Taking action in student harassment situations: application of the Behaviour Change Wheel to bystander intervention

TITLE PAGE

Authors: Emma L Davies[1], Sofia Hussain, [2] Joanne M Brooke [3], Tristan Hale, [4], Martha Cadle [5] & Sarah E Hennelly [1]

1. Centre for Psychological Research, Oxford Brookes University, Oxford, OX3 0BP

2. Directorate of Academic and Student Affairs, Oxford Brookes University

3. Oxford Institute of Nursing, Midwifery and Allied Health Research (OxINMAHR) Oxford Brookes University

4. Department of Sport, Health Sciences and Social Work, Faculty of Health and Life Sciences, Oxford Brookes University

5. Student Support, Faculty of Health and Life Sciences, Oxford Brookes University

Corresponding author: Emma L Davies <u>edavies@brookes.ac.uk</u> 01865 484056

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ABSTRACT

This study applied the Behaviour Change Wheel (BCW) to understand barriers and facilitators to bystander behaviours in UK students. The BCW includes detailed examination of the capabilities, opportunities and motivations involved in behaviours. Two surveys (n=515; n=201) and a focus group study (n = 12) were undertaken. Capability to intervene may be influenced by confidence and beliefs about physical ability and safety. Students appeared to have the physical opportunity to intervene, but social opportunity might be influenced by cultural norms. Motivations might be influenced by beliefs as well as inherent stereotypes about perpetrators and victims. Behaviour change techniques (BCTs) such as instruction on how to perform the behaviour, reattribution and creating a valued self-identity should be applied to overcome these barriers. A logic model to theorise the change processes underlying bystander behaviours in this population offers a new perspective on what needs to be addressed in interventions.

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INTRODUCTION

Background

Assault and harassment are worldwide public health and human rights issues with increased resources targeted towards prevention and support for victims (World Health Organisation (WHO, 2012). University campuses in the United Kingdom (UK) have become the site of increased efforts to tackle these issues in recent years, due to alarming figures from the UK National Union of Students (NUS). The NUS and other researchers have found that women at university experience sexual harassment as part of a 'normal' night out, with two thirds experiencing verbal or non-verbal harassment (including groping and unwanted sexual comments), and that one in seven had experienced serious physical or sexual assault whilst at university (NUS, 2011a; Phipps & Young, 2013). The NUS also found that one in six Black students experienced racism, and that 60% of respondents had observed students discriminating against other students because of their sexual orientation (NUS, 2011b, 2016). This has serious implications for students, as harassment and discrimination have negative implications for mental and physical health, and for academic motivation and achievement (NUS, 2016; Yost & Gilmore, 2011).

Findings such as these were the precursor to an initiative from the Higher Education Funding Council for England (HEFCE; now the Office for Students, OfS), who in 2017, funded 63 universities to undertake projects to address sexual assault, harassment and hate crime on campuses (HEFCE, 2017). Subsequently, the OfS have recommended further urgent action to tackle harassment and sexual misconduct in light of the 2020 Black Lives Matter protests, and an outpouring of stories of sexual assault from students posted anonymously online (Office for Students, 2021). The current paper reports the findings from a project that aimed to take an

evidence based and systematic approach (applying the Behaviour Change Wheel – see Table 1 and Figure 1) to developing an intervention to target harassment, sexual assault, and hate crime at one university.

At the outset it is important to define what is meant by these behaviours. However, these concepts are challenging to define due to patchwork of legislation and use of terms in common vocabulary. Harassment is defined within the UK Equality Act 2010 as 'unwanted conduct that creates an intimidating, hostile, degrading, humiliating or offensive environment' related to a relevant protected characteristic (age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or beliefs, sex, and sexual orientation). Harassment related to these protected characteristics is unlawful in the UK. Sexual assault is a criminal offence in the UK under the Sexual Offences Act 2003, which encompasses all types of sexual assault, from groping to rape. Racial harassment can be prosecuted under the Crime and Disorder Act 1998. Behaviours such as name calling and treating someone unfairly, or discriminating against them fall under the Equality Act, but might not be prosecuted. Hate crime is defined as any crime that is motivated by hostility on the grounds of race, religion, sexual orientation, disability, or transgender identity (UK Government, 2016). This paper employs the definition of 'unwanted conduct that creates an intimidating, hostile, degrading, humiliating or offensive environment' as outlined in the Equality Act 2010 when referring to harassment, hate crime and sexual assault, and uses the umbrella term 'harassment' from herein when discussing all of these behaviours.

Existing interventions

The project commenced with a number of reviews of the existing literature in order to seek evidence of potentially effective interventions to target harassment on university campuses. The results of these reviews are presented in more depth in other papers (Camp, Sherlock-Smith, & Davies, 2018; Hennelly et al., 2019), but are summarised for context here.

In order to target sexual harassment, many universities have introduced consent workshops, based on the assumption that this behaviour is the result of a lack of understanding about what constitutes sexual consent. However, while such programmes are often favourably received by participants (e.g. NUS, 2015) there is little evidence to suggest that consent workshops lead to a sustained reduction in harassment over time, and some evidence of backlash (Camp et al., 2018). Another possible issue is that some of these programmes are aimed solely at men as the assumed perpetrators of harassment. A recent review suggests that such interventions may cause 'boomerang' effects (in other words they may increase the undesirable behaviour) in high risk males (Malamuth, Huppin, & Linz, 2018). Further, as far as it can be ascertained, these approaches are a-theoretical and have not undergone extensive testing prior to implementation.

One approach that has been gaining traction in recent years is based on the theory of bystander behaviour (Latane & Darley, 1969). A bystander is a witness to an event who is not directly involved. Prosocial bystanders intervene in a problematic event between a perpetrator and victim, whereas passive bystanders do nothing (Latane & Darley, 1969). A large number of bystander intervention programmes have been developed and implemented in the United States and their potential for adaptation to UK contexts has been comprehensively reviewed by Fenton and colleagues elsewhere (Fenton & Mott, 2017; Fenton, Mott, McCartan, & Rumney, 2016). However, at present there is only one small study reporting the impacts of an adapted bystander intervention programme in the UK. This study found the intervention reduced rape myth acceptance (for example beliefs that a woman is at fault if she is drunk when attacked) and increased bystander efficacy, but as yet has demonstrated no impact on bystander behaviour (Fenton & Mott, 2018).

Most existing bystander interventions are designed to target sexual assault and harassment, but in the United States, this approach has also been trialled to support a reduction in harassment related to sexual orientation on a college campus (Dessel, Goodman, & Woodford, 2017). Intention to intervene was increased in older students, in those with higher self-esteem, who

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were friends with people who identified as LGBT, and/or were undertaking studies with an element of social justice (Dessel et al., 2017). Therefore, this approach may be effective in the UK at reducing harassment based on sexual orientation and may be generalised to harassment relating to other protected characteristics, however the wider socio demographic influences need to be acknowledged and may vary.

The bystander intervention approach is based on social norms theory, which assumes that individuals are motivated to behave in a manner that is congruous with perceptions of how their peers act (Berkowitz, 2002; Perkins & Berkowitz, 1986). This is a popular approach for alcohol misuse interventions at US universities, although systematic reviews suggest that overall there are only small, or negligible impacts on drinking behaviours (Foxcroft, Moreira, Almeida Santimano, & Smith, 2015). Taken together, this evidence suggests that there is a need to explore the determinants of bystander behaviour within a UK student sample in order to ensure that interventions are appropriately tailored and targeted to this population.

Intervention development

The development of interventions to change any behaviour should be informed by a systematic, robust and transparent framework, and reported using a common language (Craig et al., 2008; Michie, van Stralen, & West, 2011).   This includes the specification of Behaviour Change Techniques (BCTs), which are defined as the active and replicable ingredients of behaviour change interventions, designed to alter the causal processes that regulate behaviour (Michie et al., 2013). In many cases the reporting of an intervention fails to adequately describe the BCTs that have been employed (Michie & Abraham, 2004; Prestwich et al., 2014). Therefore, it is hard to know exactly what works or what does not work for a given behaviour, thus limiting scientific advances in theory development and evidence based practice, and making replication of successful interventions very challenging (Abraham & Michie, 2008). To that end we applied the Behaviour Change Wheel (BCW) framework within the project (Michie, Atkins, & West, 2014; Michie et al., 2011; see Table 1 and Figure 1).

The process of developing an intervention using the BCW involves eight separate steps. The first step involves defining the issue in behavioural terms, which means broadly specifying the behaviour that needs to be changed and the target group of people who are involved. The second step involves generating a long list of possible candidate behaviours, and selecting one that could bring about the desired behaviour change. The third step involves specifying this target behaviour according to who needs to do what, where, when, how often and with whom. At step four, the determinants of the target behaviour are analysed, to identify what needs to change. While some intervention development rests upon a single theory approach, within the BCW, an overarching model is applied, drawing upon key determinants from other theories (Michie et al., 2011).   It proposes that behaviour in any given moment is the result of a dynamic combination of an individual's capability, opportunity, and motivation (COM-B). Capability may be physical (skill, strength) or psychological (knowledge, psychological stamina). Opportunity may be physical (in terms of the environment, time or resources) or social (norms, cues and other interpersonal influences). Motivation may be reflective (related to plans or conscious intentions) or automatic (related to reactions, desires and impulses). To explore theoretical determinants of behaviour more deeply, intervention designers can apply the Theoretical Domains Framework (TDF; Atkins et al., 2017) in step four (a). The TDF synthesises key theoretical constructs from other theories of behaviour change, and links them to the COM-B. After this stage a full behavioural diagnosis has been completed.

[Insert Table 1 & Figure 1]

Step five of the BCW involves identifying intervention functions, which are broad categories by which interventions can change behaviour, for example education and training. Step six involves identifying relevant policy categories where the intervention might sit, for example in guidelines, or communication/marketing. In step seven, specific behaviour change techniques are systematically identified (Michie et al., 2013), which are linked to the COM-B, TDF and functions. The final step is where the mode of delivery is chosen (Michie et al., 2014).

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One further important principle that guided our work was co-production. Co-production has been defined as "… the voluntary or involuntary involvement of public service users in any of the design, management, delivery and/or evaluation of public services" (Osborne, Radnor, & Strokosch, 2016) p.640). Our approach to co-production was guided by Hawkins et al. (2017)'s framework, which consists of 1) Evidence review and stakeholder consultation; 2) Co-production; 3) Prototyping. The co-production framework provides a process of participatory action research that aims to create a greater sense of ownership as well as acceptability. This paper reports on the process. Students were asked to provide their views in the form of responses to questionnaires and focus groups. The advantage of co-production is it avoids a top-down approach, prioritising the views and experiences of the target population rather than the researchers (Realpe & Wallace, 2010). This was particularly important as some previous research in this domain has treated students as the 'object' of study, rather than as collaborators (Krause, Miedema, Woofter, & Yount, 2017).

In summary, there appears to be a lack of evidence based interventions to prevent harassment at universities in the UK. While some programmes show promise, there is no one size fits all solution, and it is clear that new approaches are required to contribute to the evidence base and target these unwanted behaviours. Currently, there also appears to be a lack of evidence relating to the prevention of harassment related to other protected characteristics covered by the Equalities Act 2010, as well as a need for robust reporting tools to understand the scale of the issue, and to monitor changes once interventions are implemented.

Applying the BCW to understand how prosocial and passive bystander behaviours might be influenced by capability, opportunity and motivation (COM-B) moves away from relying on specific theories of change, to a more comprehensive understanding of a target behaviour (Michie et al., 2011). Thus, it provides a way to explore the barriers and facilitators to intervening in harassment. For example, a lack of awareness of what constitutes sexual assault has been associated with lower bystander behaviour in a US study (Brown, Banyard, &

Moynihan, 2014). Utilising the BCW approach in a UK sample may uncover key factors that might influence the development of contextually relevant programmes.

AIMS

The aim of this paper was to describe how the BCW was applied to understanding bystander behaviours in a UK student context. By applying existing literature and theory, alongside new evidence and in conjunction with students as collaborators, the paper explored the capabilities, opportunities and motivations of students to intervene in an incident of harassment, and to outline recommendations for how these interventions might be adapted and implemented.

METHODS

Participants and procedure

We undertook three primary research studies to inform the completion of the BCW. We also worked with an expert user group comprising student union representatives. Alongside the student group, a panel of university staff were consulted for their views.

Study one was an online survey of 515 students (73% women) from universities across the UK. The survey included quantitative questions about experiences of sexual assault, attitudes towards sexual consent and victim blaming. Qualitative data was collected regarding participants' views on what universities should do to target sexual assault. This study has been published and is reported in full elsewhere (Camp et al., 2018).

Study two was an online survey of 201 students (75.6% women) from one UK University. This study was concerned with ascertaining attitudes towards reporting and intervening in incidents of all types of harassment. The results of study two are also reported in full elsewhere (Hennelly et al., 2019).

Study three consisted of three focus groups a group of heterosexual women from different ethnic backgrounds, one with LGBTQI+ students and one with ethnic minority men, and an individual interview with one woman (Total N for qualitative studies =12). All study sessions took place on one university campus and were facilitated by members of the study team. Focus group data were analysed using thematic analysis (Braun & Clarke, 2006). Data were coded by the first and last author, and a set of codes applied to the transcripts. Discussions took place to generate initial themes, which were presented to student collaborators to assist with interpretation. Study three is not reported elsewhere, thus a summary of findings is presented in the current paper.

For all three studies, recruitment was undertaken online, using student union social media and message boards. All study procedures received approval from Oxford Brookes University Research Ethics Committee (ref 181173). Copies of published papers can be obtained from the first author on request.

Intervention development

As outlined in the introduction, we undertook the eight step BCW process (see Table 1). The eight steps of the BCW were divided into two stages, in line with other researchers (Curtis, Lahiri, & Brown, 2015), to highlight how research and engagement undertaken during steps 1-4 was used to both identify intervention options (steps 5-6, stage 2 in BCW) and content and implementation options (steps 7-8, stage 3 in BCW). The first stage of understanding the issues from the student perspective involved engagement with students, both within primary research studies and through consultation with an expert user group. The second stage involved translating the findings from these studies and discussion into appropriate reporting tools and intervention content alongside a diverse study team, and the expert group.

Stage one: Understanding the issues from the student perspective

Steps 1-4*:* Steps one-three of the BCW define the problem in behavioural terms, and to select and specify target behaviours. Once this has been achieved, at step four, the intervention designer applies the COM-B model to identify the capability, opportunity and motivation of the target population to engage in identified behaviours.

Stage two: Translating research findings into a reporting tool and preventive intervention

The results of steps 1-4 of the BCW result in a behavioural diagnosis which is the starting point for designing an intervention. The following stages inform the content and format of the intervention.

Steps 5-8: In steps 5-8, intervention developers can apply the APEASE criteria to guide their judgement. APEASE stands for affordability, practicability, effectiveness/cost effectiveness, acceptability, side effects/safety and equity. Step five involves identifying intervention functions. These are the broader categories by which behaviour change can be brought about and have been defined as; education; persuasion; incentivization; coercion; training; restriction; environmental restructuring; modelling and enablement. At step six intervention developers consider which policies would support the delivery of the intervention. The seven categories are; communication/marketing; guidelines; fiscal measures; regulation; legislation; environmental/social planning and service provision. Step seven involves selecting appropriate BCTs, which are the active ingredients of an intervention, and are defined as replicable, observable components that are designed to change behaviour. The most recent taxonomy of BCTs identified 93 separate and distinct techniques. Finally, step eight involves selecting an appropriate mode of delivery for the intervention. A summary of the BCW process can be seen in Table 1.

RESULTS

Results of BCW process

The results of the BCW process are detailed below. Here we have provided examples of the primary data that was used to complete each part of the BCW. Table 1 illustrates how the data was mapped to each stage in the COM-B model.

Stage one: Understanding the issues from the student perspective

BCW Step 1: Define the problem in behavioural terms

The findings of study one and two concurred with NUS reports that harassment was a common experience for women. Our findings also showed that men experienced harassment, although to a far lesser extent than women. In study two, 29.9% of respondents thought sexual assault was an issue, 31.4% thought sexual harassment was an issue and 19.4% thought bullying was an issue at their university. Data from the focus groups in study three also suggested that harassment was commonly experienced by students from all backgrounds and that some of this came from staff as well as other students.   Thus it is important that students from all backgrounds feel included in prevention efforts, and certain groups are not positioned as only either victims or perpetrators.   Study one uncovered some evidence of backlash against consent classes. More positive approaches, such as those based on bystander interventions, frame the university as a community of shared agents for change (Fenton & Mott, 2017). This might entail undertaking the challenging task of critically exploring and transforming students' culturally embedded norms about gender inequalities, masculinity and femininity, including the onus on women to avoid risky situations. Thus, in behavioural terms, the issue of harassment should be targeted through a focus on what all students and staff can do to promote an inclusive non-threatening environment, rather than through correcting specific incidences of transgressive behaviours. Our studies also revealed deficiencies in understanding the exact extent of the issue of harassment, as no reporting mechanisms were in place, as well as a lack of knowledge about where to seek support if harassment was experienced. Students did not feel confident in what

to report or what the university would do with such a report. Additionally they did not know where to seek help if they or a friend experienced an incident of harassment (Hennelly et al., 2019).

BCW Step 2: Selecting the target behaviours

At this step, modifiable behaviours relating to challenging harassment, reporting harassment and seeking support for harassment were identified, using the existing literature and theory alongside the findings of our studies, and our discussions with students. At step two it is important to consider all of the possible behaviours that would promote an inclusive non-threatening environment. Examples of possible candidate behaviours included:

- Students to intervene directly in an incident of assault / harassment
- Students to intervene indirectly in an incident of assault / harassment
- Students to report to a lecturer/ welfare team/student support officer/ campus security
- Students to report assault / harassment to a central place at the university
- Students to report criminal incidents to the appropriate emergency services
- Students to be able access help if they experience an incident themselves
- Students to signpost support to a fellow students who experience an incident
- Students to attend compulsory information sessions about assault and harassment
- Staff to record and report incidents of assault and harassment that students disclose
- Staff to signpost support to students who experience an incident
- Staff to intervene directly

BCW Step 3: Specify the target behaviour

What behaviour (s) needs to change?

Our research suggested many incidents took place off campus, and in varied locations such as accommodation and nightclubs (Camp et al., 2018; Hennelly et al., 2019). Based on this, we choose to focus on students who witness or experience harassment rather than staff, although we recognized that staff may benefit from appropriately targeted information and support regarding these issues. We decided to focus broadly on defining the behaviour that needed to change as 'intervening in an incident'. Table 2 shows how this behaviour was specified. Overall, the main points from this analysis were that students who both witness and experience

harassment need to notice an incident (which may be on campus or in the surrounding areas such as a nightclub or at accommodation), and they need act as soon as possible. This needs to happen every time an incident occurs and this could be done either alone or in a group. We also separately analysed 'reporting an incident' and 'seeking support for self or other following an incident'.

[Insert Table 2]

Stage two: Translating research findings into intervention recommendations

BCW Step 4: Identify what needs to change

Findings from our three research studies were used to understand what barriers and challenges might prevent students intervening in an incident.

Study one identified that harassment of women was a normalised experience, however, men and non-binary student harassment also needed to be considered. Ideas around 'Lad culture' were uncovered, such as prevalent heavy drinking and negative attitudes towards victims. 'Lad culture' describes a set of negative attitudes and behaviours articulated predominantly through sporting activities involving heavy drinking, characterized by sexist and homophobic 'banter' – normally, but not exclusively espoused, by men (Phipps & Young, 2013). Importantly, this study suggested there may be a backlash against some efforts to reduce harassment, and this could be viewed as a moral panic by some.

Study two's quantitative findings suggested that students regarded harassment as unacceptable and were confident to intervene in and likely to report incidents. They were more likely to intervene to help friends, rather than students they did not know. Qualitative findings suggested there were barriers to intervening including the fear of backlash and respecting victims' wishes. A further barrier was a lack of knowledge about what constitutes harassment, assault, and consent, as well as how to support friends or fellow students if they had experienced these

things. In this study, there was a clear disconnect between the quantitative findings suggesting students would generally intervene in any incident of harassment, and the qualitative findings, that there were caveats to this.

Study three's identified three themes related to 'avoiding sexual harassment', 'norms' and 'perceptions of perpetrators and victims'. Avoiding sexual harassment was about how the participants changed their behaviours to avoid particular spaces, such as not going clubbing or visiting LGBTQ+ friendly spaces. Examples included:

> *Going clubbing is a huge one - people are grabbing you and they are trying to dance with you. If you don't want it they are pulling you everywhere and kiss you out of nowhere (Woman).*

Norms related to the participants' common experiences such as catcalling, groping and being unsafe in some spaces.

> *It's when people go on nights out and they are intoxicated and not necessarily considering their actions. I would also say that, in my personal experience, I've encountered people who are in positions of authority not necessarily recognising that what they are doing is inappropriate (Man).*

 Perceptions of perpetrators tended to be about men's use of height and strength, or people in power abusing their positions. Victims were perceived as members of minority groups, those with less power and women. Possibly due to the composition of the groups, it appeared that being a victim of some kind of harassment was a normalised every day experience.

> *Have you guys noticed some rise after like the Brexit [when the UK voted to leave the European Union in 2016] thing? I've noticed I've experienced more stuff post that, despite the fact that any of my ethnicities cannot be traced back to Europe (Man)*

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Although only a small sample and three groups of students, the Study 3 focus groups revealed some unpleasant experiences.

Study 1-3's findings were integrated using triangulation to look for convergences and divergences in the data. This process occurred involved members of the study team and stakeholders. Findings of the studies and their interpretation were discussed with students and members of welfare services. Following these discussions feedback was sought on the COM-B analysis. The process culminated in the identification of the physical capabilities, psychological capabilities, physical opportunities, social opportunities, reflective motivation and automatic motivations. Tables 3 summarises the COM-B analyses, with examples of barriers and challenges from our studies.

[Insert Table 3]

Theoretical Domains Framework

The theoretical domains framework (TDF) was developed to produce a simplified list of behaviour change processes. The 14 domains are;1) knowledge, 2) skills, 3) social/professional identity, 4) beliefs about capabilities, 5) optimism, 6) beliefs about consequences, 7) reinforcement, 8) intentions, 9) goals, 10) memory, attention and decision processes, 11) environmental context and resources, 12) social influences, 13) emotion and 14) behavioural regulation (Cane, O'Connor, & Michie, 2012). TDF domains are shown in table 3. The most salient domains for each COM-B component are listed in the table.

BCW Step 5 & 6 : Identify intervention functions and policy categories

Using the APEASE criteria, existing research (Hennelly et al., 2019) and the judgement of the research team (Michie et al., 2014), we identified functions and policy categories. Candidate intervention functions were identified for each COM-B component, based on the analysis of COM-B barriers. Training, education, modelling, environmental restructuring and persuasion

were all relevant. Training and education were identified as the most appropriate functions. Although environmental restructuring may be appropriate, this might be costly, less practical and acceptable. Modelling would be useful, but this may not be practical or equitable.   Policies are decisions made by relevant authorities or organisations in order to bring about the desired behaviour change. We identified that service provision and communication/marketing would be the most relevant categories(Michie et al., 2014).

BCW Step 7: Identify BCTs

BCTs were identified in the following ways; using the candidate intervention functions, we first reviewed BCTs that were linked to the identified functions. Then we reviewed these BCTs to understand whether they met the APEASE criteria, which included ensuring they were acceptable to student stakeholders. Table 3 summarises the identified BCTs relevant to each barrier. At the bottom of the table, the behavioural diagnosis of the relevant components is displayed. Reflective and automatic motivation seemed salient within the results of the three empirical studies. These components related to beliefs, ideas and stereotypes about what behaviours were appropriate in certain university contexts. For example, within the survey, one woman participant said "here I am ticking all these boxes [related to confidence about intervening] but I have never reported anything at all". Another woman in the focus groups said "I am not sticking up for guys that do this [grope women in a nightclub], but it is the only way they can be with someone, at uni it is impossible to talk to a girl". Another one said "I've had a lot of times when I have been out, men have just put their hands all over me, but then it's like I just think, oh, I don't know, for me it is not just really right what they are doing, but it's just a laugh". These comments suggest an acceptance of certain behaviours in specific contexts. Worries about drinking alcohol and experiencing harassment were also prevalent. Social opportunity was also important, as evidenced by comments such as "friends [are] harder to correct if you don't want to lose a friendship". There was also evidence of social norms about sharing pictures, and changing the culture. Thus, the final set of BCTs identified to address the

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barriers were. The BCTs and their theorised impacts on bystander intervention are summarised in a logic model in Table 4.

[Insert Table 4]

BCW Step 8: Identify mode of delivery

The final step within the BCW is to specify the mode of delivery by which the identified behaviour change techniques can be operationalised. Discussions within the research group, alongside the study findings suggested face to face approaches were preferred, but could be supported with online information and training (Camp et al., 2018; Michie et al., 2014).

DISCUSSION

The aim of this paper was to describe how we completed steps 1-8 of the BCW to understand bystander behaviours in a UK student context. This represents an important addition to the literature in subjecting bystander behaviour to a rigorous analysis that allows a deeper understanding of the behaviour in this context. Applying the COM-B model to this behaviour offered a novel insight into the barriers and challenges to delivering such interventions. The development of a logic model to theorise the change processes underlying bystander behaviours in this population offers a new perspective on the specific behaviour change techniques required within bystander interventions to maximise their effectiveness. The results and implications for intervention and policy are summarised below.

Implications for bystander intervention behaviours

The analysis identified that automatic motivation and psychological capability were important potential barriers to intervening behaviours. Although findings suggested that many students did already feel confident in intervening if they witnessed harassment, there were still large numbers who were not confident in doing so. Furthermore, there may be inherent stereotypes

about different groups and behaviours that impact on reporting. For example, as some of the focus group findings suggest, some behaviours may be normalised and accepted on nights out. For example if a student is attempting to flirt with another student. This means that there may not be a clear line between behaviours that should be intervened in, and those that do not require intervention. Similarly, social opportunity was also identified as an important barrier that may impact on intervening behaviours. A subsequent intervention programme to encourage intervening must take these issues into account.

As outlined in the introduction, a review of bystander interventions recommended they should be used in the UK, with careful adaptation to account for cultural differences compared to the US where such programmes originated (Fenton et al., 2016). This review highlighted that the American 'Green Dot' and 'Bringing in the Bystander' were good examples of modular programmes that showed promise in reducing sexual assault (Coker et al., 2011; Moynihan et al., 2015). The intended outcomes of these programmes are to protect the victim, and also convey to the perpetrator that their behaviour is socially unacceptable. Applying the BCTs identified in the current study could enhance their delivery. For example, using social comparison and information about others' approval could be used to counter barriers identified under the heading of 'social opportunity'. Reflective motivation was also identified as important, because beliefs about perpetrators, victims and protected characteristics may influence intervening. Analysis here also suggested automatic motivation needed to be targeted, due to some stereotypes about gender roles and acceptability of certain behaviours in nightclub environments. Re-attribution as a BCT might be helpful here, in order to re-frame normalised groping behaviours.

Our findings highlight that knowledge is necessary but not sufficient for action. This requires the individual to take responsibility to intervene, rather than passively diffusing responsibility. Indeed knowledge about sexual violence does not appear to impact on sexual violence rates in US college students (DeGue et al., 2014). Understanding capability, opportunity and motivation

to intervene from the perspective of UK University students can help to enhance the adaptation of bystander programmes to this context, or the development of new programmes based on similar principles. Specifying a logic model relating to the BCTs identified in this analysis demonstrates the expected impacts of the BCTs and provides the logic model with more explicit components that need to be addressed, rather than simply stipulating 'bystander training' as the input strategy. This may be applicable to other UK campuses where similar behaviours are observed, but further analysis of the COM-B components by those intent on delivering such training is recommended in new contexts.

Behaviour change takes time, and single session prevention efforts, such as standalone consent workshops, are unlikely to equip students with the knowledge, skills, and attitude to intervene as an active bystander (DeGue et al., 2014; Fenton & Mott, 2017). Given that intervention dosage is a key factor for any effective prevention programme (Nation et al., 2003), short one off courses are unlikely to bring about lasting change. However, one issue that researchers from other universities have reported to our team is that there are high attrition rates with multi-session face to face programmes. Students and staff suggested exploring the possibility of delivering some aspects of a bystander programme online, thus this will be explored in the next stages of our project. The challenge of delivering basic principles of bystander intervention training, alongside BCTs to challenge reflective and automatic motivations will be explored. Key issues to be understood involve how to ensure adherence to the course, and how to encourage/ incentivise students to take part.

Discussion and reflection on using BCW

Our project team comprised members of university administration, students and academic staff. While it was initially challenging to get buy in from the university to take a more systematic approach to the problem, once the process was underway, the benefits of thinking about behaviours in this way were appreciated and supported. This demonstrated how the BCW

framework can be used to support diverse teams to work together and take an evidence-based approach to addressing an important issue. The implementation of clear steps to follow allowed the team members to reflect on their progress towards the common goal. While some team members were psychologists with prior experience of using the BCW, most of the team were novices in this area. However, the clear guidance offered by the BCW approach allowed all team members to make meaningful contributions towards the end goals of the project.

To our knowledge, this is the first study to report using the BCW to address the issue of harassment on university campuses. We would need to test the logic model and apply the BCTs in context to further evaluate our findings. However, our approach to proposing a bystander intervention may be useful elsewhere, as evidence suggests similar levels of harassment are experienced by students in a range of international contexts. For example, when undertaking internships (Lin, Mao, & Hong, 2021), medical training (Herweck, Kumnick, Perone, Muller, & Bornstein, 2021) and even when traveling to university (Loukaitou-Sideris, Brozen, Pinski, & Ding, 2020). Furthermore, the BCW process been used to understand student behaviour internationally. For example, to understand Canadian students' barriers and facilitators to sexual health service use, and to propose interventions to reduce Australian students' prolonged sitting times (Cassidy et al., 2018; Castro, Vergeer, Bennie, Cagas, & Biddle, 2021). Thus, our approach to understanding behaviour may also be more widely applied.

Limitations

Our paper has some limitations that must be taken into account alongside the recommendations. Alongside the cross-sectional nature of the surveys, the studies were undertaken predominantly on one university campus in the UK, and thus may not be generalizable. We found it challenging to recruit men, and students from non-white ethnic backgrounds are not well represented, even though they may be experiencing more incidents of harassment than their counterparts. While generalizability is not an aim of qualitative research, we recommend that those wanting to implement bystander interventions conduct further focus

groups to capture the views of diverse groups of students in their own contexts. While the BCW is a useful framework to ensure a systematic approach to intervention development, some are critical of this approach, suggesting in particular that the COM-B model is difficult to falsify (Ogden, 2016). Although co-production approaches are designed to maximise stakeholder input, there can be challenges when stakeholders and researchers have different values, as well as practical and personal costs (Oliver, Kothari, & Mays, 2019). In the next phases of this project there may be challenges in ensuring the intervention content is acceptable to all stakeholders. Further to this point, there is a risk of selection bias in those that volunteer to be involved in the co-production, which may affect acceptability in the general student population.

Conclusions

In this paper we have shown that the BCW framework can be successfully applied to understanding and intervening in harassment behaviours within university campuses via bystander interventions. The use of a systematic approach was valuable in ensuring that university policymakers could understand these complex issues from an evidence based perspective. As part of this work, we recommended the development of an anonymous reporting tool, which was packaged alongside appropriate BCTs, and increased awareness of reporting services. We still need to undertake further research to develop an appropriate bystander intervention training course that takes into account the need to incorporate multiple BCTs to ensure that intervening is possible given the prevailing culture at UK Universities.

REFERENCES

Abraham, C., & Michie, S. (2008). A taxonomy of behavior change techniques used in interventions. *Health Psychology, 27*(3), 379-387. doi:10.1037/0279-6133.27.3.379

Atkins, L., Francis, J., Islam, R., O'Connor, D., Patey, A., Ivers, N., . . . Michie, S. (2017). A guide to using the Theoretical Domains Framework of behaviour change to investigate implementation problems. *Implementation Science, 12*(1), 77. doi:10.1186/s13012-017-0605-9

Berkowitz, A. (2002). Applications of social norms theory to other health and social justice issues. In H. W. Perkins (Ed.), *The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, Clinicians*. San Francisco: Jossey-Bass.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101.

Brown, A. L., Banyard, V. L., & Moynihan, M. M. (2014). College Students as Helpful Bystanders Against Sexual Violence. *Psychology of Women Quarterly, 38*(3), 350-362. doi:10.1177/0361684314526855

Camp, S.-J., Sherlock-Smith, A. C., & Davies, E. L. (2018). Awareness and support: students' views about the prevention of sexual assault on UK campuses. *Health Education, 118*(5), 431-446. doi:10.1108/HE-02-2018-0007

Cane, J., O'Connor, D., & Michie, S. (2012). Validation of the theoretical domains framework for use in behaviour change and implementation research. *Implementation Science, 7*. doi:10.1186/1748-5908-7-37

Cassidy, C., Bishop, A., Steenbeek, A., D., L., Martin-Misener, R., & J., C. (2018). Barriers and enablers to sexual health service use among university students: a qualitative descriptive study using the Theoretical Domains Framework and COM-B model. *BMC Health Service Research, 18*, 581. doi:10.1186/s12913-018-3379-0

Castro, O., Vergeer, I., Bennie, J., Cagas, J., & Biddle, S. J. H. (2021). Using the Behavior Change Wheel to Understand University Students' Prolonged Sitting Time and Identify Potential Intervention Strategies. *Int J Behav Med, 28*(3), 360-371. doi:10.1007/s12529-020-09926-0

Coker, A. L., Cook-Craig, P. G., Williams, C. M., Fisher, B. S., Clear, E. R., Garcia, L. S., & Hegge, L. M. (2011). Evaluation of Green Dot: an active bystander intervention to reduce sexual violence on college campuses. *Violence Against Women, 17*(6), 777-796. doi:10.1177/1077801211410264

Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I., & Petticrew, M. (2008). Developing and evaluating complex interventions: the new Medical Research Council guidance. *British Medical Journal, 337*(7676). doi:a165510.1136/bmj.a1655

Curtis, K. E., Lahiri, S., & Brown, K. E. (2015). Targeting Parents for Childhood Weight Management: Development of a Theory-Driven and User-Centered Healthy Eating App. *Jmir Mhealth and Uhealth, 3*(2). doi:10.2196/mhealth.3857

DeGue, S., Valle, L. A., Holt, M. K., Massetti, G. M., Matjasko, J. L., & Tharp, A. T. (2014). A systematic review of primary prevention strategies for sexual violence perpetration. *Aggression and Violent Behaviour, 19*(4), 346-362. doi:10.1016/j.avb.2014.05.004

Dessel, A. B., Goodman, K. D., & Woodford, M. R. (2017). LGBT discrimination on campus and heterosexual bystanders: Understanding intentions to intervene. *Journal of Diversity in Higher Education, , 10*(2), 101-116

Fenton, R. A., & Mott, H. L. (2017). The Bystander Approach to Violence Prevention: Considerations for Implementation in Europe. *Psychology of Violence, 7*(3), 450-458. doi:10.1037/vio0000104

Fenton, R. A., & Mott, H. L. (2018). Evaluation of the Intervention Initiative: A Bystander Intervention Program to Prevent Violence Against Women in Universities. *Violence Vict, 33*(4), 645-662. doi:10.1891/0886-6708.Vv-d-16-00074

Fenton, R. A., Mott, H. L., McCartan, K., & Rumney, P. N. S. (2016). *A review of evidence for bystander intervention to prevent sexual and domestic violence in universities*. Retrieved from London: http://eprints.uwe.ac.uk/28656/1/PHE_PublishedLitReviewApr2016.pdf

Foxcroft, D. R., Moreira, M. T., Almeida Santimano, N. M. L., & Smith, L. A. (2015). Social norms information for alcohol misuse in university and college students. *Cochrane Database of Systematic Reviews*(12). doi:10.1002/14651858.CD006748.pub4

Hawkins, J., Madden, K., Fletcher, A., Midgley, L., Grant, A., Cox, G., . . . White, J. (2017). Development of a framework for the co-production and prototyping of public health interventions. *Bmc Public Health, 17*(1), 689. doi:10.1186/s12889-017-4695-8

HEFCE. (2017). Student Safeguarding. Retrieved from http://www.hefce.ac.uk/funding/safeguarding/

Hennelly, S. E., Hussain, S., Hale, T., Cadle, M., Brooke, J., & Davies, E. L. (2019). University student attitudes to prosocial bystander behaviours. *Health Education, 119*(5/6), 408-424. doi:10.1108/HE-05-2019-0023

Herweck, A. M., Kumnick, A., Perone, H., Muller, C., & Bornstein, K. (2021). 'What a Pretty Assistant You Have': Addressing Sex-Based Harassment by Patient Offenders in Undergraduate Medical Training. *Medical Science Educator*. doi:10.1007/s40670-021-01289-9

Krause, K. H., Miedema, S. S., Woofter, R., & Yount, K. M. (2017). Feminist Research with Student Activists: Enhancing Campus Sexual Assault Research. *Family Relations, 66*(1), 211-223. doi:10.1111/fare.12239

Latane, B., & Darley, J. M. (1969). BYSTANDER "APATHY". *American Scientist, 57*(2), 244-268. Retrieved from http://www.jstor.org/stable/27828530

Lin, L., Mao, P.-C., & Hong, T.-L. (2021). Kitchen Violence and Harassment: Perspectives and Reflection from Student Interns. *Journal of Hospitality & Tourism Education*, 1-11. doi:10.1080/10963758.2020.1868311

Loukaitou-Sideris, A., Brozen, M., Pinski, M., & Ding, H. (2020). Documenting #MeToo in Public Transportation: Sexual Harassment Experiences of University Students in Los Angeles. *Journal of Planning Education and Research*, 0739456X20960778. doi:10.1177/0739456X20960778

Malamuth, N. M., Huppin, M., & Linz, D. (2018). Sexual assault interventions may be doing more harm than good with high-risk males. *Aggression and Violent Behavior, 41*, 20-24. doi:https://doi.org/10.1016/j.avb.2018.05.010

Michie, S., & Abraham, C. (2004). Interventions to change health behaviours: Evidence-based or evidence-inspired? *Psychology & Health, 19*(1), 29-49. doi:10.1080/0887044031000141199

Michie, S., Atkins, L., & West, R. (2014). *The Behaviour Change Wheel: A guide to designing interventions*. London: Silverback Publishing.

Michie, S., Richardson, M., Johnston, M., Abraham, C., Francis, J., Hardeman, W., . . . Wood, C. (2013). The Behavior Change Technique Taxonomy (v1) of 93 Hierarchically Clustered Techniques: Building an International Consensus for the Reporting of Behavior Change Interventions. *Annals of Behavioral Medicine, 46*(1), 81-95. doi:doi: 10.1007/s12160-013-9486-6

Michie, S., van Stralen, M. M., & West, R. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science, 6*. doi:10.1186/1748-5908-6-42

Moynihan, M. M., Banyard, V. L., Cares, A. C., Potter, S. J., Williams, L. M., & Stapleton, J. G. (2015). Encouraging responses in sexual and relationship violence prevention: what program effects remain 1 year later? *Journal of Interpersonal Violence, 30*(1), 110-132. doi:10.1177/0886260514532719

Nation, M., Crusto, C., Wandersman, A., Kumpfer, K. L., Seybolt, D., Morrissey-Kane, E., & Davino, K. (2003). What works in prevention - Principles of effective prevention programs. *American Psychologist, 58*(6-7), 449-456. doi:10.1037/0003-066x.58.6-7.449

NUS. (2011a). Hidden Marks: A study of women's experiences of harassment, stalking, violence and sexual assault (2nd edition). Retrieved from https://www.nus.org.uk/PageFiles/12238/NUS_hidden_marks_report_2nd_edition_web.pdf

NUS. (2011b). *Race for equality A report on the experiences of Black students in further and higher education*. Retrieved from London: https://www.nus.org.uk/pagefiles/12238/nus_race_for_equality_web.pdf

NUS. (2015). *I heart consent pilot report*. Retrieved from https://nusdigital.s3-eu-west 1.amazonaws.com/document/documents/17029/002b1798d03b70dd337d8ac3464c6 858/I%20heart%20consent%20Pilot%20report.pdf?AWSAccessKeyId=AKIAJKEA56ZW KFU6MHNQ&Expires=1495662721&Signature=8W9vHbmKw%2FnDxI3tqnGN7EZVJS0 %3D

NUS. (2016). Pride and Prejudice in Education: An exploration of experiences and perceptions of sexual orientation and gender identity among post school education learners and staff. In. London: National Union of Students.

Office for Students. (2021). How we expect universities and colleges to tackle harassment and sexual misconduct. Retrieved from https://www.officeforstudents.org.uk/news-blog-and-events/blog/how-we-expect-universities-and-colleges-to-tackle-harassment-and-sexual-misconduct/

Ogden, J. (2016). Celebrating variability and a call to limit systematisation: the example of the Behaviour Change Technique Taxonomy and the Behaviour Change Wheel. *Health Psychology Review, 10*(3), 245-250. doi:10.1080/17437199.2016.1190291

Oliver, K., Kothari, A., & Mays, N. (2019). The dark side of coproduction: do the costs outweigh the benefits for health research? *Health Research Policy and Systems, 17*(1), 33. doi:10.1186/s12961-019-0432-3

Osborne, S. P., Radnor, Z., & Strokosch, K. (2016). Co-Production and the Co-Creation of Value in Public Services: A suitable case for treatment? *Public Management Review, 18*(5), 639-653. doi:10.1080/14719037.2015.1111927

Perkins, H. W., & Berkowitz, A. D. (1986). PERCEIVING THE COMMUNITY NORMS OF ALCOHOL-USE AMONG STUDENTS - SOME RESEARCH IMPLICATIONS FOR CAMPUS ALCOHOL EDUCATION PROGRAMMING. *International Journal of the Addictions, 21*(9-10), 961-976. Retrieved from <Go to ISI>://A1986E960400001

Phipps, A., & Young, I. (2013). *That's what she said: Women students' experiences of 'lad culture' in higher education*. London: National Union of Students.

Prestwich, A., Sniehotta, F. F., Whittington, C., Dombrowski, S. U., Rogers, L., & Michie, S. (2014). Does theory influence the effectiveness of health behavior interventions? Meta-analysis. *Health Psychology, 33*(5), 465-474. doi:10.1037/a0032853

Realpe, A., & Wallace, L. M. (2010). *What is co-production?* Retrieved from London:

UK Government. (2016). Hate crime action plan 2016. In. London: Ministry of Housing, Communities & Local Government , Home Office , and Ministry of Justice.

WHO. (2012). Understanding and addressing violence against women. In: World Health Organisation.

Yost, M. R., & Gilmore, S. (2011). Assessing LGBTQ campus climate and creating change. *J Homosex, 58*(9), 1330-1354. doi:10.1080/00918369.2011.605744

TABLES

Table 1: Summary of Michie et al's (2013) Behaviour Change Wheel (BCW) steps for intervention development.

BCW Step	Summary of step
BCW Step 1: Define the problem in behavioural terms	Broadly specifying the issue in terms of what needs to change and who is involved.
BCW Step 2: Selecting the target behaviours	Listing a range of possible specific target behaviours.
BCW Step 3: Specify the target behaviour	Deciding which specific behaviour to target and defining where and when it occurs, and who should be doing it.
BCW Step 4: Identify what needs to change	Understanding the target behaviour in terms of capability, opportunity and motivation.
BCW Step 4a: Using the TDF to dig deeper into what needs to change.	Expanding on the COM-B and gaining a more in depth analysis of the target behaviour using insights from key theories of behaviour.
BCW Step 5 & 6: Identify intervention functions and policy categories.	Thinking about possible broad categories of intervention and policy levers that may apply.
BCW Step 7: Identify BCTs	Selecting the active ingredients of the intervention, ensuring that they are linked to the COM-B/TDF analysis and functions.
BCW Step 8: Identify mode of delivery.	Thinking about how to deliver the selected BCTs to the intended target group.

Table 2: *BCW Step 3: Specify the target behaviours for reporting, intervening and seeking support*

Target behaviour	Intervene in an incident of harassment
Who **needs to perform the behaviour?**	Students who witnesses the incident
What **do they need to do differently to achieve the desired change?**	Notice the issue Interpret it as problematic Feel responsible
When **do they need to do it?**	While the incident is occurring, or afterwards
Where **do they need to do it?**	On campus, in lectures, in social spaces, on nights out in the city, at student accommodation, in public spaces in the city and online
How often **do they need to do it?**	Each time an incident occurs and it is personally safe for them to do so
With whom **do they need to do it?**	Alone, or in a group of students, or around staff

Table 3: *COMB TDF, intervention function and BCT analysis for target behaviour: 'intervening in an incident'*

COM-B Components	What needs to happen for the target behaviour to occur?	Examples of indicative evidence from empirical data	TDF Domain	Intervention function	BCTs
Physical capability	To be physically able to intervene No physical intimidation (eg if perpetrator is perceived as a threat). Physical characteristics of the perpetrator and victim	• I think may be whether it was going to be safe for me to like I don't just mean personally but whether it would escalate the situation would probably be my first thought (Study 3 Woman FG). • It depends on the circumstance, I am quite comfortable if there is another person in that situation, it's more safety in numbers in that kind of case whereas if I am alone, it depends on the situation, is there anything nearby? (Study 3 LGBT FG) • A lot of the time it can be a lot of like cyber stuff as well. So on Facebook or social media. I think in this day and age it is not going to be just physical. You know lots of people I mean don't meet day to day face to face. It can all be online or on dating websites, so it can be through that (Study 3 FG Women) • When I got there this guy was huge, so there wasn't anything I could've done (Study 3 FG men) • Given (this university's) reputation and involvement in sports, where a lot of sexual assault and harassment occurs, (the university) has a responsibility to raise awareness of these incidents and implement the appropriate mechanisms to support those affected so they are more inclined to speak-out (Survey man)	Physical skills	Environmental restructuring	12.2 Restructuring the social environment 5.3 Information about social and anv consequences
Psychological capability	To be able to identify harassment/ assault correctly (uncertainty) To know the most appropriate or safest way to intervene	• About 70% of students felt confident intervening to help someone in a vulnerable situation (eg drunk at a party) and the same percentage felt confident in challenging verbal partner abuse and negative views or unkind jokes about protected characteristics (study 2). • I don't know necessarily if I'd know how to intervene um yeah so it's probably be in terms of a decision tree like whether I'd be safe and whether the other person like physically safe immediately whether it would make it worse (Study 3 FG woman)	Knowledge Cognitive and interpersonal skills	Training Education Modelling	4.1 Instruction on how to perform 6.1 demonstration of the behaviour 4.3 Reattribution

	Confidence in knowing what is witnessed is classed as harassment	• They might turn around and start getting nasty on you. So then I don't really know if I want to start getting myself all caught up in it or worse (Study 3 FG Women)			
Physical opportunity	To be physically in the same place as an incident	• I stopped clubbing about a year ago because you know there was like all the incidences so yeah (Study 3 FG Women) • If I'm on a night out, generally even if I do drink a lot, if I see someone sitting on their own looking very out of it I will still try and approach them and just say 'hi are you okay, do you need a taxi or anything?' and then just saying 'I'll draw some cash out, get yourself a taxi', or alternatively pointing them out to a bouncer and saying 'this person needs a taxi, can you look after them whilst they're waiting?' It's making sure that it's as much preventative than it is responding to a situation (Study 3 FG LGBT).	Environmental context and resources	Enablement Environmental restructuring	12.1 & 12.2 Restructuring the physical /social environment environment 4.2 Information about antecedents 2.2 Feedback on behaviour
Social opportunity	Culture that encourages intervening Those around you support what you are doing Normalisation of practices, acceptance	• Friends can be paradoxically harder to correct than your close friends and if you don't want to lose a friendship….he was a fairly good friend but afterwards we had a cooling off period for a while and we weren't friends for a while (Study 3 Men FG) • If they are a friend or an acquaintance, then I always call them out, and equally vice versa that I can trust them to call me out on my shit (Study 3 FG LGBT) • I definitely think a lot of guys will continuously ask you day to day for a picture of like whatever and it is hard. That is like seen as really normal (Study 3 FG women) • I would personally argue not to downplay like how difficult it is to change a culture. I think there are a lot of easy things that can be done now, or if the university is willing to commit the resources to it (Study 3 FG LGBT) • Students are often put in positions where they fear losing their social standing if they report certain incidents, which may be a huge factor in the lack of reporting as being ostracised by your peers is a huge fear of many university students (Survey woman)	Social influences	Persuasion Environmental restructuring Modelling	6.2 social comparison 6.3 information about others' approval
Reflective motivation	Beliefs about perpetrators and victims	• I think that most people are probably more inclined to intervene on behalf of someone else rather than themselves. When it's	Professional social role/ identity	Persuasion Education	13.1 Identification

	Beliefs about protected characteristics	yourself it's like I can get through this, it's alright. When you see it happen to someone else that's like how can you treat another person like that? (Study 3 Men FG) • I have a disabled friend who doesn't feel comfortable being spoken for if they want someone to get out of the way so it's like finding the balance between calling it out and not getting in way of a friends autonomy which I think is equally as important (Study 3 LGBT FG) • In my case, the offender was not a student (though did happen on campus). And seeing as I was very intoxicated, I doubted that anyone would take me seriously. That's why I never reported the incident (Survey woman).	Beliefs about consequences Beliefs about capabilities Intentions	Enablement	of self as role model 13.4 valued self-identity 5.3 Information about social and environmental consequences
Automatic motivation	Inherent stereotypes about victims and perpetrators may affect intervening Stereotypes about men and women's behaviour Automatic use of discriminatory language Inherent prejudice based on a protected characteristic may affect intervening Some behaviour is normalized	• Some racists' comments that come across as jokes….I think it's important to normalise correcting people (Study 3 FG Women) • Men are kind of obviously they are driven to want sex. Society makes them like they want to have sex, if they don't have sex they don't want the sexual advancements something is wrong with them. So I think that raises a different issue because then it is difficult for men to say no (Study 3 FG women) • Because all the boys I know go on a night out to pull. So there like it's like there mates are like oh come on you gotta get with a girl tonight. You have to try if you don't try it they won't know if they will get somewhere so (Study 3 FG Women) • I sometimes I think girls are just as bad. Girls are really trying it with guys as well so it's we want to be with guys as well so a lot of girls are trying, it is kind of vice versa. Everyone tries it, moves onto the next guy/girl, it is just trying their luck (Study 3 FG women). • Well sometimes, I've had a lot of times when I have been out, men have just put their hands all over me, but then it's like I just think, oh, I don't know, for me it is not just really right what they are doing, but it's just a laugh (Study 3 FG women).	Reinforcement Emotion	Persuasion Environmental restructuring	13.1 Identification of self as role model 12.2 Restructuring the social environment

Behavioural diagnosis of the relevant COM-B components:	Barriers to intervening were identified in all components. Most relevant COM-B components are reflective and automatic motivation, and psychological capability. Physical capability, and social opportunity are also important. Physical capability and physical opportunity are perhaps less relevant. BCTs most relevant might be: 4.1 Instruction on how to perform, 4.3 Reattribution, 5.3 Information about social and environmental consequences, 6.1 demonstration of the behaviour, 6.2 social comparison, 6.3 information about others' approval 12.2 Restructuring the social environment, 13.1 Identification of self as role model 13.4 valued self-identity,	

Table 4: *Logic model for intervention to increase bystander behaviour when harassment is witnessed*

Process (COM-B barrier)	Intervention component (BCT)	How operationalised	Short term outcome	Long term impact
Psychological capability	4.1Instruction on how to perform the behaviour	Training on how to intervene. E.G how to directly intervene, or distract attention.	Increased confidence in intervening	Increased intervening
Psychological capability/ Automatic motivation	4.3Reattribution	Education about what behaviours constitute harassment	Understanding that being groped without consent or groping someone without their consent construes harassment,	Fewer incidents
Social opportunity	6.1 demonstration of the behaviour	Viewing others intervening, in modelling situations	Increasing confidence and acceptability	Increased social acceptance of intervening
Social opportunity	6.3 information about others' approval	Education about acceptability of intervening	Increasing confidence and acceptability	Increased social acceptance of intervening
Reflective motivation	13.4 valued self-identity,	Encouraging students to feel that bystanders are valued	Increased confidence in intervening	Feeling confidence in oneself as a pro-social bystander in other situations

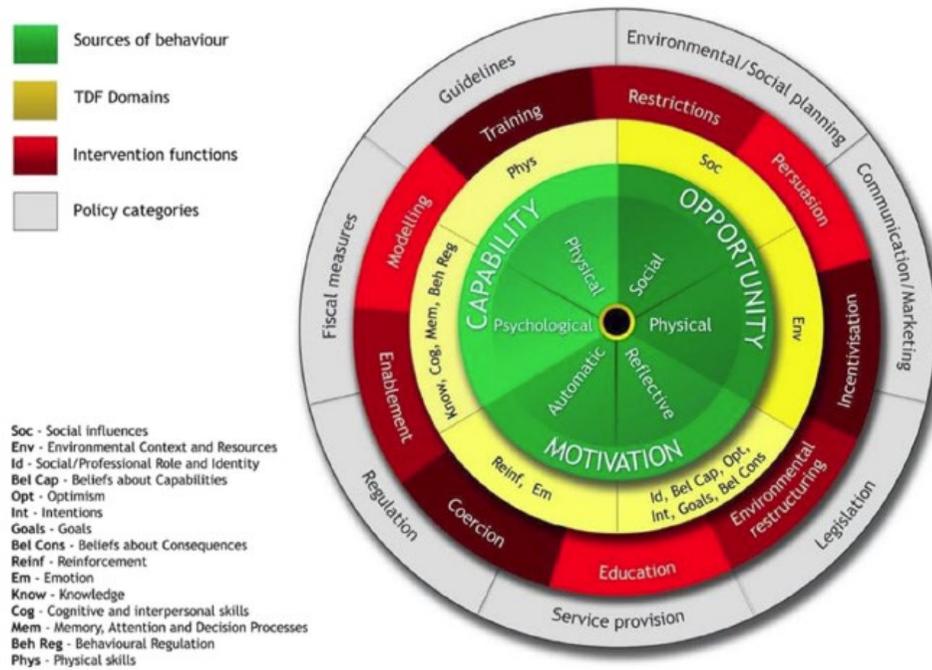| Automatic motivation	12.2 Restructuring the social environment	Changing norms through discussions and campaigns	Increased awareness of unacceptable behaviours	Decreased acceptance of harassment

Figure 1: The Behaviour Change Wheel (Michie et al., 2014) – see http://www.behaviourchangewheel.com/