One size does not fit all - life stage differences 2. Power imbalances deter participation 3. Trust - messages from untrusted sources will be ignored 4. Group membership and identity is important	1. Preparatory work is needed and involvement of participant groups to understand the barriers and the exchange 2. Researchers need to be more visible; advertising should emphasise how researchers need participants; group completion methods could allow greater security 3. Involvement of trusted people in the community, celebrity endorsement to increase social value of research; peer recruitment, meetings or videos with researchers could help to create relationships needed for trust 4. Involvement of participant groups to understand group membership and identities (e.g. motherhood) and how these influence goals, lifestyles and language
Information Search - where and how do people find information	How do participants engage with the information presented in an advertisement for a survey	**Perception**	1. Design used to assess authenticity and eligibility/relevance 2. Advertisements will be read when women are bored and have opportunity to respond 3. Women feel busy	1. Funding is required to ensure professional design; pilot work is needed to understand design that speaks to women's identities; more than one design might be required 2. Place advertisements where women are waiting and can respond privately; pilot work could help researchers to understand how women use communication methods to fill 'empty time' 3. Language suggesting that women have free time should be avoided; participation should fit with other activities; make information quick to access (reduce text and bullets), make response quick
Alternative Evaluation - persuade purchaser that your product is best	What persuades them to proceed to the survey itself or to accept the invitation?	**Attitude Formation**	1. Trust - young women are informed about scams 2. Unprofessional design/errors and location of advertising can signal a scam 3. Young women do not perceive surveys to be for them 4. Fear of lack of agency/repercussions if errors are made 5. The wrong remuneration is offered so the exchange is not reciprocal	1. Create opportunities for participants to associate the research with a person, offer immediate incentives and official rating of authenticity such as links to a review site; involvement by bodies such as colleges can cause concerns about information sharing; negotiate shorter periods to keep data and outline fully how information will be used and stored 2. Professional designers should create all materials (including survey) 3. Design should clearly signal that young adults are needed (images, design, wording) 4. Support response with ability to provide feedback, answers to participant questions; stress the need for young adults; provide the ability to choose when and how to complete participation; stress the right to withdraw 5. Involve young women in design of the study so that the right exchange, participation experience is offered
Behaviour Decision - translate interest into purchase	What encourages the decision to participate to be translated into action?	**Integration**	1. Large amount of text/long survey signals boring participation 2. Questions can tell women that they are not wanted 3. Young women want to represent their experience 4. Confidentiality/data security concerns young women	1. Keep consent short and use bullet points and images (although be aware of access issues for participation without free wifi); keep survey short; reach the health-related questions quickly 2. Pilot work is needed to check that questions are accessible and relevant; age bands should not be too wide 3. Ensure answer options are exhaustive and do not signal that a question is not for young women 4. Provide multiple modes of completion so that women can preserve their confidentiality in a way that reassures them; clarify why data must be stored and how it will be used, respecting young women's knowledge of how information might be lost or abused
Post-Decision Evaluation - advertising to friends/family by purchaser	How do we motivate participants to participate again in research or to encourage their friends to do it?	**Learning**	1. Respondents may select people who they would perceive to fit the study 2. It may be difficult to intiate the invitation 3. The request could cause anxiety 4. Young women do have reasons to share studies with others	1. Plan for multiple waves of chain referral to improve sample representativeness; do not rely on this method alone 2. Provide images or cards that could be easily shared in person or online; involve young women to find out how they use different forms of communication 3. Stress agency at all stages; limit number of suggested requests or allow respondents to choose how many requests that they make 4. Pilot work needs to understand the functions that young women believe that research can perform in their lives

Figure 10.1 The extended conceptual framework and suggested strategies for designing the recruitment strategies in future survey studies

All five stages of the original marketing framework adapted from Belch, et al. (2012) contribute relevant findings about how participants may be gained or lost during the recruitment process. As was noted in Section 10.3.1 above, the findings and resultant strategies for designing recruitment plans suggest that researchers wanting to increase survey response may not be able to simply change one or two features of the questionnaire design, such as explored in the RCTs in Chapter 3. This research, therefore, advocates a more holistic approach to recruitment with actions at policy (e.g. funding and ethical approvals to allow more work at the study planning stage), community involvement (to allow researchers to meet and support participants where needed) and questionnaire design (questionnaire appearance and methods of completion) levels.

10.5 Limitations and suggestions for future research

10.5.1 The impact of the methodology used in Study 1 and Study 2

Focus groups were selected as the method for Study 1 to provide social support to participants during the new experience of taking part in research. They also proved to be a good choice of recruitment method because some women persuaded friends to come with them, thereby the reach of the invitation to participate in this study. Some of the focus group participants had low functional literacy, English as an additional language, and low confidence. These participants may not have been willing to take part without the encouragement of other group members and the familiar environment for the groups. The group data collection also allowed the women to construct meanings together. The need to ask about hypothetical or unfamiliar topics meant that the women sometimes struggled to express their ideas and so they passed the conversation between several group members the words and the encouragement to formulate an idea. Individual or group interviews would have limited this co-production.

However, the use of focus groups also presented recruitment difficulties which limited what could be achieved. In the first phase of data collection, some organisations were drawn on more than once because they offered the only means to meet women as a group and a safe location for the groups to be held. The small number of supporting organisations meant that a wider range of women could not be reached. The need to recruit a small group instead of individuals was problematic for smaller businesses who could not release staff at the same time. Focus groups also presented another barrier to working with women without an available social network or connection to one of the supporting organisations.

In similar recent research, Langford et al (2019) found it challenging to collect rich data using focus groups. The hypothetical nature of the questions and the need to keep conversations interesting and focused led to a reliance on the activities described in Section 5.4.3.4 and 5.4.3.5. The chosen tasks did facilitate conversations on abstract or unfamiliar topics and allowed useful comparison between groups. Yet, the choice of materials and tasks may have

influenced the information provided by the groups and it would be difficult to identify the nature and extent of this influence (Morgan, 1997).

In light of the limitations of Study 1, Study 2 was designed to give young women at an FE College the real experience of receiving an envelope with an invitation to take part in a health survey and to allow them to draw on real and recent memories in answering questions in an interview. The design also made it possible to explore the responses of both women who had responded to a mailed health questionnaire and those who had not responded. Also, the use of individual interviews afforded more privacy than focus groups for expressing thoughts which might not fit with the group. Yet, a particular benefit of changing the design for Study 2 was the ability to identify commonalities across the findings obtained through both focus group and interview methods. This enhances the credibility and dependability of the findings.

A challenge in the design of Study 2 was accessing young women's actual responses to receiving the questionnaire through the interviews. The three-stage design – (1) mailed health questionnaire, (2) in-class questionnaire and (3) semi-structured interviews – resulted in a time-lag of approximately three weeks which could have limited the recall of responses and thought processes. However, the ability to give the participants the real experience of an invitation to a health study in their homes before they had the opportunity to meet me in person increased both the depth and quantity of the data. Receiving the questionnaire unexpectedly at home is similar to some of the methods of recruitment outlined in the studies reviewed in Chapter 2. This real experience also supported exploration of women's lifestyles and reactions when faced with the invitation to complete a health questionnaire. Moreover, the three-stage study design meant that even non-responders to the mailed health questionnaire were willing to take part in an interview after meeting me in class.

At the same time, interviewing young women who had not responded to one part of the study but who had responded to a later part (and in return for a shopping voucher), may have created dissonance and embarrassment. Such feelings may have altered the interview participants' responses to some questions to make the young women feel more comfortable with their differing responses as the study progressed. This dissonance was demonstrated in some interviews where the responses in the interviews did not match the actual response to the mailed health questionnaire. For example, some women talked about how they were happy to complete questionnaires and how they felt that participation was extremely important for women and for college students, when they themselves had not actually responded to the mailed health questionnaire. Such inconsistencies in the women's talk are further evidence of the young women's preoccupation with presenting an image of themselves to others in a way which will not be judged harshly.

The actual decision-making process was also difficult to explore in an interview. Previous research on decision-making and persuasion has typically employed experimental methods to establish causal explanations about factors to increase response (see Chapter 4, Section 4.3.4). It was important to ask the women to explain what they believed had encouraged and discouraged their participation in order to gain their perspectives and realities, as explained in Chapter 5 (Section 5.2). However, the dual process theories applied in Section 4.3.4 such as the Elaboration Likelihood Model suggest that some decision-making may be unavailable to conscious awareness, making it impossible for participants to reflect upon and report everything that directed their behaviour. In the same way that the interview participants may have needed to resolve contradictions in their behaviour, all of the participants may have given the researcher responses to provide an answer to a question, even if they were unaware of the reasons for their responses.

10.5.2 The impact of recruitment methods

A challenge for this research was to recruit a group of young women who do not typically participate in research studies to enable me to answer the research question. The difficulty in recruiting young women from lower SES categories to a health survey is illustrated in the current research by the low response rate (7.6%) to the mailed health questionnaire in Study 2. The sociodemographic characteristics of the respondents to the mailed health questionnaire (Table 8.1) also suggested that those who did complete and return the questionnaire were not generally from lower SES categories.

In Chapter 5 (Section 5.4.2), I explained that the choice of organisations to involve in Study 1 was based on assumptions about where to find young women from lower SES categories. As a result, the study used both proxy measures relating to the organisation i.e. the type of job roles, or the community served by the organisations. Educational level was then used to find eligible participants. These methods were successful to some extent. They did reach eligible women including some women who might be particularly challenging to involve in research, for example, those with low levels of literacy, from vulnerable groups, and those with significant caring responsibilities. A particular strength of this work was the number of FE colleges who were involved, some of which had never worked with researchers before. These colleges were able to provide access to participants who have been overlooked in research on young adults which typically draw on school or university sampling frames (Langford, Willmott and Fletcher, 2019). FE settings support people at a particularly teachable moment for health interventions, since FE college students are treated in a more adult way than those who remain in school, and have attained greater independence in their health/lifestyle choices (Fletcher *et al.*, 2017). The use of organisations as well as education to operationalise SES was also helpful. Some of the women were so young that they could not be categorised by final educational attainment alone since they were still in education,

despite the arguments for education as a good proxy measure for young adults in health disparities research (Chapter 2, Section 2.2).

At the same time, making assumptions about the ability of organisations to attract women from lower SES categories is problematic. Young women who need the support of Children's Centres may not be from lower SES categories while colleges may attract students from higher SES categories even though they overrepresent women from higher deprivation . It was particularly difficult in Study 2 to reach women who were from lower SES categories since one of the campuses of the supporting FE colleges was situated in an area of low deprivation in Oxfordshire, although it did serve people from lower SES categories in its course provision and catchment area. It was also difficult to establish whether participants were from the target population since few women knew and understood the proxy measures for SES, such as their parents' educational level or income, and even their own home postcode. Also, the research was conducted shortly after the introduction of GDPR regulations which meant that supporting organisations were cautious about collecting personal information. It was also not possible to reach the FE students on apprenticeship programmes through the colleges supporting both Study 1 and Study 2. This was disappointing as this group would have extended the range of views and experience in the research. Many of these concerns could be overcome in future research by working with colleges in areas of higher deprivation and involving apprenticeship sponsors as well as the FE college to reach a broader range of women particularly those from lower SES categories.

Despite these challenges, FE colleges still offer a useful setting for further research. Many of the concerns outlined above could be addressed by working with a greater number of colleges in areas of higher deprivation and involving apprenticeship sponsors as well as the FE colleges to reach a broader range of women who are likely to be from lower SES categories. These colleges can also facilitate other research which could contribute a useful extension to the current work. For example, ethnicity is a sociodemographic attribute which has been linked to survey response (Section 2.4.3.4), but it was not a focus of the current research. It would be possible to reach a range of young women from different ethnic groups in colleges, although this work would require a good amount of trust by the college that this topic would be treated sensitively. A further useful research direction would be to explore whether other groups of women, such as older women from lower SES categories, have different responses to being invited to complete a health questionnaire. Such work could provide evidence about which of the findings in the current work are specific to young women. FE colleges are becoming increasingly involved in community projects to empower and train adults of all ages (Association of Colleges, 2019b) and they can be a useful setting to reach population groups which are not in full-time education.

10.5.3 Developing recruitment strategies from the conceptual framework

As has already been noted, the application of a marketing conceptual framework for exploring factors to encourage research recruitment has provided an extended picture of the research process from before initial contact between researcher and participant, until after the study has ended. Suggested recruitment strategies have been mapped alongside key findings from the thesis in Figure 10.1 to provide a transparent representation of how the proposed strategies are informed by the current research. An interesting direction for future research would be to investigate the usefulness of the conceptual framework for developing recruitment strategies tailored for other difficult to reach population groups. Yet a possible limitation of this approach is the absence of a recognised model of behaviour change. For example, Sheridan et al. (2020) used the Theoretical Domains Framework (TDF; Cane, Connor and Michie, 2012) to translate identified barriers into strategies which have considerable evidential support.

The aim of this research was not to develop a model of recruitment from the framework. Instead, I used the framework to explore the responses of young women from lower SES categories at different points in the research process, recognising the processes which marketing theory suggests are influential in decision-making. This work fills important gaps in the existing knowledge of recruitment of young women from lower SES categories by proposing the psychosocial barriers to survey participation (Sheridan et al., 2020). Nevertheless, evaluating the contribution of a behaviour change framework, such as the TDF, in addition to social marketing concepts in the conceptual framework may be a useful direction for future research to increase the usefulness of the conceptual framework as a model for recruitment planning.

10.6. Conclusions

At the start of this thesis, I argued that young women from lower SES categories are underrepresented in research on their health, health knowledge and health behaviours. This situation limits the ability to collect accurate information about the risks and needs of these women. Previous research to address this concern has been not been successful because it has not sufficiently recognised the complex interaction between participant, study, and social context.

This research has focused on a more limited range of young women from lower SES categories by working with only FE students for much of the data collection. Still, these students are an important group within the target population, drawn from a sampling frame (Further Education) which has largely overlooked in previous research. The current work has also provided valuable contributions to address the question of how researchers may

recruit more young women from lower SES categories to UK health surveys. These are as follows:

- Researchers need to identify and address factors which can hinder participation at all stages of the research process from before young women receive the invitation or advertising for research, until after the study questionnaire has been completed.
- Young women from lower SES categories are more likely to complete a questionnaire if doing so affirms identities that they want to present and matches values which are important to them.
- Create relationships with young women and the organisations that they trust. They respond to perceived relationships with organisations and people, rewarding care and effort.
- Young women need warnings that they will be invited to complete a questionnaire so that they are not surprised or unnerved by its arrival. The support of trusted organisations or individuals should be involved to provide reassurance that participation will not lead to unintended outcomes such as loss of personal information.
- Young women's fears about loss of personal information must be addressed with an awareness of threats to data security which are taught in schools, colleges, and community settings. Researchers may need to update their own knowledge of these threats and ways to avoid them.
- Offering financial incentives or appealing to altruism might be useful with this target population, but not necessarily sufficient without reducing other barriers to participation and providing other reasons to encourage response.
- Decisions to participate or not in a study are often made very quickly. Young women can be easily distracted and there are other activities and pressures competing for their attention. Therefore, researchers need to avoid requiring participants to engage with large amounts of information at one time. They should find out how to make important information easily accessible for potential participants so that it fits in their routines and uses the most acceptable mode of information delivery (for example in-person interactions, video, SMS text or reading).

The application of a marketing framework to understand the responses to each stage of the research process has shown how previous views of recruitment did not capture all of the stages at which young women from lower SES categories might be encouraged or discouraged to complete and return a questionnaire. The research has resulted in a deeper understanding of the factors which might encourage or discourage their participation in a health survey and in practical strategies for recruitment .

This work has also suggested a range of reasons why young women from lower SES categories may be underrepresented in health surveys. They are at a point of transition between adolescent and adult identities and are anxious about being taken advantage of or revealing something about themselves that will be judged harshly. Yet, when they do take part in research these women value the opportunity to reflect upon their health and to help themselves and others.

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Appendices

Appendix 2.1: Gratis permission to reproduce paper in thesis



Our Ref: P011218-01

12/01/2018

Dear Sarah Howcutt on Behalf of Oxford Brookes University,

Material requested: Sarah J. Howcutt, Anna L. Barnett, Sofia Barbosa-Boucas & Lesley A. Smith (2017) Patterns of response by sociodemographic characteristics and recruitment methods for women in UK population surveys and cohort studies *Women & Health* (Online) Page number(s): 1-22. DOI: 10.1080/03630242.2017.1310170

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Appendix 3.1: Search strategies for the systematic review

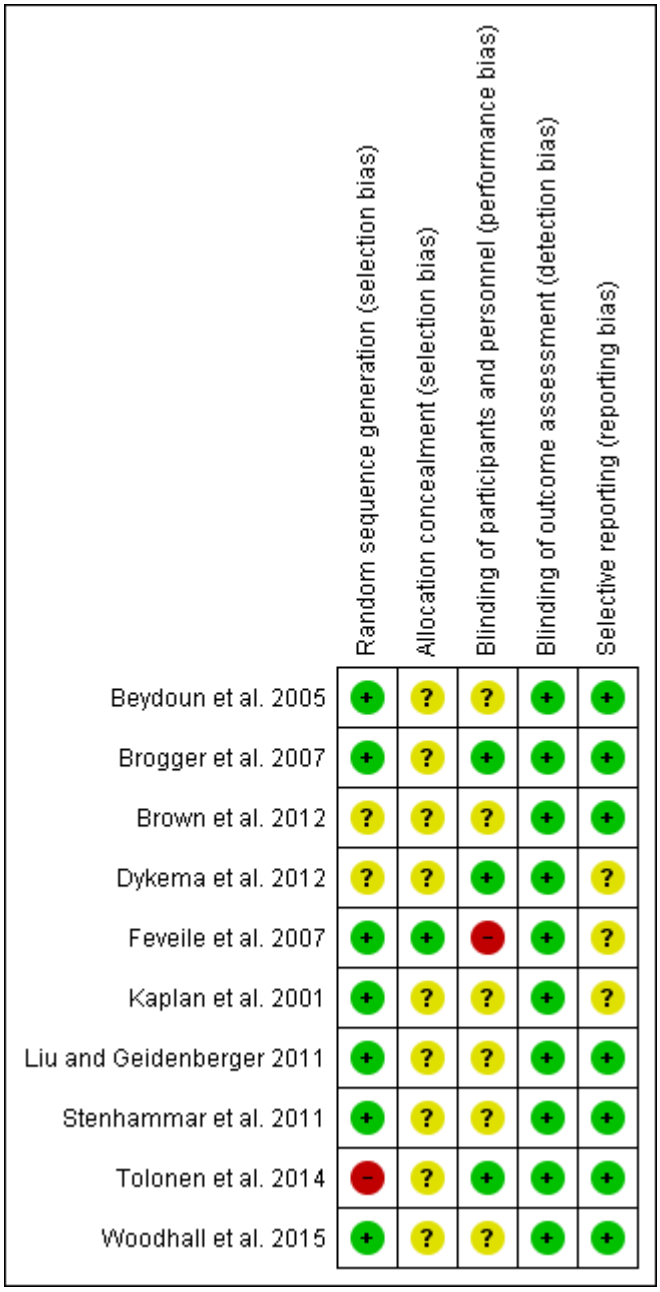
Concept	Cochrane	Medline, Embase, PsycINFO
Outcome (increasing response/ recruitment)	1 recruit*:ti,ab,kw 2 particip*:ti,ab,kw 3 enrol*:ti,ab,kw 4 (response adj rate*):ti,ab,kw 5 retain:ti,ab,kw 6 retention:ti,ab,kw 7 respon*:ti,ab,kw 8 market*:ti,ab,kw 9 consent*:ti,ab,kw 10 accrual:ti,ab,kw 11 OR/1-10	1 recruit$.mp. 2 particip$.mp. 3 enrol$.mp. 4 (response adj rate$).mp. 5 retain$.mp. 6 retention.mp. 7 respon$.mp. 8 market$.mp. 9 consent$.mp. 10 accrual.mp. 11 OR/1-10
Population (young women aged 16 to 34 years)	12 MeSH descriptor: [Female] 13 MeSH descriptor: [Male] 14 MeSH descriptor: [Women] 15 MeSH descriptor: [Men] 16 #12 and #13 17 #13 not #16 18 not #17 19 #14 and #15 20 #15 not #19 21 not #20 22 women:ti,ab,kw [Word variations have been searched] 23 men:ti,ab,kw [Word variations have been searched] 24 female*:ti,ab,kw 25 male:ti,ab,kw 26 #22 and #23 27 #23 not #26 28 not #27 29 #24 and #25 30 #25 not #29 31 not #30 32 child*:ti,ab,kw 33 infant*:ti,ab,kw 34 bab*:ti,ab,kw 35 #32 or #33 or #34 36 elderly:ti,ab,kw 37 old*:ti,ab,kw 38 #18 or #21 or #28 or #31 39 #32 or #33 or #34 40 #36 or #37 41 #38 and #39 42 #39 not #41 43 not #42 44 #38 and #40 45 #40 not #44 46 not #45 47 OR/21, 28, 31, 43, 46	12 female.sh. 13 male.sh. 14 12 and 13 15 13 not (female and male).mp. 16 (12 or 13) not 15 17 wom#n.mp. 18 m#n.mp. 19 female*.mp. 20 male*.mp. 21 17 and 18 22 18 not 21 23 (17 or 21) not 22 24 (man or men).mp. 25 min.mp. 26 24 and 25 27 25 not 26 28 (24 or 26) not 27 29 17 and 28 30 28 not 29 31 (17 or 28) not 30 32 19 and 20 33 20 not 32 34 (19 or 32) not 33 35 OR/16, 31, 34 36 child.sh. 37 infant.sh. 38 child*.mp. 39 infant*.mp. 40 bab*.mp. 41 aged.sh. 42 elderly.mp. 43 old*.mp. 44 aged.mp. 45 OR/ 36-44 46 35 and 45 47 45 not 46 48 (35 or 46) not 47

Public health topic	48 alcohol:ti,ab,kw 49 drink*:ti,ab,kw 50 consumpt*:ti,ab,kw 51 OR/48-50 52 smok*:ti,ab,kw 53 tobacco:ti,ab,kw 54 cigar*:ti,ab,kw 55 OR/ 52-54 56 diet*:ti,ab,kw 57 food:ti,ab,kw 58 consum*:ti,ab,kw 59 nutrition*:ti,ab,kw 60 intake:ti,ab,kw 61 weight:ti,ab,kw 62 obes*:ti,ab,kw 63 fat*:ti,ab,kw 64 "body mass ind*":ti,ab,kw 65 "waist circumference":ti,ab,kw 66 overweight*:ti,ab,kw 67 fruit:ti,ab,kw 68 vegetable*:ti,ab,kw 69 underweight*:ti,ab,kw 70 OR/56-69 71 physical*:ti,ab,kw 72 exercise*:ti,ab,kw 73 activ*:ti,ab,kw 74 inactiv*:ti,ab,kw 75 sport*:ti,ab,kw 76 OR/71-75 77 drug*:ti,ab,kw 78 substanc*:ti,ab,kw 79 "marijuana":ti,ab,kw 80 cannabis*:ti,ab,kw 81 "pain killers":ti,ab,kw 82 analges*:ti,ab,kw 83 heroin:ti,ab,kw 84 tranquilis*:ti,ab,kw 85 "sleeping pill*":ti,ab,kw 86 steroid*:ti,ab,kw 87 barbiturate*:ti,ab,kw 88 amphetamine*:ti,ab,kw 89 cocaine:ti,ab,kw 90 hallucinogen*:ti,ab,kw 91 inhalant*:ti,ab,kw 92 "lysergic acid diethylamide":ti,ab,kw 93 LSD:ti,ab,kw 94 ectasy:ti,ab,kw 95 OR/77-94 96 condom*:ti,ab,kw 97 risky:ti,ab,kw 98 sex*:ti,ab,kw 99 dangerous:ti,ab,kw 100 driving:ti,ab,kw	54 alcohol.mp. 55 drink$.mp. 56 consumpt$.mp. 57 54 or 55 or 56 58 smok$.mp. 59 tobacco.mp. 60 cigar$.mp. 61 58 or 59 or 60 62 diet$.mp. 63 food.mp. 64 consum$.mp. 65 nutrition$.mp. 66 intake.mp. 67 weight.mp. 68 fat$.mp. 69 (body adj mass).mp. 70 (waist adj circumference).mp. 71 overweight$.mp. 72 fruit.mp. 73 vegetable$.mp. 74 underweight$.mp. 75 OR/62-74 76 physical$.mp. 77 exercise$.mp. 78 activ$.mp. 79 inactiv$.mp. 80 sport$.mp. 81 OR/76-80 82 drug$.mp. 83 substance$.mp. 84 marijuana.mp. 85 cannabis.mp. 86 (pain adj killer$).mp. 87 analges$.mp. 88 heroin.mp. 89 tranquillis$.mp. 90 (sleeping adj pill$).mp. 91 steroid$.mp. 92 barbituate$.mp. 93 amphetamin$.mp. 94 cocaine.mp. 95 hallucinogen$.mp. 96 inhalant$.mp. 97 (lysergic adj acid).mp. 98 LSD.mp. 99 ectasy.mp. 100 OR/82-99 101 condom$.mp. 102 sex.mp. 103 driving.mp. 104 dangerous.mp. 105 risk$.mp. 106 (102 or 103) and (dangerous or risk$).mp. 107 OR/101-106 108 OR/57, 61, 75, 81, 100 or 107 109 AND/11, 40, 50

	101 (#97 or #99) and (#98 or #100) 102 OR/96, 101 103 OR/95, 102	110 AND/108-109
Study design (Randomised controlled trials)	Not required	111 randomi#ed controlled trial.pt. 112 controlled clinical trial.pt. 113 randomi#ed.ab. 114 randomly.ab. 115 trial.ab. 116 groups.ab. 117 OR/111-116
Studies involving humans only	Not required	118 humans.sh. 119 animals.sh. 120 118 and 119 121 119 not (118 and 119) 128 120 not 121

[a] Concepts joined with 'AND'

Appendix 3.2: Risk of bias summary: review author's (SJH) judgements about each risk of bias item for each included study.



Appendix 5.1: Advertising poster for the first phase of focus groups



Appendix 5.2: Participant Information Sheets for Study 1

Participant Information Sheet for the first phase of focus groups pages 1 and 4

Will my taking part be kept confidential?

Anything you say will be treated as **strictly confidential** and stored in a safe place.

We may use quotes but **your name will be removed** from what we use and store.

If we are concerned about your safety or wellbeing we would tell you first and then talk to a professional.

What will happen to the results ?

Sarah aims to write a research paper and a PhD thesis. This will be for other researchers to read. Your name won't appear on anything.

Sarah will ask you if you want a summary of the results. **She will tell you how to let her know what you think.**

We are thinking about you.

This study has been approved by **Oxford Brookes University's Research Ethics Committee.** The University asks us to store information safely for 10 years.

If you have concerns about how the research has been done, please contact **Sarah Quinton (ethics@brookes.ac.uk).**

Who can I contact if I have questions or want to take part?

If you have questions or would like to know more about taking part, please contact Sarah Howcutt:

Tel: **07874764174**

Email: **sarah.howcutt-2015@brookes.ac.uk**

: Private message to **'B' Counted Study'** (The study page will not display any details identifying you.)

Version 4

B' Counted!



Oxford Brookes University needs you!

You are a woman whose ideas count.

Your invitation to join the 'B' Counted Study'

Information Booklet

Participant Information Sheet for the first phase of focus groups pages 2 and 3

What do we want to know?

We would like to know what encourages people to take part in research about health. We will not ask about how healthy you are but only about what makes you talk about your health. **How do you spend your free time?**

Who would you talk to about your health?

Have you ever thought about taking part in research? What makes you want to do it? What puts you off?

What do you think makes a good advert?

Who do we need to help us?

Women aged **16 to 34 years** who **don't have** a university degree or similar (level 4 qualifications or higher).

Women who are **happy to talk** in a small group.



No!

Do I have to take part?

You do not have to take part and there will be no come-back if you don't want to help us.

You can stop at any time.

Are there any risks involved?

You might feel nervous.

You might worry about what we will do with the information but we will be careful. **Take a look at the last page.**

We will also give you some groups to contact if you are worried about anything that we've talked about.

What will happen if I take part?

- You will hear from Sarah from Oxford Brookes University. She will sort out a time when about 6 people can get together to chat. You can ask her any questions about what is going on.
- She will send you a short form to sign to say that you are clear about what is happening. **We are just checking that you feel happy about what you are doing.**
- Sarah would like you to stay for about an hour with about 5 other women. **We are interested in your thoughts and there are no right or wrong answers!**
- We will ask you questions like the ones on the last page and to look at some adverts. **We will record the discussion.**
- Sarah will ask you to fill out a short sheet about yourself, like your age and what you do. **We just want to know if different people like different things and why.**



Sarah Howcutt

Are there any good things about doing it?

You might enjoy talking to Sarah and **sitting down with a coffee!**

You will be helping Sarah to find out how to ask women to take part in health research so that more women have the chance to be heard by researchers.

We will give you a £15 'Love 2 Shop' voucher on the day.

Tell Sarah if you are worried about getting to the group. She will help if she can.

Participant Information Sheet for the second phase of focus groups pages 1 and 4



Participant Information Sheet for the second phase of focus groups pages 2 and 3



Appendix 5.3: Information leaflet for participants about support after participation using in Study 1 and Study 2

OXFORD BROOKES UNIVERSITY

Help and Information

B' Counted Study

If you are concerned about any issues discussed during your involvement in the 'B' Counted Study', please contact the following people and organisations.

If you are worried about what is happening to the information you have shared, please contact the researcher, Sarah Howcutt at: sarah.howcutt-2015@brookes.ac.uk or on 01865 482735.

If you are concerned about your health, please speak to your GP or look at the following web pages:

Help with addictions or drugs:

Addiction Helper—http://www.addictionhelper.com/

Beating Addictions—http://www.beatingaddictions.co.uk/

Narcotics Anonymous—http://ukna.org/



Help with smoking:

http://www.quit.org.uk/

Help with eating concerns:

B-Eat—http://www.b-eat.co.uk/

Help with alcohol:

Alcoholics Anonymous—http://www.alcoholics-anonymous.org.uk/

Help with gambling:

Gamblers Anonymous— http://www.gamblersanonymous.org.uk/

Appendix 5.4: Questionnaire to collect demographic data and answers to questions not suitable for focus group discussions

Thank you!

OXFORD BROOKES UNIVERSITY

Please help us to know a bit about you and to keep in touch.

Please circle your age group.

16-20	21-25	26-34	I prefer not to say

Please state your main work (this could be looking after children or being in education).

Please circle your highest level of education.

No formal education	GCSE or similar (e.g. NVQs level 2)	A-level or similar (e.g. NVQs level 3)	Degree level or similar (e.g. NVQs level 4 or above)

How would you describe your marital status? Please circle.

Single	In a relationship	Cohabiting or married	Widowed or divorced	I prefer not to say

Which organisations do you think that you would help with research on healthy lifestyles? Please tick any that apply.

NHS England — NHS



Charities

OXFORD BROOKES UNIVERSITY — Universities

HM Government — Government

None of these ☐

Please Turn Over

Thank you!

OXFORD BROOKES UNIVERSITY

Please help us to know a bit about you and to keep in touch.

Please tick any place where you can remember seeing advertisements about something to do with a healthy lifestyle

GP Surgery	School or College	Social Media (Facebook, Twitter etc.) Please state which platform you use the most. .....
Magazine	TV	Other (Please state): .....

We would like to share a summary of the things that we have learnt from these discussions with you. You will be welcome to contact Sarah if you would like to comment on what she has written. **Your ideas are really important to us.** If you would like a copy of this summary, please leave an **email**, **Facebook ID** or **postal address** below and we will be in touch when the results are ready.

Thank you!

Facebook identities will be used for private messages only.

Version 2, September 2015

Appendix 5.5: Development of Focus group activities and schedules from literature

	Theories and empirical findings to explore	Focus group question areas
Motivation	• Belch, Belch, Kerr and Powell (2012) – the marketing framework suggests that a viewer is actively searching for information in the environment but will only notice it if the information matches existing goals. • Kobayashi et al. (2013) – marketing messages will be more effective if they match current priorities and concerns of the audience. • Groves, Singer and Corning (2000) – Leverage-salience theory suggests that requests to participate need to be tailored to the specific cost-benefit appraisal of the person invited. • Singer (2011) – Understanding the cost-benefit appraisal is needed to provide the right incentives • Bagozzi (2013) – exchange may be tangible e.g. incentives or intangible or indirect. • Ajzen (1985), Bosnjak, Tuten and Wittmann (2005); Heerwegh and Loosveldt (2009) – need to understand cost-benefit appraisal to understand how to apply marketing • Maibach et al. (2007) – The 'People and Places' framework suggests that societal norms influence health-related decisions as well as individual norms. • Dolan et al. (2011) and Lemmens et al (2005) – ego (sense of self) is important in choosing a behaviour, particularly if the gain is not personal to them. • Hansen (1980) – self-identifying as someone who helps good causes may encourage participation in a task where reward is not personal • wOOt! Media (2013) – young women may have different priorities for their time and attention related to their lifestage. • Bonevski et al. (2014), Galea and Tracey (2007) – a mistrust of researchers is a barrier to participation. • Edwards et al. (2009) – create trust through the use of logos and female researchers as signatories • Wilson et al. (2015) – stereotypical ideas about the sender of a communication influences compliance. • Mein et al. (2012), McCann et al. (2010) – altruism is not likely to encourage participation • Review in Chapter 3 – why people would consider the invitation has not been studied	• What are people aiming to do if they have free time (goals which research could perform)? • Why did participants agree to participate in the current study? • How do participants perceive their identity? • How do participants view research and researchers? • Which organisations would you help and why?
Perception – What information	• Dual process theories such as the Elaboration Likelihood Model suggest that engagement in a	• How do participants view

is processed once they have decided to participate in a study?	message changes the information needed to persuade. • Groves, Cialdini and Couper (1992) - if interest in the topic is limited, the attitudes and decisions will be formed on the basis of environmental cues • Durantini et al. (2006) – a messenger who is similar to the recipient is more likely to be considered, particularly if the recipient views him-/herself as having lower social status. • Review in Chapter 3 – culturally specific messages may be effective; telephones are mistrusted • Groves, Singer and Corning (2000) – Leverage-salience theory suggests that costs and benefits must be understood so that persuasive messages are made clearer • Krachy and Chapman (2013), Braverman (2008) – audio presented information may be more effective than paper information.	themselves and researchers? • What features of posters and videos are encouraging and which discourage participation? • Are messengers and images which present people similar to the audience more attractive? • Are information heavy posters more effective than posters which provide less text? • Images of women of different ages and ethnicities are used in the posters to stimulate discussion • Inclusion of researcher's telephone number on posters • Comparison of posters and video
Attitude formation	• Ajzen (1985) – participants need to feel supported by the group (subjective norms) and in terms of capacity to complete the task (self-efficacy). Barriers need to be reduced as far as possible. • Wilson and Lu (2008) – model of message receiver's goals and effective communication • Dolan et al. (2011) – MINDSPACE suggests that information needs to be tailored to identity. • Groves, Singer and Corning (2000) – Leverage-salience theory suggests that costs and benefits must be understood so that persuasive messages are made clearer. • Review in Chapter 3 and Edwards et al. 2009) – non-monetary incentives are less powerful than monetary ones and lotteries are less useful than unconditional incentives. • Rick et al. (2014) – length of the participant information could be a barrier to participation. • Klein (2008), Moulton and Kosslyn (2011), Bandura (2004) – past experience will be used to make a decision in an unfamiliar context.	• Looking at different parts of advertising and surveys, what information encourages participation and what discourages • Discussion of appearance of materials and placement of materials for advertising. • Inclusion of a lottery incentive in advertising • What topics appear relevant and interesting (to understand

		expectations and barriers to participation) • Which of these topics would be uncomfortable to answer questions about?
Integration	• Review in Chapter 3 – telephone is not a good method for data collection, methods such as SMS might be useful for young women to fit their communication style • Fan and Yan (2010) – survey length is a factor in the loss of participants • Ajzen (1985) – Theory of Planned Behaviour suggests that intention is formed before the action is performed. • Fan and Yan (2010), Francis et al. (2007), Galli et al. (2014) – people can be lost at stages from initial contact all the way through to return of data. • Furse and Stewart (1984) and Barden (2013) – a series of decisions need to be made and people can be discouraged at any of these points. • Mein et al. (2012) – People find completing forms stressful. • DeVaus (2014) – If surveys are too short, exchange may not feel equitable. This judgement will impact on the appraisal of the survey and of the incentive. • Klein (2008), Moulton and Kosslyn (2011), Bandura (2004) – past experience will be used to make a decision in an unfamiliar context. • Mercer et al. (2015) – there is not a neat dose-response and incentives. It is important to understand how much gets you what activity in different population groups.	• Methods that people would or would not choose to complete survey questions. • Responses to materials from each stage of the recruitment process. • Response to incentives and survey length in the stimuli.
Learning	• Bandura (2004) – social cognitive theory suggests that people will follow behaviour observed to be positive in others. • Heckathorn (2011) and Heckathorn and Cameron (2017) – social networks can be used by researchers to increase response and to reach a more representative sample.	• Who would you ask (family, friends, acquaintances)? • How would you ask them? • Why would you choose those people to receive the invitation from you? • How would you feel about being asked by a researcher to invite others?
All stages	• Francis et al. (2007), Edwards et al., 2009; Fan and Yan, 2010; Keusch, 2015 – it is important to consider all stages of the research process.	• Looking at each stage of the process through a survey to

		discuss facilitators and barriers to each stage

Appendix 5.6: Posters used in the first phase of focus groups

Poster 1

Are you a woman aged 16 to 34 years?

Can you spare one hour to tell us about your health?

OXFORD BROOKES UNIVERSITY

Researchers at Oxford Brookes University invite you to participate in a research study which aims to understand the current health status of young adult women in the UK.

We need people who consider themselves to be healthy or unhealthy to understand how health is changing in the UK. For example we think that:

- **Young adults are drinking less than they did 10 years ago.**
- **Young adults are taking fewer illegal drugs than they did in 1996.**
- **In 2012 59% of men and 54% of women spent more than 5 hours a day sitting or standing.**

We need your help to find out if these things and others are still true. It is vial that we know what is happening so that NHS services can be planned to meet people's actual needs. This can only happen if people like you are willing to answer questions about their health.

Will my answers be kept confidential? Yes-we won't pass your information to anyone else.

Will I be compensated for my time? Yes - we will give you a £15 voucher to say 'thank you'.

Interested? Text 'I'm in' to 07865231849



Poster 2

Are you a woman aged 16 to 34 years?

Can you spare one hour to tell us about your health?

OXFORD BROOKES UNIVERSITY

Researchers at Oxford Brookes University invite you to participate in a research study which aims to understand the current health status of young adult women in the UK.

We need people who consider themselves to be healthy or unhealthy to understand how health is changing in the UK. For example we think that:

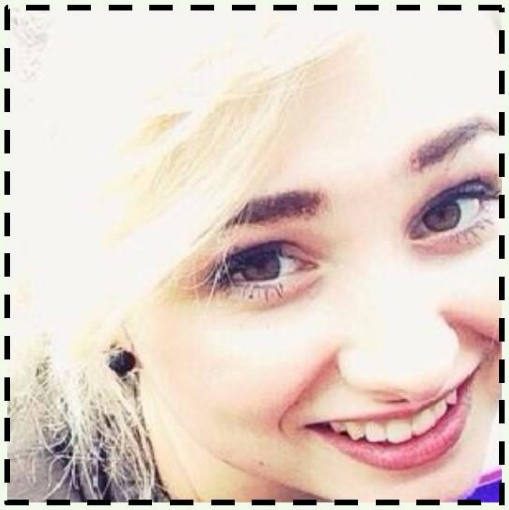
- **Young adults are drinking less than they did 10 years ago.**
- **Young adults are taking fewer illegal drugs than they did in 1996.**
- **In 2012 59% of men and 54% of women spent more than 5 hours a day sitting or standing.**

We need your help to find out if these things and others are still true. It is vial that we know what is happening so that NHS services can be planned to meet people's actual needs. This can only happen if people like you are willing to answer questions about their health.

Will my answers be kept confidential? Yes-we won't pass your information to anyone else.

Will I be compensated for my time? Yes - we will give you a £15 voucher to say 'thank you'.

Interested? Text 'I'm in' to 07865231849



Poster 3

Hi! My name is Chloe and I am one of the people who has taken part in the 'B' Counted' study at Oxford Brookes University. I had to answer questions about my life so that the team could find out about how people like me are doing with their health. I got a voucher for my time but it actually felt really great to be helping Hayley to make things better for other people like me. They are not going to tell you off or anything. They just want to know what's going on.



We need more people to join us, like Chloe, so that we can stop guessing about people's health but find out what is really going on.

OXFORD BROOKES UNIVERSITY

If you are a woman aged 16 to 34 years, please help by texting 'I'M IN!' to 07865231849. Thanks!

Hayley or one of the team will do a 1 hour interview with you and pay you

Hey, I'm Hayley! I am 24 and work with Oxford Brookes University as an interviewer. I have been talking to young women about their health for about a year now. We have spoken to lots of great people but still need more help if we are going to help the NHS to plan for the future. Can you join us to 'B' Counted'?



Poster 4

B' Counted!



Interested?

Contact Sarah Howcutt at:

Mobile: 07874764174

Private message me:

B'Counted Study

Or email:

sarah.howcutt-2015@brookes.ac.uk

Sarah at Oxford Brookes University needs help from 16-34 year old women. Tell researchers how to ask other women about health.

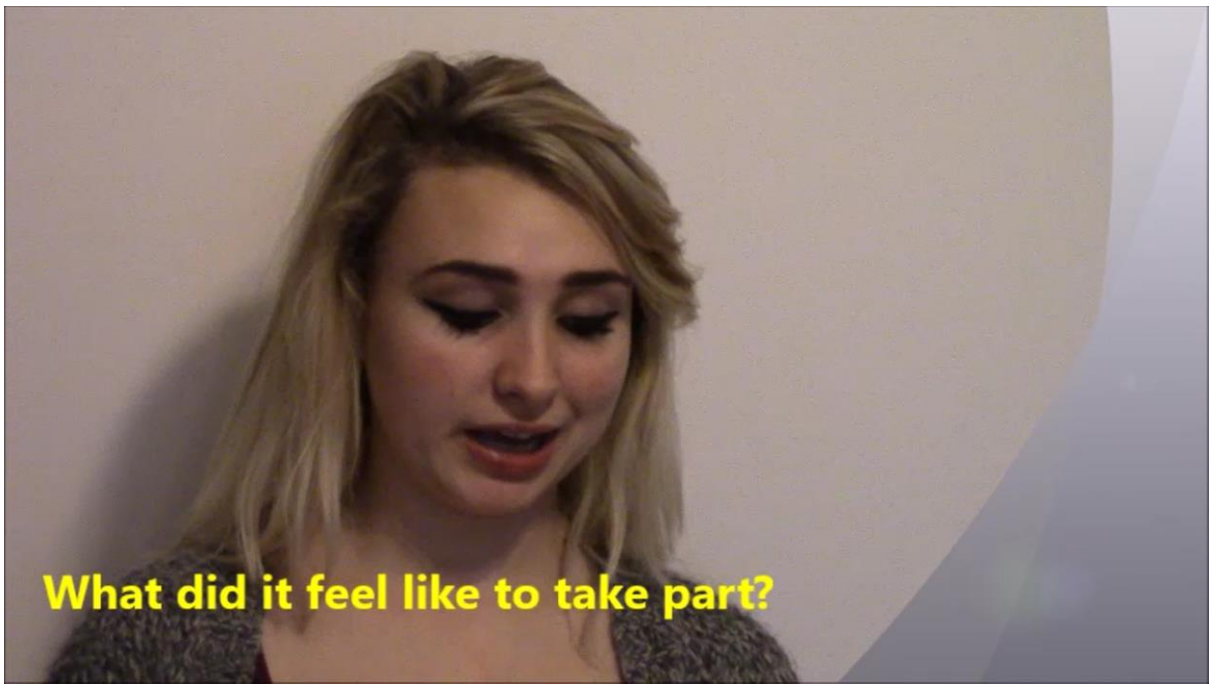
Receive £15 of 'Love 2 Shop' vouchers to thank you for 1 hour of your time.



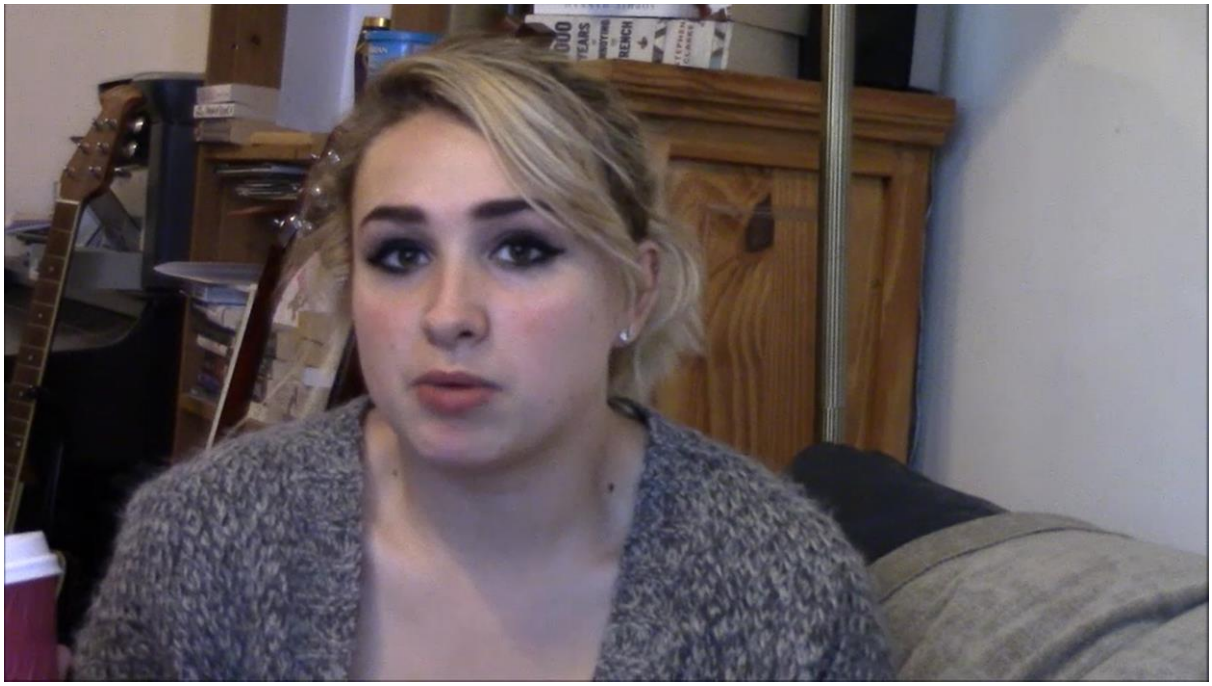
Appendix 5.7: Video stills

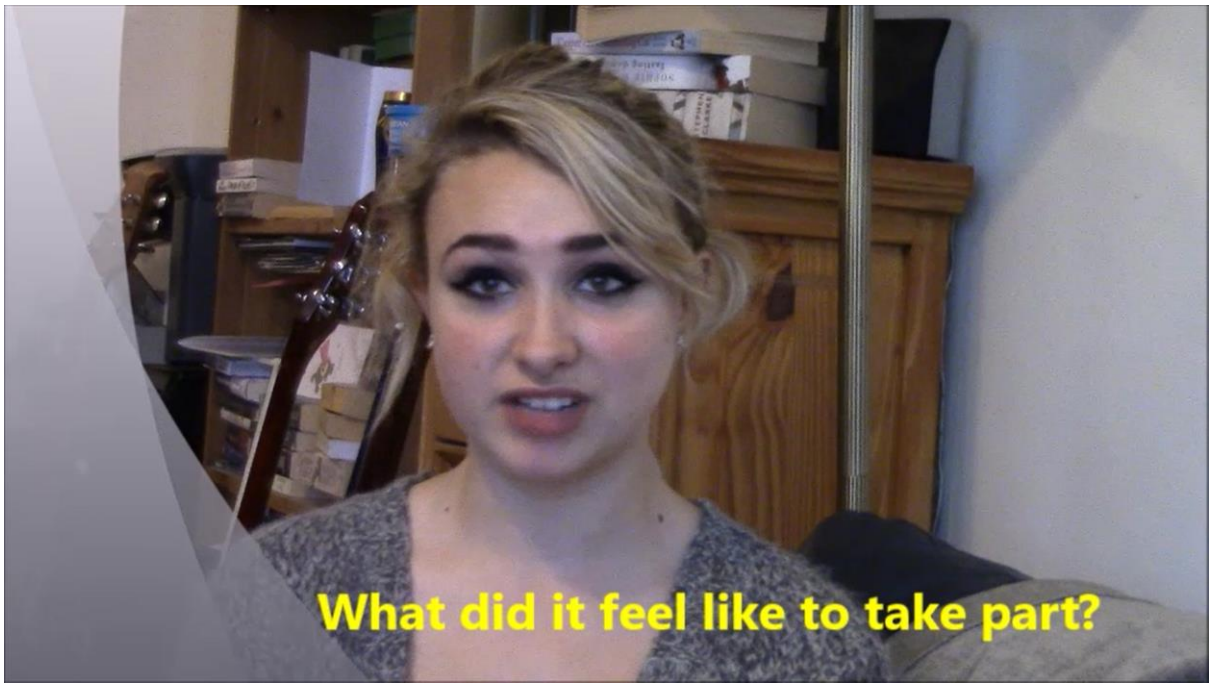
Video stills (taken from video 1)



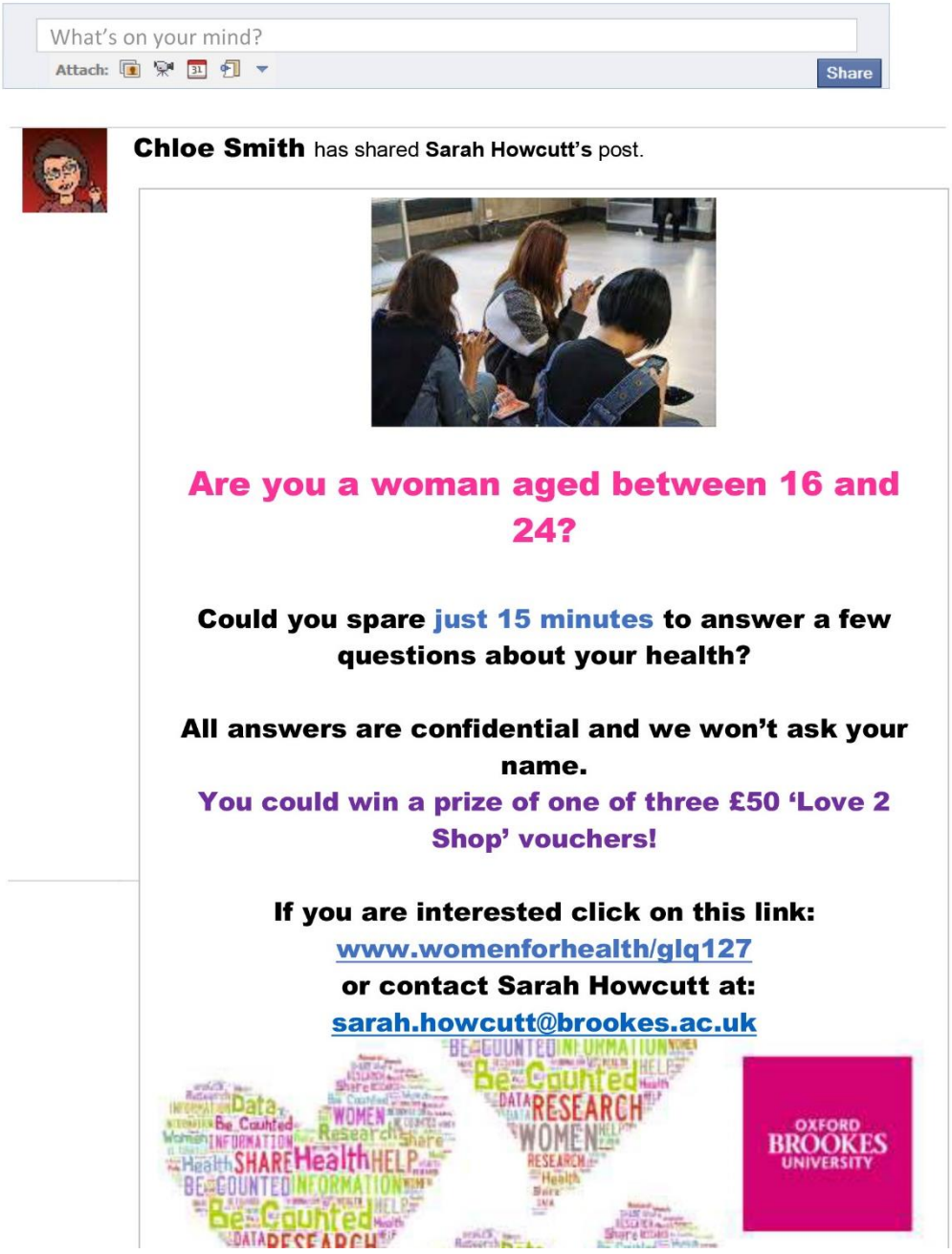


Video stills (taken from video 2)

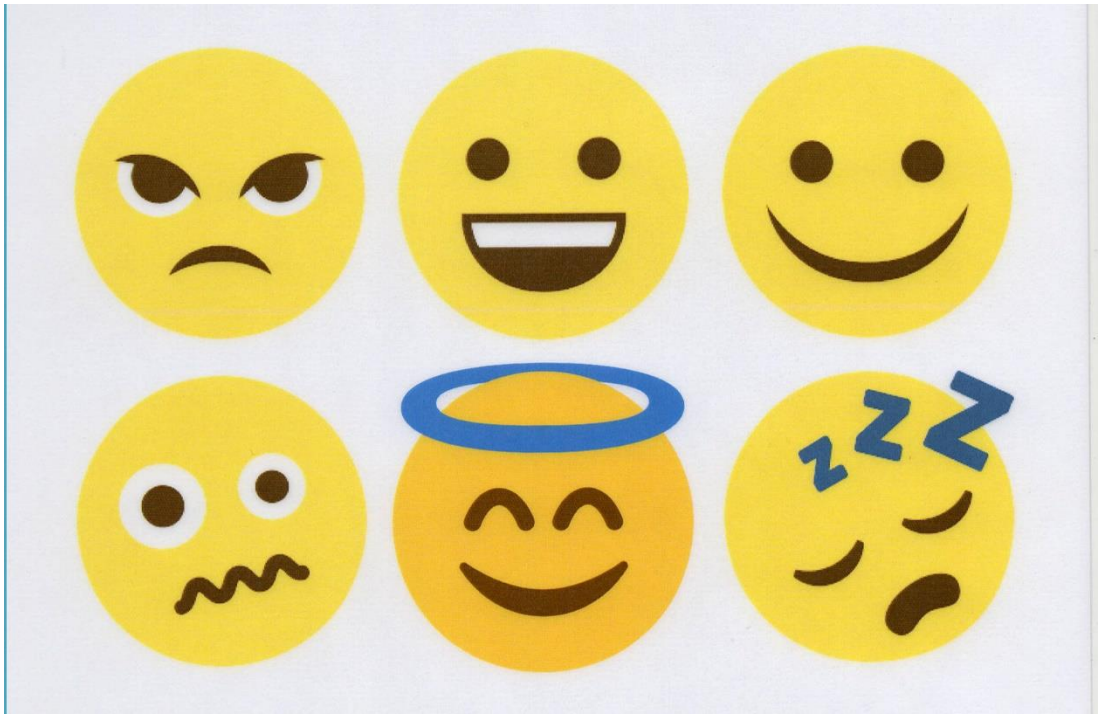




Appendix 5.8: Mock Facebook Advertisement



Appendix 5.9: Emoji images (presented to participants on small, laminated cards joined together with a metal ring)





Appendix 5.10: Sticker activity

Example Participant Information Sheet (as used with the participants themselves)

Will my taking part be kept confidential?

Anything you say will be treated as strictly confidential and stored in a safe place.

We may use quotes but your name will be removed from what we use and store.

If we are concerned about your safety or wellbeing we would tell you first and then talk to a professional.

What will happen to the results?

Sarah aims to write a research paper and a PhD. These will be for other researchers to read. Your name won't appear on anything.

Sarah will ask you if you want a summary of the results. She will tell you how to let her know what you think.

We are thinking about you.

This study has been approved by Oxford Brookes University's Research Ethics Committee. The University asks us to store information safely for 10 years.

If you have concerns about how the research has been done, please contact Sarah Quinton (ethics@brookes.ac.uk).

Who can I contact if I have questions or want to take part?

If you have questions or would like to know more about taking part, please contact Sarah Howcutt:

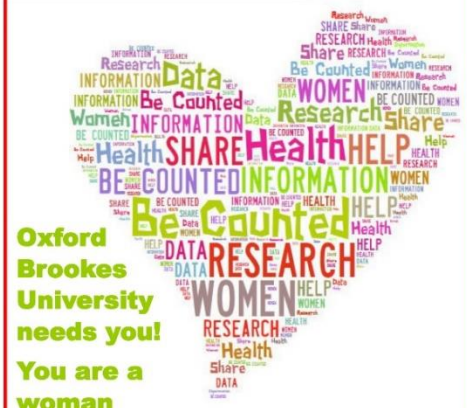
Tel: **07874764174**

Email: **sarah.howcutt-2015@brookes.ac.uk**

Private message to 'B' Counted Study'

(No details will appear about you on Facebook)

B' Counted!



Your invitation to join the 'B' Counted Study' Information Booklet

What do we want to know?

We would like to know what encourages people to take part in research about health. We will not ask about how healthy you are but only about what makes you talk answer questions about your health.

What things would encourage you to take part in research?
What things would put you off?
What can researchers do to encourage you to help them?
Who would you tell about a research study that was going on?

Who do we need to help us?



Women aged **16 to 24 years** who **don't have** a university degree or similar (level 4 qualifications or higher).

Women who are happy to talk in a small group.

Do have to take part?

No!

You do not have to take part and there will be no come-back if you don't want to help us.

Are there any risks involved?

You might feel nervous.

You might worry about what we will do with the information but we will be careful. Take a look at the last page.

We will also give you some groups to contact if you are worried about anything that we've talked about.

What will happen if I take part?

You will hear from Sarah from Oxford Brookes University. She will sort out a time when about 6 people can get together to chat. You can ask her any questions about what is going on.

She will send you a short form to sign to say that you are clear about what is happening. We are just checking that you feel happy about what you are doing.

Sarah would like you to stay for about an hour with about 5 other women. We are interested in your thoughts and there are no right or wrong answers!

We will ask you questions like the ones on the last page and we will do some tasks where you will be asked to order things or match things together.
We will record the discussion.



Sarah will ask you to answer a few short questions about yourself on a questionnaire (your age, job etc.) She just wants to work out if who you are changes what you think.

Sarah Howcutt

Are there any good things about doing it?

You might enjoy talking to Sarah and to the rest of the group.

You will be helping Sarah to find out how to ask women to take part in health research so that more women have the chance to be heard by researchers.

We will give you a **£15 'Love 2 Shop' voucher on the day**. Tell Sarah if you are worried about getting to the group. She will help if she can.

Example online consent information (shown on screen and in hard copy)



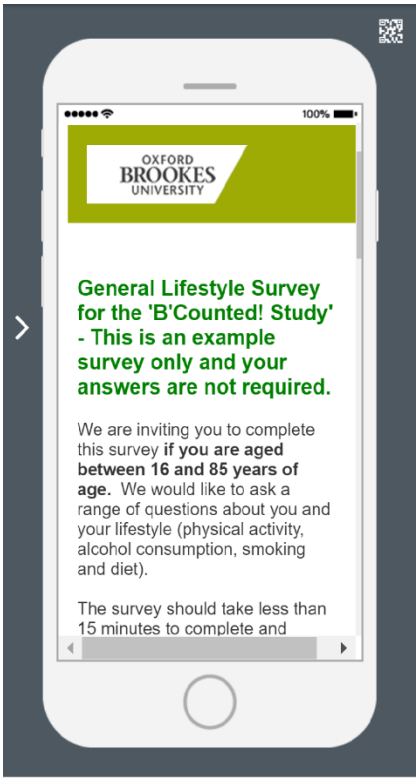
Please try to answer all of the questions as accurately as possible. Most of the questions can be answered by ticking the button next to the correct option that applies to you.

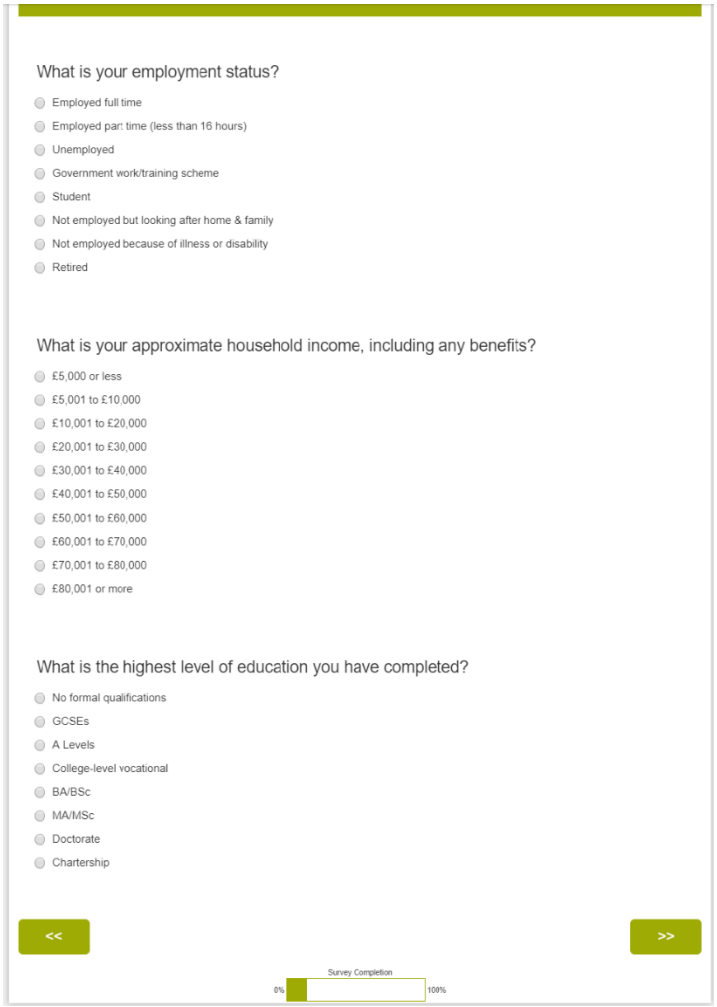
For the purposes of carrying out this Survey, the University uses the survey tools provided by Qualtrics with whom the University's Faculty of Health and Life Sciences holds an agreement. There is always a certain element of risk of data loss when data is collected and processed in an internet environment. This risk cannot be eliminated entirely and participants consenting to take part in the survey need to be aware of this risk. However, personal data will be minimized to the extent possible for the survey and the University believes that Qualtrics offers sufficient guarantees to keep the data secure while it is being processed. These security obligations are set out in the agreement between Qualtrics and the University. Further information about Qualtrics can be found on the following web site: http://qualtrics.com

- ❍ I consent to participate in this survey
- ❍ I do not consent to participate in this survey

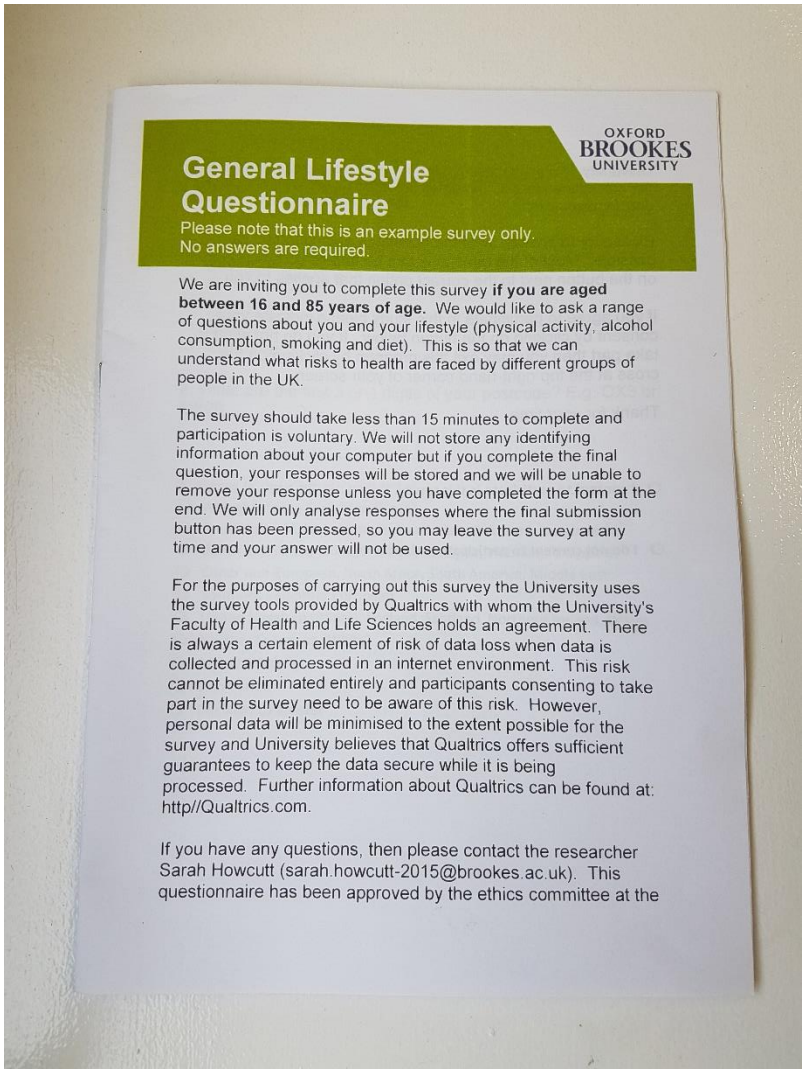
Appendix 5.11: Appearance of online and hard copy survey example in focus groups, Phase 2

Screenshots taken from the online survey hosted by Qualtrics (Qualtrics, 2014)**.**





Photographs of the hard copy survey (front cover and open)



OXFORD BROOKES UNIVERSITY

General Lifestyle Questionnaire

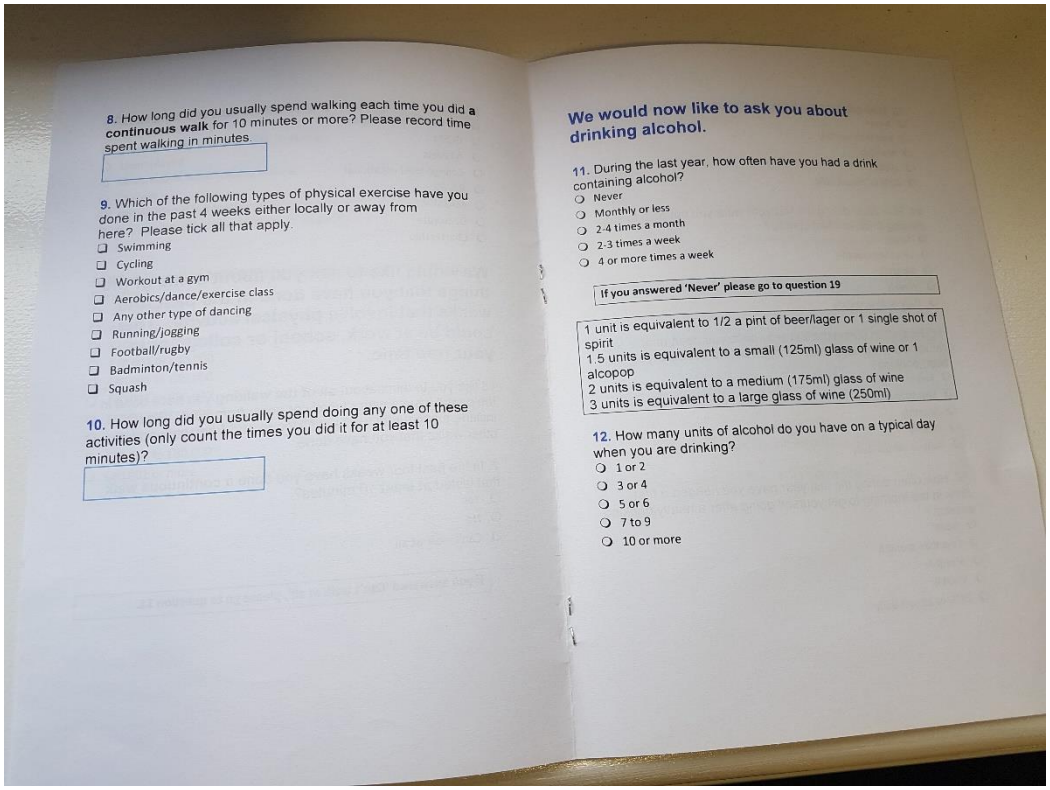
Please note that this is an example survey only.
No answers are required.

We are inviting you to complete this survey **if you are aged between 16 and 85 years of age.** We would like to ask a range of questions about you and your lifestyle (physical activity, alcohol consumption, smoking and diet). This is so that we can understand what risks to health are faced by different groups of people in the UK.

The survey should take less than 15 minutes to complete and participation is voluntary. We will not store any identifying information about your computer but if you complete the final question, your responses will be stored and we will be unable to remove your response unless you have completed the form at the end. We will only analyse responses where the final submission button has been pressed, so you may leave the survey at any time and your answer will not be used.

For the purposes of carrying out this survey the University uses the survey tools provided by Qualtrics with whom the University's Faculty of Health and Life Sciences holds an agreement. There is always a certain element of risk of data loss when data is collected and processed in an internet environment. This risk cannot be eliminated entirely and participants consenting to take part in the survey need to be aware of this risk. However, personal data will be minimised to the extent possible for the survey and University believes that Qualtrics offers sufficient guarantees to keep the data secure while it is being processed. Further information about Qualtrics can be found at: http//Qualtrics.com.

If you have any questions, then please contact the researcher Sarah Howcutt (sarah.howcutt-2015@brookes.ac.uk). This questionnaire has been approved by the ethics committee at the



8. How long did you usually spend walking each time you did a **continuous walk** for 10 minutes or more? Please record time spent walking in minutes.

9. Which of the following types of physical exercise have you done in the past 4 weeks either locally or away from here? Please tick all that apply.

- ❑ Swimming
- ❑ Cycling
- ❑ Workout at a gym
- ❑ Aerobics/dance/exercise class
- ❑ Any other type of dancing
- ❑ Running/jogging
- ❑ Football/rugby
- ❑ Badminton/tennis
- ❑ Squash

10. How long did you usually spend doing any one of these activities (only count the times you did it for at least 10 minutes)?

We would now like to ask you about drinking alcohol.

11. During the last year, how often have you had a drink containing alcohol?

- ○ Never
- ○ Monthly or less
- ○ 2-4 times a month
- ○ 2-3 times a week
- ○ 4 or more times a week

If you answered 'Never' please go to question 19

1 unit is equivalent to 1/2 a pint of beer/lager or 1 single shot of spirit
1.5 units is equivalent to a small (125ml) glass of wine or 1 alcopop
2 units is equivalent to a medium (175ml) glass of wine
3 units is equivalent to a large glass of wine (250ml)

12. How many units of alcohol do you have on a typical day when you are drinking?

- ○ 1 or 2
- ○ 3 or 4
- ○ 5 or 6
- ○ 7 to 9
- ○ 10 or more

Appendix 5.12: Focus group schedule, Phase 1

An examination of how to engage underrepresented women to studies enquiring about their health risk behaviours (B' Counted Study)

Focus Group schedule

Focus Group Aims:

The aim is to explore how young women from underrepresented groups in the UK respond to initial research advertising (the first two stages of the conceptual framework). This may be broken down as follows

Motivation –

1. To explore how they define themselves.
2. To find out why the participants accepted the current invitation.
3. To learn what activities group members are interested in (so that they spend free time on them).
4. To explore their views of research and researchers. This includes responses to different organisations involved in research.
5. To find out how women think about their health and who they would they talk to openly about their health and health risk behaviours.

Perception –

1. To investigate how research adverts are processed to learn which theories and empirical findings about advertising should be applied to increase recruitment. These include the use of text-heavy messages or emotional appeals, the use of a messenger of similar social background to the audience, the use of different media and of official and branding logos.

Note to facilitator(s): Instructions to you are in standard print. Items to read out or say are in ***bold****.*
Ask group members to re-read and sign the consent form if they still agree to take part. Ensure that they have refreshments and the opportunity to ask any questions privately. If working with a group with low functional literacy, read the consent with participants to ensure that the information has been accessed.

Check that there are no objections to the use of the audio recorder; then switch it on.

Thank everyone for coming today. We really appreciate that you have given up your time today to help us. Please feel free to stop or have a break at any time. You don't need to give a reason at all. Can I just say that the questions may mean that people share personal information and if that happens can I ask that what is said remains confidential and between ourselves.

Introductions to understand a little about the participants' self-identity (this will aid transcription too):

Perhaps we could start by going around the group and saying our names and something about ourselves. Remember there are no right or wrong answers today and you don't have to agree with everyone else. Please just say what think because that will help me the most. Feel free to use any words that you are comfortable with. I

won't actually use your real names in anything that I write but feel free to change your name if that will make you feel more comfortable. So I'm Sarah, I'm a mum with three children and, as you know, I do research at Oxford Brookes University.

Start off by reiterating the purpose of the meeting. Use a statement like the following:

I'm very grateful to you all for sparing time to talk to me today. Let me just explain a little about what we are trying to do.

Researchers like me often have to ask people questions about their health and lifestyle, things like how much they drink, smoke, what exercise they do etc. We need this information to understand how people like to live and what things improve health and what things make it worse. So, for example, if the government makes it more expensive to buy alcohol, does that mean that people drink less or are they just spending more on it?

Often we use surveys or interviews for this, but we are finding it hard to find people who are happy to answer these kinds of question. So I would like to ask you for your ideas about why women, just like yourselves, take part or don't take part in research about their health. I want to chat you about what has motivated you to come today but also about how researchers could encourage you and other young women to help us in the future. We will also look at some research invites so that you can tell me what you like about them or don't like about them. This will help me make better invitations in the future. We should be here for about an hour.

Does anyone have any questions? Feel free to ask them at any time though.

---

1. **Why did you agree to come along today?** (Gives an opportunity to encourage everyone to contribute something and you can warn them about this question so that they have the opportunity to jot down some ideas. Invite everyone to contribute).

Prompts

- What was it that interested you in talking in this group?
- What was it in the invitation that helped you to accept it?
- Was there anything that put you off or worried you?

2. **Imagine that you have an hour free in your day. What would you choose to do with it?**

Prompts

- What kinds of things do you look at online?
- What magazines or TV programmes might you look at?
- Do you like to spend time on your own or with others? Doing what?

3. **Before you met me, what would you expect a researcher to be like?**

Prompts

- Before today, how would you have described a researcher to a friend who did not know what they did?
- Would you want to talk to one at a party? Why/why not.
- Do you think that researchers and what they do are useful? Are some kinds of research better than others?

4. [2]Show some logos of charities who do research and also government groups (NHS, Office National Statistics, Cancer Research UK, British Heart Foundation, Oxford Brookes University, Open University, Medical Research Council, Alcohol Research UK). **What words come into your head when you see these logos?**
   Prompts
   - Which of these are familiar to you?
   - How would you feel if you opened a letter which had one of these on the top? Does it matter which of these was at the top?
   - How would you rank these organisations in terms of importance? Why?

5. **Who would you talk to about your health?**
   Prompts
   - Is health important to you? Why?
   - Where do you get information about health from? What kind of information do you look for there?
   - Would you talk to anyone about your health who is outside of your friends or family? Why would you choose them? / Why not?

I would like to do something a little different now. I am going to show you some adverts which are asking for people to take part in research. They are based on what people think make good adverts for research. I just need you to look at them and tell me what you think about them. Is there anything about them that is boring, annoying, worrying, attractive, grabs your interest? Again, it is really important that you just tell me what you think I am not looking for a 'right' answer.

Example 1 which tests response to statistics and objective facts in longer text form with an image of a mixed age and gender group
Example 2 uses similar text with an image of a young woman.
Example 3 uses stories to ask for help with an image of a young woman.
Example 4 uses current study poster but with information about how many people have already taken part (no person only logos).

Two videos
A young woman of similar age to the participants to warmly invite people to take part in the research. They will say that they are interested in the study.
The same young woman of similar age to the participants giving more detailed facts about the study without smiling.

Thank you. So could you put these adverts in order in terms of whether they would make you seriously think about doing the questionnaire?

Prompt where necessary to encourage participants to verbalise their thinking.

[2] This question may be omitted if time is short. This is because it can be explored in the poster activity below.

- What works well in that one?
- Why is this one less attractive than that one?
- Is there anything on that advert that you would suggest that I should keep?
- Should we use videos? What would you like to see on them?
- If I was going to make the perfect poster – which bits should I add in. Have I missed anything that I could do?

Summarise the discussion in very broad terms (this might also be done during the session):

It sounds as if you are telling me that…

Give the group chance to make comments on your summary:

Is there anything else that you would like me to think about?

Thank you for your time today. You have given me so many important things to think about. It has been really valuable. We are hoping to put your ideas together with those of a couple of other groups because we are interested in finding out how to encourage women aged 16 to 34 years to take part in health surveys. I am planning to use your ideas to devise a way to send out a short survey and then I will see if what I have done encourages women to answer questions for health research or if I need to think again.

The last thing that I would like to do today is to ask you to fill in a quick form. This is going to tell me whether you would like me to send you a summary about what has been learnt from the groups I am doing. I am really happy to do that even if that is the last involvement you want to have with the study.

But the form also gives you a chance to tell me whether you would like to help me a bit more as I am going to need to ask more about how to design questionnaires for young women. This might mean talking to me again in a group or talking to me through emails, letters, or a Facebook group. You are welcome to stop at any stage without giving me a reason.

Feel free to ask me any questions before you leave or you can email, Facebook message or telephone me. I have put down my contact details and a sheet with some useful links in case what we have talked about has made you feel concerned about your health.

At the end of the session, make notes about the session to remind yourself about how things felt, how the questions worked or did not work, future directions etc.

Appendix 5.13: Focus group schedule, Phase 1

An examination of how to engage underrepresented women to studies enquiring about their health risk behaviours (B' Counted Study)

Focus Group schedule

Note to facilitator(s): Instructions to you are in standard print. Items to read out or say are in ***red*****.**
Ask group members to re-read and sign the consent form if they still agree to take part. Ensure that they have refreshments and the opportunity to ask any questions privately. If working with a group with low functional literacy, read the consent with participants to ensure that the information has been accessed.
Check that there are no objections to the use of the audio recorder; then switch it on.

Thank everyone for coming today. I've just got to run through a couple of things quickly so that we can get on. Please feel free to stop or have a break at any time. You don't need to give a reason at all. We are going to be talking about the things that would make young women interested in doing surveys about their health to help people like me to understand what people think and do about their health. I am not planning on asking anything difficult about your health, but can I just say that the questions may mean that people share personal information and if that happens can I ask that what is said remains confidential and between ourselves. Remember there are no right or wrong answers today and you don't have to agree with everyone else. Please just say what think because that will help me the most. Feel free to use any words that you are comfortable with.

1. Aim: How do participants judge an invitation to take part in research? What might they be thinking?

Activity 1: Show participants a mock Facebook advert for a survey and show them 5 pictures of women with different expressions at computers/smartphones and ask them individually to select which one of these women are likely to be looking at that page and then get them to justify that choice together. Get them to write down their choice to reduce conformity. Question: **Can I just ask that we go round and say our names so that I can link your voice to you when I type up our conversation later? I won't use your names though in anything that I write. And then can you tell me which picture you think looks like someone who has received this advert on their Facebook.** Prompt: What makes you choose that picture? Are there any other women who might be reacting to that advert? What might they be thinking?

2. Aim: What information in a PIS or online survey consent is engaging? What cues are women searching for in this information and what is currently missing?

Activity 2: Give participants an enlarged PIS and an example consent from an online survey. Give them red and green stickers to show what is good and bad by discussing together. Ask them to elaborate on their choices. In the online survey include threat of disease information to test Hastings marking ideas that protection motivation is not a good strategy.

Question: **What made you choose those places for red stickers?**

Prompt: What about the green ones now? What else should I include do you think?

3. Aim: To understand what expectations about question content women are bring to the research and which topics provoke anxiety. (Costs in the marketing model).

Activity 3: Ask the participants to make cards for the topics they would expect in a health survey. Order them in terms of being comfortable and uncomfortable.
Question: **Can we order them in terms of which topics you are comfortable to answer survey questions on?**
Prompt: If X is uncomfortable, how does this one compare? Where should I place this card? Why is this topic easier than that one to answer questions about?

4. Aim: To find out how to overcome anxieties raised by question content. (Within this explore topics such as length of survey/ mode of completion /compensation/

Question: **What would make you happier to answer questions on these topics (look at the comfortable ones first and then the less comfortable ones)?**

Prompt: Anything about what I tell you would make you more likely to want to do the survey? Is there any place where you would find it difficult to answer questions like this? How would you like to complete a survey? (Online, on paper or telling someone your answers)? Is there anything that I could do to make it more likely that you would be prepared to answer questions on the more difficult topics?

5. Aim: To consider what information/presentation details of the survey itself are likely to encourage participation and completion?

Activity: Show participants a paper survey with the return envelope and a Qualtrics version of the same survey (use the Qualtrics app to do this offline on a table). Ask them together to decide which version they would prefer to complete.

Question: **This one you would fill out and put into the envelope here to post back to me for free and this one you could do on your phone, a tablet or a computer and you could send back to me when you are online. Which one would you be most likely to do?**

Prompt: What would make you more likely to choose that one? What would make you less likely to do that one? Can you think of a way of making the survey fun to do?

6. Aim: To find out which social networks participants would advertise research to. Find out what would make them likely to share information about research and encourage others to take part.

Activity: Show participants three piles of counters on cards saying 'Friends', 'Family' or 'People you know'. Ask them to choose three counters that represent the people they would be prepared to share an invite to do the same survey. Collect the counters in a bag as data – they should be colour coded for each category.

Question: **What would make you share the survey with the people you are imagining? How would you tell them about the survey?**

Prompt: Would you telephone, talk face to face or do something online like email or social media? How likely is it that you would have that kind of conversation? Is there anything I could do to help you with that?

Summarise the discussion in very broad terms (this might also be done during the session):
It sounds as if you are telling me that…
Give the group chance to make comments on your summary:

Is there anything else that you would like me to think about?

Thank you for your time today. You have given me so many important things to think about. It has been really valuable. We are hoping to put your ideas together with those of a couple of a few other groups because we are interested in finding out how to encourage women aged 16 to 24 years to take part in health surveys for research. I am planning to use your ideas to devise a way to improve how we advertise and design surveys.

Appendix 5.14 Codes used for initial data management in Study 1 to structure the five framework matrices.

FRAMEWORK 1: Motivation
Activities in spare time
Identity
A Research Participant's Identity
Focus Group Participant Identity
Researcher Identity
What happens in research
Job performed by participation (not stated)
Practical Issues that help or hinder

Practical Issues that help
Practical Issues that hinder
Reason for participating (stated)
Safety and trust
Information safety
Personal safety
Mental safety
FRAMEWORK 2: Perception
Barriers to processing
Features that motivate processing
Where place adverts
Where seen adverts
FRAMEWORK 3: Attitude Formation
Age differences
Incentives
Messenger (person)
Negative features of pre-study information
Negative features of surveys
Positive features of survey
Positive features of pre-study information
Safety and trust
Safety and trust: Barriers to participation
FRAMEWORK 4: Integration
Barriers to completion
Motivators to completion
Survey mode
FRAMEWORK 5: Learning
Why share study details
Barriers to telling others about the study
Facilitators to telling others about the study
How would they share adverts?
Who would they share adverts and invitations with?

Appendix 5.15: Example framework analysis matrix for Study 1

	A : Age differences	B : Incentives	C : Messenger (person)	D : Negative features of surveys	E : Negative features in adverts and PIS	F : Positive features of survey	G : Positive messages in adverts	H : Safety and trust	I : Barriers to participation
CS 4		**Exchange appraisal (for sharing too)** If they're getting paid for it then they'd be keen...That's why we were quite keen. I won't lie.		**Sensitive questions - cost to benefit** There's a lot at stake. [Sounds of agreement]. **Irrelevant questions [Needs to go in Integration Matrix]** Cos if you like looked at work first, you'd be like, what's this got to do with my health? Q So, if you put 'no'. You'd have to just keep...but online it would just disappear. **Boring appearance** One thing. It's not very colourful... People are going to think, 'What is this?' and they'll chuck it in the bin. **Too long** But some people, because there are So, many questions, people just tick and tick. They wouldn't actually read through it.	**Social media not trustworthy** Right, it just seems too good to be true. Like answer it and you can win a £50 voucher. So... Yeah because you see some people post it and you click on it and press on it and it takes you to something else. **Incentives signalling scam** Like C said, like a prize of 3 £50 vouchers, I'm like 'That's a bit dodgy'. Q **Looking for signs of threat** Nothing rubbish but it says you might feel nervous, you might worry. Makes you like second, have second thoughts. **Personal contact with people important** It doesn't say who the committee chair is.... Who you'd actually be talking to.	**Topic familiartity - matching expectations?** Cos these are all like the key things. People most talk about and come into schools. **Question order - as expected** Some surveys start like that with like your name, age, work [Sounds of agreement]. But I think that looking at the information about what we'd be talking about it'd be good to talk about where general health is and it goes straight to it. **Personal relevance - age differences respected** So, you're saying that if I'm doing a survey like this, I have to make sure that the questions are not just for everybody but really relevant to you? **Connection with the researcher - early (help to get it right too?)** Yeah, like a logo on the front. With your picture and your contact details.	**Confidentiality** Cos it says it's confidential So, it's not going to go anywhere. So... there's not harm in doing it, if like, you were worried or something. I don't know. Q **Being able to check provenance** It's got an email address on it... So, if anything did happen then you could call that. QQ **Unconditional incentive** Maybe show the prize. I don't know. [Participant laughter] I don't know...Say you're guaranteed to win it. Q **Knowing the researcher - a picture** Cos some people don't have any photos on leaflets, they're just photos from the internet...More personal. **Empowerment - agency** Saying that you don't have to take part... It's not forcing you into it at all. Q	**Incentives signalling scam** Like C said, like a prize of 3 £50 vouchers, I'm like 'That's a bit dodgy'. **Not sure about the provenance** I've put a smiley face because I am not 100% sure about the email and the £50. **Experience of click bait** You click on it and it takes you to something else. **Confidentiality - notice the language used** I thought it was helpful that it was going to be like confidential and like that none of your personal information is going to be like leaked. Q **Pictures used to deceive - so don't make them too polished** Cos some people don't have any photos on leaflets, they're just photos from the internet. ... It's nice to know that the actual person.	**Stigma about some topics/invasion of privacy** I think some people'd be more worried about drugs because sometimes they, sometimes they need it for like their own. I don't know why it's asking you for the first four digits of your postcode. **Failing to keep attention - age** Especially if it's like a younger audience because they get bored quicker. **Not knowing the researcher - scams** Probably meeting the researcher... On the phone's a bit intimidating kind of like, you don't know who you're speaking to. **Threats to confidentiality** There could be millions of people in the background listening. **Fear of losing agency** I'd be 'I don't want to do this.'
CS 5	**Age differences within 1 or 2 years important** I know! But I feel like difference between my friends on social media and say someone of say H and A's age are completely different.	**Exchange appriasal** Probably the vouchers...that's 50 pounds you know. That's a lot. Q For kind of the voucher that I put on there. Would that be fair?..Not really. Just because the way that I am, I just get bored of stuff after a while	**Personalisted contact important** If somebody contacted me saying, directly, do you want to do this. I'd probably would. ...Because it's personal and you feel like you've been, personally rather than everyone might see this one. **Helping friends** Because I know that it's going to help their... education. **Pictures of researcher can reassure** But with you being on there it's kind of like, I don't know the word but it feels kind of real, if you know what I mean... You've kind of like introduced yourself already. But maybe put like a speech bubble and be like 'Hi I'm Sarah, I just want to know if I could, ah...' [00:22:16.00] Interviewer: So, good idea? You're nodding [Sounds of agreement]. All round the room. Ok. So, what about the back page. Again, with these things we have to	**Impersonal - not for me** Pretty much, because if it looked like this then I would just think that it was another thing that everybody has to answer. **Postal completion a barrier Hassle** I would probably just put it [paper] down and never actually do it. I think that you are more likely to do it on your phone because it is quicker. With this you'd have to find a pen. You can never find a pen in the kitchen. **Can't combine with other things** And if it's not like something really vital to you, like when you're posting... **Not knowing answers/concern about getting it wrong** With question 5... I don't think that I'd even be able to guess. I literally do not know.	**Too long** I don't really spend a lot of, if it takes loads to take up more than 5 minutes then I don't really tend to do it because, I'll just get bored of it. **Too much reading and concentrating** Not really. Just because the way that I am, I just get bored of stuff after a while...There's lots of reading and concentrating. QQQ You'd be more likely to read it because it's two different smaller part than a massive big part. **Age - not for me. Surveys are for mums** I think it saying women aged 16 to 24 makes it attractive, if it said like 45 you'd ignore it... I'd be like mum read this. Also because it says between 16 and 85. That's a big gap...your nan could participate as well.	**Make it clear that their views are needed - personalisation** Pretty much, because if it looked like this then I would just think that it was another thing that everybody has to answer. **Reduce the effort (validation by college too)** If we were given this in college to fill out just like before our lesson started, just fill it out and I'll pop it in the post or whatever, um, then I'd do it. A pen has to be nearby otherwise it is just too much effort. **Personalisation and effort made to get them in the study - envelope** I don't know. I was thinking handwriting, yeah... And because then it, you'd be like 'Oh, someone has written me a letter, that's so nice and then if you open it you'll, you'll be like...It's a survey but, you'll have to know that the person has put in the time and the effort to	**Personal invitation via someone you know increases attention** I don't know because it's got a picture and it's got different coloured font, so and it's got easy to read front so... I feel like sometimes, you know if somebody had contacted me and said, like how V did like, do you want to take part in this, I'd kind of e like, yeah, but, just seeing it like that where I've got to contact, say you, I probably wouldn't. **Vouchers might make people stop and read but not necessarily act** right. I'd probably stop and read it. [Sounds of agreement] I don't know if I'd then act on it. Definitely probably stop and read it. **Familiarity with surveys [Move to learning matrix]** A lot of my friends are at Oxford Brookes doing, they are just doing their dissertations so, I've had to do a lot of surveys so. Yeah. I'd do it.	**Social media not a trustworthy provenance** If you saw this stuff on Facebook then you can win this, but it's like a con. Q **Picture of the researcher reassures** You know who it, you know what they look like...It's not like a scam. A scam, is it?	**Competition for attention** The thing is that I'd just do that anyway. I'll just quickly scroll and if I see something that I've found then I just stop. Just look at the time when you are looking at social media. I look at mine mainly just before I go to bed. **If researchers are men** I think, so speaking with women is easier, so say, than if you two were like men then that would be harder to speak about, like pregnancy and sex. **Lack of anonymity** I think I'd probably more like a survey, sort of thing because then it's kind of like, no-one has to know who I am. Feeling judged Like me and you [K] and probably you [X]. I don't know about your two, but we'd be like, we talk to

Cs 6	**Age differences within 1 or 2 years important** I'm not 70 but I'd write in it... It's because you are older.	**Immediate vouchers help** I like it that it says, the £15 voucher on the day so that you are not going to get sent it and you never get sent it. Kind of more, it looks at bit more real.	**Questioning style** And not pushed about 'You can't say that, you can't say this!'. [00:38:04.09] S: Yeah, you're not being judged are you. [00:38:10.20] H: Maybe if you're a bit like, not, not... I can't think of the word. If you're quite happy, not lively but... [00:38:15.18] S: Relaxed. Personal contact Ok. So, if you were, if I wanted to ask questions about that are you saying to me that it would be nice for you to meet me a couple of times for something else? [00:41:40.29] S: Yeah, sort of like a counsellor sort of. [00:41:40.24] K: Yeah and you'll come out with saying, if you're asked a question and then you'd come out and say something but if you've just met you.... that would just make it easier.	**Sensitive questions** You might not want to talk about your family, you might be like if you don't really see your mum or your dad [Mental health] It's really personal. **Being worried about being able to do it** As long as it was not like you're being fired questions. Like as if it was just like a normal conversation. If you can't fill it in.... would they send it back? To do all over again? **Being judged** Yeah, you're not being judged are you. **Being pushed around** And not pushed about 'You can't say that, you can't say this!' **Previous experience of being deceived [Needs to go into the Learning Framework]**	**Appearance signalling scam** Like I said, I wouldn't feel confident with that ad, as it's not really that official and if it just popped up on my Facebook screen, I'd be a bit alarmed about it. **Q** **Fears about security of personal information** So how would you know that your information's going to be confidential. You put like confidential everywhere else but like in this bit it says um, the information, we will be careful. That makes me feel a bit like uneasy Q So they have your profile? **Not knowing researcher** And obviously, we don't know who Sarah is so you might not be able to trust her with your stuff. Q **Incentives signalling scam**	**Informality and empowerment** Informal like chat not... using big words and stuff because we might think 'Oh actually I'm not going to talk to you!'. **Therapeutic incentive** Maybe, like have videos so that you can like help yourself and you can talk privately...Maybe a number to call or something. **Facilitate completion - signposting and ability to give information** 'If you can't walk please go to question 11.' So, it has like got the option of letting you know about the information. **They want to answer questions - when they see them.** I kind of want to answer... I want to like tick...	**Reassure about provenance -** If you'd seen like a leaflet as well. And you'd seen it on Facebook...Yeah, it's like you need to see something more than just an ad on Facebook. ...To know that it's a genuine thing. Yeah. Official.... Maybe like, contacts of like the NHS and that, if you like are worried about it, your health. Q **Empowerment - agency and not being judged** 'You are woman whose ideas count', it kind of makes you feel empowered like. 'Yeah I can!' Do you have to take part. ... It kind of makes you a bit, um, like that confident. Like you trust them and you can talk if you do have a problem with something. Alcohol or anything. **Colours** I liked the font and the colours	**Signs of offical provenance needed** If it was official. Then yeah. If you could guarantee that it was from a real study...If someone else like done it and actually got something, then maybe I'd trust it but. QQ **Fear about loss of personal information** **... if you knew that your information wasn't going to be shared. Cos on the internet...** **Incentives signalling scam** I wouldn't trust it because it says that you would win a prize. When I see, it I think 'You are not actually going to do it, you aren't going to win any money.' **Social media is not a good provenance** You need to see something more than just an ad on Facebook. **Fear of viruses** It's like a scam, you get like a virus or something.	
CS 7	**Older people as trustworthy** Like my mum's, a friend's mum, if she posted it, someone like that. Probably...a bit older than me, if she'd done it. **Age differences within 1 or 2 years important** I'd more likely take notice of it if it was someone probably my own age that shared it [respondent was 19]. Um... just because I would probably relate to them more than someone older than me. **Surveys are for mums** I think that this is aimed more at mums... housewives and stuff. **We are different** It seems old fashioned...Our generation are all on phones aren't they. I don't think that anyone really goes on Facebook any more that's our age.	**Signalling a scam** Cos when it uses money then it's just not realistic in this day and age. It's like when you get magazines and stuff and they put them through the doors, they are not real scratch cards.	**Researcher needs to be a woman (for some)** [If it was a man asking q's] No, I'd be like 'Why you asking me that?'...Yeah because they don't get it, they don't get it. **Training inspiring trust** I've known friends who've been in abusive relationships and they will only speak about it and tell people what happened if it's someone who's trained to understand, stuff like that, or if someone has been in a very similar situation. Well you say that you're a psychologist. So automatically that gives the impression that you understand the brain and the way people act...gives the impression that you are more likely to understand how things are happening, why you are feeling the way that you are, if that makes sense, which kind of creates an aura of trust.	**Age too wide - not enough knowledge for survey, not enough appeal** Cos, it says 16 to 85. If I saw that I'd be like 'No, mum you can...' Yeah I know but we are 16, 17. [00:42:49.27] M: So how would we know that stuff? Q **Boring** Not interesting ...Yeah...They're repetitive. **Associations with scams/Fear about identification** Is it like when Vodaphone give your number to like cold callers. **Language barriers/thinking about participants' needs** I'm Pakistani and my parents read Urdu and maybe have something in Urdu or whatever or written here. If you gave this to my grandma, she wouldn't know what to do because she can't read English.	**Incentives as scam** I'd think it was just a scam and just like close the page. Cos when it uses money then it's just not realistic in this day and age. **Too much reading** I don't like to read. I'm not really a reader so, I wouldn't like look at it and be like 'Oooh! That looks fun!' Q **Too much reading -reminds of school** Everything's thrown together.. It's a bit busy... You can't read it properly... reminds me of secondary school English... Q **Reduce burden of accessing information** But not a booklet... So, if I could get it on one side of a sheet of paper so that you haven't got to turn...Yeah. So, it looks like a smaller thing for me to read. And then I can just strut through it easily. **Being 'harsh' (related to being**	**Question format** I like multiple choice...Ticking's good. **Catering for ESOL** So maybe it'll be interesting for her to read it in her own language if that makes sense.	**Provide links to other websites to check out the provenance** Bit more information maybe... Like on that certain thing, like on that website maybe? **Video instead of written information.** I don't know, just explaining what it's about. I think it would grab you guys' attention more. Anything to watch. **If the right person shares...** ...if it was a friend that I knew and related to a bit, and went through similar situations, I would probably take a look at it if they had shared it and we've been similar in some aspects then it may relate to me as well. But that's the one time that I would ever really like go 'Mmm!' about it. **Seeing the vouchers promised** The vouchers...Because you made it bold so it reaches out to me.	**Incentives signal scams** I'm not really bothered by it and I'd think it was just a scam and just like close the page. Cos when it uses money then it's just not realistic in this day and age. Q It's like when you get magazines and stuff and they put them through the doors, they are not real scratch cards. **Want to be able to check provenance** Like on that certain thing, like on that website maybe?...Ok. So, you want like a website so that you can check it out Yeah. Before you did it. Yeah. **Social media associated with scam and viruses** I think that it was a virus or someone trying to annoy me. Cos when you go on any website, not even Facebook, you just close it instantly and think it's a scam. Q **Provenance providing reassurance**	**Fear of scam/virus** I'm H and I'm not really bothered by it and I'd think it was just a scam and just like close the page. Q It just looks like an advert but like you know when they are fake adverts like the fake news on Facebook and stuff. **Adverts don't maintain interest long enough to read.** I'd just look at it for 5 seconds and I'd be just...Scroll...Yeah move on. Q **Not looking for research opportunities on social media** I only really go on Facebook to see if my friends are doing anything and to talk to my friends. I hardly ever go on it for my feed so. **Friends sharing may not be enough (move to Learning)** What if one of your friends had posted that?... I probably wouldn't even look still.

CS 8	**Not seeing themselves as adults** Like, that's awkward, especially for our age group because we don't really want to talk about that to an adult...Especially if we are going to get judged.Q **We are different** But like that, people our age group, now when we look at stuff like that, especially when things are on paper as well. You don't. You go 'Oh I don't want to do that.'		**Researcher cannot be judgemental** Like, that's awkward, especially for our age group because we don't really want to talk about that to an adult. [00:25:48.22] N: Especially if we are going to get judged. **Not a mother figure (similar age good)** To an adult I think more because like you're like a mother figure, like you don't, like you don't want to tell your mum how many times a week you've had sex or if you've had sex...	**Too much text** ... it's just too much text [consent] [Sounds of agreement]. Uh, skip! Q **Colours** Is this your university's colour?..It is, look it's that and pink..It's horrendous! **Typos/appearance signalling scam** ...you do see mistakes in these official things because so many people look at them and still miss them. How would you feel if you saw a mistake there... I wouldn't trust it. Very unorganised and like not put well, put together well...Put me off... Cos then I'd think that it was something dodgy. **Lack of control - needing to skip questions** ...not everyone wants to say how much money they earn... And it doesn't give an option, it just says and there. Q	**Boring appearance** It looks boring....maybe just like it being more colourful. Like it's not like, like all the black it's not, it's boring. Q **Safety of personal data** I wouldn't click it in case it was something fake, or the information went somewhere I didn't want it to... **Images - must be relevant and reassuring** I picked the boring one because the images don't really have much relevance to what the advert is trying to tell you. If there was like more images, like ten people. Like people telling you how much have done it and it's actually... **Need signs of what is to come** There's not much information on it either, you could like be going for anything.	**Find out what people their age like - colours and design** Technically to come up with some of the colours, because I was going to say that you'd like big and colourful for, you know people our age. Because we tend to look at it more. Also for adults as well it could lead to them looking at it. And they could be 'This will be good for our daughter, or good for my wife.' or something like that. Needs to look designed Yeah, just more a design put behind it. That like time and actual effort has gone into the survey. Not just doing it for like a waste of time. Q **Providing information (for health education or to help with questions is unclear)** I like the fact that it's explaining to you how much, how, or you know the alcohol question. It says that one unit is equivalent to half a pint. So, it's technically explaining how much it actually taking, a massive	**Some people like being asked questions** Because I like to answer questions. **Attract attention with bright colours and pictures** Maybe more like bright colour pictures. QQQ **Informality of the information sheet** I just liked that it was, I don't know it just doesn't seem as formal as this? **But text can be formal** ...the text should be formal so... **They want to know what is coming** To tell you that your stuff was all like confidential and everything like that and it tells you what you would be asked... and things like that so I'd probably do it. Q **Promise of confidentiality** See link above. **Empowerment**	**Fear about personal information** And I've got that one because I wouldn't click it in case it was something fake, or the information went somewhere I didn't want it to... **Wanting to know who else has done it...** Like people telling you how much have done it and it's actually...	
CS 9		**Exchange appraisal** ...it's only 15 minutes and I don't know, it's quite interesting and you could win a prize. QQ (3rd quote is good) **Amount** More than £15 though. **Signalling a scam** Some people give out fake vouchers though... **Incentives inolve giving up personal information** ...then I could get the voucher from you face to face... so that I wouldn't have to write down my details. (Others didin't agree)	**Questioning style** Don't like dodge round the question, just be very blunt with it.	**Too long** Quite a long survey. **Giving away personal information** Personally, I don't like how much you earn and stuff. It's quite personal... Especially if you're sending... as you know. Q I feel like once you do one of these you'll get a hundred of them a month... Like chain mail? **Postal completion a barrier** **Hassle** And it's also the post type thing it's, I would do it and then I'd forget to post it. **Confidentiality risked** And others could find out about it, so... Because they'd sort of see what you are doing, it's like about emotions and stuff and they might want to read it. **Phones not secure** Technically it's not always safe and	**Survey mode** It is not something I would do on the internet. **Safety of personal data** I feel like if I, it says 'win vouchers', I'd have to put my like, to get the vouchers they would obviously have to send it to me and I'd have to put my details in. I wouldn't do that. **Association with health advice** I think that, haven't seen this but you see other styles of it everywhere. And I think that it could get a bit repetitive... Like you see 'Eat Well Plates' and stuff like advertised. **Threat messages** I didn't like the bit where it says that you might feel nervous. It put in a bit of doubt. (others didn't agree) **Too serious** [Online consent] I think the format; the different format isn't good... No, because it		**Cues that it is not a scam** Um, there are links? And it just looks very professional. **Positive cost benefit cues** Um... well it's only 15 minutes and I don't know, it's quite interesting and you could win a prize. So... You mentioned the £15 Love 2 Shop vouchers. That motivates people to actually do it. It means they're actually getting something back sort of thing. **Heart** I think that the picture's quite nice actually... It's, gives you quite a lot of information. And it's colourful. And I like it. **Their participation matters - participants feel wanted** Yeah. I think that that means that people think that what they say matters. **Accessibility - reduced reading**	**Fear about security of personal information** ... if I, it says 'win vouchers', I'd have to put my like, to get the vouchers they would obviously have to send it to me and I'd have to put my details in. I wouldn't do that. QQQ **Talking on phone intimidating** I think the email address is... but not that many people will talk on the phone, you know what I'm talking, I'm saying? **Fear of loss of confidentiality** And others could find out about it, so... Because they'd sort of see what you are doing, it's like about emotions and stuff and they might want to read it. **Tricks by researchers** Some people give out fake vouchers, I'm not saying yours is but could be fake. **Being able to leave the situation/personal space**	**Fear about personal data (this participant was Pakistani)** Also, I feel like if I, it says 'win vouchers', I'd have to put my like, to get the vouchers they would obviously have to send it to me and I'd have to put my details in. I wouldn't do that.

CS 10	**Surveys are for mums** I'd be more likely to it if it had like my age and above so that I would feel more entitled to do it.	**Exchange appraisal** [00:02:25.29] B: Cos you win money...For fifteen minutes to do something then yeah. I'm a bit lucky aren't I! If this came up on my thing, I'd feel a bit lucky. ...the happy face because you'd get to talk about it before getting money. **Signalling a scam** I would feel happy to get money...I don't know because I'd think that it was a scam.	**Questioning style** They ask a question and you're like 'I'm not even going to tell you because you're bitchy.'. I like it when they are more like nice and like cool. Then it makes it easier. **Qualifications reassure** Maybe telling me that you've done it before with previous students or stuff like that, so that I know that you're a bit more qualified.	**Typos/Errors signalling scam** They make it look dodgy. If someone was doing it properly. They wouldn't make that mistake. **Irrelevant questions [Needs to be copied to Integration Matrix]** It says 'To participate in this survey 'I do not consent' 'but if you are consenting then you are going to send it off and if you don't then you'll just throw it in the bin. You are going to tick it aren't you and send it off. If you don't consent... Why do you want to know our household income? Especially if you're saying that it's we're 16. Like I don't have a household income. **Fear about giving up personal information** I think that it should say, if you want to call us. Then you have their number or their email or whatever. Contact them but I don't think that they should be able to contact you.	**Incentives signalling scam** I would feel happy to get money... I don't know because I'd think that it was a scam. **Typos** Not professional... I would feel like it's dodgy. **Irrelevant text** Yeah because obviously, you know that you don't have to take part...That's what the leaflet's about if you want to take part. **Not knowing what will happen**. No some people get really funny about that don't they, they want to know what you're going to say don't they. **Perceiving threat** Are there any risks involved...Because you put like that you might feel nervous. **Too colourful** Probably like the green and the	**Make it look official (link and appearance)** Put it on like the NHS website. [Sounds of agreement] So there's like a link, like an actual website. Rather than somebody individual website. Even like the university website ... The colour green at the top is Oxford Brookes University... Is that enough?...Yeah. **Ratings/sponsorship** Ratings for the survey... Like your sponsors so that you know that other people have done it and it's safe or whatever. Has to be NHS **Keep information short at the start.** You just need like the company logo and like 'Survey' or whatever, and aged 16 to whatever. That's all you really need isn't it.	**Exchange** Cos you win money....For fifteen minutes to do something then yeah. **Answering questions is fun for some** ...the happy face because you'd get to talk about it before getting money. **Incentives motivating** Yeah. Money **Break up text** Cos they're all in different um...Categories...Yeah. That's right. **Confidetiality** I think that you need to know that it's going to be confidential. And that nothing will be used with your name. [Sounds of agreement]. **Ability to check provenance** And a sign to make sure that you know it's not a scam as well. **Narrow age - you are needed!**	**Need official support** I'd think that it was a scam...What could I do to convince you it wasn't a scam? ...The NHS logo? QQ **Reviews** Ratings for the survey. I don't know. **Confidentiality reassures** ...because everyone can see that, even if it is confidential They can track who it is... I'd be scared I think. **Being one to one is 'intense'** Support... Just a friend though. No-one else. So, that would be just awkward. **Doing the survey in front of the researcher - reassures** But then you can write it down to that you know that it is real because you are with someone. **Safe location for survey**	
CS 11			**Picture/personal details reassures** ...by reading this information, I know sort of what you're about. And that's what I like about it because I don't want to throw myself into something that I don't know about, if that makes sense so. Yeah I'm quite happy with that. **Qualifications reassure** Like what you do, what your profession is like...So if we go in, we know what we are going to like, we know what we are getting into if that makes sense? **Quesioning style** So, it's how the vibe with you is like, sort of. I don't know how to say it... To be fair. I would rather that someone went in at the deep end. What's your sex life like? Bang! [Straight to the point, done and dusted. **Fear of being judged** I think that it's nicer in a comfortable room but in a way, like	**Too many questions** Yeah. Like the same topic questions like how often do you have more than 6 units on one occasion, how often do you drink... how often in the last year have you not been able stop... and then there's more. It's just like repeat questions. **Relevance of questions** There's a lot of questions about smoking and only one about eating fruit. I thought that needs to be more than just, whatever questions, do you know what I mean? It says 'How many portions a day do you eat?'. I don't know that you'd get any useful information from it. **Representing their experience** You might not eat lots of fruit and veg but still have a very healthy diet. It, yeah... **Too much text - signals too much reading in whole survey** It's quite long... Probably bullet	**Security of personal information** Like I wouldn't trust it and when people share it, like that, sometimes they've shared it through, it maybe would be the original, safe one to click on but it's been all mangled. **Mistrust of social media** Facebook or anything like that will post anything that will get your attention and if you just click on it, you are putting yourself in that danger... **Lack of organisational support** It it's like this and it's been shared by other people, you just look at it. And you're like 'Oh, and no!'. **Boring appearance** I agree with basically what everyone has said about how you can't trust it but, if it was me, I'd just scroll past it and not give it. **Too much information** I don't think that it's a waste of time but it did seem to drag a bit...	**Female researcher - related to being in a relaxed environment** Whereas women are more 'Sit down, relax'. It's normal for us girls to talk about pretty much anything and stuff and not be bothered by it. But when you have like a doctor. **Meeting the researcher** What I've just thought of that would be quite nice is like person, to make the person more comfortable, is to have a welcome meeting thing, so you can meet the person first. **Needs to represent their experience** Cos, I like adding extras on questionnaires like that. So, that you can add a bit extra on your answers. If your answers don't...	**Ability to check provenance** ...also, you have the tick as well. I don't know if you've seen it on Twitter. You have like a tick to make sure it's actually real, if it like have a little tick or something, just to prove. I think if you were to do your own private website, just your own website, so then, um, you could then share it and be like legit 'Follow my website, have a look at the information, have a look on reviews and then go from there.'. That's what I'd do personally. **Knowing what will happen**And informative. Like the bit that says what will happen if I take part. That's all really good. A good amount of information. Also, I like the part where you've filled in about the Love 2 Shop vouchers and stuff. **Knowing the researcher** Cos, I don't know you as a person, I want to know what you're about	**Past experience of scams** Like I've clicked on them before and they've been like 'Oh you've won things from these sellers! Just give me your details!'. Like I wouldn't trust it and when people share it, like that, sometimes they've shared it through, it maybe would be the original, safe one to click on but it's been all mangled. Yeah and I don't really want to press on it. **Fear of loss of personal data/viruses** I wouldn't click on it because I wouldn't want too much information taken from my Facebook account. And there's the viruses that you sometimes get. Sometimes you click on things and they take you to really dodgy websites. Then from there can give you viruses and stuff. So... **Social media not a good provenance** To be fair, with any social media you can't be safe.	**Cannot keep attention** I agree with basically what everyone has said about how you can't trust it but, if it was me, I'd just scroll past it and not give it. **Misreading information because of expectancies** So are you saying that it would be better for me to come in and say 'Guys I need people who...'... People without... yeah.

Appendix 5.16 Study 2 materials

Reminder postcard

Help Oxford Brookes University B'Counted!

Recently we sent you a questionnaire in the post. There is still time to do the questions and we really need your help. Just type this link into your browser or read the QR code. You can use your phone, tablet or PC.

https://tinyurl.com/BCountedGLQ

Contact Sarah Howcutt on showcutt@brookes.ac.uk or Lesley Smith at: Lesley.smith@hull.ac.uk if you want to talk to us about any bit of the study. Any questions are welcome!



In-class questionnaire

OXFORD BROOKES UNIVERSITY

B'Counted: Tell us your experience of doing a questionnaire about your health

Information about the study

Your college recently sent a questionnaire from Oxford Brookes University to your homes. That questionnaire asked you about your physical activity, alcohol consumption, smoking and diet. You may have returned this questionnaire or not. It doesn't matter - we would still like to hear from you now.

The survey should take approximately 10 minutes to complete and participation is voluntary. We will not store any identifying information about you. We will be unable to remove your response once your tutor returns the forms to us but remember that we will not be able to match your answers to you, unless you give identifying information in the final question. If you do not wish to help us at this time, then return your blank or partially completed questionnaire to your tutor when the others hand in their responses, and we will not include you in the research.

If you have any questions, then please contact the researcher Sarah Howcutt (showcutt@brookes.ac.uk).

This questionnaire has been approved by the ethics committee at the University, Project ID **150953**. For more details please contact the committee chair, Sarah Quinton at: ethics@brookes.ac.uk. Please try to answer all of the questions as accurately as possible. There are no right or wrong answers and we don't worry about spelling or language in the final question - just tell us what you think.

Now that you have read this information, do you agree to take part in this study?

I consent to participate in this survey. [Please tick the box] ☐



Privacy Notice

Oxford Brookes University (OBU) will usually be the Data Controller of any data that you supply for this research. This means that we are responsible for looking after your information and using it properly. The exception to this is joint research projects where you would be informed on the participant information sheet as to the other partner institution or institutions. This means that they will make the decisions on how your data is used and for what reasons. You can contact the University's Information Management Team on 01865 485420 or email info.sec@brookes.ac.uk.

Why do we need your data? We need your data only to contact you to ask you to talk to us for about 30 minutes.

OBUs legal basis for collecting this data is:
- You are consenting to providing it to us; and / or,
- Processing is necessary for the performance of a task in the public interest such as research

If the university asks you for sensitive data such as; racial or ethnic origin, political opinions, religious or philosophical beliefs, trade-union membership, data concerning health or sexual life, genetic/biometric data or criminal records OBU will use these data because:
- You have given OBU explicit consent to do so; and / or
- Processing is necessary for scientific or research in the public interest.

What type of data will Oxford Brookes University use? We would only use your name, mobile number and /or your email if you provide these to us. If you do not complete the final question, then we will collect no identifiable information about you.

Who will OBU share your data with? Your data will be shared with Professor Lesley Smith (University of Hull) as she is the supervisor for this research.

Will OBU transfer my data outside of the UK?
No

What rights do I have regarding my data that OBU holds?
- You have the right to be informed about what data will be collected and how this will be used
- You have the right of access to your data
- You have the right to correct data if it is wrong
- You have the right to ask for your data to be deleted
- You have the right to restrict use of the data we hold about you
- You have the right to data portability
- You have the right to object to the university using your data
- You have rights in relation to using your data automated decision making and profiling.

Where did OBU source my data from?
We will only have data that you provide in the questionnaire. The College sent the survey on our behalf without providing any information about you.

Are there any consequences of not providing the requested data? There are no legal consequences of not providing data for this research. It is purely voluntary.

Will there be any automated decision making using my data? There will be no use of automated decision making in scope of UK Data Protection and Privacy legislation."

How long will OBU keep your data? In line with Oxford Brookes policies data generated in the course of research must be kept securely in paper or electronic form for a period of time in accordance with the research funder or University policy.

Who can I contact if I have concerns? You can contact the Information Management team. Postal Address: Information Management Team, IT Services, Room 2.12, Gibbs Building, Headington Campus, Gipsy Lane, Oxford, OX3 0BP Email: info.sec@brookes.ac.uk Tel: 01865 485420 in UK +44 1865 485420 outside the UK.

I confirm that I have read this privacy notice and I consent to the use of my information as outlined above.

- ○ Yes
- ○ No

Now on to the questions…

Q1 Did you complete and return the health questionnaire that we sent to you?

- ○ Yes - I completed it and returned it in the envelope provided
- ○ Yes - I completed it online and submitted the answers
- ○ I started the questions but did not complete the questionnaire
- ○ I did not want to answer the questionnaire that was sent
- ○ I don't think that I received a questionnaire from Oxford Brookes University

If you did not complete and return the questionnaire, please skip to question 4 now.

Q2 What factors prompted you to complete the questionnaire and return it to us? Tick all that apply.

- ☐ The topic was interesting to me.
- ☐ I felt that it is important to help research into health in general.
- ☐ I felt that it was important to tell people about young women's health.
- ☐ I liked the appearance of the questionnaire.
- ☐ I like doing questionnaires.
- ☐ I wanted to help my college.
- ☐ I wanted to help Oxford Brookes University.
- ☐ Another reason [please state] _____

Q3 If you sent the survey, at what point do you think that you decided to do the questionnaire?

- ○ When I opened the envelope and saw what was in there
- ○ When I read the letter inviting me to take part
- ○ When I saw the privacy statement in the envelope
- ○ When I looked at the survey's front cover
- ○ When I saw what the study was about at the start of the questionnaire
- ○ When I saw the questions
- ○ When I saw that I could earn a £10 shopping voucher for doing the interview
- ○ I made the decision after the reminder postcard
- ○ I don't know when I made the decision
- ○ Another point [please state] _____

If you answered questions 2 and 3, please skip to question 6 now.

Q4 What reasons discouraged you from returning a completed questionnaire to us or to submit your answers online? Tick all that apply.

- ☐ The topic was not interesting to me.
- ☐ I don't feel that it is important to help research into health in general.
- ☐ I don't feel that it was important to tell people about young women's health.
- ☐ I didn't like the appearance of the questionnaire.
- ☐ I don't like doing questionnaires.
- ☐ I didn't want to help my college.
- ☐ I didn't want to help Oxford Brookes University.
- ☐ I didn't think that I could answer the questions.
- ☐ I didn't think that the researchers needed my answers.
- ☐ I thought that it would take too long.
- ☐ I didn't receive a questionnaire from Oxford Brookes University.
- ☐ Another reason [please state] _____

Q5 At what point do you think that you decided not to do the questionnaire?

- ○ When I opened the envelope and saw what was in there.
- ○ When I read the letter inviting me to take part.
- ○ When I saw the privacy statement in the envelope.
- ○ When I looked at the survey's front cover.
- ○ When I saw what the study was about at the start of the questionnaire.
- ○ When I saw the questions.
- ○ When I saw that I could earn a £10 shopping voucher for doing the interview.
- ○ I made the decision after the reminder postcard.
- ○ I don't know when I made the decision.
- ○ Another point [please state] _____

Q6 How could we have improved the questionnaire or how we asked you to take part? Please tell us anything that you think will help us to encourage more young women to help with health research questionnaires in the future.

_____
_____
_____
_____
_____
_____
_____
_____

These questions are about you but we will not identify you from your answers.

Q7 Would you describe your family as:

- ○ Wealthy (within the highest 25% in your country in terms of wealth)
- ○ Quite well off (within the 50-75% range for your country)
- ○ Not very well off (within the 25-50% range for your country)
- ○ Quite poor (within the lowest 25% in your country in terms of wealth)

Q8 Please give an idea about the education of your mother and father

	No education	Primary school	High (secondary) school	College/University	I do not know
Mother	○	○	○	○	○
Father	○	○	○	○	○

Q9 What are the first 3 or 4 digits of your postcode? E.g. OX3 or OX29. **Note that we cannot locate your address from this information.**

_____

Q10 What is your age in years?

_____

Q11 What is your main subject of study at the college?

_____

Thank you for all of your help with this study. You have given us ideas about how to ask young women about the behaviours which could damage or improve their health.

If you would like to talk to the researchers about any aspect of this study, then please contact Sarah at: showcutt@brookes.ac.uk (mobile: 07724161849) or Lesley at: lesley.smith@hull.ac.uk (telephone: 01482 463710).

If you are concerned about your health, please speak to your GP or look at the following web pages:

Help with addictions or drugs:

Addiction Helper—http://www.addictionhelper.com/

Beating Addictions—http://www.beatingaddictions.co.uk/

Narcotics Anonymous—http://ukna.org/

Help with smoking:

http://www.quit.org.uk/

Help with eating concerns:

B-Eat—http://www.b-eat.co.uk/

Help with alcohol:

Alcoholics Anonymous—http://www.alcoholics-anonymous.org.uk/

Help with gambling:

Gamblers Anonymous— http://www.gamblersanonymous.org.uk/



Appendix 5.17 Interview schedules for Study 2

Interview introduction

- Introduction to the interview structure and content
- Welcome
- State purpose of the interviews (e.g. to identify what helps and what hinders the completion and return of surveys when they are on health risks such as drinking, smoking, exercise and diet.

- Discussion to take 30-60 minutes, asking about how you decided to take part in the survey and how you felt about the experience of doing research.
- Will be recording the discussion on a Dictaphone (no video)
- Assure of confidentiality and anonymity. Remind the interviewee that the interviewer has not connected their answers to the survey to their name. Remind them that you may use some of their words in a published paper but there will be no name or identifying information
- Voluntary participation and right to withdraw without giving a reason

Interview schedule (semi-structured) Responders

The interview questions will cover the following topic areas. Example questions are provided with each topic:

The follow-up interviews will cover the following topic areas:

5. **factors which encouraged them to complete and return the survey;**
   What do you think prompted you to do the survey and get it back to us?
   At the time that you first saw the survey what were you doing?

6. **factors which dissuaded them from starting, completing or returning the survey;**
   Was there anything that nearly persuaded you that you weren't going to do the survey?
   Was there anything that nearly stopped you getting the survey back to us?

7. **important points in the decision process (at what point of reading the information did they decide to participate);**
   Let's go through the different things that you saw when we asked you to do the survey, can you tell me when you think that you had made the decision to do the survey?
   What do you think that it was about the…? That made you carry on with the questions?

8. **organisations they would help with health research and why;**
   There was the Oxford Brookes logo on the questionnaire that you did for us, was that important to you?
   Were there any organisations that I could put on that survey that would have put you off?
   Have you done surveys for any other organisations? Which ones?

9. **how they judge their experience and whether they think that others would gain from participation.**
   What feelings did have when you first read the letter to ask you to do the survey?
   What about when you looked at the other letters in the pack?
   And the questionnaire itself?
   If you had to rate your experience from 1 to 10, what number would you give it? Why did you choose that number?
   Would you tell other people about the chance to do the questionnaire? Would you be happy to invite them to do the study for us too? Why is that?
   What did you get out of the doing the survey?

Debrief

- Explain that we are interested in increasing the number of young women who do surveys that ask them questions about their health and the things that they do which could damage or improve their health. We need to do this because we find it difficult to ask young women to do our studies in a way that means that they are happy to do them.

- Reassure them that a summary of the results will be sent to the college for them to read if they would like to.
- Thank them for their time and check that they do not have any concerns or questions.

Appendix 8 – Interview schedule (non-respondents)

Interview introduction

- Introduction to the interview structure and content
- Welcome
- State purpose of the interviews (e.g. to identify what helps and what hinders the completion and return of surveys when they are on health risks such as drinking, smoking, exercise and diet.
- Discussion to take 30-60 minutes, asking about how you decided to take part in the survey and how you felt about the experience of doing research.
- Will be recording the discussion on a Dictaphone (no video)
- Assure of confidentiality and anonymity. Remind the interviewee that the interviewer has not connected their answers to the survey to their name. Remind them that you may use some of their words in a published paper but there will be no name or identifying information
- Voluntary participation and right to withdraw without giving a reason

Interview schedule (semi-structured)

The interview questions will cover the following topic areas. Example questions are provided with each topic:

The follow-up interviews will cover the following topic areas:

1. **factors which discouraged them from completing and returning the survey;**
   What do you think got in the way of you doing the survey?
   At the time when you received the questionnaire and opened the envelope, what were you doing?
   If I needed to persuade you, what else could I have done, added to the pack? What would make doing a survey like this feel worthwhile?
   Did anything concern you about doing the questions?
   What about returning the information?
   Pessimism – why did you think that I had asked you to do the questions?
   What do you think would happen to your results?

2. **important points in the decision process (at what point of reading the information did they decide not to participate);**
   Let's go through the different things that you saw when we asked you to do the survey, can you tell me when you think that you had made the decision not to do the survey?
   Can you tell me more about what put your off?

3. **organisations they would help with health research and why;**
   Have you ever done a survey for a different organisation? If so what persuaded you to help them?
   If not, do you think that it matters who asks you to do a survey?
   What did you expect to happen to the information when it was returned to me?

   [Discuss the choices]
4. **how they judge their experience and whether they think that they or others would gain from participation.**

What feelings did have when you first read the letter to ask you to do the survey?
What about when you looked at the other letters in the pack?
And the questionnaire itself?
If you had to rate your experience from 1 to 10, what number would you give it? Why did you choose that number?
Would you tell other people about the chance to do the questionnaire? Would you be happy to invite them to do the study for us too? Why is that?

Debrief

- Explain that we are interested in increasing the number of young women who do surveys that ask them questions about their health and the things that they do which could damage or improve their health. We need to do this because we find it difficult to ask young women to do our studies in a way that means that they are happy to do them.
- Reassure them that a summary of the results will be sent to the college for them to read if they would like to.
- Thank them for their time and check that they do not have any concerns or questions.

Appendix 5.18 Topic framework (full) for Study 2

Research Question: How do young women in FE respond to receiving a health questionnaire in the post?

Topic structure (Topics are highlighted in green and the headings for the framework matrix are in bold)
1. Response to receiving the envelope
1.1 Initial response to receiving the envelope
1.1.1 Feeling adult, important
1.1.2 Making own decision (Exercising autonomy)
1.1.3 Not interested
1.1.4 Excited, cool
1.1.5 Surprised
1.1.6 Stressed, anxious
1.2 Reasons for opening the envelope
1.3 Reasons for not opening envelope or discarding envelope unopened
1.4 Response to being selected to receive the questionnaire (SJH renamed)
1.4.1 Response to focus on young women at college
1.4.2 Responses to personalisation of envelope
1.5 Other
2. Response to the contents of the envelope (Letter, PIS, privacy statement)

2.1 Initial negative response to accompanying documents
2.2 Initial positive response to accompanying documents
2.3 Strategies for managing contents of accompanying documents
2.2.4 Other
2.3.1 Skim reading
2.3.2 Random reading
2.3.3 Not reading them at all
2.3.4. Other
2.4 Strategies for managing threat to privacy
2.5 Response to Brookes logo
2.5.1 Confused by Brookes logo or mislead by logo
2.5.2 Association with Brookes is prestigious or supportive
2.6 Other
3. Response to the contents of the envelope (Questionnaire)
3.1 Initial response to seeing or reading the questionnaire
3.1.1. Completes all or most of the questionnaire
3.1.2. No or minimal attempt to complete questionnaire
3.1.3. Confusion, uncertainty
3.1.4. Did the questions in head without writing down responses
3.1.5. Other
3.2 Rationale for her priorities
3.2.1. Reasons for prioritising the questionnaire
3.2.1.1. Important topic, interesting topic
3.2.1.2. Personal relevance, solidarity with other women
3.2.1.3. Nothing better to do
3.2.1.4. Mood to do the questionnaire
3.2.1.5. Other
3.2.2. Reasons for prioritising other activities
3.2.2.1 Did not recognise topic or its importance
3.2.2.2. Not interested in topic or reservations about sensitive topics
3.2.2.3. Other activities more urgent at the time

3.2.2.4. Other
3.2.3. Other reasons for not completing or returning questionnaire
3.2.3.1 Losing interest or bored or lost the questionnaire
3.2.3.2 Distracted by others
3.2.3.3. Attracted to other activities or commitments
3.2.3.4 Other
3.3 Barriers and Facilitators to completing questionnaire
3.3.1. Barriers to completing questionnaire
3.3.1.1. Feeling poorly equipped to complete questionnaire
3.3.1.2 Peer influence
3.3.1.3 Design issues
3.3.1.4 Need to post questionnaire back
3.3.1.5 Concerns about security of personal information
3.3.1.6. Believing that answers would not be helpful
3.3.1.7. Other
3.3.2. Facilitators to completing questionnaire
3.3.2.1 Clarity of questions
3.3.2.2. Interest in topic
3.3.2.3. Investment of time and energy by researcher
3.3.2.4. Personal contacts
3.3.2.5. Engagement of college people as champions or sponsors of the study
3.3.2.6. Choice to do the questionnaire online
3.3.2.7. Other
3.4 Strategies for managing effort in filling in questionnaire
3.4.1. Systematic approach
3.4.2. Random approach or dipping in and out of the questionnaire
3.4.4. Response preference for tick boxes
3.4.5. Response preference for text boxes
3.4.6. Importance of a Deadline
3.4.7. Reflecting on how others complete questionnaires
3.4.8. Other

3.5 Concern about being judged
3.5.1. Concern about acceptability of questions in the questionnaire
3.5.2. Other
3.6 Benefits gained from reading or responding to the questionnaire
3.6.1. Prompts reflection on her own health or how she treats her body
3.6.2. Other
3.7 Benefits gained from returning the questionnaire
3.8 Presentation of Self in responding to questionnaire
3.8.1. Setting herself apart from classmates
3.8.2. Presenting herself as a 'leader' in her peer group
3.8.3. Presenting herself as different from older adults
3.8.4. Other
3.9 Other
4. Previous experience of questionnaires
4.1 Receiving and completing questionnaires in past
4.1.1. Frequently received and filled in questionnaires from various sources
4.1.2. Have received but did not fill in questionnaires from various sources
4.1.3. Rarely received questionnaires
4.2 Reasons for completing or not completing questionnaires in the past
4.2.1 Does not make a difference to large organisations
4.2.2 Too busy
4.2.3. Too boring
4.2.4 Survey fatigue
4.2.5. Had to do it
4.2.6. Other which includes reasons for completing the questionnaire
4.3 Comparisons between research and other types of questionnaire
4.3.1. Topic or focus of the questionnaire
4.3.2. Nature or extent of engagement with participants
4.3.3. Incentives to complete questionnaires
4.3.4. How responses are used
4.3.5. Other

4.6 Gaining kudos from links to a prestigious organisation or perceived relationships with organisations sending questionnaires
4.7 Other
5. Values informing the decision about completing the questionnaire
5.1 Willingness or desire to be helpful
5.2 Valuing or respecting other people's views
5.3 Non-judgemental or tolerant
5.4 Supportive peer group
5.5 Reciprocity
5.6 Ethical principles
5.7 Other
6. External influences
6.1 Incentives, convenience, reciprocity
6.2 Group dynamics (incl. following a leader, peer pressure
6.3 Concerns about privacy, security of emails, ethical issues
6.4 Information on provenance of questionnaire or researcher credentials
6.5 Other

Appendix 5.19: Ethics approval letters for Study 1 and Study 2

OXFORD BROOKES UNIVERSITY

Dr Lesley Smith
Director of Studies
Department of Psychology, Social Work and Public Health
Faculty of Health and Life Sciences
Oxford Brookes University
Marston Road Site

19 October 2015

Dear Dr Smith

UREC Registration No: 150953
An examination of how to engage under-represented women to studies enquiring about their health risk behaviours, short title: 'B' counted study

Thank you for the email of 1 October 2015 outlining your response to the points raised in my previous letter about the PhD study of your research student **Sarah Howcutt**, and attaching the revised documents. I am pleased to inform you that, on this basis, I have given Chair's Approval for the study to begin.

The UREC approval period for this study is two years from the date of this letter, so 19 October 2017. If you need the approval to be extended please do contact me nearer the time of expiry.

Should the recruitment, methodology or data storage change from your original plans, or should any study participants experience adverse physical, psychological, social, legal or economic effects from the research, please inform me with full details as soon as possible.

Yours sincerely

Dr Sarah Quinton
Chair of the University Research Ethics Committee

cc Anna Barnett and Sofia Barbosa Bouças, Supervisory Team
Sarah Howcutt, Research Student
Hazel Abbott, Research Ethics Officer
Jill Organ, Research Degrees Team
Louise Wood, UREC Administrator

INVESTORS IN PEOPLE | Gold

OXFORD BROOKES UNIVERSITY

Sarah Howcutt
Research Student
Department of Psychology, Social Work and Public Health
Faculty of Health and Life Sciences
Oxford Brookes University
Marston Road Site

15 February 2016

Dear Sarah

UREC Registration No: 150953
An examination of how to engage under-represented women to studies enquiring about their health risk behaviours, short title: 'B' counted study

Thank you for your email of 3 February 2016 requesting some changes to the original study approved by UREC on 19 October 2015.

I confirm that you wish to carry out a second phase of the study. This will include participation from further supporting organisations, from which you have requested permission; the aims and areas of questioning have been broadened and you have supplied updated documentation for these alterations. On this basis I give Chair's approval for these changes. The UREC approval remains the same as the original study, so until 19 October 2017.

Should the recruitment, methodology or data storage change from your original plans, or should any study participants experience adverse physical, psychological, social, legal or economic effects from the research, please inform me with full details as soon as possible.

I wish you continued success with your research.

Yours sincerely

Dr Sarah Quinton
Chair of the University Research Ethics Committee

cc Lesley Smith, Anna Barnett and Sofia Barbosa Bouças, Supervisory Team
Hazel Abbott, Research Ethics Officer
Jill Organ, Research Degrees Team
Louise Wood, UREC Administrator

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OXFORD BROOKES UNIVERSITY

Sarah Howcutt
PhD Student
Faculty of Health and Life Sciences
Oxford Brookes University

30th September 2019

Dear Sarah,

UREC Registration No: 150953
An examination of how to engage under-represented women to studies enquiring about their health risk behaviours, short title: 'B' counted study

Thank you for your email of 16th September 2019 requesting an amendment to the original study approved by UREC on 19th October 2015.

6415-letterhead_background

You would like to collect new data, to recruit female Further Education students only with an age range of 16 to 24 years. You would also like to introduce new questions in health surveys and interviews and you have provided the relevant updated documentation.

There are no other changes to the study and on this basis I give Chair's approval for this change. The UREC approval remains the same as the original extended study, so until 23rd January 2020.

Should the recruitment, methodology or data storage change from your original plans, or should any study participants experience adverse physical, psychological, social, legal or economic effects from the research, please inform me with full details as soon as possible.

I wish you continued success with your research.

Yours sincerely

Dr Sarah Quinton
Chair of the University Research Ethics Committee

cc Professor Anna Barnett, Supervisory Team
Professor Mary Boulton, Supervisory Team
Professor Lesley Smith, Supervisory Team
Dr Kellie Tune, Research Ethics Officer
Jill Organ, Research Degrees Team

OXFORD BROOKES UNIVERSITY

Prof. Anna Barnett
Faculty of Health and Life Sciences
Oxford Brookes University

7th April 2020

Dear Prof. Barnett,

UREC Registration No: 150953
An examination of how to engage under-represented women to studies enquiring about their health risk behaviours, short title: 'B' counted study

Thank you for the email of 3rd April 2020, on behalf of your research student Sarah Howcutt, requesting an amendment to the original study approved by UREC on 19th October 2015, as a result of the current Covid-19 pandemic.

You have requested approval for the use of a transcription service, UK Transcription Services Ltd. On the basis that there are no other changes to the study Chair's approval is granted. The UREC approval remains the same as previously advised, so until 23rd January 2022.

Should the recruitment, methodology or data storage change from your original plans, or should any study participants experience adverse physical, psychological, social, legal or economic effects from the research, please inform me with full details as soon as possible.

I wish you continued success with your research.

Yours sincerely

Dr Sarah Quinton
Chair of the University Research Ethics Committee

cc Sarah Howcutt, Research Student
Dr Kellie Tune, Research Ethics Officer
Jill Organ, Research Degrees Team

Peer reviewed publications

Publication 1

RADAR
Research Archive and Digital Asset Repository

OXFORD BROOKES UNIVERSITY

Howcutt, S., Barnett, AL., Barbosa Boucas, S. and Smith, L. (2017) 'Patterns of response by sociodemographic characteristics and recruitment methods for women in UK population surveys and cohort studies', *Women and Health*

DOI: https://doi.org/10.1080/03630242.2017.1310170

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Manuscript title	**Patterns of response by sociodemographic characteristics and recruitment methods for women in UK population surveys and cohort studies.**
Running Title	Representativeness of women in UK health studies
Author's full names, affiliations and addresses	Sarah J. Howcutt (Oxford Brookes University, Faculty of Health and Life Science, Jack Straw's Lane, Marston, OXON. OX3 0FL) Anna L. Barnett (Oxford Brookes University, Faculty of Health and Life Science, Gipsy Lane, Headington, OXON. OX3 0BP) Sofia Barbosa Boucas (Bucks New University, Queen Alexandra Road, High Wycombe, BUCKS. HP11 2JZ) Lesley A. Smith (Oxford Brookes University, Faculty of Health and Life Science, Jack Straw's Lane, Marston, OXON. OX3 0FL)
Corresponding author's name, telephone number and e-mail address	
Acknowledgements	There is no financial grant or award associated with this work.
Keywords	Women's health; Representativeness; Recruitment; Cohort studies; Population surveys
Figures	Six Figures are submitted. They have been produced in colour format (1200dpi) for online publication only. Black and white versions can be provided for print.
Publication Statement	This work has not been published elsewhere nor submitted simultaneously for publication elsewhere.

Abstract

Women are an important public health focus, because they are more likely to experience some social determinants of disease, and they influence family health. Little research has explored the sociodemographic representativeness of women in research studies. We examined the representativeness of female respondents across four sociodemographic factors in UK population surveys and cohort studies. Six UK population-based health surveys (from 2009 to 2013) and eight Medical Research Council cohort studies (from 1991 to 2014) were included. Percentages of women respondents by age, income/occupation, education status and ethnicity were compared against contemporary population estimates. Women aged <35 years were under-represented. The oldest women were under-represented in four of nine studies. Within income/occupation, at the highest deprivation level, the range was 4% under-representation to 43% over-representation; at the lowest level, it was 6% under-representation to 21% over-representation. Of nine studies reporting educational level, four under-represented women without school qualifications, and three under-represented women with degrees. One of five studies over-represented non-white groups and under-represented white women (by 9%). Response patterns varied by topic and recruitment and data collection methods. Future research should focus upon the methods used to identify, reach and engage women to improve representativeness in studies addressing health behaviors.

Keywords Women's health; Representativeness; Recruitment; Cohort studies; Population surveys

Introduction

A focus of epidemiologic research is to describe patterns of health-related events (Centers for Disease Control and Prevention 2012). Cross-sectional surveys are frequently used to estimate the prevalence of health risks and events at particular time points (Coggon, Rose, and Barker 2016). Data can be collected relatively quickly and compared over time, but surveys rely on samples that represent the populations to which results are extrapolated.

The efficacy of survey recruitment is typically assessed by response rates (Mindell, Aresu, et al. 2012). These have declined in the UK. For example, the response rate of the Scottish Health Survey (SHeS) has fallen from 84% in 1995 (Gorman et al. 2014) to 56 % in 2013 (Corbett et al. 2014). No consensus exists on acceptable response rates, and overall response rates cannot quantify the extent to which samples represent the sampled population. Also, the danger of ecological fallacy exists whereby estimates, for the aggregated data, do not adequately reflect the risks and events of individuals due to under- and over-representation of different sectors of the source population.

Epidemiologic studies also aim to investigate determinants of disease. Cohort studies are useful for this because they allow incidence and etiology to be explored, although they do not necessarily aim for a representative sample. Rothman Gallacher and Hatch (2013) argue that representativeness is irrelevant for establishing causal explanations. Yet in health research, potential explanatory factors may be tied to sociodemographic attributes (e.g., access to information). The external validity of a study is, therefore, threatened if respondents differ, in terms of these determinants, from the population to whom conclusions will be generalized.

Approaches exist to limit non-response bias. These either try to increase response rates or use post-hoc statistical adjustments. Both strategies are problematic. Fieldwork strategies to

increase response rates, such as increased call attempts, are costly and may increase questionnaire item-nonresponse (Olson 2013). Another approach is to target under-represented groups through 'boost' samples, i.e., oversampling of certain communities. Yet, boost samples pose difficulties in identifying sampling frames and may introduce selection bias (Platt 2013).

Statistical adjustment is often used to standardize results to population norms, for example, weighting data to alter the influence of responses (Brick 2013). However, statistical adjustments are only useful for larger data samples with sufficient data to inform assumptions about missing information. They also rely on the flawed supposition that respondents will be similar to non-respondents. In studies investigating alcohol use, heavier drinkers are less likely to participate, so that adjustments result in underestimation of actual consumption (Catto 2008). A further concern is that statistical adjustments effectively increase the sample size, making summary statistics appear more accurate than they should.

Considerable research has already identified sociodemographic characteristics linked with lower response, suggesting that non-respondents are more likely to be male, young or elderly (if infirm), in lower income occupations, educated to lower levels and unmarried (Uhrig 2008). These findings present a challenge to representativeness and consequently to external validity. While concerns about the external validity are relevant to both genders, this paper focuses upon women. Considerable focus in the UK has been upon the methods to understand social determinants of health to reduce health inequalities (Scottish Public Health Observatory 2015). Gender is an important factor. Data suggest that women experience a greater number of years with ill-health and disability, despite longer life expectancy (Office for National Statistics 2015). Women are also marginally more vulnerable to deprivation, an important predictor of ill-health (Office for National Statistics UK 2015a). Moreover, women's health risk behaviors are particularly influential over the later health behaviors of

their children (Griffith et al. 2007). Therefore, women are an important focus for harm prevention, yet little research has explored the extent to which study samples represent the population from which they are drawn.

The aim of these analyses was to describe patterns of response for women by sociodemographic attributes across a sample of health-related population-based surveys and cohort studies in the UK, to compare these against sociodemographic profiles of respective sampled populations.

Methods

Study selection

General population surveys were identified via the UK Data Service and included if they covered one or more UK nations and if their focus was health and/or health risk behaviors (e.g., tobacco use). Data for the last five years available at the time of writing were explored (2009-2013). Medical Research Council (MRC) cohort studies were identified from the *Cohort Directory* (Medical Research Council 2015) and included if they recruited women aged 16 to 65 years from non-treatment seeking populations. Data collection period was not an exclusion criterion, and data collection periods of the reviewed studies spanned 1991-2014. We selected MRC studies because they were considered to be of high methodological quality. Cohort studies concerned solely with individuals with a shared medical diagnosis or workplace were excluded because they were not recruiting a general population sample. This review focuses upon adult women's health, not ageing, and therefore studies which only recruited women >50 years were also excluded, as were birth cohort studies when their focus was solely on infant/child health.

Data sources

For the population surveys, data for each sociodemographic factor were taken from unweighted datasets held by the *UK Data Service* (Department of Health, Social Services and Public Safety 2013; Field et al. 1995; Johnson et al. 2005; Johnson and Centre for Sexual and Reproductive Health Research 2015; National Centre for Social Research 2011; 2013; 2014; 2014a; 2015; National Centre for Social Research et al. 2005; 2013; 2014; 2015; 2015a; 2015b; School Scottish Centre for Social Research 2009; 2010; 2011; 2012; 2013), with the exception of the General Lifestyle Survey. Data for this survey series were taken from the survey's Technical Appendices (Dunstan 2012; Office for National Statistics 2011; 2011a). Annual population survey data were extracted for the years 2009-2013. One population survey - the National Survey for Sexual Attitudes and Lifestyles (Natsal) is conducted every 10 years, and data were therefore taken from the 1990-1991, 1999-2001 and 2010-2012 runs. Data for cohort studies came from published articles (Cade et al. 2015; Davey et al. 2003; Fone et al. 2013; Fraser et al. 2013; Hayat et al. 2014; Inskip et al. 2006; Robinson et al. 2004; Swerdlow et al. 2011; Wilkinson, Inskip, and Southampton Women's Survey Study Group 2006), with the exception of *Understanding Society* for which it was possible to obtain data from the technical summary (Buck, Laurie, and Nolan 2011) and the *UK Data Service* (University of Essex, 2015).

Sociodemographic attributes

Age, socioeconomic status, defined by measures of occupation/income and education and ethnicity, were the selected sociodemographic attributes. Marital status was also explored, but this was not included due to the large variation in categories used by each study which limited meaningful comparison.

Age was summarized in 10-year age groups taken from the original data sources or created by collapsing data for single years of age for which raw data were available. Age data from cohort studies were taken as reported in published articles.

Proxy measures of socioeconomic status (SES) were selected which reflected economic status. Most often this was the National Statistics Socioeconomic Classification 8 (NS-SeC 8) to provide a good level of detail for subgroups (Office for National Statistics 2010). Education was classified by level of the highest qualification earned to facilitate comparisons between systems and over time. English and Scottish levels were compared using the Scottish Credit and Qualifications Framework Partnership (2015). The National Careers Service (2015) and Health Education East Midlands (2013) allowed changes in English Qualifications over time to be reconciled.

Ethnicity has only recently been routinely collected in UK surveys, and a wide range of classification systems exist due to changes in the political and social landscape (Mathur, Grundy, and Smeeth 2013). To facilitate comparison between different classification systems used, ethnicity was simplified to four categories: 'white', 'black' (black African and black Caribbean), Asian (Indian, Bangladeshi, Pakistani and Chinese) and 'Other' (mixed race and other ethnicities).

Summary statistics

The unit of analysis was the individual to facilitate comparison across studies because not all studies had household data. If full datasets were available, the denominator in percentage calculations was the percentage of the total number of female respondents classified within each category.

Population estimates were primarily taken from census data. These data were obtained from the UK Data Service. The InFuse portal (Office for National Statistics 2011c) was used to

locate data within the 2001 and 2011 censuses for England and Wales and the *Casweb* portal (Office for National Statistics 1991) for the 1991 iteration. The *Census for Scotland* was accessed via*, the Census Data Explorer* (National Records for Scotland 2015)

Estimates were as specific as possible to region. To compare region-specific cohort studies, we selected county-level data. These were taken either from the peer-reviewed publications or were derived from mid-year population estimates, using the Stats Wales tool (2015) or Office for National Statistics reference tables (Office for National Statistics 2015b).

Contemporaneous data were used for population estimates for comparison against the population surveys and cohort studies. In comparisons between population estimates and samples, we used data from the nearest available year. We were only able to explore response rates across multiple years for age due to insufficient data for other sociodemographic attributes. Aggregate census data was the main source of population estimates for SES, education and ethnicity, and therefore the year 2011 was selected for these attributes to allow comparison against the most recent census datasets.

To assess representativeness, we calculated the difference between the percentage of each sociodemographic attribute in each sample and in the population. Negative values denoted under-representation and positive values over-representation.

Results

Six population surveys were included (Department of Health, Social Services and Public Safety 2013; Dunstan 2012; Field et al. 1995; Johnson et al. 2005; Johnson and Centre for Sexual and Reproductive Health Research 2015; National Centre for Social Research 2009; 2010; 2011; 2012; 2013; 2013a; 2014; 2015; 2015a; 2015b; Office for National Statistics 2011; Office of National Statistics 2011; Scottish Centre for Social Research, University

College London. Department of Epidemiology and Public Health 2015; 2015a; 2016, 2016a; 2016b) (Table 1).

Each population survey was repeated annually, except the National Survey of Sexual Attitudes and Lifestyles (Natsal), which is conducted every 10 years. All involved adults aged 16 years and over; however, the Natsal survey stopped at age 44 years for the first two iterations and at age 74 years for the third. The Scottish Health Survey (SHeS) had the smallest sample, and the General Lifestyle Survey (GLS) has the largest. The Welsh Health Survey (WHS) was the newest, having been first conducted in 2003. **[Place Table 1 here.]**

Eight cohort studies were included (Buck et al. 2011; Cade et al. 2015; Davey et al. 2003; Fone et al. 2013; Fraser et al. 2013; Hayat et al. 2014; Inskip et al. 2006; Robinson et al. 2004; Swerdlow et al. 2011; Wilkinson et al. 2006; University of Essex 2015) (Table 2). Data were available for the period between 1993 and 2009. Three cohorts were on a national scale, and five were regional. The Avon Longitudinal Study of Parents and Children (ALSPAC) and the Southampton Women's Study (SWS) focused on family health; the *Breakthrough Generations*, two European Prospective Investigations into Cancer (EPIC-Oxford and EPIC-Norfolk) and the UK Women's Cohort Study (UKWCS) projects focused upon cancer prevention. The remaining studies explored links between sociodemographics and health. Only limited data covering the entire cohort were available to the authors for the ALSPAC, and therefore these are only reported in the text. **[Place Table 2 here.]**

Two cohort studies were excluded. These were the UK Biobank, because this cohort profile was only available as an abstract (Hutchings et al. 2014), and the Southall and Brent Revisited study had a very small (n=1,198) target sample of women (Tillin et al. 2012).

Recruitment and fieldwork techniques

The national population surveys used stratified samples based upon random selection of addresses from postcode sectors (Corbett et al. 2014; Erens et al. 2014; Mindell et al. 2012; Office of National Statistics 2011; Sadler et al. 2013). All surveys used face-to-face interviews, recorded using computerized assisted personal interviewing. In the Natsal and Northern Ireland Health Survey (NIHS), participants answered sensitive questions in writing to reduce embarrassment. In Nastsal III a boost sample was used to increase the sensitivity of analyses in 16-34 year-olds (Erens et al. 2014).

More variation in study recruitment was observed for the cohort studies. The *Breakthrough Generations* study (Swerdlow et al. 2011) needed a committed group due to the study's requirements. They initially advertised through national cancer charities and then encouraged chain or snowball referrals from existing members to strengthen social ties between participants. The E-CATALyST study (Fone et al. 2013) employed postal contacts. Visits were organized to follow up missing questionnaires and verify property occupancy.

Both *EPIC* studies used postal recruitment using lists from family doctors (Davey et al. 2003; Hayat et al. 2014) but the *EPIC* Oxford also asked vegetarian and vegan societies to advertise the study to reach non-meat eaters. In both EPIC studies, family doctors and research nurses took biological samples.

The SWS sent leaflets and letters to eligible women (identified via family doctor registers) (Inskip et al. 2006). This was followed by a telephone call, a letter and visit to update contact details. To reach women who were not registered with a local family doctor, women were also approached in supermarkets and at local events.

The UKWCS, like EPIC Oxford, also wanted to recruit non-meat eaters (Cade, Burley, and Greenwood 2004). This study, however, contacted women via the World Cancer Research Fund using mailing lists targeted at women, including a number of charity databases. All

vegetarians were selected, and a systematic sampling procedure was devised to create a meat-eating comparison group.

Understanding Society used, like the population surveys, stratified sampling based upon postal code sectors to divide the UK into sampling units. A boost sample and inclusion of the British Household Panel Survey respondents allowed this study to develop an extremely large sample of minority groups. The sample was clustered in most of the UK with the exception of Northern Ireland (Buck et al. 2011). *Understanding Society* employed a variety of data collection techniques, including the collection of audio and video qualitative data plus record linkage.

Patterns of Response by Sociodemographic Attributes

Age

A consistent pattern was observed across surveys and over time of under-representation of lower age groups and over-representation of older age groups (Figure 1). This ranged from 10% under-representation in 16-24 year olds to 3% over-representation in > 44 year olds. **[Place Figure 1 here.]**

Differences between year of data collection in the population surveys (Figure 1), comparing the same age group in the same survey, were all within 2%, apart from the SHeS in which a 3% reduction in under-representation occurred between 2012 and 2013 for the 25 to 34-year age group. The Natsal differed from the other population surveys in that the first two iterations demonstrated the same pattern of under-representation at younger ages noted above (Figure 2). However, the results in the Natsal III were reversed. Individuals younger than 35 years were over-represented, and older groups were under-represented. **[Place Figure 2 here.]**

In the cohort studies (Figure 3), with the exception of *Understanding Society*, the youngest age group was also under-represented. In two of the four studies, the oldest age group was under-represented. The *EPIC Norfolk* study recruited participants aged at least 40 years with the youngest and oldest age groups under-represented. **[Place Figure 3 here.]**

Socioeconomic Status (Occupation and Income)

At the highest deprivation categories (according to the different measures used in the original datasets), three of four population surveys and one of three cohort studies with data showed under-representation of 2% to 15% (Figure 4). At the lowest level of deprivation, one of four population surveys and one of three cohort studies with data showed under-representation of 1% to 6%. The pattern for deprivation was less clear than for age, but the percentage differences between samples and population estimates were much larger in some cases. Notably *Understanding Society* over-represented women with high deprivation by 43% and *Breakthrough Generations* over-represented those with lower deprivation by 21%.

In addition, the ALSPAC study (not reported in Figure 4 due to the smaller number of categories) had a sample which over-represented women owning cars (7% higher levels than Avon estimates) and homeownership (10% higher than Avon estimates) (Fraser et al. 2013). Data were only available for genders combined in the *E-CATALyST* and population estimates from 2011 Census (England, Wales and Scotland). **[Place Figure 4 here.]**

Socioeconomic Status (Education)

Two of four population surveys and two of five cohort studies demonstrated under-representation at the lowest level of education; two of four population studies and one of five cohort studies showed under-representation at the highest qualification level (Figure 5).

The SWS had the greatest under-representation at the lowest educational level (16%) (Wilkinson et al. 2006). While the WHS had the highest under-representation of women with

level 4 (university) education (10%), EPIC Oxford had the highest over-representation at this qualification level (28%). *EPIC* Norfolk was the most successful in obtaining representation of those with no qualifications (22%), and yet it was the study that did not achieve representative samples at level 4 and over. **[Place Figure 5 here.]**

Ethnicity

Few included studies reported response rates by ethnicity. Individuals who classed themselves as white were over-represented by 1% in the HSE and 2% in the Natsal III (Figure 6). Asians were under-represented by 1% and 2% in the SHeS and Natsal III, respectively. *Understanding Society* employed a boost sample. 'White' women were under-represented by 9%. In the *ALSPAC* cohort, non-white mothers were under-represented by 2% compared to 1991 Census figures for Avon. No under-representation was observed in the 'Black' or 'Other' groups in the included studies. **[Place Figure 6 here.]**

Discussion

Overall a clear and consistent under-representation was observed of women at younger ages. Patterns of under-representation, particularly within SES attributes, were more varied. The differences between percentages of women within samples and populations were large in some cohort studies, particularly if income/occupation was the attribute under consideration.

We found under-representation of women under the age of 35 years, notably in the population surveys. Lower response by young people has been attributed to availability. Stoop (2005) notes that younger individuals are difficult to contact and engage due to lack of landlines and time spent away from home for work/leisure activities. Older people may be more willing to participate due to greater ties to their social community (Groves and Couper 1998).

Some exceptions to under-representation at younger ages were observed, which could have been related to question topics. For example, *Understanding Society* included crime and

security. The different age profile in that study could suggest that reduced focus upon health may have attracted different ages.

Recruitment strategies could also have affected response. Surveys employing methods with reduced direct contact seemed to under-represent women in the youngest and oldest age groups. Reliance upon charity mailing lists could reduce the younger and older people within the sampling frame because they may have had less disposable income to donate to these organizations. Interestingly, even when only middle to older aged individuals were the recruitment target, the youngest and oldest age groups were still under-represented in *EPIC* Norfolk, suggesting that contact methods (e.g. survey literature) may not appeal to all ages.

Overall, the data showed greater under-representation at higher levels of deprivation, suggesting that women with lower socioeconomic status were less willing to participate. Groves and Couper (1998) have attributed this, in part, to pessimism in those with lower socioeconomic status, which is translated into reduced willingness to help organizations viewed as contributors to their difficulties. However, under-representation was also seen at the lowest level of deprivation. This finding could perhaps support the idea that availability may be a further barrier to participation. People with lower incomes may be less accessible to contact due to irregular shift patterns and those with higher income due to long work hours but also staying away from home during leisure hours due to their greater disposable income.

Differences between cohort studies SES also suggested that recruitment strategies and survey topic were influential in response. Thus, *Breakthrough Generations* had a relatively large over-representation at the lowest level of deprivation, and this study relied on charity mailing lists and chain or snowball referral methods to contact new participants. This may have resulted in wealthier individuals contacting people within their social networks who may have been of similar socioeconomic status levels. Finally, as stated above, the *Understanding*

Society study was not simply focused on health but also upon wider social and economic issues. It is possible that these topics may have had more appeal to those with higher levels of deprivation.

This review showed a pattern of greater under-representation at lower educational levels. This is not unexpected, in the light of trends found for deprivation, because higher-earners often have more education. Yet Groves and Couper (1998) isolated education to specify that greater levels of education may be associated with increased willingness to respond due to ability to see the societal benefits of research. It would also make intuitive sense that the amount of reading and interpretation required in study materials could be a barrier to participation for populations whose educational attainment is low.

The data suggest, however, that other factors were involved in the pattern of education and response. Both *EPIC* studies used postal recruitment through patient lists from family doctors. Yet *EPIC* Norfolk was more successful at representing individuals with lower levels of education than *EPIC* Oxford. This may have been due to the fact that the topics were slightly different; the older age range in *EPIC* Norfolk could have mitigated lower education. *EPIC* Oxford extended the sampling frame by using vegetarian/vegan organizations. Interest in this diet may have been more relevant to those with higher educational qualifications, because higher levels of education have been observed in vegetarian groups (e.g. Gale et al. 2007). More difficult to explain were the differences observed in the general population health surveys in which the questionnaires and recruitments strategies were similar. More research is needed to understand why the WHS seemed more successful at representing populations with lower levels of education. This cannot be explained by sampling, topic or by prevalence of level 4 education in the population because, while lower than other nations in the UK, this is only by 1% compared with Scotland and by 2% compared with England (Office for National Statistics 2011).

Regarding ethnicity, white women were more likely to be over-represented, and only women classed as 'Asian' were under-represented. The use of boost samples in *Understanding Society* was successful at recruiting ethnic minorities. However, the resultant sample could not be used to provide estimates of health risk without statistical adjustment.

Interestingly, the levels of underrepresentation for different age groups were similar over time within the population surveys. Achieving high overall response rates can mitigate the bias due to the 'healthy volunteer effect'. In the current climate of declining response rates; however, it is unlikely that sufficient overall response will be achieved to overcome this source of bias. Addressing underrepresentation may be a useful strategy to reduce the healthy volunteer effect because it is likely to bring more people from sociodemographic groups at risk (Buck and Frosini 2012) into the sample. Arguably, some of the differences between population and sample distributions were quite small. The included studies aimed to provide summary statistics for a population. However, other research has demonstrated that the prevalence of certain risk behaviors is higher in the under-represented groups than in the rest of the population and that reported reductions in risk behaviors are driven by changes in individuals with higher socioeconomic status (Catto 2008). Therefore, even these small differences may translate to problematic underestimations of harmful behaviors in the groups who are at greatest risk. An additional limitation of this work is that we chose to focus upon response patterns by social determinants only in women. Therefore, we were unable to comment on representation by these factors in men or sex differences in response according to these factors.

The key strength of this work was the integration of multiple surveys which employed different recruitment strategies and approached different health topics. However, to achieve this broad overview, it must also be acknowledged that pragmatic decisions had to be taken to integrate such a large amount of data. Classification differences, related to differences over

time and study objectives, made it difficult to compare studies exactly. For the same reason, certain attributes had to be excluded or reduced to broad categories, as in the case of ethnicity. A reliance on secondary data also meant that some studies did not contribute data for each sociodemographic attribute. However, we believe that because the aim of this study was to look at overall patterns, these difficulties did not prevent the aims of the review from being met.

Conclusion

The findings of these analyses suggest that health survey results have not been representative of women from all sociodemographic groups in the UK. If single studies were considered in isolation, clear associations appeared between sociodemographic characteristics and participation. However, this work is useful because it has integrated the findings from multiple surveys to demonstrate that topic, recruitment strategies and fieldwork strategies may affect response patterns. Future research should now consider how to identify, reach and engage women in a way that improves sample representativeness. Over- and under-representation among men included in surveys and studies, and gender differences in over- and under-representation should also be explored.

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Table Titles

Table 1 – Included large population surveys: sample characteristics, sample size, geographic regions, dates covered and study focus

Table 2 – Included cohort studies: cohort characteristics, sample size, geographical regions, recruitment period and study focus

Figure Legends

Figure 1: Difference between percentage of female respondents within general population survey samples and population estimates by age group: NIHS, HSE, SHeS, WHS and GLS for years 2009 to 2013

Figure 2: Difference between percentage of female respondents in Natsal I (1990-1991), II (1999-2001) and III (2010-2011) and population estimates for England and Wales by age group

Figure 3: Difference between percentage of female respondents within cohort study samples and population estimates by age group

Figure 4: Difference between percentage of female respondents within general population survey and cohort study samples and population estimates by levels of deprivation

Figure 5: Difference between percentage of female respondents within general population survey and cohort study samples and population estimates by highest level of education attained

Figure 6: Difference between percentage of female respondents within general population survey (Natsal -3, SHeS and HSE) and cohort study samples (*Understanding Society*) and population estimates by ethnic group

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Patterns of response by sociodemographic characteristics and recruitment methods for women in UK population surveys and cohort studies.

Table 1 – Included large population surveys: sample characteristics, sample size, geographic regions, dates covered and study focus

Survey	Sample Characteristics	Latest Available Sample Size (Year)	Geographic Region	Dates Covered by Survey (Frequency)	Study Focus
General Lifestyle Survey (GLS)[a]	Adults aged 16 and over in private households.	18,367 (2011)	Great Britain	1971 -2012 (annual)	Multipurpose – gathers information about households and families for use by education, health, business and charity sector.
National Survey of Sexual Attitudes and Lifestyles (Natsal)	Natsal 1&2 – adults aged 16 to 44 Natsal 3 – adults aged 16-74	15,162 (2010)	Great Britain	1990 – 2011 (every 10 years)	Sexual behaviour
Health Survey for England (HSE)[b]	Approximately 8000 Men and women in private households aged 16 and over	10,980 (2013)	England	1991 to 2013[b] (annual)	Health – risk factors, past and current health status
Northern Ireland Health Survey (NIHS)[b]	Adults in private households aged 16 and over.	3059 (2010-2011)	Northern Ireland	2010/2011	
Scottish Health Survey (SHeS)[b]	Adults in private households aged 16 and over	6,733 (2013)	Scotland	1995, 1998, 2003, 2008 – 2013[b] (annually)	
Welsh Health Survey (WHS)[b]	Adults aged 16 and over in private households	15,007 (2013)	Wales	2003/4 – 2013[b]	

[a] This survey was named the 'General Household Survey' until 2008.

[b] These surveys continue beyond this date but data were unavailable for all surveys at the time of writing.

Table 2 – Included cohort studies: cohort characteristics, sample size, geographical regions, recruitment period and study focus

Cohort Study	Cohort Characteristics	Sample Size at Recruitment	Geographical Region	Recruitment Period	Study Focus
ALSPAC	Mothers/ pregnant women aged 16 to 45 years	Mothers 14,541	Hampshire England	1991-1992	Health and educational outcomes for mothers and their children
Breakthrough Generations	Women aged >16 years.	112,798	British Isles	2003-2011	Links between lifestyle characteristics and cancer.
The Caerphilly Health and Social Needs Electronic Cohort Study E-CATALyST)	Adults aged ≥ 18 years	17,979	Caerphilly	1998-2008	Sources of health inequalities.
European Prospective Investigation of Cancer, Norfolk (EPIC-Norfolk)	Adults aged 40-79 years. Living in Norfolk and surrounding areas.	30,000	Norfolk	1993-1997	Diet, exercise and lifestyle and cancer.
European Prospective Investigation of Cancer, Oxford (EPIC-Oxford)	Men and women aged 17 to 98 years. Mainly vegetarians	65,000	Oxfordshire, Buckinghamshire and Greater Manchester	1993-2000	Influence of diet on cancer risk.
Southampton Women's Study (SWS)	Women aged 20-34 years	12,583 women	Southampton	1998-2002	Dietary and lifestyle factors.
UK Women's Cohort Study (UKWCS)	Women aged 35-62 years	35, 372	England, Wales and Scotland	1994-2002	Links between diet and cancer in the UK
Understanding Society	Men and women of all ages	40,000 households (100 000 individuals) Health questions for 20 000 individuals	UK (including North Caledonian Canal)	2009-2014	Social and economic status and attitudes.

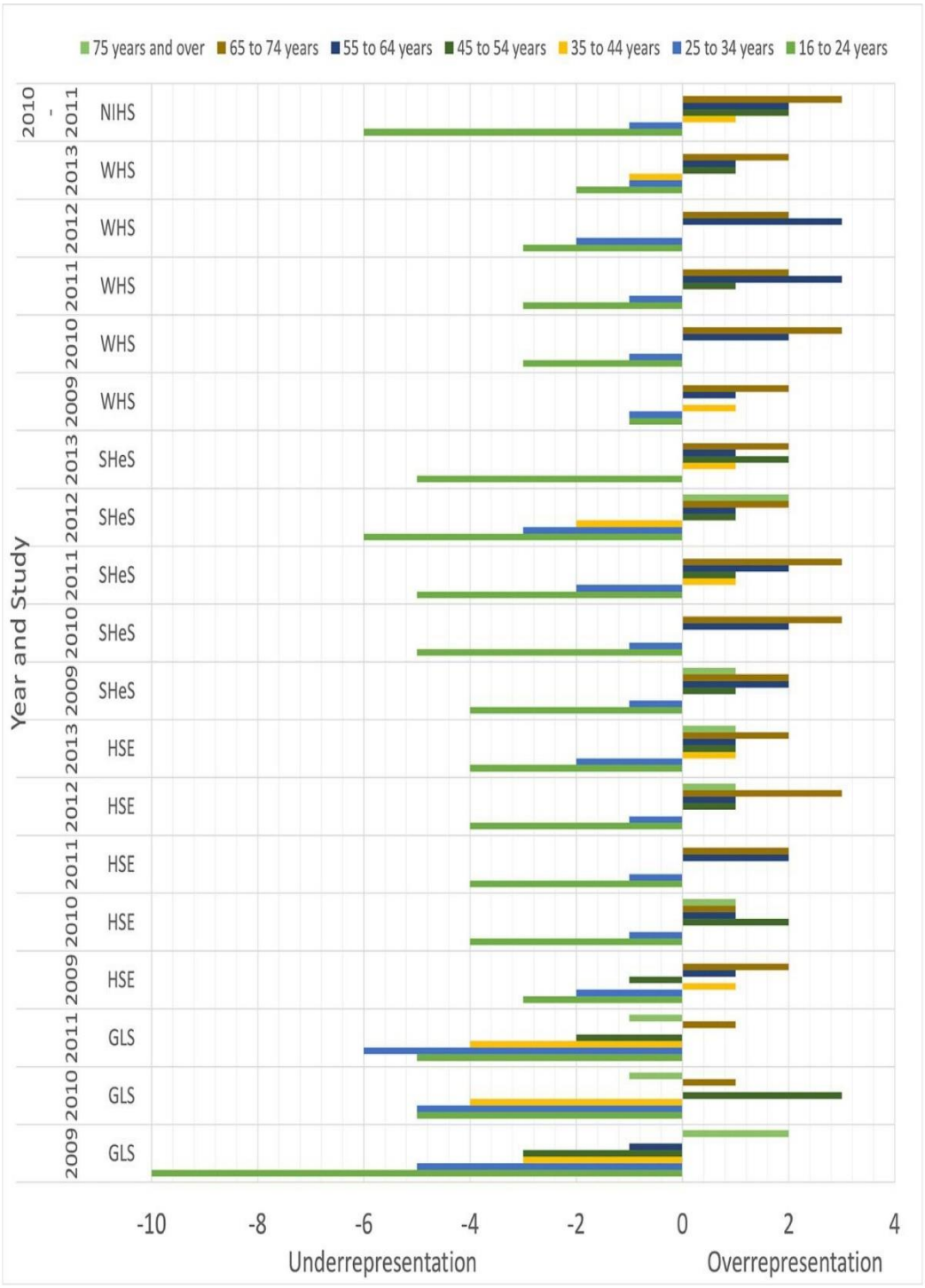

75 years and over
65 to 74 years
55 to 64 years
45 to 54 years
35 to 44 years
25 to 34 years
16 to 24 years
Year and Study
2010 - 2011 NIHS
2013 WHS
2012 WHS
2011 WHS
2010 WHS
2009 WHS
2013 SHeS
2012 SHeS
2011 SHeS
2010 SHeS
2009 SHeS
2013 HSE
2012 HSE
2011 HSE
2010 HSE
2009 HSE
2011 GLS
2010 GLS
2009 GLS
-10
-8
-6
-4
-2
0
2
4
Underrepresentation
Overrepresentation

Fig 1

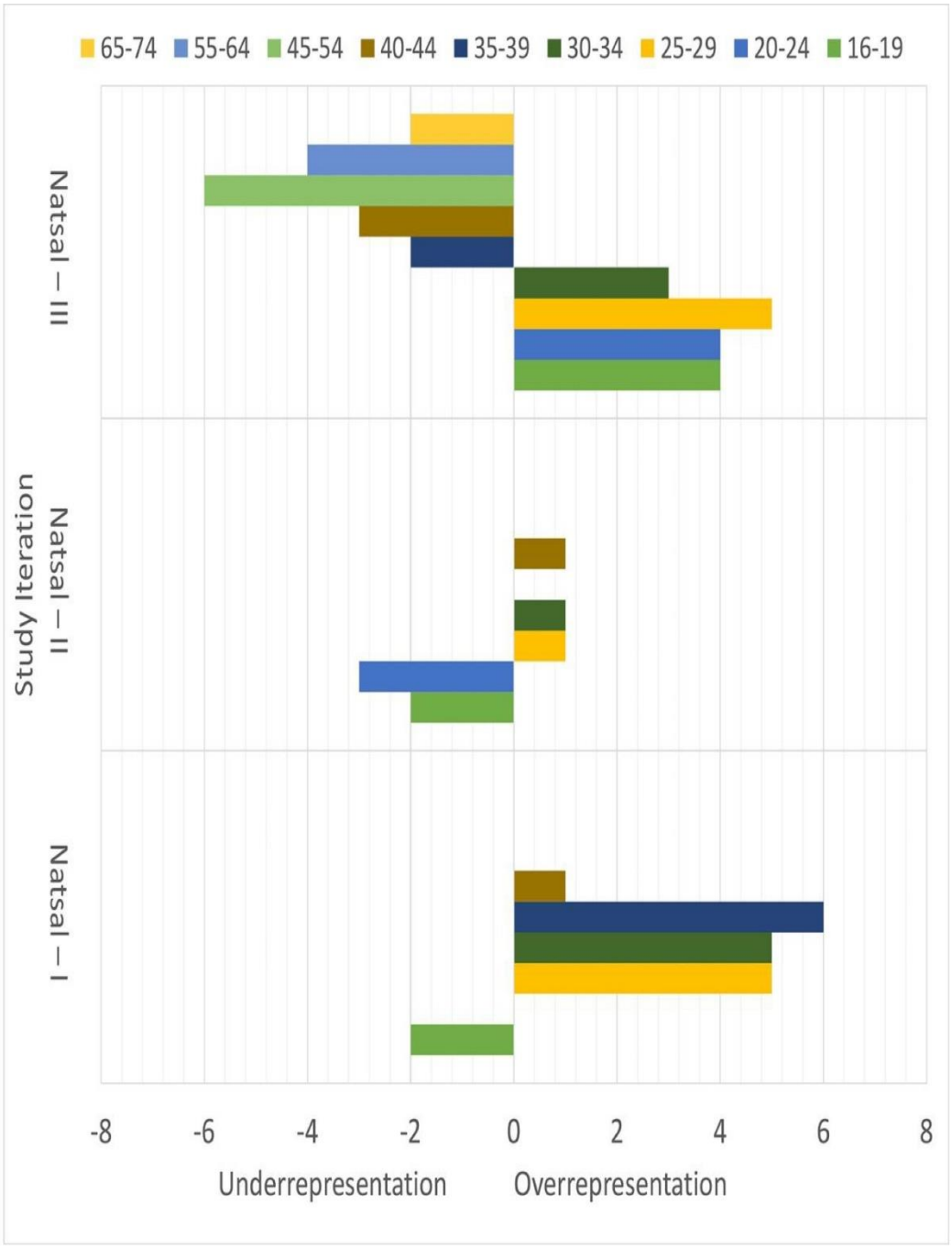

65-74
55-64
45-54
40-44
35-39
30-34
25-29
20-24
16-19
Natsal – III
Natsal – II
Natsal – I
Study Iteration
-8
-6
-4
-2
0
2
4
6
8
Underrepresentation
Overrepresentation

Fig 2

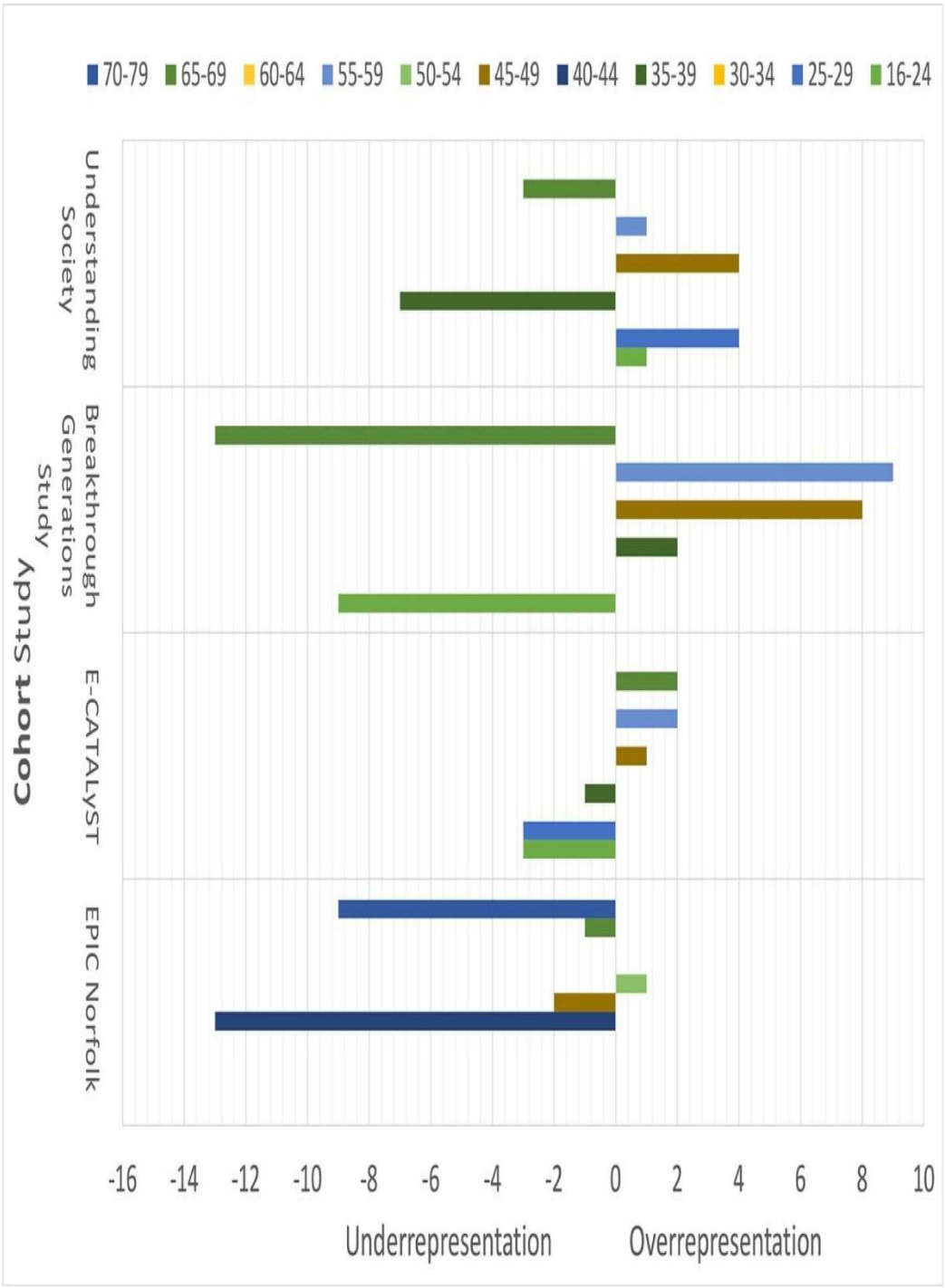

70-79
65-69
60-64
55-59
50-54
45-49
40-44
35-39
30-34
25-29
16-24
Cohort Study
Understanding Society
Breakthrough Generations Study
E-CATALyST
EPIC Norfolk
-16
-14
-12
-10
-8
-6
-4
-2
0
2
4
6
8
10
Underrepresentation
Overrepresentation

Fig 3

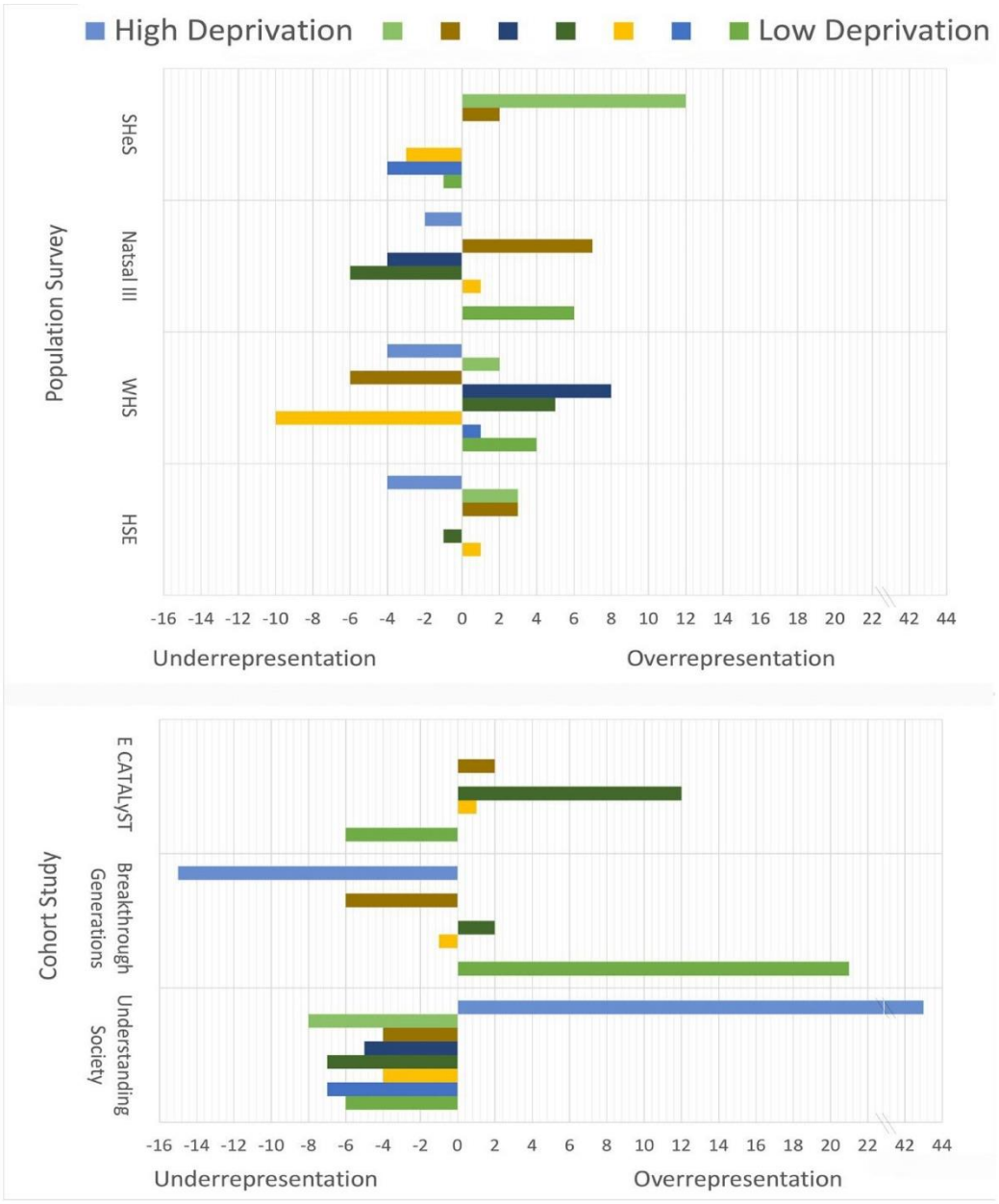

High Deprivation
Low Deprivation
Population Survey
SHeS
Natsal III
WHS
HSE
-16 -14 -12 -10 -8 -6 -4 -2 0 2 4 6 8 10 12 14 16 18 20 22 42 44
Underrepresentation
Overrepresentation
Cohort Study
E CATALyST
Breakthrough Generations
Understanding Society
-16 -14 -12 -10 -8 -6 -4 -2 0 2 4 6 8 10 12 14 16 18 20 22 42 44
Underrepresentation
Overrepresentation

Fig 4

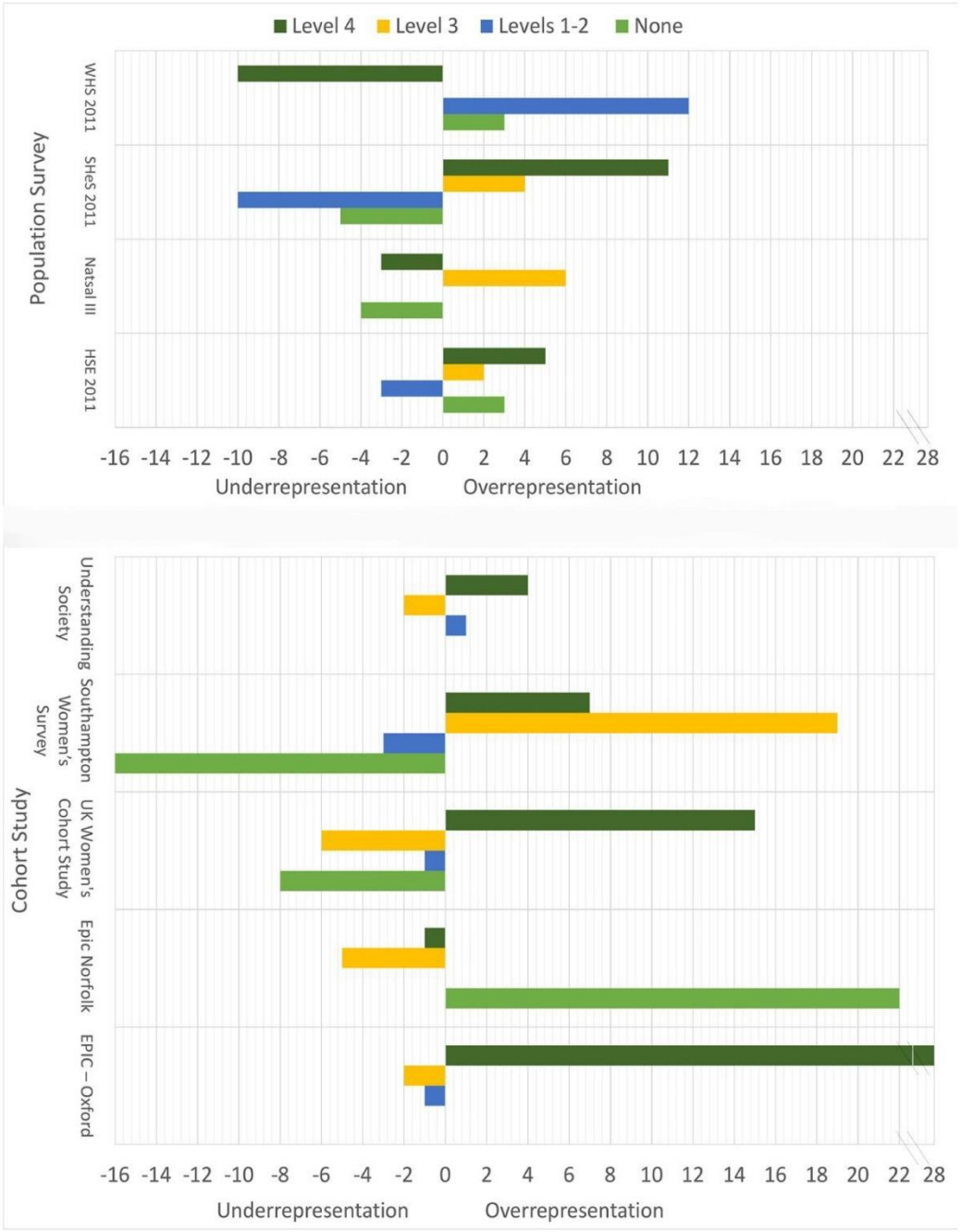

Level 4
Level 3
Levels 1-2
None
Population Survey
WHS 2011
SHeS 2011
Natsal III
HSE 2011
-16 -14 -12 -10 -8 -6 -4 -2 0 2 4 6 8 10 12 14 16 18 20 22 28
Underrepresentation
Overrepresentation
Cohort Study
Understanding Society
Southampton Women's Survey
UK Women's Cohort Study
Epic Norfolk
EPIC – Oxford
-16 -14 -12 -10 -8 -6 -4 -2 0 2 4 6 8 10 12 14 16 18 20 22 28
Underrepresentation
Overrepresentation

Fig 5

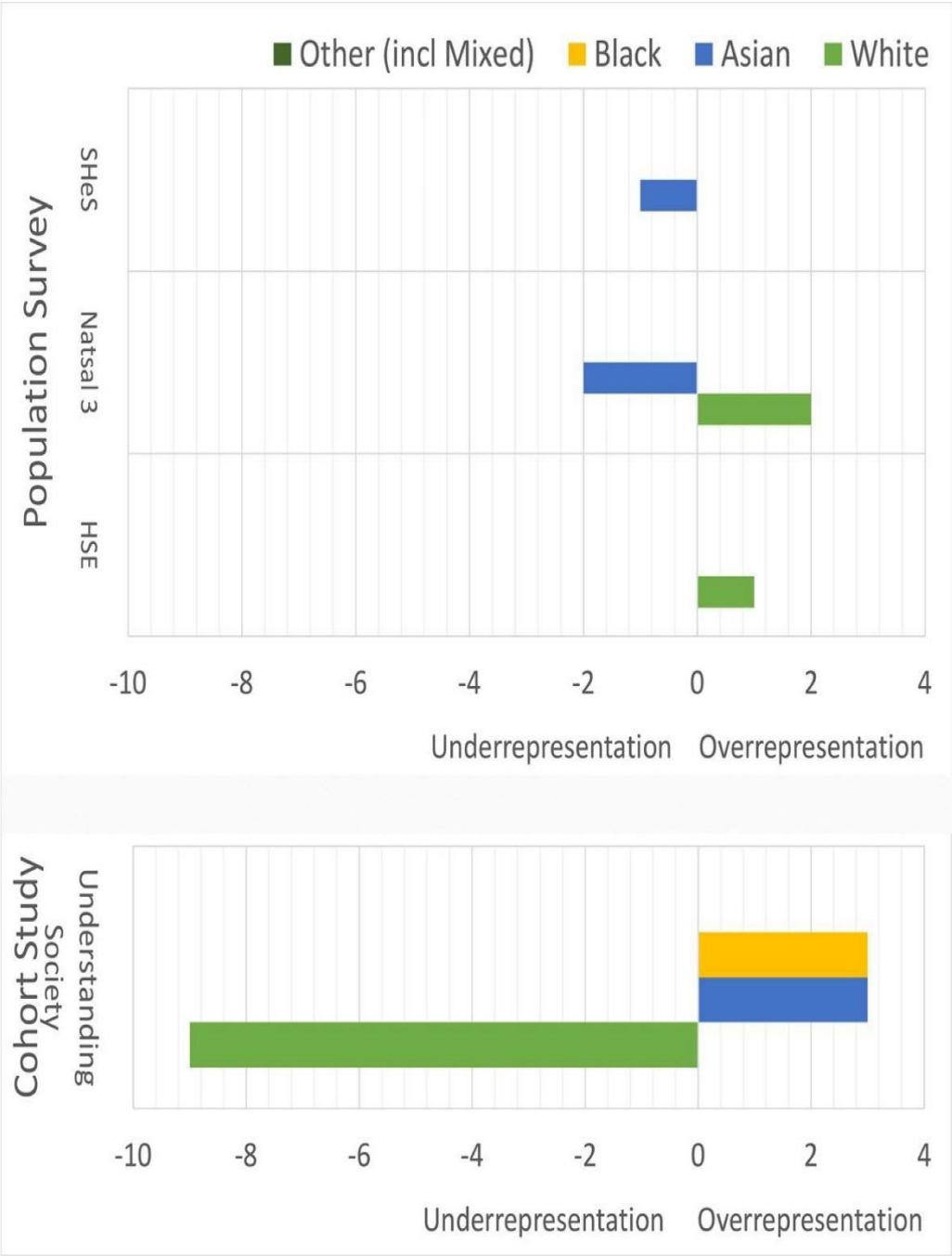

Other (incl Mixed)
Black
Asian
White
Population Survey
SHeS
Natsal 3
HSE
-10
-8
-6
-4
-2
0
2
4
Underrepresentation
Overrepresentation
Cohort Study
Society
Understanding
-10
-8
-6
-4
-2
0
2
4
Underrepresentation
Overrepresentation

Fig 6

Publication 2

Research recruitment: A marketing framework to improve sample representativeness in health research

Running Head: Marketing to improve sample representativeness

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No conflict of interest has been declared by the authors.

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

ABSTRACT

Aims

This discussion paper proposes a five-part conceptual framework to inform recruitment strategies. The framework is based on a marketing model of consumer decision-making.

Background

Respondents in surveys are typically healthier than non-respondents, which has an impact on the availability of information about those most in need. Previous research has identified response patterns, provided theories about why people participate in research and evaluated different recruitment strategies. Social marketing has been applied successfully to recruitment and promotes focus on the needs of the participant, but little attention has been paid to the periods before and after participant-researcher contact (during advertising and following completion of studies). We propose a new model which conceptualises participation as a decision involving motivation, perception of information, attitude formation, integration of intention and action and finally evaluation and sharing of experience.

Design

Discussion paper

Data sources

This discussion paper presents a critical review. No literature was excluded on date and the included citations span the years 1981 - 2017.

Implications for nursing

The proposed framework suggests that researchers could engage a broader demographic if they shape research design and advertising to perform functions that participants are seeking to achieve. The framework provides a novel and useful conceptualisation of recruitment which could help to inform public engagement in research design, researcher training and research policy.

Conclusion

This framework challenges researchers to investigate the goals of the potential participants when designing a study's advertising and procedures.

KEY WORDS: survey designs, research methods, research implementation, psychology, inequalities in health, consumers, nurses, midwives

SUMMARY STATEMENT

Why is this research or review needed?

- Sample representativeness is difficult to achieve and it is the people at greatest risk of ill-health that tend to be underrepresented in research studies focused on prevention of risk behaviours and/or ill-health.
- There is a lack of research considering how the decision to participate is influenced by an individual's personal and social factors.

What are the key findings?

- Focus on response patterns or strategy effectiveness underplays the complexity of response behaviour.
- Without understanding the psychological and social influences on participation, efforts to improve recruitment may increase overall response but not necessarily sample representativeness.
- Marketing theories may provide useful insight because they suggest how to shape research and place advertisements so that potential participants are more likely to see, attend to and respond positively to invitations to participate.

How should the findings be used to influence policy/practice/research/education?

- The proposed conceptual framework should be used to communicate to researchers how time and resources should be used to improve the recruitment of inclusive samples.
- The framework provides a useful visualisation of recruitment which could be valuable in researcher training.

- These findings should influence research practice by encouraging researchers and policy makers to plan for sufficient time to involve underrepresented groups in pilot work to inform recruitment strategies.

INTRODUCTION

The ability of a survey to provide generalisable data about a population depends on the participation rate (Mindell, Aresu, *et al.*, 2012). Declines in response are not inherently problematic unless non-respondents differ from respondents with respect to behavioural and social determinants of health, which then may affect the validity of the findings. A body of research shows that individuals who complete health surveys are generally healthier than those who do not. For example Tolonen et al. (2010) used personal codes assigned to respondents and non-respondents to link survey response to national mortality records for the same individuals. Non-respondents experienced excessive mortality compared with respondents. Moreover, cause of death records suggested that non-respondents were at higher risk of serious illness and more likely to engage in health risk behaviours such as excessive alcohol consumption. Such findings mean that to reduce bias in estimates of health risk, statistical methods of adjustment are needed to compensate for the non-random differences between the sample and target population. While these adjustment methods are useful to reduce bias, their accuracy depends on the data which are available to inform the statistical methods (Brick, 2013). A more robust method is to achieve a balanced sample by design rather than relying on post-hoc adjustments.

Background

A range of research approaches have been employed to explain participation in health surveys (Keusch, 2015). One strategy to develop theories about response behaviour has been to identify sociodemographic characteristics of respondents, by comparing study samples with population estimates for the same geographical area and time period (Howcutt, Barnett, Barbosa-Boucas, & Smith, 2017). Research participation has been

associated with higher education, being female, older, in a relationship and not being defined as lower or manual social class (Keeble, Baxter, Barber and Law, 2015). Identification of the sociodemographic profiles of underrepresented groups is useful for understanding who is missing from data, but these findings do not themselves explain why people participate in health research.

A second research strand, aggregated in systematic reviews, has evaluated methods to increase participation, such as questionnaire distribution (web, telephone or paper completion) or remunerating participants (Bonevski *et al*. 2014; Edwards *et al.* 2009; Treweek *et al.* 2010). However, this testing of design features implies that there are simple causal relationships between study design and response behaviour. When evidence to recruit socially disadvantaged groups has been aggregated, the findings about strategy effectiveness have been inconclusive, making it unclear which strategies researchers should select for a given project (Bonevski *et al.*, 2014). A further limitation of this strand of research is that they often use sampling strategies with narrow inclusion criteria which limit the generalizability of evidence concerning strategy effectiveness. Notably, specific sampling frames mean that some underrepresented groups, such as those with lower income or education are excluded. Such sampling frames include student groups with an interest in research (e.g. Rosenbaum, Rabenhorst, Reddy, Fleming, & Howells, 2006), church congregations (e.g. Herring et al., 2014; Yancey et al., 2008), employees of a specific organisation (e.g. Greene, Speizer, & Wiitala, 2008) or people who have already volunteered for parent studies (Rocheleau *et al.*, 2012).

A further research direction has emphasised the importance, to recruitment, of the interaction between researcher and participant (Keusch, 2015). For example, leverage-

salience theory (Groves, Singer and Corning 2000) suggests that recruitment can be increased by the researcher's behaviour. Using cues from their interactions with participants, data collectors can choose to promote the information which they perceive will make participation more attractive. This theory could explain why one recruitment method may not be effective with a broad demographic but is less helpful for studies which cannot use personal contact by experienced researchers.

Other contributions to improving recruitment have centred on appraisal of cost and benefit by potential participants. Williams, Entwistle, Haddow and Wells (2008) argue that researchers should actively include messages about altruism in advertising, using mass media campaigns to reach a broad audience and to increase the social value of research. Nevertheless, altruism may be less powerful than anticipated by Williams and colleagues. As an intangible reward, it is easily displaced by more immediate costs, such as travel expenses (McCann, Campbell and Entwistle 2010; Mein *et al*. 2012). If costs are relatively greater for underrepresented groups, then mass approaches may simply perpetuate or increase bias by engaging greater numbers in overrepresented groups.

This summary of recruitment research has highlighted several concerns. Study of response patterns or testing for strategy effectiveness underplays the complexity of response behaviour. Without understanding the psychological and social influences on participation, efforts to improve recruitment may increase overall response but not necessarily sample representativeness. This commentary therefore proposes a new conceptual framework for recruitment which draws on social marketing, due to its recognition that promoting a voluntary behaviour, such as participation, calls for in-depth understanding of the influences on decision-making.

Data Sources

This paper presents a critical review of literature investigating how to improve recruitment to research (Grant and Booth, 2009). This approach was adopted to present a synthesis of the theory and empirical findings underpinning the proposed conceptual framework. In January 2015, the Cochrane database was searched first to identify systematic reviews on recruitment to health research. Later searches were conducted between January and November 2015 in PubMed, PsychINFO, Medline and Embase and no records were excluded on date. Searches were updated regularly until June 2017, using automatic search alerts for each database. Search terms included 'recruitment', 'response rates', 'representativeness', 'participation' and 'non-response'. The cited sources span the years 1981-2017.

DISCUSSION

Social marketing for recruitment

Grier and Bryant (2005, p. 319) define social marketing as 'the use of marketing to design and implement programs to promote socially beneficial behaviour change'. The approach poses three questions (Hastings, 2007):

1. What range of positions (attitudes, beliefs and behaviours) might people take in relation to the behaviour we are proposing?
2. What factors cause adoption of those positions?
3. How might we encourage people to adopt the behaviour we are promoting?

Research identifying sociodemographic patterns of response reveals some aspects of the current positioning of individuals (question one), although it does not elucidate why they are positioned in that way. To address question two, we must understand the personal and social processes that encourage some individuals to participate more than

others. Only then can we select the right approaches to improve sample composition (question three).

The application of marketing to recruitment likens the relationship between participant and researcher to that between consumer and retailer. Reciprocal benefit underpins this relationship. In commercial contexts, the consumer is seeking a new product and the retailer hopes for profit and future custom; in research, the researcher profits from new data but the gain for the respondent is harder to identify. Health research may not be perceived as personally beneficial, although benefit may be easier to establish in studies to reduce the effects of ill-health, than in research that targets behaviours that are enjoyed, such as consuming alcohol. Moreover, considerable barriers to participation in health research can exist because there can be discomfort in discussing health with professionals and topics such as illegal substance use, mental health and sexual behaviour can carry stigma in certain communities (Fry, 2008). Consequently, the difficulty in providing benefit and reducing barriers may explain why certain individuals are more likely to refuse participation than others (question two).

Therefore, marketing models have been applied to recruitment because marketing science effectively combines behavioural science with the psychology of persuasion and decision-making to increase understanding of health behaviour choices, communication and responses to health promotion messages (Evans, 2006). For example, the 7Ps Marketing Mix (Booms and Bitner, 1981) specifies factors to consider when promoting services: product, promotion, price, place, people, process and physical environment. Reciprocal benefit comes from the orientation away from the retailers' goals towards the consumers' needs. By suggesting how to tailor and place messages to engage intended audiences, the seven parts of this model conceptualise how to promote

perceived benefit and reduce the barriers, Galli et al. (2014) describe how the 7Ps Marketing Mix usefully informed the design of recruitment to the *Text2Stop* study. The marketing approach highlighted the importance of learning and adapting strategies through monitoring of recruitment progress. Similarly, Kobayashi, Boudreault, Hill, Sinsheimer and Palmer (2013) used a reduced Marketing Mix of 4Ps (product, price, place and promotion) to engage a difficult to reach population of deaf individuals to a controversial study involving genomic testing. These researchers supplemented the Marketing Mix with an extra element which they termed 'Messaging' (Kobayashi *et al*. 2013, p. 5) where advertisements were designed to meet the current needs of the deaf community being asked to participate. This was only possible due to the knowledge brought by research team members who were also part of this community.

These successful examples demonstrate how marketing theories can be applied to increase recruitment of specific groups. Yet the models, described above, only touch on a factor of great importance, namely the motivation for potential participants to pay attention to information about the study. Without this initial attention, the required interaction between researcher and participant cannot even begin.

The proposed framework

The summary of research above identified the challenge of developing recruitment strategies to appeal specifically to underrepresented groups. In social marketing, targeting certain groups is often accomplished by tailoring messages to segments of the population with common needs (Grier and Bryant, 2005). However, this segmentation suggests that people within a segment will behave in a similar way. Moreover, commercial marketers are moving away from attempts to shape behaviour (by using persuasive messages and larger remuneration) to consider the functions that their

product performs to draw in a broad audience. For example, Christensen, Cook and Hall (2009) describe a milkshake company who wanted to reach new customers. When they surveyed consumers, they found that despite differences in the customer base, most people wanted the milkshake to serve as a breakfast that could be eaten during commutes. By finding the common function for the specific product, advertising could emphasise what most people would search for. This commercial approach can develop social marketing theories by showing that we need to understand consumers' (participants') lives. This is arguably a more ethical response to recruitment challenges, because it shifts action from manipulating behaviour to fulfil researcher goals, to transforming the research to achieve reciprocal benefit.

Therefore, we propose a conceptual framework that applies commercial marketing theory to increase the appeal of research participation to reach and engage a broader demographic in health studies. It extends Kobayashi *et al.*'s (2013) 'Messaging' to start from the functions that participants need research to perform. This framework (Figure 1) is based on a marketing model by Belch, Belch, Kerr and Powell (2012).

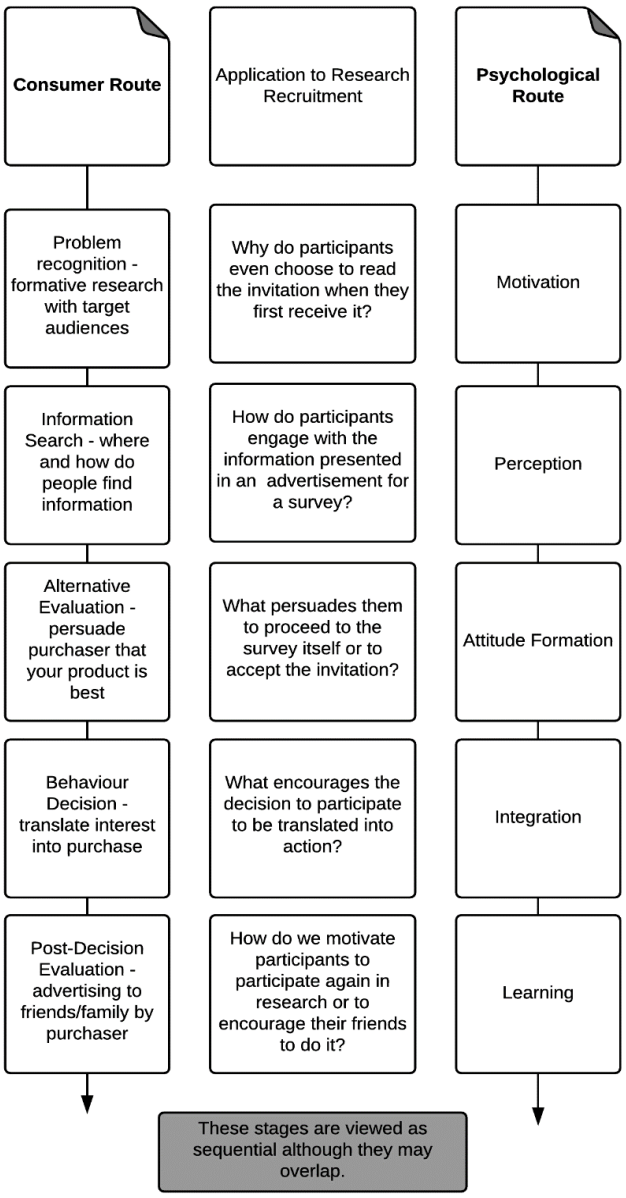


Figure 1: Proposed conceptual framework applying the decision-making process of a consumer to research recruitment, adapted from Belch et al. (2012)

When applied to recruitment, the 7Ps Marketing Mix shows how to create mutual, beneficial exchange for researcher and participant. However, this framework conceptualises recruitment as a decision, allowing for exploration of the period before contact between researcher and participant (to elicit the function of participation). It

further considers the social environment that is created for future recruitment as a result of the participant's current participation experience.

Belch *et al*. (2012) proposed five stages of a consumer's decision-making process (the consumer route in Figure 1). These stages are linked in the original model to five psychological constructs (the psychological route in the figure).

Motivation **–** For the consumer, the first stage is to recognise a problem, or function for the product to perform. Advertisers identify this by talking with their customer base to tailor advertisements and the product to fulfil that need. As researchers, we may need to listen to our target population before planning a study. Current approaches often use remuneration, in the form of vouchers. While this strategy does provide a practical exchange relationship between researcher and participant, other, more symbolic benefits may also be influential in the decision-making process (Bagozzi, 2013). For example, the chance to talk informally with clinicians or combining the study with social activities, may be prized more than money. Indeed Mein et al. (2012) found that a motivation for participants in a longitudinal cohort study (*Whitehall II*), was the ability to maintain relationships over a long period of time. Therefore, they offered appointment times which coincided with those of friends to provide a social backdrop to the clinic visits. Until the current social and personal needs of the target population are explored, it is difficult to know how to design a study to create an equitable and acceptable exchange. Moreover, we are targeting a voluntary behaviour and so must be aware of the other options that may be chosen (Hastings, 2007), because individuals can *choose* not to participate. By identifying the problems and competing solutions, information can be tailored to catch attention.

Perception – After problem (or function) recognition, Belch *et al*.'s model suggests that the consumer will search for information. For the research participant, the information search involves sensing that the advertisement is there, then paying attention to the information within it. The role for the researcher is to facilitate the availability of the information to the senses. In a similar way to the motivation stage, researchers must understand current functions being performed, so that the optimum placement of key information is selected. For example, it may be ineffective to position posters in corridors where people are passing rapidly, their task being to reach another destination rather than to pay close attention to information in their surroundings. Once information is sensed, it is important to consider how the information is interpreted. Psychological theories of persuasion, such as the Elaboration Likelihood Model (Petty and Cacioppo, 1986) or the Heuristic-Systematic Model (Chen and Chaiken, 1999) suggest that the information search is influenced by an individual's processing style (such as the desire for facts to facilitate considered decision-making), but could also be altered by the nature of the decision, or once again the function being performed. If research participation is low in terms of time commitment or difficulty, or if the respondent's task is to achieve something to relieve immediate boredom, the opportunity to make a quick decision may be prioritised over the ability to read about the background and need for the research. Given the complex interplay between a person's cognition and current tasks that they need to perform, it may be difficult to engage whole audiences with one approach. Consultation and collaboration with potential participants could suggest how diverse needs may be met. Hure and colleagues (Hure, Smith and Collins, 2008), in their helpful summary of how they improved recruitment in a pregnancy study, argued that they needed to put themselves into the position of participants to improve the readability and appeal of study

documentation when their first attempt was too complex and sent the wrong messages to the intended audience. The participant's position will be difficult to adopt, if researchers are looking for people with which they have limited familiarity, such as different ethnic communities.

Attitude formation – Once the consumer has noticed a product, they need to be persuaded that the item will perform the required function. Social marketing theorists argue that marketing differs from other forms of behaviour change because it acknowledges that there is an exchange of effort and benefit for both promoters and audience (Maibach 2002). Therefore, persuasion needs to understand the specific benefits of participation so that these can be emphasised in advertising. Similarly, the costs must also be known so that they can be reduced. Appraisal of benefit and costs may be tied to changing influences. Barden terms this changeability as 'a series of occasions' (2013, p. 64) because the same information could be presented on different occasions and a different decision made, according to the current functions that the individual wishes to perform. For example, a participant may not consider it excessive to pay for travel and parking at a hospital when visiting a close relative. From the visit, they may gain a sense of altruism for making their relative feel more positive. However, if asked to spend the same amount of money with similar rewards for a visit to a research clinic, they may not appraise the costs of money and time in the same way against the possible rewards gained from attendance. This may explain why persuasive strategies, which seem sufficient at the time of planning (from experiences of previous studies or observations of behaviour), may not account for participants' responses in a new study. Therefore, as Galli *et al*. (2014) suggest, constant monitoring of recruitment patterns and consultation with potential participants are needed to react dynamically to participants' changing appraisals.

Integration – In this stage in the consumer's decision process, the consumer acts on the intention to buy a product. Choice becomes action. In research, this is an important stage where the participant moves from interest to contact with the researcher. It is the task of the researcher to maintain engagement and facilitate the start and completion of the research. This stage is reminiscent of theories of behaviour change, such as the Theory of Planned Behaviour (Ajzen, 1985) where it is recognised that, before a new behaviour is adopted, there needs to be the intention to change which is then converted to action. Once again, however, the researcher will need to collaborate with the target population to understand what barriers to turning interest into contact may exist, so that they can be reduced as far as possible. For example Chan and So (Chan and So, 2016) note that in their cancer screening research, knowledge of cultural and religious practices was fundamental to recruitment, because participation would not possible for South Asian women when they needed to care for children, pray or cook for the family, since interruptions to these duties would be upsetting to the women. By removing the worry about the women fulfilling their responsibilities, these researchers increased the willingness of women to be involved. Knowledge of the groups could also improve study completion by influencing the methods chosen for the research. An example of this is Bradby et al. (Bradby *et al.*, 2007) where the researchers needed to use hypothetical vignettes of child mental health issues to facilitate conversations about a sensitive topic because beliefs in the population (in this case British Asian families), would have made discussion of personal experience a difficult starting point.

Learning – For the consumer the final stage represents an evaluation of whether the product has been effective to perform the required function. For the research participant, this involves appraisal of their participation experience. It is likely that this evaluation will involve communication with others. Indeed, retailers rely on such peer

advertising, as can be seen from advertising strategies employing social media networks (Nicholls, 2012). It may be useful for researchers to adopt similar approaches, such as has already been explored in adaptations of snowball sampling for recruitment (Sadler *et al.*, 2010). A research participant may know precisely the function that someone in their social networks would like to perform at a given time. Strategies could include forms of chain-referral sampling, or peer promotion of an advertisement, either by word of mouth or by reviews and sharing via social media platforms. Moreover, positive evaluations of participation experiences, may reduce the barriers created by the fear of research or the low social value in certain communities placed on helping official organisations.

Implications for Nursing

The proposed conceptual framework could support nurses by helping them to structure interactions with the public (for example through patient and public involvement groups) in a way which is most constructive for a study's development. Each stage of the framework, outlined above, calls for detailed knowledge of the people to be involved in the research, but the knowledge required at each stage is slightly different.

Motivation - Before study development, researchers should meet with potential participants informally to ascertain information about their lifestyles to find out how a research study will be perceived and how it needs to be presented to compete against other activities which may be selected over participation.

Perception - Information about lifestyles of potential participants could also inform where advertisements can be placed to reach intended audiences. By looking at products and activities that do engage the participant group, the advertising can also be

shaped to use a style and appearance that delivers information in an appropriate way for the full range of the demographic sought for the study.

Attitude formation and integration - Researchers must also ask about practical barriers and the appraisals that participants may adopt when evaluating the invitation to participate in their study. This understanding can also be used to inform the data collection procedures so that the functions that participants want to perform can be aligned with data collection in a way that reduces the perceived costs.

Learning - After participation, evaluation of the experience with participants could show where mistakes have been made to improve the current process but could also show how to make chain referral methods (such as snowballing outlined in Sadler et al., 2010) easier for participants so that future recruitment approaches do generate a larger, more representative sample for researchers.

In addition to informing public involvement in research design, the conceptual framework could help to develop effective training programs for new nurse and midwife researchers. According to a focus group study by Newington & Metcalfe (2014), recruitment skills teaching would be appreciated by inexperienced researchers in clinical research teams. This conceptual framework could, therefore, provide a useful visualisation of the recruitment process to help researchers to take the participants' viewpoint during the design of studies and their interactions with study populations.

Finally, it can be seen from the discussion above that much more preparatory work is being suggested by this framework. Therefore, it also has implications for nurses and midwives involved in the development of policy related to research design and ethics. A reconceptualization of the recruitment process may necessitate funding and monitoring

bodies to allow for a longer period at the start of the study, to conduct the necessary exploratory work to engage underrepresented individuals.

CONCLUSION

Poor sample representativeness threatens the ability of research to generate valid data to inform development of effective health interventions and could therefore perpetuate health inequalities. Participation in research is a voluntary behaviour and therefore researchers need to be mindful of competition for participants' attention and interest. This commentary has proposed a conceptual framework of five stages, starting prior to contact between researcher and participant and continuing until after participation has ended. This framework adds to current knowledge about recruitment because it moves away from the focus on increasing overall response to a consideration of how individuals make the decision to participate. It challenges researchers to consult and collaborate with target populations to discover what potential respondents may need at the time and place that they are going to encounter the study invitation. By tailoring the product (participation) to the consumer's (participant's) needs, a positive experience can be created which could also reduce the barriers to future participation. Future research should evaluate the practical application of this framework to health research, to ascertain the feasibility and effectiveness of this conceptualisation of recruitment.

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Publication 3
Howcutt, S.J., Barbosa-Bouças, S., Brett, J., Barnett, A.L., Smith, L..A. (2020),' Lifestage differences in young UK women's reasons for research participation', *Health Promotion International*, daaa041, Doi: https://doi.org/10.1093/heapro/daaa041

Lifestage differences in young UK women's reasons for research participation

ABSTRACT

Lifecourse epidemiology suggests that preconception is a valuable opportunity for health promotion with young women. Yet young women are less likely than older women to be research participants, limiting evidence about their needs and risks. Marketing data indicate that young adults are not engaged with one advertising strategy because they transition through three life stages: (1) limited independence and focus on own interests, (2) increased independence and time with peers, (3) establishing a home and family. The aim of this study was to explore whether these marketing lifestage categories could inform the tailoring of strategies to recruit young women.Three focus groups per lifestage category were conducted (49 women aged 16 to 34 years). Lifestage category (1) was represented by further education students, category (2) by women in workplaces, and (3) by mothers. Questions explored participants' lifestyles, identity, reasons for participation in the current study and beliefs about researchers. Three major themes were identified through framework analysis: Profiling how young women spend their time; Facilitators of participating in research; and Barriers to

participating. Students and women in work valued monetary remuneration whereas mothers preferred social opportunities. Participants' perceived identity influenced whether they felt useful to research. All groups expressed anxiety about participation. Altruism was limited to helping people known to participants. Therefore, the marketing categories did not map exactly to differences in young women's motivations to participate but have highlighted how one recruitment strategy may not engage all. Mass media communication could, instead, increase familiarity and reduce anxiety about participation.

INTRODUCTION

Lifecourse epidemiology recognises that there are periods in a woman's lifetime where interventions to promote health can make significant differences to her own health, and also to that of future generations (Stephenson *et al.*, 2018). One such period is pre-conception. Lifestyle behaviours such as poor nutrition can have negative consequences in early pregnancy (Bédard *et al.*, 2017). Not all women plan pregnancy and some risks, such as obesity, cannot be addressed by adopting health behaviours only at the time of conception (Stephenson *et al.*, 2018). Moreover, if healthier behaviours become embedded in everyday life, inter-generational patterns of harm could be reduced (Flemming et al. 2018).

Young adulthood is a valuable stage to focus on lifestyle behaviour change since this is when young women may be leaving parental homes and making independent lifestyle decisions (Barker *et al.*, 2018). Yet, young women are less likely than older women to take advantage of health-related activities, such as cervical screening, or to participate

in health research to identify needs, target interventions and inform services (Howcutt *et al.*, 2017b; NHS Digital Screening and Immunisations Team, 2017).

Currently, strategies to engage women in harm prevention activities and health research tend to adopt a one-size fits all approach, such as generic letters and leaflets coming from national agencies. While this is practical, allowing automatic mailings based on limited information such as postcode or an individual's age and gender as recorded in health service records, it may lead to under-representation of young women. In other hard-to reach-groups targeted approaches are adopted, such as translated and culturally sensitive information for health screening in different ethnic groups (Public Health England, 2018). Such targeted approaches have not been developed in other hard-to-reach groups such as women at a specific adult age.

Young women's participation in research is valuable if interventions are to be tailored appropriately for their specific needs and lifestyles at important lifecourse stages, such as when these young adults are starting to make decisions about their own health. Yet it is difficult to study reasons for participating in research studies using quantitative measures because these are also prone to nonresponse bias. For example, Glass et al. (2015) in Australia conducted a survey about reasons for participation in health research, using two samples (1) a general population and (2) previous study participants. They achieved only a 44.5% response rate from the general population and only 11% of these respondents said that they would be unwilling to take part in future health research. Yet these findings are likely to be an overestimation of the willingness to participate since that people who did not respond to Glass et al.'s survey would also be less likely to be willing to participate in other studies. Indeed, Glass et al. achieved a much higher response rate in the sample of people who had previously

volunteered in a research study. Therefore, our study aims to contribute new knowledge to the literature about research recruitment by using qualitative methods which do not rely on the assumptions of probability sampling, but which can also explore the barriers to participation in greater richness.

In a previous paper (Howcutt et al. 2017b), we proposed a framework based on a model of consumer-decision making (Belch *et al.*, 2012), viewing participants as active information-seekers who look for ways to perform current goals. The framework conceptualises recruitment as five stages: motivation to notice messages, perception of information, attitude formation, integration of interest in study and action, and post-study evaluations. We argue that the first stage (motivation) is particularly vital, because strategies to increase recruitment will not be effective if the impetus to attend to recruitment information is lacking.

Marketing principles further suggest that researchers need to be aware of factors competing for an audience's attention and interest (Schuster, 2015). The value that young women put on their time and aspects of their life may be significantly different to that of older women. Consumer research may offer an understanding of the priorities of adults of different ages. *wOOt! Media* (2013) researched the spending choices of young adults. By recording purchases, they suggested that it is challenging to market products to young adults because even during the narrow age range of 16 to 34 years, people transition through three stages relating to changing levels of independence and responsibility. Purchasing patterns reflect a shift from individual interests to purchases that facilitate spending time with others within the peer group, to a final move towards purchases for the family.

This study explored what motivates women in the UK, aged 16 to 34 years to participate in health research relating to health behaviours, using qualitative methods.

The aim was to find out whether life stages could usefully guide how to present recruitment information about health research to engage this underrepresented group.

METHODS

Study design

A qualitative descriptive design was used, with focus groups as the method of data collection. We selected a descriptive approach over a more interpretative qualitative analysis because our research question required us to identify factors which could encourage or discourage participation. The aim was not to explore how participants' attitudes were constructed and negotiated.

Participants

Focus groups were conducted with three different groups of young women identified by marketing research categories (wOOt! Media 2013). The marketing lifestage categories were named 'All about me', 'All about us' and 'All about them'. The 'All about me' group were living with parents or in shared accommodation and were still in education with limited independence and responsibility, who used money and time to further personal interests such as sport and music, the 'All about us' category were newly independent who were focused on spending time with peers, and the 'All about them' category grouped people who were themselves independent but starting to establish their own home and family. In our sample, mothers of young children were recruited to represent 'All about them' since they were more likely to be focused on others' needs. The young women were recruited from one further education (FE) college ('All about me'), two

businesses ('All about us'), one children's centre and two mothers' support groups ('All about them'). SJH and SBB independently coded a selection of transcripts from each of the three lifestage categories to check the credibility of the decision to view the life stages as different to one another.

The study was introduced informally to the groups where access was allowed, or managers known to the women passed on the study information. All participants received a written information leaflet in English, and they were supported by trusted people from the organisations with reading of the information if functional English literacy was limited. Consent and the eligibility of participants was checked by SJH via email, text or through informal discussion.

Development of the topic guide

We conducted a literature review of theories of research participation and trials of strategies to increase the recruitment of women to health research (Howcutt et al. 2017b). Following this reading of evidence, the questions were designed to focus conversations around the following areas:

1. how participants would use an hour of free time - to understand their priorities for their time and effort;
2. their reasons for participation in the current study and their sources of concern before participation - to allow participants to explain their cost-benefit appraisal in a familiar context;
3. participants' perceptions of researchers and research - to investigate more abstract attitudinal factors in the cost-benefit appraisal regarding participation.

Data collection

Each focus group lasted between 60 and 90 minutes. After two groups with larger numbers of women (of 8 and 11 women in groups CS1 and CS2 in Table 1)), we reduced the size of the groups to 3-6 women to give each participant more opportunity to express their ideas within the time available. Group discussions were in English and were audio-recorded and transcribed verbatim. The focus groups with college students were held in college classrooms. Two of the focus groups with women in work were at the workplace but one was held at a social venue close to the work setting. Two of the mothers' groups took place in a home while one was in a Children's Centre to facilitate childcare. The focus groups took place between December 2015 and August 2016. Data collection for each lifestage category was stopped after no new ideas were identified in the last transcript for that lifestage. This decision resulted in three groups for each lifestage and the stopping point was checked and agreed with SBB.

Data analysis

Thematic coding was managed using framework analysis (Ritchie and Spencer, 1994). The analysis was conducted, as outlined by Gale, Heath, Cameron, Rashid, and Redwood (2013), using NVivo version 11.3.2.779 to organise the data into matrices and to link summaries in the matrices to the full transcripts. Initial codes were identified after a critical review of the literature (Howcutt et al. 2017b). Further themes were added after familiarisation with the data through transcription, conducted by SJH and hearing/reading the data multiple times. New codes were added where the initial set was insufficient. The data were sorted into the matrix by selecting short excerpts which illustrated themes and electronically linking the excerpts to the original transcript, to maintain the data integrity. To ensure rigour, the team developed an 'inquiry audit'

(Lincoln and Guba, 1985) to evaluate decisions. After SJH had coded the nine groups, SBB independently analysed four transcripts. These codes were compared against those identified by SJH and inconsistencies were resolved. Once the interpretation phase of the analysis had been conducted, SJH and LAS presented the analysis and findings to JB for feedback on the analysis and interpretation.

Ethical considerations

The study was approved by Oxford Brookes University Research Ethics Committee (UREC No. 150953) in October 2015. Participants consented in writing, and they received a £15 shopping voucher. Participants have been assigned initials to de-identify excerpts used to illustrate the findings. Audio recordings and transcripts, with identifying information removed, were stored in a secured computer folder following university data management procedures.

RESULTS

Forty-nine women participated in nine focus groups, three for each lifestage. The sociodemographic characteristics and size of the groups are presented in Table 1.

Table 1: Sociodemographic characteristics of the nine focus groups included in the framework analysis (values in the table refer to the number of women)

	Age in years	Main work role	Educational level	Relationship status

Group label	**Group size**	**16-20**	**21-25**	**26-34**	**Education**	**Caring Role**	**Work**	**Unanswered**	**No formal education**	**2**	**3**	**4 and over**	**Unanswered**	**Single**	**In a relationship**	**Cohabiting or married**
CS[a] 1	8	8	0	0	6	0	0	2	0	0	8	0	0	5	3	0
CS 2	11	10	1	0	9	0	0	2	0	1	9	0	1	5	6	0
CS 3	4	4	0	0	4	0	0	0	0	4	0	0	0	1	3	0
WW[b] 1	4	2	1	1	0	0	4	0	0	2	2	0	0	0	3	1
WW 2	4	0	0	4	0	1	3	0	0	2	2	0	0	0	2	2
WW 3	5	1	3	1	0	0	5	0	0	0	5	0	0	0	3	2
M[c] 1	6	0	2	4	0	6	0	0	0	3	2	1[d]	0	2	0	4
M 2	4	2	0	2	1	0	3	0	0	1	3	0	0	2	0	2
M 3	3	0	0	3	0	0	2	1	0	0	3	0	0	0	0	3
Total	49	27	7	15	20	7	17	5	0	13	34	1	1	15	20	14

[a] College students for the 'All about me' lifestage

[b] Women in work for the 'All about us' lifestage

[c] Mothers of for the 'All about them' lifestage

[d] Participant still met the selection criterion for education

The college students were undertaking courses in hair and beauty, media makeup and childcare. One working group involved women who assisted children with disability; the two remaining groups held junior administrative roles in a large organisation. One mothers' group was recruited by a Children's Centre manager, while the remaining groups were friendship groups who had met at a Children's Centre.

This section presents the findings of this study under the following major themes: Profiling how young women spend their time; Facilitators of participating in research; and Barriers to participating in research:

Profiling how young women spend their time

This theme describes how young women spend their time to understand competing activities that may lead to them declining an invitation to take part in research, to identify where research can be advertised to optimise uptake, and to identify what modifications may be required to tailor studies to the life profile of participants.

Differences between life stages were apparent in women's choices for free time, yet these differences did not match those suggested by the *wOOt! Media* (2013) life stages. Instead of a focus on personal interests such as music and sport, participants in the 'All about me' group, seemed to prioritise spending time with others. Group activities (such as eating or shopping), seeing friends and family were enjoyed. Even when spending time alone, social connection was sought. There were frequent references to using mobile devices and social media to see what other people were doing and to communicate:

K: Like Facebook you've got Messenger to talk to people and Instagram we can like look at different people's posts, stuff like that. [CS 1]

Moreover, when describing themselves, participants in the 'All about me' group often defined themselves through their relationships with other people (cousins, friends and siblings), rather than by talking about their interests or activities outside of college.

In contrast, participants in the 'All about us' group, would choose interest-related activities, as they started to form their own identity in the adult world, not prioritising social activities with peers as suggested by the marketing life stages. Outside of work, the ability to choose the activity and to spend time alone was valued:
HY: I'm so anti-social. I have to spend all my minutes slash hours, slash days with people that when I get an hour to myself, no-one's getting in that! [laughs] That's my hour! [WW 2]

Activities included walking, music, fitness, gaming, and reading. These interests influenced choices in television, reading, and social media. In contrast to the participants in the 'All about me' focus groups, who used media to share time with others, the participants in the 'All about us' groups were using these platforms to find information about their interests, to follow public figures that they wished to emulate and to find entertainment. The main use was not about maintaining social networks:
C: … I follow like quite famous people or like for me I follow a lot of fitness girls, a lot of them and just look at new workouts and stuff like that…obviously I see them doing that thing and I want to do it because obviously because I see them do it and people liked it…' [WW1]

For participants in the 'All about them' life stage, there was a common need to spend time alone. While the marketing lifestage categories implied that the women would be totally focused on others' needs, the new mothers wanted to shop, go to the gym, read or bathe without children. At the same time, they were vulnerable to loneliness. They craved social interaction with those at a similar life stage:

V: I enjoy my own company. And having a little toddler all day... The thought of an hour quiet by myself is just bliss. [M 3]

T: …I get really, really lonely. Like today I've just had me and my son all day…I have to fill my day with people around me. [M 3]

Yet, as was suggested by the marketing life stage descriptions, the mothers appeared to feel pressure to attend to the needs of others and the home. Being busy appeared central to their view of being a good mother, and their talk of doing something for themselves was characterized by expressions of guilt:

A: … I can't sit down during the day.

H: I feel guilty.

A: I do, really guilty and if I did sit down, I would be 'Oh yeah, that's got to be done'. I can't do it. [M 2]

Consequently, talking about free time was difficult for some mothers. Feelings of guilt influenced by the social norms surrounding motherhood could therefore create a tension between messages about doing research to provide gain for the women

themselves and their self-identity. However, the opportunity to combine participation with the company of other mothers might be engaging.

Facilitators to participation in research

Financial remuneration

The marketing lifestage categories suggested that the women would be attracted to different things according to their changing priorities during young adulthood. When asked for their reasons for participating in the focus groups, the financial remuneration (shopping vouchers) was cited by both the 'All about me' and the 'All about us' groups as the primary reason. Other free items, such as chocolate, were also valued:

J: Voucher.

G: That was mine [reason for participating] as well.

J: I think it's probably everyone's

*C: Chocolate [*CS 2]

Remuneration was not typically the main reason for taking part in the 'All about them' focus groups. More important was the chance to spend time with other mothers:

C: …it's a nice way to get together and to help out as well. [sounds of agreement].

A: Good answer.

H: And to meet with other mummies I thought was quite nice. I liked that idea. [M 1]

The shopping vouchers were appreciated but, while the vouchers or other tangible rewards were always stated immediately by the other life stage groups, the 'All about

them' groups tended to mention these as an afterthought or as something for other women and not them.

B: I think that it was the last lines of R's text. Before I'd even got to that line I was thinking 'Yeah, you know, I'll come around and do it.' and then I was like 'Oh and I can get a voucher! Double bonus!' [M 3]

Therefore, there was not a clear distinction between all three lifestage categories in what was perceived as a suitable reward for participation; the differences related instead to whether the women were caring for others or not in their day to day lives.

Helping others

Once again, the reason for participating in the study was not perceived in the same way across the three lifestage groups. Reasons for participation were sometimes expressed by the 'All about us' and 'All about them' groups as a desire to help another. Yet despite the occasional reference to helping the researcher, the desire to help was typically phrased as the wish to help a named person known to them. In the 'All about us' groups the 'other' was a person in authority, perhaps because of how the invitation had been cascaded within workplaces.

K: Well we're brown nosers [sycophants] really aren't we? [Manager's name] we said yes! Please like us! [WW 1]

But for the 'All about them' groups the person helped was within their peer/social network and there was no sense that a power difference was influential. For the students in the 'All about me' life stage, their reason for doing the research was sometimes described as wanting to help the researcher. When helping was phrased as a

need to help other women as a cause or research in general in the college students, this was mocked by the group.

Novelty and avoiding the mundane

All three life stage groups saw research participation as something novel, but the attraction was slightly different for each category. The desire to do something new was discussed by the 'All about me' and the 'All about them' groups because the research presented a welcome relief from normal routines. Nevertheless, the escape was different for the two life stages. For the students it was relief from boredom of college life but for the mothers it was not having to be responsible for others:

B: In the evenings would be… because it's a nice break, not having to put the kids to bed. [M 3]

For the 'All about us' group it was the novelty and intrigue that attracted them to help out:

R: I don't think you ever really get given opportunities to do stuff like this otherwise but I would have never had the opportunity to sit in and do some research. [WW 3]

These differences between the three lifestage categories could be helpful for researchers wanting to tailor advertisements. However, while the differences could be anticipated for the 'All about me' and 'All about them' groups, the interest in the 'All about us' group in doing something new to see what it was like was more surprising and not so closely linked to their daily activities.

Barriers for participation in research

Power imbalances as a deterrent

When discussing the participants' perception of researchers and research, there was evidence that power imbalances were perceived which made young women feel vulnerable or inadequate. The distance between participants and researchers was apparent in all three life stages.

The 'All about me' groups talked about research participants in the third person as people with more life experience or time than them. Alternaltively they spoke in the first person, describing themselves as people who are manipulated by researchers for their own ends:

C: What you want to get out of us, and you're sort of out to get what you want out of us.

J2: Manipulateable. [Participant laughter] [CS 2]

The 'All about us' and the 'All about them' groups defined research participants by comparing them to researchers. Research participants were described as less knowledgeable than researchers and for some women this created anxiety about what would happen during participation.

H: On the way here, I was slightly worried that it would be, really quite, oh dear I did say to you [points to friend] 'well I did have a wine' [laughs]. All these clever questions but, no, I didn't really think that I knew exactly what was going, going to be said or anything. [M 2]

The distance between researcher and participant was also evident when the women described a researcher. All groups started with a stereotypical image of a "Person with a white coat and a clipboard" (CS 1), but the women swiftly provided elaboration. In most cases the descriptions of researchers were negative, using language to suggest that researchers would be very driven to complete their research:

CT: Like stuck in their ways sort of thing. Like just get their research done, that's it.

J: I think nosey. Well they know what they want to find out, so they are going to try to get it, worm it out any way. [CS 2]

However, some participants had experienced research in the 'All about us' and the 'All about them' groups and they described researchers positively, shifting group opinion. The strong difference between the more stereotypical images and the ones based on real people suggest the value of the experience of participation or of researchers for reducing this barrier to participation:

A: I took part in a research, well the same one that you did 'Into Bio' study when I had [child's name]. Um... I had to go and have scans every. That's why I took part because you had scans every 4 weeks wasn't it? And they were all lovely, there was no pressure to do anything. [M2]

Research provoking anxiety

All groups described anxiety surrounding the safety of responding to invitations. There was considerable mistrust across all three lifestage groups about unsolicited contact. This worry was expressed more in the 'All about me' and the 'All about us' groups. Some reported mistrust of email recruitment, while others debated the trustworthiness of social media. Previous expectations about communication methods could also create mistrust of advertisements:

E: Not email. I think it's spam. … If it was on Twitter, I'd scroll past it but Facebook...Yeah. Cos, they seem to have much more like ads for rubbish. [Sounds of agreement]. Whereas Facebook it's more like news articles, stuff you'd be more interested in. [WW 1]

The ‘All about me’ and the ‘All about us’ groups discussed how researchers could reassure them. Endorsements by medical institutions were particularly trustworthy for these two life stages:

C: If someone was from the NHS or something and had a badge.

H: If it was a leaflet in a GPs like. [WW1]

Some participants in each of the life stage categories also expressed anxiety about meeting a stranger for the first time; they believed that being in a group was important. Their discourse implied that being together would provide confidence, even when the topic of the conversation was sensitive:

CT: You don't really want to go in a room when you don't know each other. If you're like talking about personal things. If you're with friends, then you'll probably do it. [CS 2]

C: I think a group's more relaxed. One to one you feel like that person is just grilling you. Personally. [WW 1]

In two of the ‘All about them groups’ a concern was expressed about confidently going out alone. They echoed the preference for group participation, or for the researcher to come to them.

T: See I'm going out. I can't go out by myself. Like I mean if I've got my son and that's helped me to become more confident… I think it's nice in a group but I'd prefer someone, if I was doing it by myself, I'd prefer someone to come to me than for me to go out and meet somewhere because I would get quite anxious about driving somewhere, getting there on time. [M 3]

Therefore, while there were small differences between different lifestage categories in the reasons for anxiety, there were common ideas expressed across the groups.

Researchers need to be mindful that research participation is new to many participants and the first experience of participation may create anxiety in multiple ways. The opportunity to meet a researcher or past experience will be helpful to reduce this anxiety.

DISCUSSION

This study provides insight into how young women spend their time to explore competing calls on their attention and identifies barriers and facilitators to their participation in research. We proposed that a challenge for the recruitment of young women to health research could be that their priorities are changing as they adopt adult identities. Motivations for participation in health research did vary according to the three life stages categories described but not always in ways anticipated and there were also overlaps between groups.

Marketing research suggests that advertising is effective if it promotes something that fulfils existing goals (Christensen, Cook and Hall, 2009). The differences between the life stages in what might compete for young women's attention support a similar strategy for recruitment to health research. Providing social opportunities might motivate participation because being with others is important to college students and mothers. In contrast, to reach women within the 'All about us' life stage, targetting places such as gyms and online communities could be more effective. Alternatively, using popular public figures followed by young women at this lifestage could be useful because such 'celebrities could serve as benchmarks of social norms. This use of celebrities has already been adopted successfully by e-cigarette marketers to create the

acceptance that e-cigarettes are part of everyday fashion and lifestyle for young adults (de Andrade, Hastings and Angus, 2013).

Remuneration as a motivating factor was different among the groups of women, with the division between women with children and women without. Shopping vouchers were less engaging for mothers than for the other groups. Social opportunities were a greater attraction. Previous research has found unexpected variability in the effectiveness of remuneration (Mercer *et al.*, 2015) and some research has noted that non-monetary gains such as improved healthcare, in the form of more frequent tests or discussions with professionals, might be perceived as more valuable (Katz *et al.*, 2019). Indeed, the women in this study suggested several non-monetary factors were attractive such as novelty and escape from usual or boring activities.

The differences between the three lifestage categories have also highlighted the influence of the women's perceptions of their identity. The women talked in strong language about the gap that they felt between themselves and researchers which seemed to create feelings of ineligibility and anxiety about ability. In addition, the mothers seemed to be directed by social norms of the activities expected of mothers, such as selflessly managing tasks for their families. Such norms about how to be a 'perfect' mother are known to be powerful, influencing women's identity, cognition and behaviour (Meeussen and VanLaar, 2018). Knowledge of identity-related discourses could, therefore, help researchers to provide clearer messages about who is needed and valued in the research. Awareness of role identity could also help invitations for participation to avoid alienating messages, such as asking people whether they have free time, if this is a source of guilt.

Similarly, this research has shown how an understanding of participants' perceptions of research and the identity of research participants is valuable. Young women within the 16 to 34-year age groups may be feeling that they are adopting adult roles at different stages. Johnson and Mollborn (2009) found that people who had finished education or who were from families experiencing economic hardship were more likely to feel older than their chronological peers. This could present a challenge if survey research is perceived as an 'adult' activity or if advertising materials appear to be targeted towards adolescents if the potential participants feel that they have matured beyond that younger lifestage. The importance of speaking to specific identities to engage participants in research, presents a challenge for mass media advertising for studies because the advertisement's audience may not be known (as in social media advertising where recipients can share with their own personal networks). Other researchers have found unanticipated ethical issues arising from advert contents creating offence and dislike of research when adverts have reached social media accounts of people who perceive the invitation to be categorising their identity incorrectly (Fileborn, 2016).

However, there were also commonalities across the life stages of young women, which challenge the usefulness of the consumer research categories. Altruism has often been cited as a reason for participation; but similar to other research (McCann, Campbell and Entwistle, 2010; Mein *et al.*, 2012), 'helping out' causes were rarely stated, or could be mocked. Therefore, promoting altruism to increase response via mass media campaigns (as suggested by Williams, Entwistle, Haddow, & Wells, 2008), may not work. Instead, requests from individuals known to the women were more motivating, indicating that involving key informants in communities could be a useful way to disseminate

invitations to participate. This finding also supports existing evidence that altruism takes many forms (Carrera *et al.*, 2018) and that a shared connection with others related to the research can be influential in the decision to participate.

Anxiety about participation was expressed in all life stages. This anxiety related to perceived differences in power or ability between researchers and participants. The women used stereotypical views of researchers to guide responses. Contact with 'real' researchers seemed to sway group opinion. This implies that researchers should be more visible to hard-to-reach groups so that potential participants draw on more positive and realistic images. To reduce reliance on stereotypical constructs in decision-making requires information about individuals within the unfamiliar groups (Bodenhausen, 2005). Yet, this process may also require participants to have more time to process this information so that they do not fall back on the quick and dirty heuristic of stereotyping.

Strengths and limitations

A strength of this study has been the involvement of a population which does not typically participate in health research. The focus group method was selected to provide a supportive environment and the participants apparently valued friends' company, as peer recruitment occurred. Invitation sharing also improved the groups' diversity. The study engaged women that the original invitation did not reach including participants with lower functional literacy and limited English. The focus group method seemed to empower participants, as was evidenced by their willingness to mock answers which they felt were not authentic.

The choice of a qualitative descriptive design could be viewed as a limitation because this design impacts on the generalisability of the findings, such that probabilistic generalisability is not possible. Nevertheless, we have tried to provide evidence to facilitate naturalistic generalisation (Smith, 2018) by providing a large number of extracts so that the reader can see whether the data and our interpretations fit with their own experiences of working with young women. The use of a descriptive rather than an interpretive analysis of the data could also be judged to be a limitation of this work.

Much has been learned from these women, but participants struggled to articulate ideas. This challenge may have increased because English was a second language for some participants in the 'All about me' groups, although all of the students did have sufficient English proficiency to meet the college entry requirements. More often the difficulty appeared to be the abstract nature of the questions that was problematic since the questions were sometimes exploring participation in future, unfamiliar research activities. Their conversations were more fluent outside of the research. Consequently, meanings were sometimes subtly expressed and generated between several speakers. Therefore, it has been difficult to reflect the ideas through short quotations. This observation is relevant because it emphasizes how articulating answers in health research could be difficult. Researchers, therefore, need to work with potential participants to understand how to facilitate expression. For example, group data collection could be valuable because the women can help each other to build responses.

Another analytical difficulty was that participants adopted multiple identities; for example, mothers within workplaces valued social interaction above personal interests,

unlike the other group members within the working life stage focus groups. However, these overlaps do not negate the usefulness of the life stage categories. They further demonstrate how differences in life priorities are an important consideration when designing research recruitment approaches.

CONCLUSIONS

The aim of this research was to evaluate the usefulness of the marketing lifestage categories to inform tailoring of recruitment strategies to increase participation of young women in health research. However, these focus groups suggest that the life stage categories indicated by the marketing research by *wOOt! Media* (2013) does not provide a reliable framework to help researchers to anticipate the differing needs of young women aged 16 to 34. However, the categorisation of women by life stage was useful to illustrate that a 'one size fit all' is not likely to optimise recruitment of more young women to research about their health.

Awareness of young women's developing identity, and attentiveness to the facilitators of and barriers to research in these groups at the time of the research can help researchers to adopt the participant-perspective needed to tailor recruitment strategies. Therefore, a recommendation of this paper is that researchers must make time during study planning to become very familiar with the possible transitions and complexities in the identity of their intended participants at the time of the study. This investigation of identity could involve eligible women in the design of the recruitment strategy and study tasks but could also involve an examination of how eligible groups of young women want to be represented in advertising materials and how they network with their peers.

At the same time the difficulty of using one recruitment strategy to engage a wide range of young women suggests that mass media approaches to share study invitations or advertisements may not be effective. The differences in women's perceived social roles and priorities during young adulthood mean that it would be difficult to tailor advertising materials with sufficient sensitivity so that the wording or images does not offend or send messages that the recipient is not the right person for the research. Instead mass media may be more useful to increase knowledge and awareness about research and researchers so that young women have more accurate information and are less reliant on negative stereotypical assumptions.

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