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**How commercial senior living facilities help enhance the social
well-being of older customers through social activities:
Evidence from China**

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Abstract

The fast-growing ageing population has posed numerous challenges across the world. Social isolation has become a major problem with health and economic implications globally (Buheji et al., 2020; Hall et al., 2021). Owing to the changes in family structures which have led to limitations in care provision from family members, commercial senior living facilities have emerged as a solution to older adults' care. Transformative service research, which focuses on the uplifting changes generated by the interactions between service entities and customer entities, has been applied to diverse studies to examine the potential effect of services on customers' well-being, particularly among vulnerable customers. Services provided by hospitality businesses have been criticized for their negative impact on public order (e.g., Barnoya et al., 2016; Harnden, 2018) and limited effort in offering services contributing to well-being outcomes. Despite the fact that hospitality has already attracted the attention of scholars in relation to improving individuals' wellbeing, it is argued that the transformative potentials of hospitality services has not been entirely explored through the lens of transformative service research.

This study aims to investigate how elderly customers' engagement in interactive social activities provided by commercial senior living facilities helps them connect socially and enhance their social well-being. This research demonstrates: firstly, the extent to which social activities provided by commercial senior living facilities supplement the lost social relationships of older adults; and secondly, the fact that commercial relationships developed in commercial settings are crucial to older customers' social well-being. For this, this study applied a sequential explanatory mixed-method research design. In the quantitative phase, the questionnaire was administered face-to-face, and data was collected from 267 older customers residing in commercial senior living facilities in China. Partial Least Squares SEM (PLS-SEM) was used to analyze the data. In the

qualitative phase, three focus groups were conducted based on the results yielded from the quantitative phase. Each focus group comprised of six participants, including two employees in charge of social activities in commercial senior living facilities, two older customers from commercial senior living facilities and two government officials or employees from the ageing development foundation. The data was analyzed using thematic analysis to explain and further explore the quantitative results.

The findings indicate that social interactions generated by participation in social activities contribute to older customers' social well-being. Employees, peers and outsiders play an important role in fulfilling older customers' social needs. In addition, there was evidence indicating resource integration occurred during social interactions, which resulted in transformative values. This explained what had happened during older customers' social interactions with various actors. Furthermore, the moderating role of social connectedness is highlighted as contributing to older customers' social well-being. In particular, this study provides a better understanding of the important role hospitality services play with service offerings in addressing a societal problem that the ageing population is facing-older adults' social connectedness and social well-being. This study makes a distinct contribution to the existing body of knowledge by employing a transformative service research framework to commercial senior living facilities and emphasizing the impact of interactions between service and customer entities on the social well-being of older customers.

Dedication

This thesis is dedicated to my mother, Mrs. Yushu Zhang, to my father, Mr. Yuyong Feng and to my husband Stephen Francis Hughes who wanted to see me achieve my goal in studying for a higher degree and who has supported me unconditionally throughout the whole journey.

It is also dedicated to my precious baby girl, Villanelle (Zeyi), who was born during this journey and whose birth has encouraged me to accomplish the final completion.

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I would like to thank all my colleagues within the Business School. They have been my continuous support in research and life. Their kindness and friendship have given me a sense of belonging. They are not only my research partners, but some of them have also become friends for life.

I would also like to extend my gratitude to the participants in this research, without whom it would have been impossible to complete this research. Their time and help are greatly appreciated. My sincere wish for all the older adults involved in this study is to fulfill their social well-being and enjoy their retirement.

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LIST OF ABBREVIATIONS

TSR	Transformative service research
SIE	Social interaction with employees
SIP	Social interaction with peers
SIO	Social interaction with outsiders
SWB	Social well-being
SC	Social connectedness
SPFT	Social Production Function Theory
SPSS	Statistical Package for the Social Sciences
PLS-SEM	Partial Least Squares Structural Equation Modelling
α	Cronbach's alpha
CR	Composite reliability
AVE	Average Variance Extracted
HTMT	Heterotrait-monotrait
VIF	Variance inflation factor
β	The path coefficients
R^2	Coefficient of determination values
Q^2	Cross-validated redundancy value
SRMR	Standardized root mean square residual

Chapter One
Introduction

1.1 Chapter overview

This chapter presents an overview of the research conducted in this PhD study. It starts with an introduction to the background to the study, followed by an explanation of the rationale. Then, the aim and objectives of the study are stated. Finally, an overview of the study structure is presented.

1.2 Background to the study

The world is experiencing a steadily increasing trend in ageing population. It is reported that the ageing population (population over 60 years old) will almost double from 12% to 22% between 2015 and 2050 across the world (WHO, 2021), escalating at a rate of 3.26% annually (UN-Habitat, 2016). The growing ageing population displays some geographical and socio-economic features. For example, Asia is projected to have a quarter of its population aged over 60 years whereas developed countries are forecast to have a quarter of the population aged over 65 years by 2030 (Khan, 2019). Nearly all the continents, except Africa, are estimated to have a quarter of their population aged over 60 years by 2050 (Khan, 2019). Furthermore, by 2050, low-and middle-income nations will account for 80% of the world's ageing population (WHO, 2021).

The growing ageing population is believed to have been affected by low fertility rates and zero immigration policies such as in Japan, one-child policy, and widespread migration such as in China, or sustainable immigration policies such as those in the United States and United Kingdom (Khan, 2019). In addition, higher life expectancy is another contributor to the ageing population. The

increasing global life expectancy is the result of a variety of improved factors, such as health-care service delivery (WHO, 2019), environmental and societal factors (GBD, 2017), education levels (Cantu et al., 2021), and nutrition (Ekmekcioglu, 2020).

An immediate challenge of older adults' longer life expectancy that service sectors face involves a greater demand for health care delivery in service sectors (Lopreite and Mauro, 2017). According to Age UK (2019), even though local authorities arrange care for older adults, it is noted that friends and families are still the primary care providers for older adults. However, due to the change of family structures such as family size, the ability of family members, friends, and neighbors to provide care to older adults is declining (CPA, 2014). As a result, commercial senior living services have been developed, the concept which combines the services of housing, hospitality and health care (Hollis and Verma, 2015). Commercial senior living facilities are places where older adults can be taken care of, get improved access to various services and their desired lifestyle after retirement (Ayalon, 2015).

Bunt et al. (2017) point out that older adults greatly depend on their social relationships and social environments to fulfil their social needs. A decreased level of need fulfillment will lead to decreased social well-being. Hospitality has been found to play an important role in improving well-being by providing social spaces for networking and interaction (Dunbar, 2016). However, how hospitality services help older adults mitigate social isolation and loneliness and improve their social well-being has been rarely researched (Altinay et al., 2019; Feng et al., 2019; Song et al., 2018).

1.3 Rationale and research questions

Globally, social isolation is a serious issue with implications for both health and the economy (Bhalla and Lapeyre, 2016; Leigh-Hunt et al., 2017). Poor physical and psychological health is found to be associated with social isolation among older adults (Zhang et al., 2022). Social isolation affects an individual's well-being (Vozikaki et al., 2017). Over the past 40 years, research has consistently been carried out into the well-being of the elderly and how to reduce their social isolation.

Previous literature examining the social isolation of the elderly has looked at it from a healthcare, sociological, and psychological perspective (e.g., Machielse, 2015; Taylor et al., 2018; Veazie et al., 2019;). In the healthcare literature, scholars have discovered that pain, impairments, and chronic medical illnesses negatively affect older adults' lives (e.g., Guthrie et al., 2016; Mansour et al., 2017). It is proposed that active social contact involving creativity and mentoring should be encouraged to help improve the physical well-being of the elderly (e.g., McQuade and O'Sullivan, 2021; Ronzi et al., 2018).

In sociological studies, social functions such as social interaction, social roles, and social networks have significant impacts on the well-being of older adults (e.g., Farokhnezhad et al., 2017; Lee and Szinovacz, 2016; Wang, 2016). It is suggested that more communication with family and friends and emotional support can help improve older adults' subjective well-being (dos Santos et al., 2019; Wang, 2014). In the field of psychology, numerous researchers have discovered that depression, happiness, life satisfaction, loneliness and plans for the future are crucial indicators of older adults' well-being (e.g., Kim et al., 2017; Liu et al., 2022; Rao et al., 2017). It is reported that communication with other people and meaningful activities effectively prevent older adults from experiencing social isolation (Seyfzadeh et al., 2019; Wigfield et al., 2022).

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Moreover, there is a growing body of literature in leisure and retailing studies on well-being. It is reported that leisure activities, such as tourism, and going to a theatre or museum, help reduce the social isolation of older adults (Morgan et al., 2015; Toepoel, 2013). Ryu and Heo (2018) conclude that social contact and well-being can be achieved by older adults through leisure activities, such as dining out or having a drink in a bar. Numerous researchers have identified that some consumers go to commercial places for meaningful social relationships, which help enhance health and longevity, which can be critical for older customers (e.g., Makgopa, 2016; Rippé et al., 2018). Gale (2020) postulates that playing bingo helped older customers reduce their social isolation in long-term care facilities. Some research has ascertained that shopping malls and shopping play a role in social relationships for some consumers (e.g., Xu and Lee, 2018). Altinay et al. (2019) identified that customers visit coffee shops not only for consumption, but also for well-being purposes, such as seeking companionship or friendship either with the employees or with fellow customers and this applies particularly to older customers.

These studies make an important contribution to the literature by offering new insights into how the social well-being of older adults could be enhanced through their direct involvement in commercial activities. Several studies (Altinay et al., 2019; Feng et al., 2019; Song et al., 2018) suggest that further research should be conducted to illustrate the role of consumption activities in enhancing older adults' well-being. In particular, there is a need for further research into how the social well-being of the elderly can be tackled by institutional hospitality services, and it is largely unknown how their social well-being can be enhanced through regular social interactions and an enhanced customer experience.

Transformative service research (TSR) has been developed to promote well-being outcomes for individuals, collectives, and ecosystems (Anderson et al.,

2011). It emphasizes the transformative values generated during service encounters between service entities and customer entities in commercial settings. Prior studies have been conducted on issues related to transformative service research, such as service inclusion (Fisk et al., 2018), vulnerable consumers (Rosenbaum et al., 2017) and social support (Parkinson et al., 2017) in several industries, for example, in healthcare (e.g., Anderson et al., 2018; Black and Gallan, 2015), technology-enabled health services (Schuster et al., 2015), charitable organizations (Mulder et al., 2015), higher education (Taylor et al., 2017), and financial services (Reynoso et al., 2015). Nevertheless, Anderson and Ostrom (2015) point out that there are still many areas of the relationship between services and well-being which have not been explored.

As discussed earlier, older adults come to the marketplace to fulfill their social needs (e.g., Altinay et al., 2019; Wills et al., 2022). Employees are found to provide supportive resources and friendship to customers in retail and service contexts (Rosenbaum et al., 2015). The companionship, emotional and instrumental supportive resources employees deliver during interactions with customers can enhance customers' self-esteem and social connectedness with others (Leroi-Werelds, 2021; Song et al, 2020). Due to life changes such as the loss of loved ones and retirement, older adults are reported to experience possible social exclusion and affective symptoms (Burns et al., 2012). Lecovich (2014) discovered that moving into commercial senior living facilities can have negative impacts on older adults' social well-being. It is suggested that more supportive resources should be available to older adults to help them alleviate the adverse effects of their relocation.

Social interaction is viewed as one of the fundamental factors influencing older adults' overall well-being after their transition to a care institution (Ferdous,

2021). As a result, the influence of social interactions on older adults' social well-being in commercial senior living facilities needs to be examined.

Furthermore, prior studies point out that hospitality services play a significant role in improving well-being (Altinay et al., 2019; Gallan et al., 2021). The positive benefits generated from services provided by the hospitality industry such as social support, joy and enjoyment all contribute to individual well-being and overall quality of life (Altinay et al., 2019; Sirgy, 2019; Huang et al., 2019). However, constant criticisms still fall on hospitality services in relation to the provision of unhealthy food, drink promotion and disregarding other dimensions of well-being (Gallan et al., 2021). Altinay et al. (2019) reveal that how social problems such as loneliness and the social isolation of older adults can be addressed by hospitality services is still empirically unexplored.

This study investigates the effects of social interactions between service entities and customer entities on older customers' social well-being through the lens of transformative service research in commercial senior living facilities. It attempts to answer the following research questions:

1) Do the social interactions of older customers with employees, peers, and outsiders participating in social activities affect older customers' social well-being; and does social connectedness moderate the relationship between social interaction and social well-being (this being explanatory in nature)?

2) How can social activities facilitate the social interactions of older customers and help enhance social well-being (this being exploratory in nature)?

Thus, this research contributes to knowledge in two distinct ways. First, the TSR framework is used in this study to explain how social interactions with

employees, peers, and outsiders (i.e., people from wider communities) affect older customers' social well-being. Furthermore, the relationship between social interactions with employees, peers and outsiders is also moderated by social connectedness. Second, this is the first empirical research to specify causal recipes (i.e., critical combinations of predictors) and essential factors resulting in the social well-being of older customers in commercial contexts. The following publication certify the contribution of the study to the existing body of knowledge:

1. Feng, K., Altinay, L., and Olya, H. (2019). Social well-being and transformative service research: evidence from China. *Journal of Services Marketing*, 33(6), pp. 735-750. Available at: https://doi.org/10.1108/JSM-10-2018-0294

2. Forthcoming

Feng, K., Altinay, L., and Alrawadieh, Z. (2022). Social connectedness and well-being of elderly customers: Do employee-to-customer interactions matter?. *Journal of Hospitality Marketing & Management WHMM*, Available soon at: https://doi.org/10.1080/19368623.2023.2139036

1.4 Research aim and objectives

Given the above discussion, this study aims to investigate how the engagement of elderly customers in interactive social activities provided by commercial senior living facilities helps older adults socially connect. In doing so, it examines the role that such social activities and the social connections engendered by these activities play in enhancing older adults' social well-being.

In order to accomplish this, the following objectives have been identified:

1. To critically review the literature on key concepts and theories of social outcomes of well-being and various types of interactions, making specific reference to the social outcomes of well-being and interaction;

2. To develop a research model to examine, firstly, the impact on social well-being of social interaction with hospitality employees, with other customers and with outsiders; secondly, the moderating role of social connectedness in the relationship between social interaction and social well-being;

3. To gain an in-depth contextual understanding of the key findings emerging from the quantitative data collection stage;

4. To draw conclusions that offer new insights into understanding the interface between social interaction, well-being and connectedness;

5. To provide suggestions and implications on what hospitality businesses can do to help facilitate social interactions of older customers, to help them reduce loneliness and leading to social well-being enhancement.

1.5 Research structure

The structure of this study is outlined as follows:

Chapter One: Introduction

This chapter has described the study background, justified the study focus, outlined the research questions, aim and objectives of this study. Finally, it has introduced the study structure.

Chapter Two: Literature review

Chapter 2 reviews the existing research studies on social well-being. It discusses transformative service research related to this study. It also critically reviews the key concepts, namely social well-being, social interaction, and social

connectedness. Definitions and prior empirical studies relevant to the key concepts are explored and gaps are identified in the extant literature.

Chapter Three: Development of the research model and hypotheses

This chapter discusses the context of social interactions which highlights the features of commercial senior living facilities and social activity as a service offering. It highlights some of the current business practices and efforts made to achieve customers' well-being. This chapter also provides the research conceptual framework and the development of initial hypotheses.

Chapter Four: Research Methodology

This chapter discusses the methodological framework of this study, illustrating that the research approach and methods have been determined by the research philosophy. This chapter explains and justifies the mixed methods approach applied in this study. A quantitative survey was conducted to examine the hypotheses proposed based upon the interpretation of literature review. The survey development, administration and analysis techniques are discussed. The second part of the chapter focuses on the qualitative approach. It explains and further explores the findings of the quantitative phase by conducting three focus groups. Subsequently, the research ethics and the integration of the quantitative and qualitative research are revealed and validated.

Chapter Five: Findings and Discussion

This chapter presents a detailed review of the findings and discussion of the study's outcomes, drawing on both the quantitative and qualitative results, and comparing these results with the extant literature. The quantitative analysis is carried out first by the use of SPSS and SmartPLS. Hypotheses are examined and the discussion revolves around the results. The qualitative analysis then provides a detailed explanation and further exploration of the quantitative results.

Chapter Six: Conclusion and Recommendations

The final chapter of the study is devoted to pinpointing the theoretical, methodological, and practical implications of the findings in this study. The limitations of the study are discussed, and recommendations are made on the direction of future research based upon the findings and discussion, indicating the path the present study has paved for future studies. Lastly, some personal reflections are presented, reviewing the researcher's journey during this study.

Chapter two

Literature review

2.1 Chapter overview

This chapter provides an in-depth review of the relevant literature pertaining to the factors affecting social well-being. The chapter begins by discussing transformative service research in relation to the factors affecting well-being. Thereafter, definitions, dimensions and previous empirical studies of social well-being, social interaction and social connectedness are critically examined. This chapter provides a justification of the gaps identified by the literature review for this thesis.

2.2 Theoretical perspective on predictive factors of well-being

Transformative service research (TSR) is a research combining both consumer and service (Rosenbaum et al., 2011). According to Anderson et al. (2013), TSR focuses on the relationship between services and well-being, specifically the interaction between service entities (e.g., service staff, service process or offerings, service industries or businesses) and consumer entities (e.g., individuals, groups, social networks or communities) and emphasizes the positive impact on well-being outcomes (e.g., access, literacy, reduced disparity, health or happiness) of these two entities (shown as Fig.2.1). They claim services can transform the lives of customer entities.
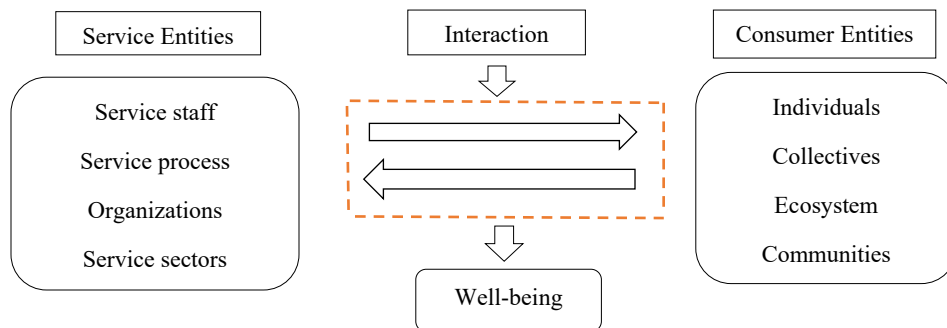
Figure 2.1 Transformative service research framework

Adapted from Anderson et al. (2011)

Previous studies discovered transformation in TSR occurs during service exchange via social interaction and resource integration with others (Abney et al., 2017; Mende and Van Doorn, 2015; Mulder et al., 2015). For example, Black and Gallan (2015) conclude that well-being is generated through customer-citizens resource integration in healthcare services. Mende and Van Doorn (2015) propose that customers with a high level of involvement co-produce their well-being in financial counseling services. Cheung et al. (2017) reveal that customer-citizens integrate resources in their social networks through interactions to co-create value with others, thereby enhancing well-being.

Service entities have varied impacts on different levels of consumers (Anderson et al., 2013). For example, a conflict between a doctor and a patient will affect the patient's individual well-being whereas a crisis in the healthcare industry will affect the collective well-being of all patients and the society as a whole. Nasr and Fish (2018) suggest the scope of TSR should be extended to include the overarching dimension of 'reducing suffering'. Thus, TSR anticipates that the interaction between service entities and consumer entities generates positive or negative changes on well-being. This interaction has a clearly defined meaning. It indicates any encounter between service entities and consumer entities. It can be an interpersonal service contact or exposure to any element of a service entity. Therefore, a wide range of interactions may have an influence on well-being. It is also pointed out that interaction in the TSR framework and well-being may not be directly connected (Kuppelwieser and Finsterwalder, 2016). The use of specific resources and tools may be applied to achieve well-being (Hepi et al., 2017).

A number of TSR studies which seek to address problems and enhance consumer well-being through interactions have been conducted in the service sector, including healthcare and higher education services (Anderson et al., 2013; Nguyen Hau and Thuy, 2016), not-for-profit organizations (e.g., Isboli et al.,

2020; Mulder et al., 2015), financial services (Brüggen et al., 2017) and social services (Foote et al., 2014). In healthcare services, all sorts of interactions between consumers and healthcare services have great impacts on consumers' well-being (e.g., Anderson et al., 2018; Danaher and Gallan, 2016). A study of service design in healthcare showed that consumers' participation in the service process generates experience sharing between consumers and caregivers, which in turn improves the well-being of all individuals in the service system (Anderson et al., 2018). The interactive relationship between consumers and service providers in healthcare services is of great importance to bringing about better outcomes (Hardyman et al., 2015). Moreover, Boenigk et al. (2021) discovered that completing the interactive phase of registering, participating and applying to higher education can improve refugees' well-being.

In a study of transformation in organizational volunteering (Isboli et al., 2020), it was noted that volunteers as consumers can benefit from volunteering service experience. The feelings of being useful and the gratitude generated by volunteering improved volunteers' well-being. Huang and Lin (2020) point out that financial services are strongly associated with consumers' well-being throughout the duration of their lives. Several studies focus on the impact of financial education on consumers' knowledge in order to help them make better financial decisions (Lusardi, 2019; Xiao and Porto, 2017). By contrast, consumers' well-being is found negatively affected by misleading interactions between service employees and consumers due to the harmful decisions consumers make in financial services as a result (Baker and Dellaert, 2017), especially among vulnerable consumers (DeVaney, 2016).

Hepi et al. (2017) explored the role social service providers play in consumers' well-being in a study of the transformative social service ecosystem in New Zealand. It found that negative interactions between social services and consumers leave consumers with a feeling of fear (Levenson, 2017). In addition,

some researchers discovered that some may experience a feeling of being "abandoned" when the focus of social services' interaction is only given to certain ethnic or societal groups but not others, which causes negative impacts on well-being unintentionally (Kuppelwieser and Finsterwalder, 2016).

There is a growing academic interest in studying tourism through a TSR lens. For example, Magee and Gilmore (2015) investigated the transformative experience of dark tourism. Chou et al. (2018) examine festivals' transformative impact on local residents' subjective well-being. Raki et al. (2021) developed customer well-being orientated recovery strategies with proactivity within TSR in the tourism industry. Although recognition of tourism services as contributing to well-being is increasing, Galeone and Sebastiani (2021) indicated that TSR has not been fully explored in the tourism and hospitality sectors.

It is suggested that services such as hospitality, which are not considered to possess distinct transformative goals, may have positive impacts on consumers' well-being in unanticipated ways (Rosenbaum et al., 2011). There is evidence showing that social relationships developed within the hospitality industry, such as bars, restaurants and beauty shops may have transformative effects on individuals' well-being (e.g., Altinay et al., 2019; Gallan et al., 2021). Intriguingly, even some less socially responsible services such as casinos are found to potentially enhance tourists' well-being with restorative qualities (Rosenbaum and Wong, 2015). However, hospitality services have been criticized for a lack of focus on their contribution to well-being outcomes.

Several scholars have identified that new services offered by hospitality organizations, such as fitness equipment in hotel rooms, menus with healthy 'superfoods' options and well-being themed seminars (Hardcastle, 2020), lack focus in terms of both scope and consumer target audience. Hospitality

organizations have faced criticism for only emphasizing amenities or health related elements while overlooking important factors contributing to other dimensions of customers' well-being (Gallan et al., 2021). Furthermore, it is claimed that the influence of actors other than customers and employees on well-being outcomes is largely neglected (Kara et al., 2013). Studies indicate that the social outcomes of relationships generated by interactions with different actors on older customers' well-being are still under-investigated (Altinay et al., 2019). Thus, future researchers need to look beyond the commercial purposes of such services in order to have a better understanding of their transformative potential.

Globally, older customers, with their unique consumption orientation, constitute a significant part of the market. Prior scholars posited that the enjoyment that older customers derive from the consumption experience does not develop solely from consumption, but also from the social benefits derived from the consumption process (Altinay et al., 2019; Uysal et al., 2016). Social interactions of older adults in natural settings such as with families, friends or neighbors have formed the focus of previous studies (e.g., Ashida et al., 2019). However, few studies have investigated the impact of certain types of social interactions on older customers' social well-being in hospitality settings, especially that of emerging senior living facilities. In addition, more empirical attention is called for on the role that hospitality services play in addressing societal problems caused by the growing ageing population.

Older customers seeking social benefits from their consumption experience reveals the effort older adults make to adapt to their social life conditions in response to the diverse challenges of ageing. Formosa (2020) postulates that older adults actively engage in the social world in order to gain the utmost happiness and life satisfaction.

The focus of TSR on the importance of indicators leading to enhanced well-being outcomes makes it distinguishable from other types of service research (Alkire et al., 2019; Anderson and Ostrom, 2015). TSR aims to explore the potential of services to enhance customers' well-being. Even though studies have started to shed light on the transformational potential of hospitality services (e.g., Gallan et al., 2021), there is a dearth of research investigating whether the social well-being of older customers is influenced by certain kinds of social interaction generated by participation in the social activities offered by commercial senior living facilities. Therefore, this research applies a TSR approach to respond to calls for further exploration of the relationship between services and their impact on well-being (Anderson and Ostrom, 2015).

2.3 Social well-being

According to Linton et al. (2016), social well-being is a dimension of well-being. This section first explores the definition of social well-being. Thereafter, the dimensions used to measure social well-being are outlined.

The concept of "well-being" is ambiguous and diverse. No universal definition has been accepted, despite plentiful attempts to reach a consensus (Topcu, 2014). It is often used interchangeably with "life satisfaction", "happiness", and "quality of life" in academic literature (Arrondo et al., 2021; Simons and Baldwin, 2021). A definition of well-being was offered by the World Health Organization in 1997,

'*a broad ranging concept affected in a complex way by the person's physical health, psychological state, personal beliefs, social relationships and their relationship to salient features of their environment*'

This WHO definition shows the significance of the social dimension to well-being.

Although the importance of social well-being is highlighted in the definition given by the World Health Organization, it is argued that well-being literature has failed to recognize the individual's evaluation of their own well-being and personal performance under social norms (Keyes, 1998). Individuals face particular social tasks and challenges in different social structures and communities (Keyes, 1998). Therefore, it is unsatisfactory that individual well-being is portrayed as a private experience in subjective and psychological concepts of well-being, overlooking the dimension of social lives (Keyes, 2002). Gerritsen et al. (2004) propose that, despite good medical and functional health status, social well-being is also a component of well-being. According to the definition of well-being given by Dodge et al. (2012), well-being is the balancing point between an individual's resource pool and the challenges confronted by an individual from physical, psychological and social aspects.

It is obvious that social well-being is viewed as a component of well-being, as it is related to social relationships and social contact (Evans and Vallelly, 2007). According to Callaghan (2008), social well-being is the social aspect of overall well-being, and it involves social relationships, social participation, social networks, and social support. Nevertheless, a few studies provide basic understanding of social well-being. Blum (1976) posits that social well-being equates to positive social behaviors. Based on this definition, McDowell and Newell (1987) define social well-being as a dimension that involves how an individual gets along with others, how others react to an individual, and how an individual interacts with social organizations and institutions. Subsequently, Larson (1993) developed a concept of social well-being. He proposed that social well-being consists of social adjustment and social support, which embraces subjective and objective elements respectively. For example, social adjustment involves satisfactory relationships with others, performance in social participation and behaviors, and fitting in to the new environment, whereas social support concerns the number and frequency of social contacts.

Meanwhile, Keyes (1998) defines social well-being as the evaluation of an individual's social status and functioning. In addition, he proposes that there are five dimensions within social well-being; these are:

1) *Social integration*, the extent to which people feel they have something in common with others who develop a social reality around them (e.g., neighborhood, commercial establishment), and the degree to which they gain a feeling of belonging to the society and the community.

2) *Social acceptance*, the capability and belief in good aspects of human nature (Wrightsman, 1991). A sign of good mental health is that people feel good about themselves and comfortably accept their lives (Ryff, 1989).

3) *Social contribution*, the degree to which the society values what people do and contribute to the world.

4) *Social coherence*, the awareness of the operation of the social world. Some scholars suggest that it is similar to meaninglessness in life (Seeman, 1959, 1991).

5) *Social actualization*, the belief in the development of the society and the potential for the future evolution of the society.

The five dimensions of social well-being proposed by Keyes have been applied broadly in previous studies. For example, Salehi et al. (2017) employed the five dimensions of social well-being to investigate the status of students' social well-being in nursing and midwifery in Iran. Bekalu et al. (2019) adopted the five dimensions of social well-being to test its relationship with social media use. Colenberg et al. (2020) explored measures of social well-being at a workplace in the Netherlands through the application of the five social well-being dimensions. Yu et al. (2021) used the five dimensions of social well-being to examine their association with personality traits in the Chinese cultural context.

Nevertheless, there has been some debate about whether Larson or Keyes provide a complete definition of social well-being. Larson excludes individual links to the wider community, whereas Keyes fails to realize the function of social support. To overcome the missing elements of these definitions of social well-being, Lindenberg (1986, 1993, 1996) introduced Social Production Function Theory (SPFT). This theory stresses that individuals produce their own well-being subject to resources and constraints by enhancing the possibility of achieving two universal goals: physical well-being and social well-being within the resources and constraints they face.

Nieboer et al. (2005) proposed that physical well-being can be attained by fulfilling the basic needs of comfort and stimulation, whereas social well-being can be achieved through three basic social needs: the need for affection (e.g., friendship, emotional support, being loved as a person by close and intimate relationships regardless of occupation or possessions), for behavioral confirmation (e.g., belonging to a group), and for status (e.g., being well-known for certain skills or personal characteristics) (Gerritsen et al., 2004) (Table 2.1). SPFT proposes that well-being can be achieved through needs, activities, and resources, which provides a comprehensive framework for social well-being.

Table 2.1. The hierarchy of well-being explained by Social Production Function Theory

Top Level	Well-being				
Universal goals	Physical well-being		Social well-being		
First order goals/Basic needs	Comfort	Stimulation	Status	Behavioural confirmation	Affection
Activities (means of production to fulfil basic needs) (examples)	Eating; drinking; utilizing appliances; securing housing and clothing; self-management	Physical and mental activities creating incentives; sports; study; creative activities; active recreation	Paid work; consumption; excelling in a valued dimension	Behaving in compliance with internal and external norms	Exchanging emotional support; spending time together
Resources (examples)	Financial means; food;	Physical and mental health;	Education; social	Social skills; social	Attractiveness; empathy;

	housing; physical health	financial means	background; unique skills; scarce capabilities	network; normative environment	partner; children; intimate ties

As shown in Table 2.1, resources and activities lie at the bottom of the hierarchy serving to fulfil the five goals leading to overall well-being. Nieboer and Cramm (2018) indicate that resources and activities are interchangeable subject to the cost of achieving alternative goals. For example, when a decline in status (e.g., retirement) occurs, an individual may enhance social contact to potentially increase affection and behavioral confirmation. However, losses of resources and activities are found to create greater difficulties to achieve physical and social well-being, for example, the loss of resources such as health (Nieboer and Cramm, 2018) and partner (Waldinger et al., 2015).

A variety of previous empirical studies have applied SPFT on older adults' research. For example, in a study of older adults' transition to care homes, SPFT was applied to examine the differences in their preferences (Steverink, 1996). Van Eijk (1997) applied SPFT to investigate the effects of activity patterns on older adults' well-being. Meanwhile, Nieboer (1997) conducted research on the effect of illness or loss of partners on the well-being of older adults with the help of SPFT. Nieboer and Cramm (2018) applied SPFT to develop a valid and reliable instrument to evaluate well-being among native and migrant older adults. Liu et al. (2019) examined the impact of gender differences on a selected domain of SPFT among older adults in the UK. Ten Bruggencate et al. (2019) employed SPFT to explore how an intervention experience fulfilled older adults' social needs in a Dutch language café. Bunt (2020) used the social needs concept of SPFT to explore social frailty among older adults. Due to the valid results achieved by using SPFT in previous studies on older adults, SPFT was employed in this research to assess older customers' social well-being.

As well as the above factors' influence on social well-being, it has been found that different cultural backgrounds also have distinct effects on social well-being. For example, Western culture emphasizes individuals and independence, whereas Eastern culture stresses collectives and interdependence (Liu et al., 2017). Most social well-being studies have been conducted within Western cultures (individualist culture) (Li et al., 2015), so it is meaningful to examine social well-being in a different culture (collectivist culture). Moreover, Liu et al. (2017) point out that the demographic changes and social challenges caused by the fast-growing ageing population is another contextual factor affecting the understanding of well-being in China. Therefore, further examination of Chinese culture (a representative of collectivist culture) will make an important contribution to the literature.

In addition, older adults are likely to have fewer social responsibilities and a smaller social network due to the change of demography and society, such as retirement and family living arrangements (Ten Bruggencate et al., 2017). As a result, social well-being for older adults is likely to be influenced by their living contexts, such as neighbors and care homes. Therefore, Callaghan (2008) proposes environmental characteristics (e.g., design of the physical environment, care delivery model, social environment), social factors (e.g., friendship and social support, social isolation, and loneliness), and social activity (e.g., social activity provision, approach to activity and link to wider community) as crucial elements of social well-being for institutionalized older adults.

Well-being is often measured by negatively framed scales overlooking positive notions, such as currently used autonomy scales (VanderWeele et al., 2020) among older adults. It is advocated that well-being measurements with positive elements are needed in future studies as the public responds better to positively worded questions (Mukuria et al., 2016). Despite previous studies having examined well-being using financial, socioeconomic and health dimensions

within the lens of transformative service research, it is noted that the social function of well-being has received relatively little attention (Kong et al., 2015). Buijs et al. (2021) advocate that the fulfillment of an individual's social needs is a crucial factor leading to the achievement of their overall well-being. Therefore, measuring sub-dimensions may provide more specific information on improving total well-being (Linton et al., 2016).

Relocation to senior living facilities can engender significant negative impacts on older adults' social life (e.g., O'Neill et al., 2022; Prentice et al., 2022; Sun et al., 2021). It may negatively affect older adults due to the potential loss of their previous familiar surroundings and social relationships (Prentice et al., 2022; Weil, 2017) or disruption in the sense of autonomy (Ayalon, 2016). Even though older adults moving to senior care institutions wish to retain their former social networks, their ability to do so may be restrained by poor health (Shaw et al., 2016) or geographical distance (Perry et al., 2014). As a result, older adults may experience social isolation and loneliness. Within the limited number of studies on older customers in tourism and hospitality services, the research only focuses on the relationship between activities and older customers' overall quality of life (e.g., Kim et al, 2015; Morgan et al., 2015; Woo et al., 2016). So, the impact of activities on the social dimension of older customers' well-being merits investigation (Kim et al., 2015).

2.4 Social interaction

Social interaction has long been a fundamental concept in sociological studies (Argyle, 2017). Sociologists view our society as a combination of social interactions (Andersen and Taylor, 2007) which embrace culture, social institutions, and accepted social behavior. Early sociologists gave similar brief definitions to social interaction. Dawson and Gettys (1948) first defined social interaction as a process which generates stimulated responses between two or more than two persons. Gist (1950) described social interaction as a mutual

influence between individuals resulting from interstimulation and response. Merrill and Eldredge (1957) proposed that social interaction is a sequence of behaviors which establish meaningful contact between two or more persons.

As research in this area has developed, more sophisticated and detailed definitions of social interaction have started to emerge, which are not only limited to sociology, but which expand to include psychology, healthcare, and marketing. For example, Garton (1995), a psychologist, defines social interaction as an information exchange process taking place between a minimum of two persons, which illustrates a certain degree of reciprocity and bidirectionality. It is suggested that social interaction is a process in which friendly relationships can be established through information exchange, which leads to successful engagement in collaborative practice in a healthcare environment (Petri, 2010). In marketing, social interaction occurs when relationships between individuals generate multipliers of the effect of any primary stimulus to one individual or overflow of the information to other individuals in the same network (Hartmann et al., 2008).

Although there are different definitions of social interaction, it is not hard to see something in common. These definitions emphasize two dimensions of social interaction, namely the social dimension, and the communicative dimension (Eckerman and Peterman, 2001). The social dimension involves social contact, social behaviors, and reciprocity (Carpentier, 2015), while the communicative dimension concerns language, symbols, and response.

Subsequently, Chua (2002) identified three important dimensions of social interaction: structural, relational and cognitive. The structural dimension describes the presence or absence of access to resources or information, and the network configuration for information exchange (Gilbert and Karahalios, 2009).

The relational dimension concerns personal relationships built upon previous interactions (Chua, 2002). The cognitive dimension involves resource sharing, including language, codes and narratives (Turner, 2011). In a study of German team venture success (Lechler, 2001), six dimensions were identified, namely communication (quality and quantity of the communication between team members), cohesion (the extent to which team members want to be attached to the team), work norms (the behavior and effort of the team members), mutual support (the collaboration and cooperation among team members), coordination (dedication to work harmoniously) and conflict resolution (to unravel conflict and disastrous performance).

It is notable that social interaction is a multidimensional concept. As a result, different forms of social interaction have been identified by an extensive number of scholars (McMillan, 2002). Goffman (1961) classifies two types of social interaction: focused and unfocused. Focused interaction occurs when a group of people with or without a history of interaction get together to interact for a common goal, such as a student study group for final exams. Conversely, unfocused interaction happens when no common goal or awareness of interaction is present, such as asking someone for directions on the street. Based on this distinction, four types of social interaction are categorized: accidental (not anticipated or inclined to be repeated), repeated (not anticipated, however, likely to be repeated, e.g. meeting a lecturer on campus), regular (not anticipated, however, a common occurrence, e.g. buying a newspaper from the same stall) and regulated (anticipated and conducted by customs, e.g. work interaction in an organization) (Heatherton and Walcott, 2009).

Meanwhile, another group of scholars introduce two general types of social interaction: people-to-people interaction and people-to-machine interaction (Lee, 2000). People-to-people interaction involves groups or aggregated agents occasionally, which does not always occur among individuals (e.g., Hartmann

et al., 2008; Page, 2013). Therefore, people-to-people interaction can be divided into interaction at an individual level (e.g., nurse-patient, staff and customer), interaction between an individual and a group (e.g., lecturer-students, actor-audience), and interaction between groups (e.g., two teams in a game, employees of two departments in a meeting). With the help of media, for example, a telephone, a virtual community and social media, social interactions take place in a larger and more collective context (e.g., Skog, 2005; Baym, 2002). This research focuses on people-to-people interactions.

As social interaction is a key element of our society, there are a broad number of studies on people-to-people interaction within transformative service research. Anderson et al. (2018) noted that social interactions have the greatest impact on people in healthcare services, where negative emotions such as disjointed, confusing, and scary feelings arise through the entirety of a customer's journey (Danaher and Gallan, 2016). The importance of different levels of patients' social interactions on their well-being has been widely recognized in healthcare services. For example, Sawang et al. (2019) conducted their study in a healthcare service in Vietnam. They discovered that social interactions between physicians and patients have a strong impact on patients' emotional well-being. Birklund and Larsen (2013) explored interpersonal interaction among hospitalized peer patients. The findings of their study revealed that patients provide help, support, and information for fellow patients, which generates positive experiences and outcomes. Furthermore, patients' interaction with volunteers is found to reduce patients' social isolation (Priebe et al., 2020) and improve patients' well-being (Siette et al., 2017).

Hospitality and healthcare services are increasingly intertwined. Hospitality and healthcare services have many core characteristics in common, such as foodservices and housekeeping. Previous studies have demonstrated the importance of integrating healthcare services with hospitality services. For

example, radiologists apply the digital technology used in hospitality services to provide better customer service (Steele et al., 2015). Healthcare services employ hospitality service design to improve patients' overall well-being (Seuss and Mody, 2018). Thus, it is important to examine the different levels of social interactions in hospitality services.

Furthermore, there remains a research gap in examining the impact of these interactions on older consumers' well-being, particularly in the hospitality industry (Song et al., 2018). Previous classification of social interaction fails to recognize the characteristics and status of older consumers. Therefore, this study investigates the impact of three types of social interaction, namely, social interaction with employees, social interaction with peer customers and social interaction with outsiders (people from wider communities) to address the research gap.

2.5 Social connectedness

Loneliness is one of the most serious issues faced by the increasing ageing population in society (Landeiro et al., 2017) due to the decline in older adults' network and social ties (Kemperman et al., 2019). Older adults are reported to be at a growing risk of experiencing a decline in their overall social life due to the death of their partners and peers, the loss of their social roles, and the constraints of lack of mobility (Losada-Baltar et al., 2021). Thus, loneliness presents when there is a lack of perceived intimacy or interpersonal relationships in comparison to the relationships an individual wants to have (Yanguas et al., 2018). It is noted that loneliness links to serious issues in relation to cognition, behavior, emotion, and health (Beutel et al., 2017; Käll et al., 2020). For example, loneliness is found to be associated with an increasing level of impaired cognitive function (Kyröläinen and Kuperman, 2021), suicide (John et al., 2021), low self-esteem (Szcześniak et al., 2020), depression (Lee et al., 2021),

multimorbidity and mortality (Kristensen et al., 2019; Rico-Uribe et al., 2018). Therefore, the prevention of loneliness is an important means of improving health and well-being.

Social connectedness is viewed as the opposite of loneliness (O'Rourke et al., 2018). It is a basic need for human beings (Seppala et al., 2013) and a specific function of human beings' social network (Garofalo, 2013). According to O'Rourke et al. (2018), social connectedness is defined as subjective awareness of interpersonal closeness with others in the social world. The feeling of closeness is a significant element contributing to an individual's sense of belonging and is affected by the social distance (close or distant) with others (e.g., friends, peers, other groups/communities, and society) (Long et al., 2022). Unlike social support and peer relationships, social connectedness is a continuous and universal experience that an individual has with the social world. Social connectedness reflects more diverse and prevailing relationships. In addition, it focuses more on an individual's experience of having distinct and current interactions with the surrounding world (Kinreich et al., 2017).

Some researchers identify different forms of connectedness in relation to different individuals or groups. Townsend and McWhirter (2005) concluded that there are seven types of connectedness from past studies, encompassing connectedness with self, connectedness with others (e.g., families, friends and neighbors), cultural connectedness, community connectedness, emotional connectedness, affective connectedness and empowered connectedness. More explicitly, connectedness with others refers to different kinds of social support (Betancourt et al., 2012); cultural connectedness involves the value developed from closeness of relationships (Bejanyan et al., 2015); and community connectedness looks at the relatedness among teachers, peers, religious groups, extended family members and after-school activities (Dove et al., 2018).

On the other hand, some scholars focus on relationships and feelings aspects of connectedness (e.g., García -Moya, 2020; Winstone et al., 2021). They conclude that connectedness incorporates emotional and social components. The emotional component concerns feelings and senses, for example, satisfaction from the relationship with others and a sense of togetherness (Boutelle et al., 2009; Gooch and Watts, 2010). The social component refers to relationships with others, for example, social networks, social support, and social ties (Hendrickson et al., 2011; Wang et al., 2011).

The importance of social components in connectedness is revealed in a meta-analysis conducted by Masi et al. (2011) who provide the most holistic, empirically based recommendations for loneliness interventions. The meta-analysis highlighted the role of social support as a crucial intervention to reduce loneliness. Previous studies have illustrated the impact of social support on well-being in different service contexts and situations. For example, the social support provided by online healthcare services enables patients to be connected with others (Yao et al., 2015), which satisfies patients' social needs and improves their well-being (Gage-Bouchard, 2017). The support offered by service providers can develop a sense of belonging among customers in financial counselling services, which in turn affects customers' financial well-being (e.g., Mende and Van Doorn, 2015). It was found that supportive resources can be integrated through service design within service encounters to promote transformative values (Blocker and Barrios, 2015). Moreover, it was also uncovered that social connectedness which may lead to individual well-being (Yelpaze et al., 2021) can be developed by supportive service schemes facilitating personal growth, such as complementary accommodation and job-related training and education.

Older customers have been found seeking social connectedness in commercial settings (e.g., Altinay et al., 2019; Toepoel, 2013; Uysal et al., 2016). The

purpose of customers' visits to commercial places has been explored by social scientists, and includes broadening their social networks, gaining social support, and creating social relationships with others through social interaction (e.g., Parkinson et al., 2017; Storr et al., 2021). As discussed earlier, interaction indicating any contact between service and customer entities has a broad meaning in transformative service research. These interactions may occur during an interpersonal service encounter or even a disclosure to any part of a service entity. Thus, Kuppelwieser and Finsterwalder (2016) indicate that interaction and well-being may not be directly connected. It is suggested that proper use of resources and tools can generate well-being (Hepi et al., 2017). In light of this work, in this study, social connectedness is perceived to be a resource to achieve social well-being through social interaction.

2.6 Summary

The literature in this chapter focused on current arguments about the factors influencing the social well-being of older customers who participate in social activities in commercial senior living facilities. The applied transformative service research has been critically reviewed. Definitions of key factors proposed by the applied theories and relevant prior empirical studies were examined. The main findings emerging from this literature review are outlined as follows:

• Prior TSR studies conducted in healthcare and higher education services, not-for-profit organizations, financial services, and social services have shown the transformative potential of services in contributing to well-being outcomes. Even though studies conducted through the TSR lens have started to shed light on the tourism and hospitality industries, the transformative potential of hospitality services is still underdeveloped. As the hospitality industry is expected to undertake greater social responsibilities, the impact of services

provided by the hospitality industry in contributing to well-being outcomes needs to be investigated. Moreover, evidence had shown that older customers visit hospitality businesses for social benefits. More attention is needed to investigate the role hospitality services play in addressing the societal problems caused by the growing ageing population by enhancing their social well-being.

Previous studies exhibit evidence that social relationships established within the hospitality services may carry transformative effects on individuals' well-being. However, focus is predominantly placed on the influence of customers and employees on well-being outcomes. The impact of other actors is greatly under investigated. Moreover, few studies have examined the impact of different levels of social interactions on customers' social well-being in hospitality settings, especially the emerging commercial senior living facilities.

Relocation to commercial senior living facilities is found negatively affect older adults' well-being. Loneliness and social isolation may appear due to the potential loss of familiar surroundings, social relationships, or disruption in the sense of autonomy. Limited research has examined the role activities play on older customers' overall well-being in hospitality and tourism services. Moreover, the impact of activities as a service offering in commercial senior living facilities on the social dimension of older customers' well-being is largely neglected. Future research is in great demand to explore older adults' well-being across the service sectors through the lens of transformative service research (Anderson et al., 2013).

• The definition of well-being by the WHO illustrates that social well-being is a dimension of overall well-being. According to Dodge et al. (2012), social well-being is the balance point of an individual's resources and challenges from social aspects. Previous scholars have used various dimensions to measure social well-

being, such as social adjustment and social support (e.g., Karataş et al., 2021; Prati et al., 2016), social integration, social acceptance, social contribution, social coherence and social actualization (e.g., Li et al., 2015; Urzúa Morales et al., 2017), and social relationships, social participation, and social networks (e.g., Bekalu et al., 2019; Wolf et al., 2015). However, they have ignored the elements of wider community and social support. To overcome the omission, this research employed the SPFT which measured social well-being from the perspective of three basic social needs: the need for affection, for behavioral confirmation, and for status (Lindenberg, 1986, 1993, 1996). Literature was also reviewed on the application of the SPFT in various prior studies. The literature review exhibited that there was a need to conduct social well-being studies with samples outside Western cultures. Moreover, it was revealed that more attention should be paid to studies using positive scales to measure sub-dimensions of well-being.

• Literature on the definition of social interaction was reviewed in sociology, psychology, healthcare, and marketing. All these definitions could be distilled into two fundamental dimensions of social interaction: the social dimension and the communicative dimension (Carpentier, 2015; Nash, 2014), despite the fact that other dimensions were subsequently identified, such as structural, relational and cognitive dimensions (e.g., Junaidi et al., 2020; Newman et al., 2014), and communication, cohesion, work norms, mutual support, coordination and conflict resolution dimensions (e.g., Carrasco and Bilal, 2016; Cheah et al., 2019; Greco, 2018; D'Ausilio et al., 2015; Sherif, 2017). The literature reviewed different types of social interaction and people-to-people interaction was chosen as the focus of this research. The impact of various types of social interactions has been investigated in transformative service research in healthcare which shared many common features with hospitality services. However, the influences of different levels of social interaction in the hospitality industry were barely assessed, specifically on older customers' social well-being. This

research aims to examine the effects on older customers' social well-being- of social interaction with employees, with peers and with outsiders.

• Social connectedness is the subjective awareness of interpersonal closeness with others in the social world (O'Rourke et al., 2018). Literature on social connectedness has identified seven types of connectedness: connectedness with self (e.g., Makkar and Singh, 2021), connectedness with others (e.g., Xiao et al., 2020), cultural connectedness (e.g., Snowshoe et al., 2017), community connectedness (Schultz et al., 2016), emotional connectedness (e.g., Lacoste and Dekker, 2016), affective connectedness (e.g., Min and Nam, 2014) and empowered connectedness (e.g., Li et al., 2021). Following on from this, the emotional and social components of social connectedness were reviewed. The importance of social support as a resource in developing a sense of belonging and contributing to well-being has been critically reviewed. Social interaction may not directly connect to well-being outcomes since social interaction carries a broader meaning in transformative service research. Thus, research is required to investigate the role of social connectedness in leading to well-being through social interaction.

Based on this literature review, the next chapter discusses the development of the conceptual framework and hypotheses of this research.

Chapter Three

Development of the research model and hypotheses

3.1 Chapter overview

The previous chapter reviewed relevant literature related to social well-being, social interaction and social connectedness, and the research gaps were presented. In this chapter, the conceptual framework and the development of the hypotheses underpinning this research are discussed based on the existing evidence.

3.2 The context of social interactions

This study aims to investigate the impact of social interactions generated by interactive social activities provided by commercial senior living facilities on older customers' social well-being. In doing so, it examines the role that such social activities and the social connections engendered play in enhancing older adults' social well-being. Commercial senior living facilities, an emerging phenomenon combining both hospitality and hospital features, serve as a platform for facilitating older customers' needs for social interaction. In the following sections, firstly the characteristics of commercial senior living facilities are discussed. Subsequently, the features of social activities as a service product provided by service providers of commercial senior living facilities are reviewed.

3.2.1 Commercial senior living facilities-The intersection of hospitality and hospital

Both "hospital" and "hospitality" originate from the same word "hospice", which means a place offering rest and accommodation to sick or tired people travelling for their journeys (Levander and Guterl, 2015; Nightingale, 2022). Back in the early 1950s, hospitals were already viewed as hotels with special functions in certain aspects (Malott, 1959-1961). In modern times, the origin of

both words is widely recognized through an increasing focus on hospitality in the healthcare industry.

Hospitality provides a commitment between a host and their guests that their primary goal is to meet guests' needs (Mmutle and Shonhe, 2017), thus primarily offering a demand-led service. Hospitals, on the other hand, represent an extreme example of this host-to-guest relationship providing a necessity-led service, where the patient is primarily an ill or sick guest. Patients may experience involuntary inhabitancy and discomfort in hospitals, where intensive care and attention are the primary foci of the stay. In this situation, more personal and intimate interactions and lack of social distancing are required than in social standards between guests and hosts (Innes et al., 2016). As a result, the importance of hospitality in hospital environments is intensified.

In addition, hotels and hospitals both provide similar services to their customers, for example, 24-hour residential services (e.g., housekeeping, maintenance, security, and foodservice), planned and unplanned demanding variances, and communication between hosts and guests. Both hospitals and hospitality rely on their patients' and guests' evaluation of their experience in order to stimulate their patients'/guests' intention (e.g., revisits, recommendations) in the future (Chauhan and Manhas, 2017). As competition and consumer service knowledge increase, more hospital administrators realize the value of adding hospitality-centric services into hospital operations. Studies have shown that implementing hotel-style amenities plays a positive role in patient experiences (e.g., Mody et al., 2020; Suess and Mody, 2018). For example, hotel-like rooms have been found to be helpful in reducing patient stress and they contribute to overall service performance (Lynch, 2015). In some private clinics such as the Mayo Clinic, fine dining in patients' rooms with a chef on-site and concierge services

have been introduced to enhance patients' overall experience (Suess and Mody, 2017).

Patten (1994) emphasizes the importance of hospitality in the hospital context and concludes that three types of hospitality can be applied in healthcare services in terms of the relationship between caregivers and the patient experience. These are public hospitality (e.g., daily interaction in public areas, café, and shops), personal hospitality (e.g., contacts in patients' wards), and therapeutic hospitality (e.g., services help reduce negative impacts of isolation and loneliness). Furthermore, numerous scholars have suggested that improved hospitality may lead to a better patient experience as well as enhancing the family or visitor experience in hospital settings (e.g., Kelly et al., 2016; Zygourakis et al., 2014). A study of patient experiences in the United States found that hospitality-inspired physical environment designs are an essential element affecting patients' emotional and psychological well-being (Suess and Mody, 2017). It is clear that patients' well-being can be enhanced by the hospitable acts of hospitals through improved social interaction between patients and care providers, patient amenities, and a supportive culture among hospital staff (Hunter-Jones et al., 2020; Jha et al., 2017).

Meanwhile, there is an increasing growth in patient travel to improve health and well-being (e.g., Martin et al., 2015; Singleton, 2019; Ye and Titheridge, 2017). The emergence of 'medical tourism' has triggered the development of medical hotels. A medical hotel provides not only hotel products and services, but also medical clinic services to facilitate patient-travelers' needs (Wu et al., 2013).

Wu et al. (2013) identify three types of medical hotels. The first type is an on-site hotel in a medical center providing standard hotel services and specially

trained hospital staff who can offer help and support to the patient-travelers, such as the Kahler Grand Hotel at the Mayo Clinic in Minnesota and Shilev Hotel in the Sheba medical center in Israel. The second type is a hotel that does not necessarily belong to any medical clinic but is equipped with facilities and capable of serving patient-travelers, such as The Jesse H. Jones Rotary House International in Houston. The third type is a hotel integrated with medical facilities providing medical services to guests, which is sometimes labeled as a hospital (Wu et al., 2013). This type of medical hotel targets guests with non-fatal illnesses, who may need long-term healing care or stable post-surgery care. Ferrer Park in Singapore is a medical hotel serving international patient-travelers with hotel facilities and basic medical care (Wu et al., 2013).

The development of medical hotels responds to the following market demands:

1) Cost reduction. Medical hotels can be included as packaged products provided to patient-travelers, which contain a variety of services such as medical treatment, accommodation, food and beverages at a reasonable price (Han et al., 2015).

2) Convenience. Patient-travelers can get all the services they need in one property or from a location near where the medical treatment takes places (Wu et al., 2013). This can save a lot of time and travel. As well as patient-travelers themselves, their friends or family travelling with them can also be accommodated in the same place.

3) Reliability. Medical hotels provide well trained medical supporters and language translators to ensure smooth communicative flow (Wu et al., 2013). In addition, safety and security are assured. Privacy and confidentiality are respected.

Furthermore, apart from medical hotels, programmes provided by spa and wellness centers located in hotels contribute to guests' health and well-being, which also benefit the hotels from a financial perspective (Rančić et al., 2021).

As discussed above, it is not hard to see that hospitals and hospitality share many interests in common. As the ageing population grows rapidly, both the hospitality and the healthcare industry are facing numerous challenges and opportunities regarding this emerging market (Smith and Puczkó, 2014). Progress in health care can facilitate changes in health status and health-related disability among the elderly. The key trends are shifting from curative measures to preventive measures in healthcare (Lombarts, 2016). The healthcare industry is facing the challenges of reducing costs and maintaining high service quality. Meanwhile, hotels need to make arrangements to accommodate older customers, such as special bed covers, heating pads, easy access, and the availability of refrigeration facilities for medicine and devices to assist sensory loss. Moreover, some hospitality facilities may realize that providing service to a residential population could be more beneficial than serving a mobile market. For example, Rosewood Hotel in London provides workcation rooms (hotel rooms with a workstation) with a butler to help print or scan or organize tutoring and babysitting. These challenges and opportunities boost the likelihood of/benefits of cooperation between hospitality and healthcare industries.

The emerging phenomenon of commercial senior living facilities is a combination of hospitality and healthcare services (Hollis and Verma, 2015). Given that real estate and insurance companies take part in the development, commercial senior living facilities are operated under a unique set of systems (Hollis and Verma, 2015). The concept of a commercial senior living facility is to make all levels of care from independent living to professional care available in one single organization (Zebolsky, 2014). The commercial senior living

facility provides single-family homes, apartments or condominiums for older adults who do not require any assistance for daily life to reside independently and assisted-living or nursing care facilities for older adults to move into if assistance is needed for daily activity (AARP, 2018). There are many different types of services available in these senior living facilities, such as an onsite pharmacy, swimming pool, fitness areas, onsite medical professionals, activity classes, transportation, restaurants, libraries, theatres and beauty or hair salons (Timmermann, 2021). Although older consumers are attracted by the medical and healthcare services in general, the provision of hospitality services is among the important features them to consider (Pizam, 2014). Therefore, a rich culture of hospitality services is considered an essential element of a successful senior living facility (Hollis and Verma, 2015).

The hospitality industry has been constantly criticized for its negative influences. For example, pub managers and tenants are blamed for providing alcohol to their customers outside the official licensing hours in order to raise their revenues, which may encourage binge drinking or late-night disturbances (Harnden, 2018). Restaurant managers and staff turn a blind eye to smoking in restricted areas in order to retain their customers who smoke, whilst endangering other non-smoking customers or staff (Barnoya et al., 2016). The nature of the casino business is traditionally viewed as socially irresponsible (Alhouti et al., 2016). However, despite these negative influences, scholars have recognized the positive effects of hospitality services in addressing issues related to the ageing population (Kim et al., 2015; Uysal et al., 2016). Thus, the role of hospitality services in facilitating older adults' well-being calls for empirical attention (Altinay et al., 2019).

Most of the hospitality studies regarding ageing largely focus on tourism by European and Asian scholars (e.g., Mangunsong, 2020; Patterson et al., 2021; Zielińska-Szczepkowska, 2021). Only a limited number of studies on senior

living facilities have been published (Bhat et al., 2016; Chaulagain et al., 2021; Lee and Severt, 2017; Lee and Severt, 2018; Lee, 2020a, 2020b; Pizam, 2014). Notably, there is a great need for research focusing on senior living facilities (Pizam, 2014). Additionally, previous studies have only examined the quality of food, services, care, and service delivery in senior living facilities (e.g., Abbey et al., 2015; De-ying et al., 2019; Martin and Powell, 2017; Vitale-Aussem and Andrews, 2016). The role that senior living facilities play in older customers' lives has not been fully explored (Robinson et al., 2020). Hospitality services, which may carry a much stronger purpose than has been traditionally known, should respond to the needs of this growing clientele.

A number of researchers have discovered that customers seek social connections in commercial settings (e.g., Altinay et al., 2019; Debenedetti et al., 2014; Toepoel, 2013). Senior living facilities centered on hospitality and service culture have been shown to have a positive impact on older customers' health and longevity through social engagement (Dombrowsky, 2017). It is advocated that studies on older people's well-being should shift their focus from self-evaluation of personal and environmental factors to their social connectedness in the future (Golant, 2014). Thus, this research focuses on the role social interaction plays in older customers' social well-being in commercial settings.

3.2.2 Social activities as a service offering

Participation in social activities has been broadly studied in healthcare and psychological sectors. Some studies examine the relationship between social activities and the physical and mental health of the elderly (e.g., Kelly et al., 2017; Ng et al., 2015; Santini et al., 2020). Many findings suggest that participation in various social activities, such as religious groups or visiting neighbors and friends, effectively contributes to better physical health for the elderly, defined here as aged over 65 (e.g., Dury et al., 2015; Evans et al., 2019).

They are found to experience a healthier life with a lower level of physical deterioration, disability, and depression (e.g., Marti and Choi, 2022; Tan et al., 2019).

Participating in social activities is also found to have a beneficial effect on slowing the rates of cognitive decline (e.g., Hikichi et al., 2017; Marioni et al., 2015) and dementia onset (e.g., Floud et al., 2021; Foubert-Samier et al., 2014). It is noted that the risk of mortality among older adults can be delayed or reduced by engaging in meaningful activities in social settings, such as religious groups, community centers or organizations (e.g., Finlay and Kobayashi, 2018; Smith et al., 2020). Higher levels of self-rated health (Beyer et al., 2015), life expectancy (Beard and Bloom, 2015), and self-fulfillment (Neri et al., 2018) as well as lower levels of functional limitation (Kelly et al., 2017) present in older adults who participate in social activities. In a study conducted among Dutch older adults during the COVID-19 pandemic (Wu, 2020), the mental health status of older adults appears to have been greatly influenced by participation in social activities as the contact with societal institutions was reduced during the lockdown.

Numerous studies have reported the psychological benefits of participation in social activities. For example, increased self-efficacy, a sense of belonging, purpose in life and life satisfaction are shown among older adults who participate in social activities (e.g., Chun et al., 2016; Kim, 2020; McClain et al., 2018; Wood et al., 2021). Saigushev et al. (2020) suggest that socialization and the development of personality can be improved through social activities. According to Tang et al. (2017), participating in social activities helps establish a sense of community. Kelly et al. (2017) propose that the perceived support derived from participating in social activities anticipates declined levels of distress. A number of other studies have also discovered this association

between social activities and level of depression (e.g., Jøranson et al., 2015; Wahle et al., 2016).

Social activities are mostly used as therapeutic interventions, which are also frequently applied to older adults. Older adults can achieve a satisfying life and remain healthy through engaging in activities which generate social relationships (Chang et al., 2014). A range of studies have concluded that social engagement, social networks, and social support can be developed through participating in social activities (e.g., Ashida et al., 2019; Park et al., 2013), which are broadly associated with better health and improved psychological well-being of older individuals (e.g., Ashida et al., 2019; Simons et al., 2021). It is implied that active engagement in the local community and the development of meaningful social roles established from social activities contribute positively to the quality of life and health of socially isolated older adults (e.g., Fakoya et al., 2020; Gardiner et al., 2018). Scientists, especially in social and behavioral areas, have been examining activities in later years for decades. However, few studies have been conducted to explore the effect of social activities provided by senior living facilities on the social aspects of older adults' well-being.

Social activities, as a service offering provided by commercial senior living facilities, aim to ensure older customers' satisfaction and well-being (Hu et al., 2015) as they are the ultimate users of the service. Meanwhile, senior living facilities may benefit from positive feedback from older customers' service experiences, and they may develop sustainable businesses via positive word-of-mouth (Tanford, 2016). However, little research has been done on service offerings which provide social interaction and engagement opportunities within senior living facilities (Lee, 2020a). Thus, this research looks at the impacts of social interaction opportunities provided by service offerings on older customers' social well-being.

3.3 Conceptual framework and hypotheses

A diagram showing the relationships between social interaction, social well-being and social connectedness is presented in Figure 3.1. The conceptual framework aims to understand the antecedents of social well-being and outcomes for hospitality services to improve older customers' social well-being.

The diagram is adapted from the transformative service research framework proposed by Anderson et al. (2013) and also has some similarities with the framework presented by Winstead et al. (2014) on the effect of social connectedness on the relationship between social interaction and social well-being. However, instead of looking at a single level of social interaction, the current study focuses on three different levels of social interaction, namely: social interaction with employees; social interaction with peers; social interaction with outsiders. It also explores the moderation role of social connectedness.

Galeone and Sebastiani (2021) note that the tourism and hospitality sectors have not been fully explored through the lens of TSR, and the influence of actors other than customers and employees on well-being outcomes has not been identified (Kara et al., 2013). Moreover, previous studies neglected the moderation role of social connectedness for older customers participating in social activities in commercial settings. Therefore, this study holds the assumption through the lens of transformative service research that different levels of social interaction are influential factors within social well-being. This study seeks to investigate whether social interaction has positive effects on social well-being and whether social connectedness positively moderates the above relationships in hospitality businesses.
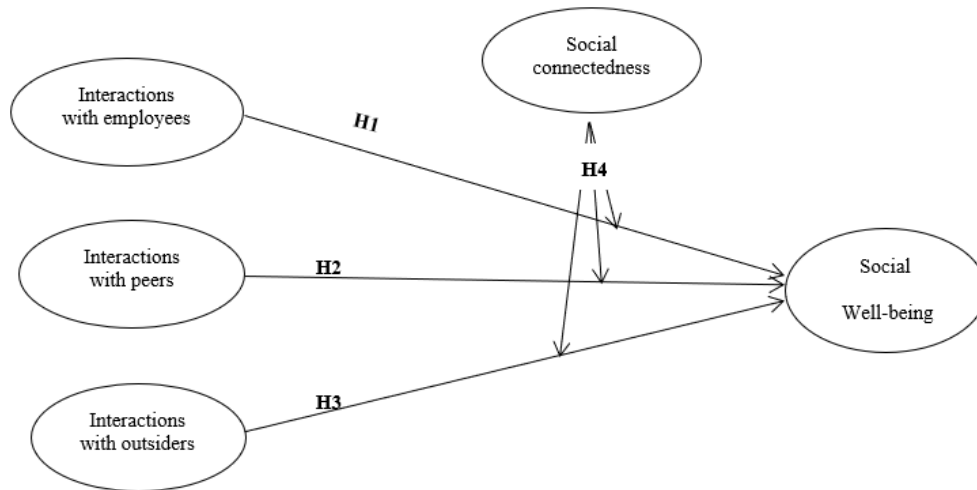
Figure 3.1. Proposed social well-being development model

The proposed structural model above shows the relationship between older customers' interactions with employees and their social well-being (H1), their interactions with peers and their social well-being (H2), and their interactions with outsiders and their social well-being (H3). The model also shows the indirect effect of social connectedness on social interactions and social well-being (H4). The development of the four hypotheses is discussed in the following section.

3.3.1 Social interactions with employees and social well-being: Hypothesis 1

Social interactions with employees are reported to have significant influence in the health and psychological well-being of consumers. In the healthcare context, interaction is viewed as an important tool to improve patients' health status (Paterick et al, 2017). It is advocated that influencing patients' state of well-being is the main intention of interaction in healthcare settings (Newell and Jordan, 2015). Recent reviews explore the idea that the most prominent elements shaping the patient care experience may be nurse-patient interactions (Lotfi et al., 2019). Thus, interaction between patients and nurses plays a fundamental role in receiving and delivering care (Kwame and Petrucka, 2021). Positive interactions can enable patients to receive sufficient health status and the

treatment process information (Kartika and Hariyati, 2018), which can in turn help patients develop acknowledgement, care and comfort (Kornhaber et al., 2016), and may guarantee patients' safety and privacy (Vujanić et al., 2022). Moreover, interactions between other healthcare professionals (such as doctors and therapists) and patients have also proven to be beneficial to patients' well-being (e.g., Chipidza et al., 2015; Miciak et al., 2018).

Social interaction has also been found to have a positive impact on psychological well-being (e.g., Heo et al., 2015; Whear et al., 2014). Kim et al. (2016) support this conclusion by adding that social interaction has a particular strong impact on the elderly. A number of studies indicate that interpersonal relationships between caregivers and residents in care homes are crucial determinants of care experiences (Wu et al., 2020). Residents have a positive experience when their needs for closeness and intimacy are met by the staff (Paudel et al., 2020). Interaction between older adults and staff in care homes provides a platform to share personal information, which bring enjoyable and comforting feelings (Neves et al., 2019). Conversely, it is reported that older adults have a negative experience when nursing staff do not interact with them and seem uncaring (Wälivaara et al., 2013).

In commercial settings, social interaction is defined as the interface between a customer and a provider (Mahr et al., 2019). The interpersonal interactions attained during service delivery often have the greatest impacts on overall customer satisfaction (Kim and Baker, 2019). A wide range of studies have been conducted on customer-employee interaction. For example, it is proposed that customers and employees depend on each other in a service environment (Katsaridou and Wilson, 2017). A good relationship between employees and customers is beneficial for customer satisfaction improvement and the positive communication development (Chen and Li, 2021). Some other prior studies

suggest that increased positive effects on customers can be generated from high quality social interactions (Gong and Yi, 2018). This is supported by a number of researchers who also discovered the association between interaction quality and positive effects on customers in retail contexts (e.g., Bahadur et al., 2018; Kageyama and Barreda, 2018; Sicilia et al., 2021).

Intriguingly, Ivanova et al. (2020) found that consumers' needs for physical consumption vary as they go through different life stages. Some scholars have identified that older consumers have different shopping orientations from other age groups (Kohijoki and Marjanen, 2013). Older consumers visit retail employees for social support and friendship to reduce their loneliness (Altinay et al., 2019; Song et al., 2018). Therefore, the orientation for older consumers coming to the marketplace is not solely for consumption, but also for human support in order to meet their social needs (Altinay et al., 2019). Moreover, it is proposed that older customers who experience life changes, such as retirement or loss of loved ones, are more likely to visit the marketplace for suggestions, where they may fulfill their social needs through interacting with salespeople (Rippé et al., 2018). A high level of physical, social and emotional satisfaction for older customers helps curtail their social and emotional loneliness (Altinay et al., 2019). As a result, social well-being may be a possible outcome for consumers developed from social interactions with employees. Thus, the following hypothesis is proposed:

Hypothesis1: Social interactions with employees have positive effects on social well-being.

3.3.2 Social interactions with peers and social well-being: Hypothesis 2

There are continuous debates over the positive and negative effects of peer customer interactions. In healthcare contexts, social interactions do not only happen among patients and medical professionals, but also among patients

themselves. Positive peer patient interactions are found to be beneficial to patients' health (e.g., Birkelund and Larsen, 2013; Fage-Butler and Nisbeth Jensen, 2016). In their study of patient-patient interactions in a Danish hospital, Birkelund and Larsen (2013) identified that interpersonal interactions between patients are of great value. Patients share information with fellow patients from which they can make possible progress (Larsen et al., 2014) and learn how to face the challenges of their hospital life (Andersen et al., 2015). Social interactions with fellow patients have been shown to improve recovery, reduce stress and anxiety, and provide relief (Gibson and Watkins, 2013).

Moreover, it is noted that patients tend to seek help from fellow patients instead of medical professionals because information and support received from fellow patients are viewed as more important (Birkelund and Larsen, 2013). Social interactions between patients is also found to positively influence hospitalized patients' satisfaction, which in turn affects their overall satisfaction (Hantel and Benkenstein, 2020). However, it has also been discovered that patients feel a lack of privacy and security in the presence of other patients (e.g., Larsen et al., 2014; Maher and de Vries, 2011).

In commercial contexts, peer interaction is defined as the interchange of information from one customer/group of customers to another customer/group of customers having the potential to change their choices, actual consumption behavior or their future way of interacting with others (Moura and Amorim, 2017). Previous studies have demonstrated that certain peer customer interactions may generate positive customer experiences (e.g., Altinay et al., 2018; Song et al., 2018). For example, conversations between customers are found helpful to ease dissatisfied customers' anxiety and boredom (e.g., Bruhn et al., 2014; Kim and Yi, 2017). Interactions between customers such as exchanging information, delivering social support and sharing experiences, are viewed as predictors of customers' satisfaction (Camelis et al., 2013). Older

customers come to the marketplace for social interactions to reduce their social isolation (Kim et al., 2015; Uysal et al., 2016) and peer interactions among older customers can enhance their satisfaction and social inclusion in the wider society (Altinay et al., 2019).

Conversely, prior studies have also demonstrated that specific social interactions between customers may lead to dissatisfying customer experiences (Lin et al., 2020). For example, customers may feel frustrated or anxious by other customers' public behaviors such as skipping the queue or smoking (Luo et al., 2019). In addition, customer dissatisfaction and negative experiences can also be provoked by the different ages (Tomazelli et al., 2017), incompatibility (Kim and Choi, 2016), authenticity (Wei et al., 2017) and dysfunctional behaviors (Jung et al., 2017) of other customers.

Peer interactions play an important role within institutional care settings for older consumers (Roberts and Bowers, 2015). Several researchers suggest that institutional peer support may enhance older adults' living experience in nursing homes by providing additional social support and help, and in turn this way reduce the stressful effects of physical decline (Franco et al., 2015). Conversation has been discovered as the most popular form of interaction between peers in institutional care settings, from which residents can establish a mutual and caring social relationship (Righi et al., 2017). In a study of one group of residents in a Malaysian nursing home, Makhtar et al. (2016) demonstrate that residents' experiences and interpersonal relationships with peer residents contribute to the experience of thriving. Moreover, positive institutional peer interactions reduce the impact of physical decline on depression (Yeung et al., 2013).

Prior studies reveal that older customers have different shopping orientations from other age groups (Peng et al., 2016). Older customers can establish relationships and act as a source of social support for each other (Brodie et al., 2013). Older customers may experience loneliness and unhappiness due to lack of social interaction (Feng et al., 2019). Therefore, the following hypothesis is proposed:

Hypothesis2: Social interactions with peers have positive effects on social well-being.

3.3.3 Social interaction with outsiders and social well-being: Hypothesis 3

A number of studies have shown that limited social networks for individuals are likely to be connected to higher levels of morbidity and mortality (e.g., Kauppi et al., 2018; Mackenbach et al., 2018; Nordentoft et al., 2013). Thus, building sufficient and diverse social networks is regarded as a crucial element in achieving positive health outcomes (Tew et al., 2012). Engaging with wider communities which are outside of commercial services has been encouraged as an effective intervention for better health (Murayama et al., 2012).

A broad variety of outsiders (people from wider communities), such as social therapists, hobby therapists, craft instructors, activity organizers/directors or diversional therapists are invited to attend to customers' wider needs in institutions for older adults. It is reported, for example, that music therapists can build an interactive relationship with elderly people and establish meaningful communication with their customers through interventions (Zhang et al., 2017). Meanwhile, dance therapists can deliver a structured, supportive and stimulating setting where older adults can express their feelings without judgement, and they can release their frustration and loss (Bräuninger, 2014).

It is increasingly recognized that artists working in a care context are expert practitioners who encourage people to interact in an art form just for the enjoyment of it (Richard et al., 2015). It is said that an artist in a care context plays multiple roles, such as a therapist, an activity organizer, a context for social interaction, and a bridge to the wider community (Lewis et al., 2016). Interactions with community artists foster increased self-confidence and esteem, improved communication, and social skills, as well as art skill development among older adults (Young et al., 2016).

In a study of older adults' psychological well-being in Finland, it was shown that older participants are empowered by group leaders who are artists, occupational therapists or physiotherapists, to express themselves and affect the progress of the group meeting through interactions. In addition, this empowerment may in turn help improve older adults' psychological well-being (Noone et al. 2017). Furthermore, intellectual and social benefits for older adults can be achieved through field trips and lectures organized by visiting experts. These activities require cognitive preparation before the event and generate interactions within the group afterwards to share thoughts and feelings (Lazar et al., 2016).

In addition, interactions with outsiders are sometimes carried out by volunteers from charity organizations. It has been shown that volunteer inspectors are effective in the resolution of specific complaints, rights protection and care quality improvements in long-term care settings (Aroonsrimorakot et al., 2022). Volunteers were also found to be helpful in multi-modality communication with residents who suffer from aphasia in nursing homes (Blais et al., 2017). It is advocated that this interaction with volunteers is significant for developing individual interpersonal skills and competency (Bruce et al., 2021). Furthermore, volunteers act as additional help to clinical staff (Ross et al., 2018), by, for example, monitoring chronic illness status (Witten, 2014) and detecting

unreported illnesses among older people (Newton, 2013), and as educators on health-related courses (Siqueira et al., 2022).

Volunteers interact with elderly residents in institutions in a group or on a one-to-one basis for some activities, which may provide the recipients with ongoing support and may lead to new social contacts and friendships, and alleviate social isolation and depression (Parkinson et al., 2018). In addition, volunteers contribute to establishing positive communications between residents, providers, regulators, and others in long-term care home settings (Hill, 2016). Therefore, the following hypothesis is proposed:

Hypothesis 3: Social interactions with outsiders have positive effects on social well-being.

3.3.4 Social connectedness as a moderator: Hypothesis 4

Lancee and Radl (2012) propose that social connectedness is associated with the number and quality of social interactions an individual has. Individuals interact with others in their social network which contributes to their perceptions of being socially connected (Pantell et al., 2013). Positive interactions have been found to be more likely to generate a sense of belonging (e.g., Glass et al., 2015; van Gijn-Grosvenor and Huisman, 2020).

Social connectedness is associated with social interactions in healthcare and education settings. People who have more social ties and are more integrated with friends are reported to have greater longevity (e.g., Holt-Lunstad, 2018; Yang et al., 2016). For example, pairing with a professional or volunteer helps old adults to be reconnected with others (Blieszner et al., 2019; Devine, 2014). In addition, it has been discovered that the empathy generated from physician-patient interactions can enhance a sense of connectedness and reduce patients' isolation from others in healthcare settings (Carson et al., 2020). Meanwhile, the

experience of regular and intimate interactions with peer students has a positive impact on a stronger sense of belonging in school settings (Gowing, 2019). The more students get socially involved in the university, the higher the psychological sense of belonging they will develop (Pickford, 2016, 2018).

It has been noted that a positive relationship between social interactions and social connectedness is found among older adults. According to Miyawaki (2015), group-based activities can increase older adults' sense of belonging, especially among ethnic groups who may encounter interaction difficulties with wider communities due to possible language barriers. Furthermore, previous studies note that intergeneration interactions such as students providing computer training to older adults in care homes successfully reduce social isolation among older adults (Siette et al., 2017). In a similar vein, a study by Jopling (2015) demonstrated that social interactions between older adults and community volunteers have positive effects on social connectedness among older adults. Intriguingly, it appears that people who interact with the barista in a coffee shop gain a greater sense of connectedness in the marketplace (Sandstrom and Dunn, 2014).

Numerous scholars have found that social connectedness can be improved by increasing opportunities for social interaction. For example, Tse (2010) revealed that the experimental indoor gardening programme organized in a nursing home improved individuals' social network and decreased loneliness among the older adults. Zhu and An (2013) found that older adults participating in home-delivered meal programmes experienced a low level of loneliness and isolation. They enjoyed their communication with the volunteer drivers who were in charge of the daily meal delivery. Gardiner and Barnes (2016) investigated the befriending schemes provided to older adults by volunteers among the befriend service users in the UK. The findings indicated that older adults develop a

relationship with volunteers through these befriending schemes which improves their social connectedness.

Social connectedness has been uncovered as a crucial factor in increasing life satisfaction, physical and psychological well-being. In a study of social connectedness and internet use among American older adults, it was found that increased social connectedness contributes to a higher level of life satisfaction amongst those using the Internet to be connected with friends (Easton-Hogg, 2013). According to Kim et al. (2015), the quality of social relations has a greater impact on life satisfaction for older adults who live alone than those living with others. Furthermore, in a study of older adults' social participation, it has been shown that life satisfaction can be increased indirectly by enhancing an individual's social connectedness (Xia and Li, 2018).

In addition, social connectedness has been found to be essential for physical well-being. For example, Ge et al. (2017) examined the association between social connectedness and depression. They argue that weak social connectedness with friends is strongly related to increased depression. Similarly, a low level of social connectedness among older adults often leads to health problems, such as cognitive and functional decline, increased systolic blood pressure and diastolic blood pressure, and mortality (Creaven et al., 2020; Domenech-Abella et al., 2019; Read et al., 2020). Steptoe and Di Gessa (2021) discovered that older people with disabilities are more likely to experience impoverished well-being due to the lower number of social connections with family and friends, especially during the COVID-19 pandemic. Moreover, decreased social connectedness is also reported to be associated with older adults' health-risk behaviors, such as poor nutrition, smoking, risky sexual behavior, alcohol abuse, and lack of physical exercise (Luo et al., 2020).

Additionally, it has been shown that a sense of belongingness among older adults positively affects their psychological well-being (e.g., Delle Fave et al., 2018; Park, 2018; Yasué et al., 2020). Being connected to a social world increasingly generates a sense of control and self-esteem among older adults (Jetten et al., 2015). It is reported that a low level of social connectedness may lead to a number of psychological problems, such as guilt, shame, regret (Juhl et al., 2021), and low self-esteem (Harris and Orth, 2020). Sociologists acknowledge the relationship between social connectedness and social factors, such as poverty and racism (Kasten, 2018). It is noted that social connectedness may be an essential element in diminishing poverty (Samuel and Uwizeyimana, 2017). Intriguingly, social connectedness also has an effect on material well-being. Richards (2016) identified that connectedness with family members offers protection and security at the times of financial risk in one's life such as unemployment or divorce. Therefore, social connectedness is considered as an important element affecting well-being.

Some researchers dispute the idea that there is evidence to show that the more people are connected, the lonelier they will become. This is because it requires significant effort mentally and emotionally to interact with people in order to maintain one's social network which leads to disruption in personal time and space (Turkle, 2017). In addition, it can be stressful to be available to others in a social environment (Ozcelik and Barsade, 2018). It can also lead to health-related problems when people encounter disagreements in their intimate relationships (Kiecolt-Glaser and Wilson, 2017).

A considerably increasing amount of efforts has been devoted to identifying the moderating role of social connectedness by diverse researchers. For example, in a study of Korean immigrants (Yoon and Lee, 2010), social connectedness moderated the relationship between positive effects and subjective well-being. They detected that social connectedness positively influenced Korean

immigrants who have a higher belief in connectedness. Cruwys et al. (2013) demonstrated that social connectedness moderates the onset of depressive symptoms among older adults. They suggested that social connectedness reduces the risk of depression recurring among depressed older adults. Schwartz and Shrira (2019) investigated the moderation role of social connectedness older adults' health. The findings of their research indicate that enhanced social connectedness can help older adults in poor health, such as those who suffer from PTSD symptoms or physical and mental health conditions by increasing their involvement in healthy activities. Ermer and Proulx (2022) examined the moderation role of social connectedness in the association of dyadic relationship strain and emotional well-being among older couples. Social connectedness is found to increase couples' happiness and reduce relationship strain and depression. Hence, the following hypothesis is proposed:

Hypothesis 4: Social connectedness moderates the relationship between social interactions and social well-being.

3.4 Summary

This chapter focused on the conceptual framework and the development of the study hypotheses. Prior to the introduction of the conceptual framework and the discussion of the hypotheses, the specific context of the social interaction in this research was explained. As hospitality and hospitals have progressed, services from both industries have become closely intertwined and have created many opportunities for improved services to fulfill customers' diverse needs, such as medical hotels, spas, and wellness centers in hotels. The growing ageing population poses challenges and opportunities for the hospitality and hospital industry. As a result, commercial senior living facilities are emerging from the intersection of hospitality and hospitals to cater for older adults' needs for hospitality and healthcare services.

The positive impact of participation in social activities has long been reported in healthcare and psychological fields. As a result, in previous studies, social activities have been viewed as therapeutic interventions for older adults. Social activities in commercial senior living facilities are provided to older customers as a service to generate opportunities for social interaction, aiming to enhance older customers' satisfaction and well-being. This research has examined the impact of social activities as a service offering in commercial contexts, something which has been scarcely investigated in previous studies.

A social well-being development model was proposed, which aimed to conduct useful research about the direct impact of social interaction with employees, with peers and with outsiders on social well-being. Next, the indirect impact of social connectedness on social well-being was also assessed. Subsequently, the development of the four hypotheses was discussed in turn.

Chapter Four

Research Methodology

4.1 Chapter overview

This chapter outlines the methodology employed for this research. To ensure a suitable methodology was adopted contributing to the accepted knowledge, this chapter begins with clarification of the research aim and objectives. An explanation of the positivism and constructivism research philosophies, the mixed deductive and inductive research approach, and the mixed methods research strategy is given, which ensure that the research aim and objectives are achieved. Further to this, a detailed sequential explanatory research design is presented. The chapter then discusses how the samples were selected for both the quantitative and qualitative stages. Methods of data collection and pilot studies are explained, then the data analyses are outlined. The integration of the quantitative and qualitative phases for interpretation and discussion is then described. At the end of the chapter, the ethical considerations and methodological limitations are presented.

4. 2 Research aim and objectives

The previous chapters explored the literature on the role of interactions in fostering the social well-being of older customers within hospitality services and this examination revealed research gaps. Firstly, there is limited literature on how hospitality addresses societal issues, such as the well-being of older customers. Secondly, there is little knowledge on the social outcome of various types of interactions on older customers' well-being. To fill these gaps, this study aims to investigate how the engagement of elderly customers in the interactive social activities provided by commercial senior living facilities helps them to socially connect. In doing so, it examines the role that such social

activities and the social connections engendered as a result play in enhancing older adults' social well-being. In order to accomplish this, the following objectives have been identified:

1. To critically review the literature on key concepts and theories of social outcomes of well-being and various types of interactions, making specific reference to the social outcome of well-being and interactions in the hospitality services;

2. To develop a research model to examine firstly the impact on social well-being of social interactions with hospitality employees, with other customers and with outsiders; secondly, to explore the moderating role of social connectedness on the relationship between social interactions and social well-being;

3. To gain an in-depth contextual understanding of the key findings emerging from the quantitative data collection stage;

4. To provide suggestions and implications on what hospitality businesses can do to help facilitate social interactions among older customers and help them reduce loneliness, leading to enhanced social well-being.

According to Wright et al. (2016), three major elements are crucial to designing a study: paradigm worldview, methodological approach and methods of data collection. Along this conceptualization, the following section discusses the philosophy of the research.

4. 3 Philosophy of the research

The research philosophy is the world view researchers employ to answer their research questions (Creswell and Poth, 2016), which refers to the knowledge developed from a combination of belief and assumptions (Saunders et al., 2019). Research philosophies answer questions about the relationship of the researcher

and the subject being researched (Žukauskas et al., 2018). Thus, the research philosophy provides the foundation of the studies conducted by researchers where they hold certain beliefs or assumptions on the nature of knowledge. It has been pointed out that researchers need to clarify the philosophical stance of their research to develop appropriate research designs, to identify the evidence needed, to determine data collection and interpretation methods and to outline the research limitations (Saunders et al., 2015; Sekaran and Bougie, 2013).

Previous scholars have proposed there is no right or wrong way for researchers to choose a research philosophy as each has its own influence (Sekaran and Bougie, 2013; Creswell and Clark, 2017). Additionally, Altinay et al. (2015) advocate that research philosophies can compensate for each other, where the joint strength of combined philosophies may improve the accuracy and organization of the research. They also conclude that the choice of research philosophy depends on the intensity of current knowledge in the focused research area. Thus, this study followed a dialectic stance (Fetters and Molina-Azorin, 2017) by adopting positivism and constructivism combined in one study.

The rationale for aligning with two opposing research philosophies is based on the research aim of this study (see 4.2). As discussed earlier, scholars have been examined social interactions in transformative service research from healthcare, financial and social services perspectives. Few studies have been investigated social interactions in hospitality services, especially for the emerging new concept of hospitality service-commercial senior living facilities. There is still a dearth in understanding of how hospitality services can address older customers' loneliness and social isolation. Therefore, explanatory research was conducted first to find the correlations between social interactions and social well-being. The researcher needed to test the relationship between social interactions and social well-being proposed by transformative service research. Secondly, exploratory research was carried out to identify the intentions and reasons

behind the correlation. The researcher needed to explain and explore how older customers 'feel' about interacting with different actors, and how their social well-being may change through these social interactions provided by hospitality services. Considering the nature of the two different types of knowledge the researcher wished to gain, two philosophies were adopted in this study.

Employing multiple philosophies enabled the researcher to engage in multiple methods while conducting the study and apply them in meaningful discourse throughout the study (Antwi and Hamza, 2015). Multiple philosophies provide combined channels and viewpoints through which important insights and understandings can be generated. It brings divergence and perspectives developed from theoretical and practical outcomes. For example, Litt et al. (2020) applied multiple philosophies to examine meaningful social interactions and their positive outcomes such as satisfaction and happiness. Jonas et al. (2020) employed multiple philosophies to investigate the relationship between social interactions and memorable marine tourism experiences. Buhalis et al. (2020) utilized multiple philosophies to investigate the impact of social interactions on individual and community well-being in an accommodation sharing economy.

Furthermore, multiple philosophies allowed the researcher to embrace diverse and conflicting perspectives from individuals or groups (Kelle, 2015) rather than being compromised. This afforded a better insight and understanding on the complexity of the phenomenon researched. Previous research investigating hotel managers' perceptions of using robots for services (Ivanov et al., 2020) employed multiple philosophies. The utilization of multiple philosophies in this research brought out agreement and points of disparity among the participants and extended the understanding of service robotisation from a service provider's perspective. In a study conducted by Buhalis et al. (2020), multiple philosophies were used to find out social interactions did not only have positive effects on

individual and community well-being, but also negative effects in an accommodation sharing economy.

According to Altinay et al. (2015), research questions are another factor influencing the choice of research philosophy. The specific research questions of this study are a) do the social interactions of older customers with employees, peers and outsiders participating in social activities affect older customers' social well-being; and does social connectedness moderates the relationship between social interaction and social well-being (this being explanatory in nature)? b) How can social activities facilitate the social interactions of older customers and help enhance social well-being (this being exploratory in nature)? The adopted positivist philosophy has enabled the researcher to 'objectively' answer the first research question through a survey where respondents will be assessed statistically with the related numeric data and scores. However, details are needed to help further explain the relationships mentioned in the first research question. Thus, constructivism has been adopted to enable the researcher to 'subjectively' understand and interpret the transcripts of participants' lived experience from focus group discussions. This can draw a clear picture of the mechanism of those relationships and provide answers to the second research question.

Given the research questions, the pertinence of positivism and constructivism is reviewed. *Positivism* focuses on gaining factual knowledge through observation (Hodge et al., 2020). The issue being researched by positivists indicates the reality exists objectively and can be measured independently of the investigator (observer) (Majeed, 2019). The aim of positivist research is to seek explanation and prediction (Park et al., 2020a). Researchers working within this philosophy reach their understanding through testing hypotheses developed from existing theories using quantifiable measurements of variables (Majeed, 2019; Panhwar et al., 2017). Studies where positivist principles have been applied start from a

theory to collecting data for analysis and to concluding with findings that either agree or disagree with the proposed theory.

This research is to investigate the relationship of social interactions and social well-being proposed by transformative service research in hospitality services. The researcher can achieve certain levels of objectivity under positivism by carefully employing research designs which measure human attitudes towards the phenomenon such as social interactions, social well-being, and social connectedness. Moreover, the accepted measures must meet the criteria of validity and reliability.

On the other hand, *constructivism* focuses on participants' views (Hiller, 2016). It involves interpreting and understanding certain phenomena or human behaviour with researchers' own background or experiences to generate broad theories or patterns (Creswell, 2014). Researchers mostly depend on respondents' subjective opinions of the phenomenon under study, which are derived from their social, cultural, and historical roots. Contrary to positivism which follows an established theory, constructivism looks to establish or advance a theory or patterns of meaning inductively.

In this study, constructivism has been applied to further understand the phenomena or human behavior. Respondents were invited to make meaning and interpret how the social interactions of older customers influence their social well-being and 'construct' what they perceived to be the encouraging factors contributing to their social well-being. Respondents could provide original viewpoints on the transformative outcomes of hospitality services offerings or reveal themes which might be contributing to the transformative service research and hospitality services literature.

4. 4 Research approach

Previous scholars have pointed out that a research philosophy usually determines a research approach and the strategy the researcher applies in their study (Melnikovas, 2018). As discussed in the previous section, this research aligns with the dialectical paradigm moving from the positivist to the constructive tradition. Positivism is largely associated with the deductive approach and quantitative research strategy, whereas constructivism is mostly associated with the inductive approach and qualitative research strategy. Thus, this study adopted a deductive approach where a distinct application was examined by broad themes. Meanwhile, this study also embraced an inter-subjective perspective which believed the research was to explore shared meanings constructed by people and the findings were transferable to other cases sharing similar characteristics to those in this study.

According to Woiceshyn and Daellenbach (2018), deduction and induction are complementary. Combined deductive and inductive approaches can provide a complete understanding of the factors influencing older customers' social well-being by using contrasting and complementary sources of data. A single source of data is insufficient to answer the research questions.

The deductive approach focuses on causality (Park et al., 2020b). It is used to test causal relationships of existing phenomena between variables using theoretical arguments. As discussed earlier, transformative service research has rarely been investigated in hospitality services. Also, this study aims to test the causal relationship between social interactions and social well-being proposed by transformative service research. A deductive approach would enable the researcher to quantitatively examine the effects of social interactions on social well-being. The findings would provide a mathematical explanation of how the world works, in this case the impact of social interactions on social well-being.

On the contrary, the inductive approach emphasizes exploring new phenomena which are little or not known at all (Woiceshyn and Daellenbach, 2018). In this case, how hospitality services can reduce older customers' loneliness and social isolation is not known. Moreover, one of the objectives in this study is to gain an in-depth contextual understanding of the key findings emerging from the quantitative data collection stage. An inductive approach would enable the researcher to qualitatively explore the impacts of social interactions on social well-being, which would reinforce and expand the findings from the deductive approach. The exploration of respondents' experiences and interpretations (in this case employees, older customers and outsiders, who are involved in social interactions affecting the social well-being of older customers) would be exhibited in the findings.

4. 5 Research strategy

Saunders et al. (2019) posit that a research strategy is a research plan related to the philosophical stance of the study, which indicates the data collection methods and techniques employed for analysis. Thus, informed by the philosophies of positivism and constructivism, and the deductive and inductive approaches adopted in this research, a mixed methods strategy has been applied.

The reason for choosing a mixed methods strategy lies in the fact that some of the research questions are more apt to quantitative investigation, for example, measuring the effects of social interactions on social well-being and examining the moderating role of social connectedness; whereas the question of how social interactions affect the social well-being of older customers needs qualitative exploration. Neither of the approaches can independently and satisfactorily answer the complex questions surrounding the factors contributing to older customers' social well-being and their intentions with regards to participating in social activities in the context of senior living facilities in China. As a result, this

research combines both quantitative and qualitative phases which complement each other. This strategy can also give a more holistic angle to understand the phenomena under research.

Mixed methods research is not new in well-being studies, nor specifically in relation to older adults' well-being. For example, a substantial number of mixed methods research projects have been carried out on sources providing formal or informal assistance to older adults, such as medical/care professionals, volunteers, or intergenerational groups. Some studies have applied mixed methods to investigate certain medical issues, such as dementia, palliative care, chronic illnesses or cancer among older adults (Gaugler et al., 2018). Some have adopted mixed methods for intervention studies among older adults (e.g., Auger et al., 2015; Danilovich et al., 2017). Several studies have examined the impact of intergenerational volunteer programmes for older adults (e.g., Cristancho-Lacroix et al., 2015; Hooker et al., 2017). Finally, there is a small group of mixed methods research studies focusing on the impact of community activities on older adults' well-being (e.g., Phinney et al., 2014; Schell et al., 2016).

However, it is argued by some scholars that mixed methods have not been fully applied in research about older adults' well-being. For example, few scholars have studied interpersonal relationships, well-being in institutional or independent residential settings, or the impact of retirement from the perspective of older adults (Gaugler et al., 2018). In addition, a majority of mixed methods research into older adults' well-being was conducted in Western settings, such as Europe (e.g., Brand et al., 2016; Hammer et al., 2016; Quasdorf et al., 2017), the United States (e.g., Mullaney et al., 2016; Schonberg et al., 2014), and Australia (e.g., Lee et al., 2015; Haas et al., 2014). Further exploration is needed by employing mixed methods in diverse cultural contexts reflecting the role of nationality, ethnicity or race in older adults' well-being (Harries et al., 2019).

Moreover, the majority of studies on older adults in the hospitality and tourism industry are quantitative driven, such as studies of older tourists' needs and preferences (e.g., Akçay et al., 2017; Liew et al., 2021; Zielińska-Szczepkowska, 2021), the application of technologies for older tourists in travel services (e.g., Moura et al., 2017; Wang, 2019). It is advocated that other research approaches, such as mixed methods, should be applied in tourism and hospitality studies (Nunkoo et. al, 2017; Wilson et al., 2017). Additionally, more research using mixed methods is needed to provide empirical evidence and extend the understanding of the relationship of older adults and these industries (Hung and Lu, 2016).

A two-phase sequential explanatory mixed methods design has been adopted for this research (see Figure 8). A sequential explanatory design is where qualitative data is collected and analysed based on the results from an earlier stage of quantitative data collection and analysis; the purpose is to use the subsequent qualitative strand to explain or further explore the initial quantitative results (Creswell and Clark, 2017). There are several strengths of the sequential explanatory design. First, the distinct sequential design is straightforward for the researcher to implement and report, where quantitative and qualitative data are collected one at a time. Second, through the quantitative data and its subsequent analysis, a general knowledge of the study problem can be attained, upon which exploration of participants' views is refined and explained through qualitative data and its analysis (Kelle, 2015). Finally, the explanatory sequential design lends itself to the prototypical follow-up approach in which the design of the subsequent qualitative phase is based on what is uncovered during the quantitative phase.

In this research, quantitative data from the survey questionnaire was collected and analyzed in the first phase. The structure of the questionnaire moves from general themes to a particular application. The relationship between social

interactions and social well-being as well as the role of social connectedness were examined. Areas requiring further exploration were identified to understand and explain the survey findings. Then, qualitative data from focus group discussions was collected and analyzed in the second phase. This delivered an inter-subjective stance of the linkage between the researcher and the research process. The qualitative phase aimed to explain and explore the reasons and intentions behind the quantitative results by means of the diverse opinions and reactions of the participants in the focus group discussions.

The integration of the quantitative and qualitative data took place during the analysis and discussion stages. In the analysis stage, the findings which emerged from the analysis of the quantitative data were connected to the collection of the qualitative data. During this integration phase, the areas needing explanation and further exploration were identified. Then, the protocol and questions were formulated for the focus group discussions. Also, older customers to be participants in the focus group discussions were purposefully selected from those who participated in the survey. In the discussion stage, qualitative data was applied to explain and further explore the reasons for the quantitative results, firstly, the reason for respondents' descriptive patterns and, secondly, the reasons for hypothesized relationships, which may have been positive or negative.

Phase | Method | Procedure | Product

Phase1 Quantitative

Instrument and measure development
• Design quantitative data collection instrument, measure
• Refine quantitative questions

Quantitative Data Collection
• Cross-sectional survey (N=274)
• Numeric data

Quantitative Data Analysis
• Data screening
• Descriptive statistics, missing data, normality, outliers
• Factor analysis — • Factor loadings
• Reliability — • Cronbach's alpha
• Hypotheses testing — • Regression analysis

Integration point 1

Focus Group Protocol Development
• Purposefully selecting two elderly representatives, two staff members from commercial senior living facilities, as well as two officers from either the Ageing Development Foundation or local community
• 3 Focus groups

Phase2 Qualitative

Qualitative Data Collection
• Focus group interview enabling participants to discuss within the group with a focus (N=3)
• Text data (transcripts, field notes)

Qualitative Data Analysis
• Thematic analysis (Braun and Clarke, 2006)
• Data familiarization
• Initial codes generation
• Themes search
• Themes review
• Theme defining and naming
• Writing up the findings

Integration point 2

Interpret the connected results
• interpret and explain the results from quantitative and qualitative phases
• Discussion
• Implications
• Directions for future research

Figure 4.1 Diagram for the application of the Explanatory Sequential Design adapted from Ivankova and Stick (2007)

A sequential explanatory design was also chosen since it has recently been adopted in older adults' well-being studies. For example, Auger et al. (2015) employ the sequential explanatory design in their research into the development and feasibility of an intervention among older wheelchair users. They conducted a survey to inform the development in the first phase and interviews on users' experience to evaluate the feasibility. Lindsay-Smith et al. (2018) employed focus group discussions of older customers to provide explanation and an insight

into social well-being changes derived quantitatively from an earlier survey on the impact of joining a community group. In another study of the impact of volunteering transitions among Swiss older community-dwellers' well-being (Kleiner et al., 2021), the quantitative stage provided information and support to design the focus group guides. The findings of the focus group discussions were used to explain the results from the quantitative results. This research was the first to adopt a sequential explanatory design to investigate older customers' social well-being in a commercial senior living context.

All the studies discussed above illustrate that a sequential explanatory design enables researchers to not only examine the proposed associations of research constructs, but also to obtain an insight into the underpinning reasons explaining the associations. Thus, a sequential explanatory design has been applied in this research. A survey has been employed first to test the relationship between social interactions and older adults' social well-being as well as the moderation role of social connectedness. Focus group discussions are used second to explain the results yielded from the survey.

4.6 Sampling strategy

The purpose of sampling is to gain access to participants who are considered to be of theoretical interest and significance. Both quantitative and qualitative research seek samples which will address the research questions as the appropriateness of the selected sample will have a critical impact on the quality of the data and the whole research. As this research adopts a sequential explanatory design, the sampling occurs at two points: the quantitative phase and the qualitative phase. Since the aim of this research design is to explain the initial results gathered during the quantitative phase, it was decided that the two phases of the research would apply different sampling techniques and sample sizes which will be explained in detail in the following sections.

4.6.1 Population and sampling

Population represents the entire group of people or units (households or organizations) from which researchers draw sample when conducting research (Taherdoost, 2016a). The population of this research was older adults residing in commercial senior living facilities in China. However, due to the limited accessibility to the population, financial resources and time, a sample which can represent the whole population was used to collect the data. As Mujere (2016) points out drawing a sample is more likely to provide accurate results than a census. In addition, using sampling can distribute financial resources and time better than collecting data from the entire population (Saunders et al., 2016).

According to the statistics announced at the 2018 National Conference on Civil Affairs, there were more than 12,500 registered commercial senior living facilities in China by September 2017. However, it is worth mentioning that a full list of these registered commercial senior living facilities is very difficult to obtain as there is very limited information on the official website. Thus, in order to define the sample frame for this research, this study made use of the data from the 2010 National Population Census released by the National Bureau of Statistics of China in 2011. Beijing, Shanghai and Liaoning were selected as they were among the top regions with the highest numbers of older citizens, especially Liaoning which has negative population growth. Shenyang, as the capital city and the largest city of Liaoning Province was selected. 785 commercial senior living facilities from these three cities were chosen to make up the sample frame (see Table 4.1).

Table 4.1 City coverage of the sampling frame

Year	Location	No. of commercial senior living facilities	Resources
2017	Beijing	354	Beijing Civil Affairs Bureau (2017)
2018	Shanghai	255	Chen et al. (2018)
2019	Shenyang	176	Shenyang Civil Affairs Bureau (2019)

4.6.2 Sample size

Having identified a suitable sampling frame, it is crucial for a researcher to determine the sample size when making the research plan (Gruijters and Peters, 2020). The study should be big enough to achieve scientific and statistical significance. However, it should not be so big that it wastes more resources than necessary (Ledolter and Kardon, 2020).

4.6.2.1 Sample size for phase I Quantitative approach

In quantitative research, the minimum number of participants necessary to evaluate if a real difference actually exists is known as an adequate sample size (Burmeister and Aitken, 2012). There are two considerations required for sample size determination-confidence level and margin of error (Hunter, 2016). Confidence level is the certainty a researcher has as how much the sample represents the target population (Saunders et al., 2016). It indicates the precision of the target population with a tolerated range of error margin. It is suggested that researchers, especially those in business and management research, normally work at a confidence level of 95 per cent (Saunders et al., 2016).

Saunders et al. (2016, p.704) suggest a formula to calculate the minimum sample size:

$n = p\% \times q\% \times (z/e\%)^2$

where

n is the required minimum sample size

p% is the percentage belonging to the specific category

q% is the percentage not belonging to the specific category

z is the z value corresponding to the required confidence level

e% is the required margin of error

This phase of the study follows De Vaus and de Vaus' (2013) recommendation of allocating 50% to both p% and q%, which could deliver the greatest diversity in the worst scenario, as it is difficult to estimate the response rate at this stage of the research. Meanwhile, Saunders et al. (2016) suggest a 95% confidence level, which is associated with a z value of 1.96. The minimum calculated sample size is $[50 \times 50 \times (1.96/6)]^2 = 267$ with a 6% sample error.

Meanwhile, the likely response rate should be considered when deciding an actual sample size. The likely response rate needs to be estimated in order to ensure the error margin is within accepted limits and enough details are obtained for the analysis. According to Saunders et al. (2016), the actual sample size can be calculated with the following formula:

$n^a = n \times 100 / re\%$

where

n^a is the required actual sample size

n is the minimum sample size

re% is the estimated response rate

As calculated earlier, the minimum sample size n is 267. At the same time, this research follows Neuman (1999, 2014)'s suggestion that face-to-face interviews can ensure a high response rate which can be up to 90 percent. As a result, the calculated actual sample size is $267 \times 100/ 90\% = 297$.

Furthermore, several previous studies have applied similar numbers of questionnaires to achieve valid results (See Table 4.2). For example, Altinay et al. (2019) investigated the influence of interactions among older consumers on their social well-being based on the results of 268 questionnaires. Albuquerque et al. (2017) discovered that physical activities have positive effects on quality

of life and memory skills from the analysis of 149 participants. Praveen (2017) assessed quality of life in rural areas with a sample of 50 older adults. Khazaee-pool et al. (2015) illustrated the impact of physical activities on happiness among older adults based on the statistics from 60 male and 60 female volunteers. Moore and Moloney (2015) conducted a comparative study on the significant role social connectedness play in contributing to older adults' well-being among 178 university students and 89 older adults aged over 60, which illustrated that levels of relatedness and competence are significant predictors of older adults' well-being. Goudarz et al. (2015) discovered the important relationship between social support and subjective well-being with a sample size of 147 older adults. Zhang and Chen (2014) administered survey research among 292 older adults in China to identify important correlates of psychological distress.

Table 4.2 Previous older adults' well-being studies applying a survey strategy

Research Title	Author	Year	Sample Size
The influence of customer-to-customer interactions on elderly customers' satisfaction and social well-being	Altinay et al.	2018	268
Physical activity: Relationship to quality of life and memory in older people	Albuquerque et al.	2017	149
Quality of life among the elderly in a rural area	Praveen	2016	50
Active ageing and quality of life: factors associated with participation in leisure activities among institutionalized older adults with and without dementia	Fernández-Mayoralas et al.	2015	234
Effects of a physical exercise programme on happiness among older people	Khazaee-pool et al.	2015	120
The effects of social connectedness and need satisfaction on wellbeing in older adults	Moore and Moloney	2015	267
Relationship Between Social Support and Subjective Well-Being in Older Adults	Goudarz et al. (2015)	2015	147
Psychological Distress of Older Chinese: Exploring the Roles of Activities, Social Support, and Subjective Social Status	Zhang and Chen	2014	292

Source: Collated by the researcher

Despite these calculations, Allen (2017) proposed that sample size should also be based on a researcher's judgement. Factors such as time and financial constraints, the size of the total target population, as well as different variables and data analyses, should be taken into consideration when choosing a sample size (Neuman, 2013; Saunders et al., 2016). It is advised that a sample size

bigger than 30 and smaller than 500 can be applied to most research as a useful rule of thumb (Tennent, 2013).

Overall, taking all the factors discussed above into consideration, these being calculated minimum sample size, calculated actual sample size, previous studies on older adults, the rule of thumb and the researcher's own judgement on time and financial status, the number of questionnaires to be administered would be 300, 100 questionnaires in each city.

4.6.2.2 Sample size for phase II Qualitative approach

Focus groups were conducted in phase II to clarify and elaborate on the results yielded from the phase I quantitative research. A focus group is a data collection method used to obtain participants' opinions and experiences on a topic pre-determined by the researcher through moderated discussions within a group (Krueger, 2014). According to Hennink et al. (2019), few empirical studies provide guidelines for researchers in determining the necessary numbers of focus groups for research. As a result, researchers have to rely on rules of thumb or personal judgement. The concept of saturation which has appeared in many publications has become the golden rule to determine sample sizes for focus groups (Namey et al., 2016). Guest et al. (2017) point out that 80% of the main themes from the data can be captured with two to three focus groups and 90% with three to six focus groups. However, it is argued that there are still a lot of unknowns about saturation (Morse, 2015), and not all types of qualitative research can use saturation as a guideline (e.g., van Manen et al., 2016; Nelson, 2017). Furthermore, most research requires an estimated sample size before a study takes place (Charmaz, 2014), whereas saturation cannot be assessed before data analysis takes place.

On the other hand, a few scholars have made various attempts to determine focus group sample sizes through mathematical and statistical methods. For example, factor analysis and mathematical modelling have been employed to discover that four participants who have the same level of knowledge in relation to the research domain, are sufficient to provide researchers with a confident level of accurate information (Romney et al., 1986). Moreover, Galvin (2015) proposes that a sample of six participants can identify a concept with more than 99% accuracy if the breadth of the concept is among 55% of the population in a larger study by using binomial logic analysis.

In order to fill the gap of the focus group sample size for research with empirical evidence, Guest et al (2017) conducted a thematic analysis of health-seeking behaviors by using focus groups. Consequently, they concluded that two to three focus groups can explore 80% of all themes and three to six focus groups can identify 90% of all themes in an area of study. They also advocate that three focus groups are sufficient to discover the most prevailing themes in a research study.

Moreover, several studies on older adults' well-being have reached valid results by conducting two to three focus groups (see Table 4.3). Bradwell et al. (2019) assess the importance of the robot design between older adults and developers. Lindsay-Smith et al. (2018) conducted two focus groups with new and long-term members of life activity clubs to explore the impact of membership on older adults' social well-being. Osmanovic and Pecchioni (2016) investigate the outcomes of gameplaying between older adults and their younger family members through three focus groups. Hill et al (2015) explored the positive impact of digital technology on older adults' empowerment and inclusion by using two focus groups. Meanwhile, in a study of fall risk and safety precautions, a deeper understanding of older adults' perceptions of fall risk awareness and

implementation of prevention schemes was captured by conducting two focus groups with community-dwelling older adults (Pohl et al., 2015).

Table 4.3 Previous well-being studies conducted among older adults using a focus group discussion method

Research Title	Author	Year	Focus Group Nos.
Companion robots for older people: importance of user-centred design demonstrated through observations and focus groups comparing preferences of older people and roboticists in Southwest England	Bradwell et al.	2019	2
A mixed methods case study exploring the impact of membership of a multi-activity, multicentre community group on the social wellbeing of older adults	Lindsay-Smith et al.	2018	2
Beyond Entertainment: Motivations and Outcomes of Video Game Playing by Older Adults and Their Younger Family Members	Osmanovic and Pecchioni	2016	3
Older adults' experiences and perceptions of digital technology: (Dis)empowerment, wellbeing, and inclusion	Hill et al.	2015	2
Fall Risk Awareness and Safety Precautions Taken by Older Community-Dwelling Women and Men—A Qualitative Study Using Focus Group Discussions	Pohl et al.	2015	2

Source: Collated by the researcher

Therefore, according to empirical evidence, mathematical and statistical methods, and the previous studies discussed above, three focus groups of six participants each were conducted in this study, one in each city. The three focus groups were used to explain and further explore the results from the quantitative phase I.

4.6.3 Sampling method

Having determined an appropriate sampling frame and actual sample size, the most suitable sampling techniques need to be selected to obtain a representative sample. According to Saunders et al. (2016), there are two types of sampling techniques-probability and non-probability. For probability sampling, the chance or the possibility of all the members of the population being selected is pre-established and equal. Each individual from the targeted population is able to answer the research questions, which helps reduce possible bias, and

contribute to achieve the research objectives. Therefore, probability sampling was selected for the first phase quantitative research.

On the other hand, for non-probability sampling, the chance or the possibility of the members of the population being selected is unknown. It is impossible for each member of the population to answer the research questions. Therefore, the selection of the sample from the population is based upon the researcher's own subjective judgement. Mujere (2016) points out that non-probability sampling is usually associated with exploratory research which aim to investigate a phenomenon in life instead of statistically making assumptions regarding the whole population. Thus, non-probability sampling was chosen for the second phase qualitative research.

4.6.3.1 Sampling method for phase I quantitative approach

As discussed earlier, phase I is explanatory in nature and a survey was employed. Thus, it followed that probability sampling methods were used. Among the types of probability sampling, stratified random sampling was chosen for this study since it can provide a sample which is highly representative of the target population and it reduces possible human bias (Sharma, 2017). In addition, stratified random sampling is viewed with external validity which allows generalization (Sharma, 2017).

As discussed earlier, the target population for this study was older adults residing in commercial senior living facilities in China. The significant strata in the sampling frame were distinguished earlier (three cities in China, see Table 4.1). Since the sampling frame in relation to commercial senior living facilities in Beijing, Shanghai and Shenyang consisted of 785 organizations (as shown in Table 4.1), in an effort to get a total sample size substantially bigger than the necessary minimum sample, convenience sampling (Guetterman, 2015) was

applied to select one five-star commercial senior living facility from each city (see Table 4.4). According to the Classification and Accreditation for Senior Care Organizations (State Administration for Market Regulation, 2019) in China, a five-star commercial senior living facility should meet the following major criteria:

1) The occupancy rate is no less than 50%

2) The services provided should include, but not be limited to check-in, daily care, catering, housekeeping, laundry, medical care, culture and entertainment, psychological/spiritual support, well-being, rehabilitation, and education

3) One professional social worker should be assigned to every 200 older residents

4) The proportion of en-suite apartments should not be lower than 80%

Table 4.4 City coverage of five-star senior living facilities

Year	Location	No. of five-star commercial senior living facilities	Resources
2017	Beijing	3	Pension World (2017)
2017	Shanghai	10	Shanghai Civil Affairs Bureau (2017)
2015	Shenyang	3	National Ageing Office (2015)

In addition, a convenience and snowball sampling method were used to facilitate access to the target population through face-to-face questionnaires. With the help of the staff and older customers in commercial senior living facilities, a hundred older adults aged 60+, independent in their daily living activities and experienced in social activities, were randomly selected to participate in the study.

4.6.3.2 Sampling method for phase II qualitative approach

Since phase II is exploratory in nature, a non-probability sample is the most practical, which applies non-randomized methods to select the sample. There are

four common types of non-probability sampling techniques, namely convenience, purposive, quota and snowball sampling (e.g., Berndt, 2020; Sharma, 2017; Taherdoost, 2016a).

Among the four major types of non-probability sampling techniques, purposive sampling was chosen for this study. According to Creswell and Clark (2017), purposive sampling allows participants who have experienced the essential phenomenon or main concept being explored in the study to be selected intentionally by researchers. Maximal variation sampling is viewed as one of the more common strategies within purposive sampling, which enables researchers to select diverse participants with different perspectives on the essential phenomenon. The first stage of the study is to examine the association of interaction with employees, peers, outsiders and social well-being. Thus, people from each actor category have the best knowledge concerning the research topic. As a result, two older customers living in commercial senior living facilities, two employees and two officials from the local community/ ageing development foundation who represent each type of interaction were intentionally chosen.

4.7 Data Collection

This study employs primary methods of data collection. The first phase uses questionnaires to test the hypothesis and evaluate the outcome. Subsequently, the second phase explains and further explores the results gained from the first phase.

4.7.1 Quantitative approach using a survey

Surveys are viewed as popular and useful to examine the opinions or attitudes of human beings (Bee and Murdoch-Eaton, 2016). There are a number of

advantages of using questionnaires in this research: firstly, it allows the use of theoretical frameworks and precisely constructed measurement scales which emerged from the literature review (Timmins, 2015); secondly, the data can be collected from large and geographically spread samples (Aldhaen, 2020); thirdly, the information collected from subject samples has no interviewer bias and can be generalized to the whole research population. Furthermore, questionnaires provide greater anonymity and more flexibility because the participants can answer in their free time (Safdar et al., 2016).

Meanwhile, researchers may encounter some problems when administering questionnaires: firstly, it is hard to control and secure a high response rate (Ebert et al., 2018); secondly, participants may feel confused or misunderstand the questions on the questionnaires (Kumar, 2019); thirdly, a poor level of literacy among participants may cause the research to fail. The participants for the questionnaire in this research are older adults. Thus, the researcher needed to take more caution into consideration.

Previous studies involving older participants suggest a number of factors which may affect the success of the data collection. For example, it is essential to ensure instructions, forms and questionnaires are understandable for older adults with any visual or sensory impairments (Giebel et al., 2019; Hassan et al., 2017). In addition, give appropriate breaks to older adult participants so that they have enough time to complete different research assessments and provide an accessible and convenient physical environment (Bartlett et al., 2015; Hassan et al., 2017). Furthermore, autonomy, beneficence and confidentiality should be ensured (Farnia and Rahmanian, 2019). To overcome the potential problems associated with surveys in this research, the following actions were taken by the researcher:

• Participant information sheets (Appendix 4.1) were handed out to participants prior to the start of the survey. The participant information sheet explained the purpose of the research and described the importance of understanding how engagement in social activities helps older adults to stay socially connected and the role social activities play in enhancing older adults' social well-being. Additionally, confidentiality, privacy and anonymity were stressed in the participant information sheet when it came to the gathering, storage, and dissemination of study data.

• Structured face-to-face interviews were conducted to avoid any possible misunderstanding and to ensure that participants completed the questionnaires.

• The contact details of the researcher and her supervisory team were provided on the participant information sheet. Participants could request an explanation of any point that needed clarification or verification.

• The questionnaire was developed with distinct instructions and layout with the use of larger and clear types of fonts (Times New Roman size 16).

• Fatigue was a concern due to the age of the participants. Therefore, breaks were allocated as soon as signs of fatigue started to emerge. Should participants have felt tired or unwell, they could fill in the questionnaire at a different time.

• Well-lit and quiet locations were chosen to eliminate extraneous noise given that some participants may not be aware of mild sensory loss when filling in the questionnaires.

• Standby medical personnel were available in case any emergencies arose

• Consent forms (Appendix 4.2) were provided along with the questionnaires. Thus, participants were able to end their participation or withdraw any previously provided unprocessed data without explanation.

Thus, ethical issues involving older adult participants were addressed prior to the start of the survey.

According to Saunders et al. (2015), the response rate, as well as the reliability and validity of the data, will be impacted by the questionnaire design. Thus, the questionnaire was designed for this research following four steps (see Fig 4.2).
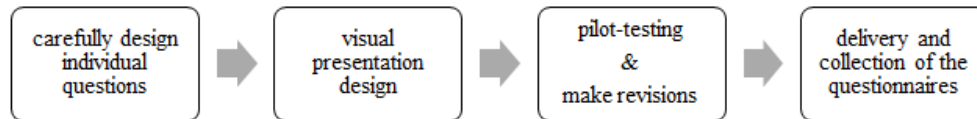
Figure 4.2 Questionnaire design process adapted from Frazer and Lawley (2000) and Saunders et al. (2015a)

Step one: carefully designed individual questions

The information required for the questionnaire was rooted in the research questions or hypotheses under investigated (Jhangiani et al., 2015). In particular, the relationships that are likely to exist between the variables were clarified (as shown in Table 4.5).

Table 4.5 Summary of hypotheses and their corresponding variables

Hypotheses	Identified variables
Hypothesis1: Social interaction with employees have positive effects on social well-being.	the independent variables: social interaction with employees
Hypothesis2: Social interaction with peers have positive effects on social well-being.	social interaction with peers social interaction with outsiders
Hypothesis 3: Social interaction with outsiders have positive effects on social well-being.	the dependent variables: social well-being
Hypothesis 4: Social connectedness moderates the relationship of social interactions and social well-being.	the moderating variable: social connectedness

Each part of the questionnaire was developed by referring to or adapting various resources such as the research aim and objectives and literature from previous studies that had applied a questionnaire approach (as shown in Table 4.6). A seven-point Likert scale was applied to measure the five constructs in this study, ranging from "strongly disagree" (1) to "strongly agree" (7). Existing scales and

items from the literature related to the topic were adapted and combined. A seven-point Likert scale was used due to its application in previous studies (e.g., Killen and Macaskill, 2015; Milosevic et al., 2019). In addition, a seven-point Likert scale enables participants to give a more comprehensive response (Taherdoost, 2019) by providing a wider range of options. It is reported that the human brain can identify seven categories at a time (Miller, 1956). As a result, a seven-point Likert scale increases the possibility of reflecting human reality (Joshi et al., 2015).

The survey questions were created to get an understanding of how older customers of senior living facilities perceive their social connectedness and well-being through participating in social activities. Using research from Chandon et al., (1997), Brady and Cronin (2001) and Winsted (1997, 2000), Lloyd and Luk (2011) constructed a multi-item construct integrating two categories to conceptualize social interactions with employees. Four items derived from Walls (2013) were used to measure social interaction with peers. Four questions about social interaction with outsiders were taken from Auter and Palmgreen (2000) and Novek et al. (2013). Eight items from the Social Connectedness Scale-Revised (Lee et al., 2001) were modified to measure social connectedness. The scales used to measure social well-being were adapted from studies conducted by Diener et al. (1985) and Wann and Pierce (2005).

Table 4.6 The questionnaire parts and the corresponding resources

Parts of the questionnaire	Resources
Demographic data Q1-Q5	▪ Research aim and objectives ▪ Literature Davis (2014)
Part 1 Social interactions with employees	▪ Research aim, objectives and questions ▪ Literature Lloyd and Luk (2011), Chandon et al. (1997), Brady and Cronin (2001), Winsted (1997, 2000)
Part 2 Social interactions with peers	▪ Research aim, objectives and questions ▪ Literature Walls (2013)

Part 3 Social interactions with outsiders	▪ Research aim，objectives and questions
	▪ Literature
	Auter and Palmgreen (2000), Novek et al. (2013)
Part 4 Social connectedness	▪ Research aim，objectives and questions
	▪ Literature
	Lee et al. (2001)
Part 5 Social well-being	▪ Research aim，objectives and questions
	▪ Literature
	Diener et al. (1985), Wann and Pierce (2005)

The choice of wording for each question was crucial to ensure valid responses to the questionnaire. Attention was paid to avoiding double-barreled, double negative and leading questions, proverbs, and terminology in designing the questionnaire.

Step two: visual presentation design

The structure and the layout of the questionnaire was determined in this step. A well-designed questionnaire will encourage the respondents to complete and return it. A brief introduction was provided at the start of the questionnaire to explain the purpose of the survey. The questions were in simple language without ambiguity, the use of technical or terminological language. An enlarged font size (Times New Roman size 16) was used for the questions and answer boxes were large enough for the respondents to write in. The demographic questions on the questionnaire were numbered from 1 to 5, followed by explanatory section headings from Part 1 to Part5. A Chinese version of the questionnaire was administered to the respondents.

Step three: pilot-testing and making revisions

A pilot test's primary goal is to confirm that participants comprehend the questionnaire's questions and consent to providing the data (Saunders et al., 2016). It helps the researcher to refine the questions which may contain uncertainties and measure the time required to complete the questionnaire. In addition, validity and reliability are also assessed at this stage.

Step four: delivery and collection of the questionnaires

Once the questionnaire was designed, pilot-tested, revised and the sample was selected, it proceeded to data collection. The population and sampling frame for this questionnaire were reviewed in this step as discussed in 4.6.2.1. Access to the sample was gained by contacting the managers of the chosen senior living facilities in Beijing, Shanghai and Shenyang. Participants for the questionnaire survey were volunteers recruited via posters in these facilities. Once the residents in these senior living facilities showed an interest in taking part, they were given a participant information sheet, and they could decide if they wished to participate. To take part, they could contact the person who gave them the participant information sheet. A face-to-face paper-based questionnaire was administered in this research. In addition, according to the findings of the studies conducted by Pedersen and Nielsen (2016), certain techniques can be used to maximize the response rate. Thus, a small souvenir (a pen) was given to the questionnaire survey participants as a token of the researcher's appreciation and thanks.

4.7.1.2 Pilot-testing

The process of pilot testing was thorough. During this phase, the experts were consulted, and a focus group discussion was conducted to provide feeback on the representativeness and suitability of the questionnaire's questions. Additionally, it entailed giving the questionnaire to a sample of respondents in order to assess how practical it was. The questionnaire was piloted among three groups of people. It was sent electronically to the researcher's supervisory team who were familiar with the research area. A focus group was conducted with six Chinese older adults in a fourth city (not one of the three cities which were due to feature in the main study), all of whom are over 60 years old and living independently, who have experience of living in commercial senior living facilities, have experience participating in social activities, and who have not been diagnosed with dementia or any mental health issues. Subsequently, a sample of 30 respondents who met the above-mentioned criteria was chosen

from a fourth city to pilot the questionnaire (details of specific revisions made during the pilot-testing are shown in Appendix 4.3).

4.7.2 Qualitative approach using focus groups

In this study, focus groups were selected as the most appropriate data collection method for the qualitative stage following the quantitative stage for the following reasons:

• Focus groups consider reality as being constructed socially and knowledge as an interactive product being co-constructed between individuals and the society (Stalmeijer et al., 2014). Thus, it fits most commonly in the constructivist paradigm. Additionally, focus groups involve participants' perceptions, feelings, actions, and interpretations. It fits a mixed method methodology which refers to how people value their experiences in the world.

• Focus groups are the most common qualitative methodology in mixed method research with sequential designs to clarify and further explore the findings once a survey has been conducted and analyzed (Harrison et al., 2015; Manwa and Manwa, 2014). In particular, focus groups are valuable in providing qualitative data alongside a quantitative survey in the hospitality and tourism industries (Brunt et al., 2017).

• According to Ayrton (2019), the exploration value of focus groups is demonstrated in the interactions arising from the group discussions, and the environment of focus groups is socially oriented (Krueger, 2014). As the interaction is a major construct for this research, focus groups offer a unique opportunity for the researcher to gain an indepth understanding of the results of the quantitative phase and reflect on aspects of the participants' daily lives.

• Focus groups enable the researcher to 'give a voice' to marginalized groups (Phillips, 2016), such as older adults, to express their perspectives of their needs. They are used as a basis for empowering participants. Furthermore, Chinese older customers' perspectives of their social well-being through social

interactions may differ from older customers in western countries. Thus, focus groups need to be used to better understand older Chinese customers' perceptions of their social well-being due to a dearth of comprehensive information concerning these perspectives.

• Focus groups can create a sense of belongingness which can lead to an enhanced sense of connectedness among participants (Stewart and Shamdasani, 2014). It can make participants more willing to share in group discussions, in particular, older participants.

In order to conduct successful focus groups, the following actions were taken to overcome the challenges discussed above.

a) Since the quantitative survey was carried out on a face-to-face basis, older customers who showed an interest in the topic were recruited during the quantitative stage for the focus groups. The researcher had already established a rapport with them so that they felt comfortable to open up in the focus group discussions.

b) In order to minimize the travel between locations, private rooms in cafés or activity rooms within commercial senior living facilities were prepared for the focus groups. This arrangement enabled the focus groups to take place in an environment close to participants' usual places of work or residence. It also helped to reduce the possible effect of raising participants' expectations or introducing strategic group bias (Harrison et al., 2015).

c) The researcher focused on skills and techniques at encouraging participation, creating a comfortable environment prior to the focus groups in order to guide the group discussion, such as good listening and communication skills, flexibility with regards to the flow of the discussion and having the ability to get involved and remain objective. A longer warm-up was needed to draw out the shy ones. Meanwhile, being familiar with participants' various backgrounds and

ensuring that participants felt confident in providing honest answers helped to draw people out.

Due to the features of focus groups discussed above, this research selected focus groups as the most appropriate data collection method for the qualitative stage.

4.7.2.1 Design of the focus group discussions

The focus groups were designed to explain and further explore the results from the quantitative stage. Several meetings and discussions were held with the supervisory team to analyze the quantitative results, reflect on the aims and objectives of the research and relate them to the literature. Multiple questions and probes were used to encourage the discussion and explore more issues. The table (Table 4.7) below demonstrates the development of the focus group questions. However, these questions were only used as general guidance.

Table 4.7 The development of the focus group questions and probes

Focus group questions (probes)	Areas for further explanation & exploration	Reflections on previous related literature
What did you like best about social activities in senior living facilities? (e.g., contents of the activities, space/opportunities to make friends, environment)	purpose of participating in commercial activities	▪ The importance of participating in social activities activities (3.2.2 Social activities as a service offering, p. 39) ▪ Hospitality may positively impact on consumers' well-being in unanticipated ways (Altinay et al., 2019). ▪ Previous studies discovered that some consumers seek social connections in commercial settings (3.2.1 Commercial senior living facilities-The intersection of hospitality and hospital, p33). ▪ Previous studies investigated the positive outcomes of participating in social activities in the health and psychological fields (3.2.2 Social activities as a service offering', p. 39).

What do you think about the interactions with employees from senior living facilities in relation to the social activities?	social interactions with employees have positive impacts on social well-being (the results from the quantitative research)	Previous studies have examined the positive effects of social interactions with medical professionals and employees on health and customer satisfaction (3.3.1 Social interactions with employees and social well-being: Hypothesis 1, p43)
What do you think about the interactions with peers during social activities?	social interactions with peers have positive impacts on social well-being (the results from the quantitative research)	Previous studies have investigated the positive effects of social interactions with peer patients and peer consumers on health, support, companionship and customer satisfaction (3.3.2 Social interactions with peers and social well-being: Hypothesis 2, p46)
What do you think about the interactions with outsiders during social activities? (e.g., beneficial outcomes of social activities through interactions with outsiders, types of social activities older customers want to participate in more with outsiders)	social interactions with outsiders have positive impacts on social well-being (the results from the quantitative research)	Previous studies have tested the positive effects of social interactions with people from wider communities which are outside of formal services (e.g., therapists, artists, volunteers) on health, social relationships, social support, self-confidence, esteem and social skills (3.3.3 Social interaction with outsiders and social well-being: Hypothesis 3, p48).
What do you think motivates older customers to engage in social activities? (e.g., learn new knowledge, feel included, be needed)	the moderating role of social connectedness (the results from the quantitative research)	Due to the negative impacts of loneliness, the importance of social connectedness, which fulfils the basic human need for companionship and contributes to better health and a greater sense of belongingness is recognized. The moderating role of social connectedness has been demonstrated in a number of previous studies ((3.3.4 Social connectedness as a moderator: Hypothesis 4, p50).
How are older customers informed about the availability of social activities in senior living facilities?	service design-communicative interactions between consumers and service providers	Transformative service research and service design: synergistic effects in healthcare (Anderson et al., 2018)
What problems did you see/feel about social activities in senior living facilities? (e.g., facilities, staff, design)	issues/problems in service design	Problems have been identified in transformative service research in healthcare, financial and social services (literature review,

		'transformative service research', P11)
What do you think can be improved? (e.g., activities/event availability/design, space/environment)	▪ areas can be improved to enhance the transformative outcomes of services for older consumers ▪ strategies businesses and governments can employ to contribute to transformative outcomes of services	▪ Transformative service research and service design: synergistic effects in healthcare (Anderson et al., 2018) ▪ Conceptualisation and aspirations of transformative service research (Rosenbaum et al., 2011) ▪ Transformative service research: an agenda for the future (Anderson et al., 2013) ▪ Transformative services and transformation design (Anderson et al., 2018)

Three focus groups were scheduled. Participants were selected and recruited during the quantitative stage. In addition, a focus group schedule (See Appendix 4.5) was also developed to help run the focus groups effectively. Each focus group discussion consisted of three parts: an introduction to the session, the questions and a closing section.

4.7.2.2 Pilot-testing the focus groups

Due to the scarcity of the research resources (time, finance etc.), the first focus group of the three focus groups planned for the qualitative stage was used as a pilot test. According to O'Cathain et al. (2015), it is not necessary to conduct a separate pilot study for qualitative research. They propose that the insights gained from previous focus groups can be used to improve focus group schedules and specific questions as the nature of qualitative data collection methods are usually progressive. Subsequently, modifications to the research design were carried out to achieve the benefits of a pilot study (Malmqvist et al., 2019):

• The first focus group was extended in length to ensure that the meanings of the questions were checked during the discussion session. The researcher was clear

with the participants that should they feel unsure about any questions they should ask the researcher for clarification or explanation.

• The focus group findings were used to make the researcher aware of any misinterpretation of the questions during the data analysis stage.

Thus, even though there was no specific pilot test, the analysis of the first focus group helped improve the later ones.

Meanwhile, the researcher discussed the design and the proposed focus group questions with a panel of experts in the field to ensure relevance and clarity; these included two supervisors and professionals working closely with older customers (details of specific revisions made during the pilot-testing are shown in Appendix 4.4).

4.7.2.3 Conducting the focus groups

Three focus groups were conducted, one in each city where the survey was administered. Each focus group comprised six participants: two older customers, two employees and two officers from either government departments or Ageing Development Foundations. A detailed profile of all the participants is provided in Table 4.8 below.

Table 4.8 Profiles of participants

Cities	Participants	Gender	Age	Length of staying/working in the facilities
Shenyang	Service provider *Zhang Wei*	M	30	5 years
	Service provider *Li Qiang*	M	35	3 years
	Older customer *Wang Fang*	F	80	1.5 years
	Older customer *Zhang Min*	F	79	1.5 years
	Government officer *Wang Lei*	M	45	---
	Government officer *Li Jun*	M	47	---
Shanghai	Service provider *Wang Xiu Ying*	F	46	8 years

	Service provider *Li Na*	F	45	10 years
	Older customer 3 *Liu Yang*	M	82	13 years
	Older customer 4 *Li Jie*	M	78	7 years
	Ageing development foundation officer *Li Jing*	F	39	11 years
	Government officer *Zhang Yong*	M	42	---
Beijing	Service provider *Zhang Li*	F	36	5 years
	Service provider *Wang Jing*	F	32	3 years
	Older customer *Li Min*	F	85	1.5 years
	Older customer *Wang Yan*	F	81	2 years
	Government officer *Wang Li*	F	36	---
	Government officer *Li Hong*	F	39	---

The focus groups were held in a private room in the café onsite at the commercial senior living facilities. It was quiet and well-lit, which was believed to be an appropriate location in which to conduct focus groups. It was a convenient and familiar place for all the participants. There was accessible parking and ease of access. The focus groups were scheduled during working hours for employees and officers and did not overlap with older customers' rest time after lunch. Specific care was taken since there were older participants involved. For example, some participants may have felt fatigued during the focus groups. Therefore, sufficient breaks were allocated as soon as any signs of fatigue emerged. Refreshments were provided and dietary requirements were dealt with. The participant information sheet (Appendix 4.5) and the consent form (Appendix 4.6) with the use of larger and clear type fonts were handed out prior to the start of the focus groups.

Although a focus group schedule was developed, participants were free to discuss any additional topics they viewed as relevant. The focus groups were moderated by the researcher and substantial opportunities were given to explore further topics/issues raised by participants. At the beginning of each focus group,

the researcher highlighted the focus group schedule which explained the study and assured the participants of the confidentiality of the discussion. All participants signed the consent forms and were given the chances to ask any questions. The focus groups started with an introduction from the participants themselves. Discussions lasted from one to two and half hours per group and were audio recorded.

4.8 Research Ethics

As the participants were older customers, potential risks were observed and managed. In addition to what was discussed in section 4.7.2, contact with standby medical personnel was available in case of any emergencies throughout the whole data collection period. Participation was solely on a voluntary basis with no coercion or any other adverse approaches. Thus, the participants were able to end their participation or withdraw any previously provided unprocessed data without explanation. This was emphasized in both the participant information sheet and the consent form with the use of larger and clear type fonts. Before participating, the participants were offered the opportunity to raise any negative or potential distressing ideas or experiences privately to the researcher.

4.9 Analysis methods

As stated above, this research followed the sequential mixed methods approach in which the analysis of the data took place in a sequential manner. The quantitative data analysis occurred before the qualitative data was collected. According to Onwuegbuzie and Teddlie (2003), the decision of how to conduct the data analysis is made based upon the following key points. Firstly, it depends on the purpose of the mixed method research. The purpose of the mixed-methods approach in this research is to explain and further explore, then both quantitative and qualitative data were used, and a sequential mixed data analysis is

appropriate. Secondly, building upon the types of data, both exploratory data analysis and regression analysis were needed. Lastly, the data analysis was conducted in a quantitative-qualitative order. The qualitative phase was built from the preceding phase. The results from each phase of the data analysis were then compared and integrated.

According to the decisions made above, both quantitative and qualitative data were collected in this research. Each of them was analyzed sequentially using different approaches. This is discussed in greater detail below.

4.9.1 Quantitative data analysis

SPSS (Statistical Package for the Social Sciences) and SmartPLS (Ringle et al., 2015) software were selected for the quantitative data analysis. Before the data was analyzed by Partial Least Squares Structural Equation Modelling (PLS-SEM), it was coded and processed into SPSS. The presentation of the results followed the order of the questions in the questionnaire. Missing data and perfunctory responses were controlled by data screening. Seven cases were deleted, and the rest of the missing data was replaced by approximated mean values. Outliers were checked by conducting descriptive statistics analysis, missing value analysis and box plots. Then, reliability and validity tests were conducted to establish the consistency and validity of the measurements. Finally, the theoretical model of the study was validated through PLS-SEM by using SmartPLS.

PLS-SEM is a causal-prescient way to deal with SEM that focuses on forecasting in assessing measurable models, whose designs are intended to give causal explanations (Sarstedt et al., 2017). It has been broadly employed in studies within the hospitality and tourism industries. According to Usakli and Kucukergin (2018), 19 SSCI-indexed hospitality and tourism journals have

published 206 studies using PLS-SEM between 2000 and 2017. They noted that the application of PLS-SEM demonstrated an increasing pattern during these 17 years, such as 32% (66 studies) before 2015 and 68% between 2015 and 2017 (472 studies) in hospitality and tourism research. They also concluded the most prevailing reasons for using PLS-SEM, including the aim of the research (predicting relationships between constructs and developing theories), the existence of formative constructs, small sample sizes, and non-normality of the data.

Partial Least Squares Structural Equation Modelling (PLS-SEM) was adopted to analyze the data in this research for the following reasons. First, the aim of this research is to examine the relationship between social interaction and social well-being as well as analyzing the moderation role of social connectedness. Second, the sample for this study is relatively small. Finally, PLS-SEM can be used when distribution of the data might be a concern. Therefore, SEM is viewed as appropriate for this research as the research was enabled to assess total causal relationships simultaneously (Lowry and Gaskin, 2014).

There are two steps involved in the assessment of PLS-SEM: assessment of the measurement model and the evaluation of the structural model (Ali et al., 2018; Hair et al., 2017; Sarstedt et al., 2017).

4.9.1.1 Measurement model assessment

Evaluating the reliability and validity of constructs are two major parts in the assessment of the measurement model. Reliability tests evaluate the ability of a scale to consistently measure the construct being examined. The reliability of this research has been assessed by Cronbach's alpha (α) and composite reliability (CR). In the literature, Cronbach's alpha (α) is the most popular and widely used method to assess reliability (Trizano-Hermosilla and Alvarado,

2016). It is used to test the extent to which all the items measure the same variable or construct, referred to as internal consistency (Bujang et al., 2018). Moreover, it is also viewed as the most appropriate measure when Likert scales are used (Sharma, 2016). It is recommended that a α score of 0.70 or higher is considered satisfactory (Hair et al., 2015).

However, it is argued that Cronbach's alpha can lead to a downward bias if the measures are not tau equivalent (Edwards et al., 2021). Thus, composite reliability (CR) was also used to assess the reliability of the constructs. It is suggested that each item should have factor loadings equal to or greater than 0.5 and the composite reliability (CR) should be equal to or greater than 0.7 (Shrestha, 2021). Despite the above statistical methods, other non-statistical procedures were undertaken to ensure reliability, which included the use of multi-item measures, the employment of items from prior studies (Robinson, 2018) and the conduct of pre-testing procedures to minimize the source of unreliability by clarifying ambiguous and misleading words (Boateng et al., 2018).

Although reliability is an essential condition for measuring validity, validity has received more attention than reliability from researchers in quantitative research (Ahmed and Ishtiaq, 2021). Face validity refers to the extent to which an instrument appears to be related to what it is supposed to measure (Taherdoost, 2016b). The evaluation of face validity is given by the subjective assessment of the researcher in terms of feasibility, readability, style consistency and formatting, as well as the use of clear language. Content validity is a subjective evaluation by a set of reviewers who have some knowledge of the subject under study on the appropriateness of items or scales (Taherdoost, 2016b). According to Taherdoost (2016b), content validity is examined by literature reviews and experts of a particular research topic. Therefore, the questionnaire was first constructed by reviewing the previous literature on similar concepts by using

existing questions to ensure validity. Then, the questionnaire was reviewed by two academic supervisors who are experts in the field.

Despite the two types of validity discussed above, convergent validity was verified through Average Variance Extracted (AVE). It is suggested that a satisfactory value of convergent validity is 0.5 or greater. The discriminant validity was established by means of Fornell-Larcker criterion (Fornell and Lacker, 1981). A satisfactory value of discriminant validity is indicated by the fact that the variance extracted between components is higher than the component correlation coefficient squared. In addition, Heterotrait-monotrait (HTMT), proposed as an additional criterion providing superior performance (Henseler et al., 2015), was used to test discriminant validity. Henseler et al. (2015) suggest a threshold value of 0.90 or 0.85 when constructs are more conceptually distinct.

4.9.1.2 Structural model assessment

Prior to evaluating the structural model, it is necessary to examine the collinearity issues. If there are serious levels of collinearity among the indicator constructs in the estimation, the path coefficients might be biased. Consequently, the significance of the path coefficients, the level of the coefficient of determination value (R^2), and the predictive relevance of cross-validated redundancy value (Q^2) were assessed. Evaluation of the hypothesized relationships among the constructs presented in the structural model can be accomplished by running the PLS-SEM algorithm. The path coefficients (β)' standardised values are between -1 and +1 (e.g., -1 represents strong negative associations and vice versa for positive values). The relationships are weaker when the estimate coefficients are closer to 0 (Hair et al., 2017).

The coefficient of determination value (R^2) is the most commonly used measure to examine the structural model (Ali et al., 2018). The range of the R^2 values are from 0 to 1. The higher the value, the more accurate are the predictions. It is suggested that values of 0.75 can be considered as significant, 0.50 can be considered as moderate and 0.25 can be considered as weak.

Despite the fact that R^2 values can suggest a model's in-sample prediction, it cannot achieve the out-of-sample predictive evaluation (Shmueli et al., 2016). To fill this gap, Stone-Geisser recommended Q^2 value as a means of examining the out-of-sample predictive performance (Ali et al., 2018). Each construct's cross-validated redundancy value (Q^2) can be obtained through the application of blindfolding. According to Sarstedt et al. (2017), a Q^2 value greater than 0 is acceptable for a specific endogenous construct.

Goodness of fit is measured as it validates the performance of both the measurement and the structural models (Jaros et al., 2017). Previous studies have shown the application of goodness of fit in PLS-SEM research (e.g., Henseler et al., 2016; Henseler et al., 2017). Lohmöller (1989) suggested SRMR to be used in PLS-SEM to detect model misspecification. Hair et al. (2017) propose that a value of SRMR less than 0.08 is considered a good fit.

To test the moderation effect, the latent variable scores of the exogenous latent variable and the moderator variable were multiplied to produce a single-item measure known as the interaction term (Hair et al., 2017). Moderation was achieved when significance was presented in the interaction effect (Hair et al., 2021). Slope plots were also used to provide a better understanding of the moderation effect with a visual illustration.

4.9.2 Qualitative data analysis

The quantitative data were analyzed to examine the relationship between social interactions and social well-being as well as the moderation effect of social connectedness. However, this was insufficient to explore the research questions adequately and obtain a deep and insightful understanding of the relationships and effect mentioned above. Qualitative data can complement the quantitative data to provide a comprehensive statement of older adults and this can enable the researcher to answer all the research questions, which cannot be accomplished by the quantitative approach alone.

A thematic analysis approach was used to analyze the qualitative data which emerged from the focus groups. Thematic analysis is a typical process within qualitative analysis. It is commonly used to analyze classifications and identify themes or patterns relevant to the data (Maguire and Delahunt, 2017). According to Roberts et al. (2019), thematic analysis assists in connecting quantitative and qualitative approaches, which is appropriate for the qualitative data analysis in this research.

There are two main possibilities for coding in thematic analysis: inductive and deductive (Terry et al., 2017). Inductive coding involves a 'bottom up' data-led analysis, from which meanings are identified and themes are developed; whereas deductive coding refers to a 'top down' approach based on existing theoretical concepts or theory-led analysis from which data is clustered to develop themes (Terry et al., 2017). This research applied deductive thematic analysis to cluster data in order to explain and further explore the quantitative results.

Previous scholars have outlined some advantages of thematic analysis (e.g., Javadi and Zarea, 2016; Terry et al., 2017): i) It is a simple and accessible method for researchers who are not experienced with qualitative research; ii) It

is a flexible method which enables the researcher to use various types of information systematically to obtain an accurate understanding and interpretation; iii) It is a useful method to extract key factors from a large body of data and provide an accurate, in-depth description of the data set; iv) It can produce unexpected insights; v) It can assist in informing and developing policies.

Although there are numerous advantages of thematic analysis, the researcher had to face a few challenges. One of the challenges of using thematic analysis is how to control the data analysis and decide the focus with a wide and broad data set. It is argued that the amount of the data analysis and the focus depend on the researcher's purpose when selecting the theory or framework (Graneheim et al., 2017). In this study, the purpose of the researcher was to validate and conceptually supplement a theoretical framework. The data analysis from the inductive thematic analysis could be an important contribution. Meanwhile, the data which does not fit the theoretical framework can be used as a direction for future studies. Another challenge is the potential bias from the researcher during data collection, analysis and interpretation (Yi et al., 2020). It has been suggested that the participants in the research can check the findings to ensure it is true to the reality (Birt et al., 2016).

4.9.2.1 Reliability and validity

Trustworthiness, which indicates the reliability of the method used in the analysis process and the validity of the research results, is viewed as a challenge using qualitative analysis. Various ways of judging trustworthiness at different stages of the research process include credibility, dependability, confirmability, transferability and authenticity (Lincoln and Guba, 1985) (see Table 4.9).

Credibility concerns confidence in the data addressing the intended focus (Polit and Beck, 2012). To achieve credibility, as discussed earlier, focus groups were selected as the most appropriate data collection method for this research; purposive sampling was applied to select participants who have the best knowledge of the phenomenon under study and are able to talk about it; and a sufficient number of participants were determined to ensure enough data would be collected to cover major constructs. Dependability refers to the stability of the data regardless of the time and the setting. To achieve dependability, the principles and the criteria used to select the focus group participants were stated clearly. This also enhanced the assessment of the results' transferability to other settings. Confirmability deals with objectivity which indicates the congruity of the accuracy, relevance or interpretation of the data between two or more independent individuals. It was achieved through member checks, as discussed earlier, which could reduce the bias of the researcher and ensure the research findings accurately represent participants' true experiences. The degree to which the results can be applied to different populations or contexts is referred to as transferability (Polit and Beck, 2012). A clear description of the research context, the selection of participants and their characteristics, and culture was provided in order to enhance the transferability.

Lastly, authenticity refers to the extent to which the data reflects reality (Lincoln and Guba, 1985; Polit and Beck, 2012). It was enhanced by demonstrating how/where categories were derived or formulated from the data through the use of authentic citations.

Table 4.9 Summary of how to improve the trustworthiness of this research

Trustworthiness	Content	The research process stage	Actions
Credibility	Confidence in the data	Sampling	Purposive sampling was employed. Participants representing the phenomenon being studied and who are able to discuss it were recruited.

			Appropriate sample size was applied.
		Reporting the results	▪Categories covered the data well ▪ Used representative citations or core stories
Dependability	Stability of the data	Sampling	The principles and criteria used to select participants were clearly stated
Confirmability	Objectivity	Data analysis	Member checks
Transferability	The extent to which the findings can be transferred to other contexts or groups	Reporting the results	▪ Provided a clear description of context, selection and characteristics of participants, and culture
Authenticity	The connection between data and results	Reporting the results	▪Authentic quotations were used to illustrate that the researcher interpreted the information provided by participants correctly. ▪Prioritized the voice of participants

Adapted from Lincoln and Guba (1985) and Elo et al. (2014)

4.9.2.2 Stages of thematic analysis

The thematic analysis was a more systematic approach to analyzing the data at the qualitative phase. It used the analytical process derived from Braun and Clarke (2006), which includes data familiarisation, initial codes generation, theme search, theme review, theme defining and naming, and writing up the findings. These stages are not linear. Thus, the research can move back and forth between different stages:

Stage 1: Data familiarisation

This stage involves listening, reading, and re-reading all the data. The researcher used digital tape to record the focus group discussions and transcribed each focus group by hand, which was typed out using Microsoft Word. The researcher inserted initial comments of interpretations into the margins. Also, the researcher organized segments of similar texts in the data based on the literature review, applied framework and key concepts in this research.

Stage 2: Initial codes generation

Having obtained a sense of the overall data set, the researcher started to create meaningful codes from the theories and key concepts applied in this research. In the case of older customers' participation in social activities in commercial senior living facilities, the codes were developed from social interactions, social aspects of older customers' needs, and their relationships. Once the researcher determined the key concepts and their relationships, potential codes and descriptions were produced. For example, social well-being was a key concept in this research. The initial codes were generated by working through every segment of text relevant to this key concept in the data. Boyatzis' (1998) guidelines were followed to write the codes. Table 4.10 demonstrates a sample of initial codes, descriptions, and examples.

Table 4.10 Sample of initial codes, descriptions, and examples

Initial code	Description	Example
Establish close relationships with others	Mention of size, composition, and intensity of the relationship of older customers in commercial senior living facilities with employees, fellow residents, and outsiders	'Regardless of the money we paid, the love given by the staff here cannot be bought by money…Some of the staff would come to keep us entertained even on their days off.'
Able to experience the exchange for support	A combination of emotional and practical supportive resources received from others	'The life assistant or I sometimes stay to accompany her...She can't walk properly…It was the resident who lives on the floor above her who gave her a lot of support... All the group members care for her.'
capability of self-evaluation	Older adults are able to evaluate their value, confidence, and importance within a social group.	'I respect them. When you respect others, you respect yourself. Self-esteem results from respecting others.'

While the researcher worked on developing new codes, modifications were also made to existing ones during the coding process. Table 4.11 displays a sample of the modification of codes, descriptions, and examples.

Table 4.11 Sample of the modification of initial codes, descriptions, and examples

Final code	Initial code	Description	Example
Relationship	Establish close relationships with others	Mention of size, composition, and intensity of the relationship of older customers in commercial senior living facilities with employees, fellow residents, and outsiders	'Regardless of the money we paid, the love given by the staff here cannot be bought by money…Some of the staff would come to keep us entertained even on their days off.'
Social support	Able to experience the exchange for support	A combination of emotional and practical supportive resources received from others	'The life assistant or I sometimes stay to accompany her...She can't walk properly…It was the resident who lives on the floor above her gave her a lot of support... All the group members care for her.'
Self-esteem	capability of self-evaluation	Older adults are able to evaluate their value, confidence, and importance within a social group.	'I respect them. When you respect others, you respect yourself. Self-esteem results from respecting others.'

Stage 3: Theme search

Having established a good understanding of the data through familiarization and initial code generation, the researcher was well set up to construct themes. This involves examining codes and associated data and clustering them into meaningful patterns (Terry et al., 2017). For example, the researcher collated codes that related to the outcomes of social interactions into an initial theme called the benefits of social interactions. Table 4.12 displays a sample of identified preliminary themes along with the associated codes.

Table 4.12 Sample of classification of identified preliminary themes

Theme: The context of older customers' participating in social activities Codes	Theme: Benefits of social interactions Codes	Theme: Socially supportive resources Codes	Theme: Integration of socially supportive resources from various actors Codes
Change of life focus	Safe physical setting	Physical spaces	Resources combined between service providers and older customers
Retirement and health	Ensured personal safety	Material	
Interests and hobbies		Economic (Cash, credit)	
		Social support	

Desire to learn Make friends Fulfil dreams from youth	Establish close relationships with others Able to experience the exchange for support Capability of self-evaluation Eradicate negative experience of being excluded Feel useful to others and productive to the living environment Individual value can be recognized Receive a sense of pride, pleasure, and joy Able to use modern technology to be connected Follow current issues	Work-related knowledge Work-related skills Technology Care Love Experiences Skills Knowledge Commitment Physical and mental health Self-esteem Emotions Information	Resources combined between older customers and fellow residents Resources combined between older customers and outsiders

The researcher grouped all relevant codes into potential broader themes. Codes were organized into predominantly descriptive themes at this stage.

Stage 4: Theme review

The preliminary themes identified in stage 3 were reviewed and modified during this stage. This stage involved two steps. The first step was to gather data relevant to each theme and examine if they displayed consistent patterns. The researcher examined the data and codes again to check if they support associated themes. Several themes were dropped due to insufficient data to support them. Some themes were developed into one or separated into different themes. Themes needed to be clear and distinct from each other. For example, the theme *Benefits of social interactions* did not seem to be distinct enough to reflect all

relevant codes. Thus, it was modified into *Social well-being as the outcome of social interactions*. The second step was to check individual themes in relation to the entire data set. Themes were cross checked to make sure they worked for all the focus groups and not only in a single focus group discussion. A sample of modifications of themes is illustrated in Table 4.13.

Table 4.13 Sample of modification of identified preliminary themes

Theme: Motivations of older customers to participate in social activities Codes	Theme: Social well-being as the outcome of social interactions Codes	Theme: Socially supportive resources exchange Codes	Theme: Resource integration during social interactions Codes
Pursue a colourful life		**Subtheme: Service providers' resources**	Resource integration between service providers and older customers during social interactions
Maintain good physical and mental health	**Subtheme: The need for security** Physical setting security	Physical spaces	
Resume interests/hobbies	Personal safety	Material	
Learn new knowledge	**Subtheme: The need for affection** Relationship	Economic (Cash, credit)	Resource integration between older customers and peers during social interactions
Make friends	Social support	Social support	
Make up for regrets	Self-esteem	Work-related knowledge	
	Subtheme: The need for behavioural confirmation A sense of belonging to a group/society	Work-related skills	Resource integration between outsiders and older customers during social interactions
	A sense of value	Technology	
	Subtheme: The need for status Recognition	Care	
	A sense of achievement	Love	
	Subtheme: The need for connectedness to a society Technology	**Subtheme: Older customers' resources** Economic (income, pension, state benefit)	
	Keep up to date	Material (purchased, gifted goods, possessions)	
		Social support	
		Experiences	
		Skills	
		Knowledge	
		Commitment	
		Physical and mental health	

		Self-esteem	
		Emotions	
		Technology	
		Care	
		Love	
		Subtheme: Outsiders' resources Material (gifted, donated goods)	
		Social support	
		Knowledge	
		Skills	
		Information	

Stage 5: Theme defining and naming

This stage involved determining and further refining the essence of what each theme captures. In this stage, the researcher needed to ensure i) that the 'story' each theme tells fitted into the 'story' of the data overall; ii) that the relationships between the themes were carefully examined; iii) that the overlapping contents were thoroughly handled. Furthermore, subthemes illustrated in a hierarchical manner were refined, which enabled a clear structure to be given to large and obscure themes. Figure 4.3 demonstrates the final refinement of the thematic map of the focus group discussions.
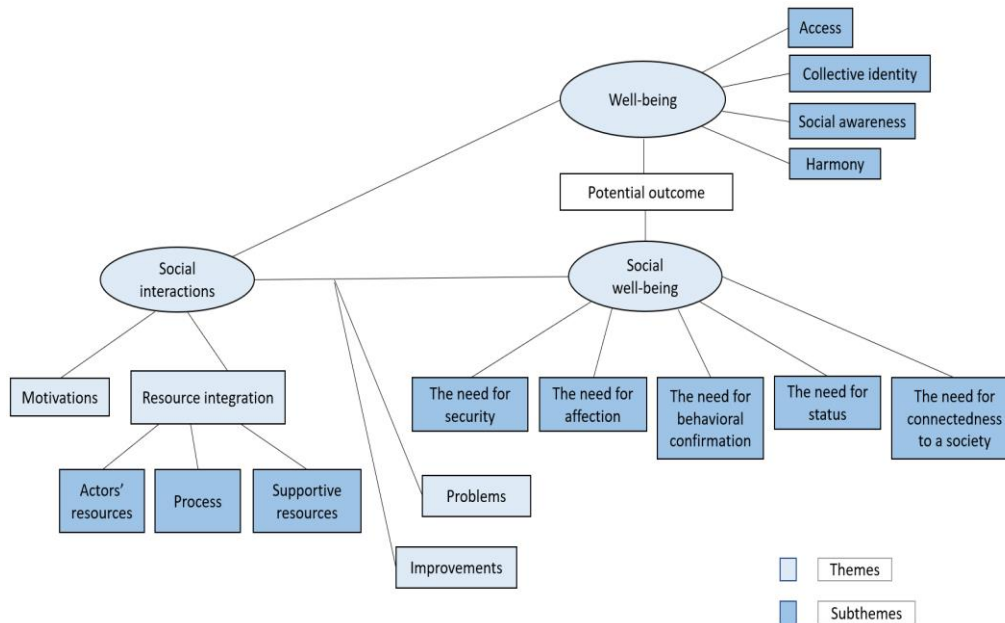
Figure 4.3 Final thematic map of the focus group discussions

Stage 6: Writing up the findings

With the help of notes, codes, theme definitions and a wide range of previous writings during the qualitative analysis stage, the researcher was able to focus and refine the findings and make connections with the literature. Sufficient evidence was provided within the data to construct identified themes. Particular examples were chosen to demonstrate the nature of the finding with clarity. Thereafter, the researcher produced a concise, coherent, and logical account of the analysis story of the overall research (Braun et al., 2016).

4.10 Integration of the quantitative and qualitative findings for interpretation and discussion

In this research, the researcher and the research subjects who are older customers in commercial senior living facilities are different to a certain degree, as the research subjects belong to a different generation with a specific social background. The researcher does not have sufficient knowledge of the everyday life of older customers under investigation due to not being a member of the

target group. As a result, this may have caused problems in formulating hypotheses about older customers' preferences and their expectations related to being customers in an emerging concept of commercial senior living facilities. Kelle (2015) points out that this is the exact reason why a quantitative phase should be followed by a qualitative one in mixed methods research. The qualitative phase enables the researcher to acquire knowledge which was not available initially. In particular, it constructs an empirical foundation between eminently hypothetical concepts and empirical data (Kelle, 2015).

The two phases (quantitative and qualitative) of this research are connected as the decisions made during the second phase (qualitative) were influenced by the results of the first phase (quantitative). Firstly, the qualitative sampling was informed and supported by the quantitative findings (Kelle, 2015). The quantitative findings capture the impact of various social interactions on social well-being in social activities by describing the distribution of predetermined phenomena among older customers. This enabled the researcher to determine the essential requirements for the qualitative sampling and ensured that the qualitative research captured the heterogeneity of the research with its small samples.

Secondly, the interactive nature of these two phases enabled the researcher to determine the protocol for the focus group discussions (Dominiek et al., 2021). Thirdly, the researcher could decide the questions for the focus group discussions based on the outcomes from the quantitative phase, which contributed to the explanation and further exploration of the theories being examined (e.g., transformative service research). However, the questions might have changed based on the results of the quantitative phase. Fourthly, the quantitative part of this research can help generalize and transfer the qualitative findings.

Four hypotheses were tested in the quantitative phase as influencing the social well-being of older customers in commercial senior living facilities in China. However, the validity and quality of the survey data may be threatened by the deceit or elision of the respondents. According to Komarek and Schroer (2013), it may be difficult to capture individuals' true experiences and intentions due to their reluctance to reveal this information. Thus, individuals may try to hide their motives or intentions. In addition, given that older adults may be more vulnerable and sensitive, they are likely to hide their real feelings to cope with their frailty and protect themselves (Sarvimäki and Stenbock-Hult, 2016), such as in relation to their independence. Kelle (2006) advocates that qualitative methods are suitable for persuading respondents to disclose private information. Therefore, the results of the focus group discussions were combined to bring out initially hidden information from respondents. The employment of qualitative methods contributed to the divergence of this research. Furthermore, valuable contradictory information may be produced about the justification of the survey data (Kelle, 2006).

Subsequently, the joint results were analyzed in relation to the previous literature on social well-being. The benefits of mixing quantitative and qualitative phases as well as their theoretical and practical implications for social well-being literature was the primary contribution of this study. The joint findings will be further discussed in the findings and discussion chapter.

4.11 Limitations of the Methodology

Different research studies are confronted with different constraints in terms of research design and methodology. It is essential to outline the limitations within this research.

• Administrative bureaucracy posed an issue in this research, as the researcher had to wait for a month and a half to obtain full approval from the Ethics

Committee of the university (see Appendix 4.8) as well as approval from the managers of the commercial senior living facilities to conduct the research.

• Several participants were unwilling to participate in the questionnaire survey due to their busy schedule or a lack of information, e.g., some missing answers to the questions on the questionnaire. As a result, seven questionnaires had to be removed because of the missing data.

• The time for the focus groups was limited. The participants had a daily schedule for different activities, such as meals and nap time etc.; meanwhile, the employees in charge of social activities in commercial senior living facilities and officers from local communities had various duties to attend to. Thus, some issues were not raised, such as the technology interventions which facilitate social interaction among older customers as many of them mentioned using WeChat as a platform to interact with each other. More details about their experiences could have been obtained.

• Some of the participants in the focus groups always agreed with the opinions of others. This might indicate the participants were too shy to express themselves or too easily influenced by others.

• Due to the time and financial restraints of this PhD research, the researcher was only able to collect detailed data from five-star commercial senior living facilities. Commercial senior living facilities with other star rankings were excluded from this research.

• Finally, it is very beneficial to apply a mixed method approaches to understanding the phenomenon under study. However, it was very time consuming, and it required a lot of effort in data collection and analysis due to its sequential explanatory nature.

4.12 Summary

Based on the research aim and research questions, positivism and constructivism were adopted in this research. Combining these two research philosophies can provide a comprehensive and divergent understanding of the phenomenon under investigation. It can also avoid compromising conflicting opinions arising from individuals or groups.

These two research philosophies determined the study methods, which employed deductive and inductive approaches. The researcher used the deductive approach to assess the influence of social interactions on social well-being and provide a mathematic explanation of the impact. Additionally, the inductive approach enabled the researcher to explain and further explore the findings using the deductive approach by analyzing the experiences of respondents. As a result, a sequential explanatory mixed methods design was applied.

The first phase involved quantitative data collected via survey questionnaire, where the relationships between social interactions and social well-being as well as the role of social connectedness were evaluated. This phase also identified the areas requiring further explanation and exploration. The second phase involved qualitative data collected from focus group discussions, where the reasons and intentions underlying the quantitative results were explained and explored through the diverse opinions and interactive reactions of the participants. The integration of the quantitative and qualitative data took place during the analysis and discussion stages.

Since this research adopted a sequential explanatory design and each phase had a specific aim to fulfill, different sampling techniques and sampling sizes were

chosen for each phase. For the quantitative phase, 300 face-to-face questionnaires were administered among older adults aged 60+, who were independent in their daily living activities and experienced in social activities randomly selected through a convenience and snowball sampling method. For the qualitative phase, three focus groups were conducted. Maximal variation sampling of the purposive sampling was employed to select participants from each actor category involved in this research. As a result, two older customers living in commercial senior living facilities, two employees and two officials from the local community/ ageing development foundation who represented each type of interaction were intentionally chosen for each focus group.

Prior to the data collection for the quantitative phase, the ethical issues surrounding interviewing older participants were addressed, including possible misunderstandings; researcher's contact means; the instructions, layouts and fonts used in the questionnaire; the potential fatigue of the participants due to their age; the location to use for the interviews; medical assistance issues; and gaining participants' consent. The questionnaire was designed following the four steps proposed by Saunders et al. (2015). The questionnaire was carefully designed with a clear layout and structure by adopting items and scales from previous studies. Thirty pilot questionnaires were distributed, and revisions were made (Appendix 4.3). Posters were used to recruit voluntary participants and a face-to-face paper questionnaire was conducted in Chinese.

Meanwhile, prior to the data collection for the qualitative phase, actions taken to overcome the challenges posed by focus groups were discussed. For the qualitative data collection, multiple questions and probes were developed based on the areas identified for further explanation and exploration from the quantitative phase. Although it was not necessary to conduct a separate pilot study for the qualitative research (O'Cathain et al., 2015), feedback from the first focus group was used to make revisions for the other focus groups. A private

room in the café onsite at commercial senior living facilities was chosen as the venue for the focus groups.

Upon the completion of the survey, the quantitative data was analyzed using SPSS and SmartPLS. The data was first coded and processed by SPSS, where data screening was carried out. Then, Partial Least Squares Structural Equation Modelling (PLS-SEM) was applied to test the theoretical model using SmartPLS, where the reliability and validity of the results were established and the measurement and structural models were assessed. The qualitative data was analyzed once the focus group discussions were completed. A deductive thematic analysis was employed to cluster the data in order to explain and further explore the results from the quantitative phase. The issue of trustworthiness in relation to qualitative data was discussed as it relates to the reliability and validity of the research. Five procedures from Braun and Clarke (2006) were followed for the thematic analysis.

The results of the quantitative and qualitative phases were integrated for interpretation and discussion, which was necessary and advantageous for this research for the following reasons. First, the qualitative phase supplemented the missing knowledge which may have been caused by the generation gap and differences in lived experience between the researcher and the older customers. Moreover, the quantitative findings informed the essential requirements for the qualitative sampling. Second, the quantitative phase informed the protocol for the focus group discussions. Third, the questions for the focus group discussions were determined by the results of the quantitative phase. Fourth, the quantitative phase contributed to the generalization and transferability of the qualitative findings. The qualitative phase was able to bring out hidden information from the respondents. Last, the joint results of both phases are the primary contribution of this research which has theoretical and practical implications for the literature on social well-being.

Subsequently, the limitations of the methodology used in this research were discussed, including bureaucratic administrative issues, the unwillingness of some participants to commit to the study, the limited time available for the focus groups, some participants following the majority view in the focus groups, the time and financial constraints of PhD study, and the time-consuming nature of conducting a mixed methods research study.

The findings and discussions of both the quantitative and qualitative phases are presented in the next chapter.

Chapter Five

Findings and Discussion

5.1 Chapter overview

The content of this chapter is divided into five sections. The first section presents an assessment of the conceptual model. It commences by examining the results of the evaluation of the measurement and structural models. The remaining sections present the results of each hypothesis testing from the quantitative phase and explanation provided by the qualitative phase. Each of the remaining sections presents a discussion of both the quantitative and qualitative findings in detail and relates them to the extant literature. The chapter then concludes with a summary of the key outcomes of the study.

5.2 Evaluation of the conceptual model

This section of the chapter focuses on empirically examining the model developed in Chapter 3 (see Figure 3.1, page 43) to measure the impact of social interactions with employees, peers, and outsiders on older customers' social well-being as well as the moderation role of social connectedness. There are two steps in examining results by applying the PLS-SEM (Hair et al., 2019): assessing the measurement model followed by analysis of the structural model; these are discussed below.

5.2.1 Measurement model assessment

The measurement model represents the link between the indicators and the latent variables, therefore examining the measurement model is the first step in analyzing the PLS-SEM results of this study. According to Hair et al. (2017),

researchers can only proceed to assessing the structural models when all the required criteria are met in the measurement models. The assessment of the measurement model includes the indicator loadings, internal consistency reliability, convergent validity and discriminant validity proposed by Hair et al. (2019).

An indicator loading concerns the extent to which it contributes to its associated construct (Hair et al., 2017). It is necessary to observe the indicator loading first before evaluating the reliability and validity. This enables the researcher to eliminate any unacceptable indicator and ensure each construct with an expected dimension is in the final measurement model. Hair et al (2019) suggest that loadings above 0.708 are recommended. This cut-off indicates an acceptable item reliability as 50 percent of the indicator's variance can be explained by the construct. Table 5.1 shows the factor loadings of the measurement model indicating it is suitable for further analysis.

Table 5.1 Initial measurement model factor loadings

Variables	Indicators	loadings
Social Connectedness	I feel connected with the world around me	0.828
	I feel that I really belong to the people I know	0.842
	I don't feel too distant from people	0.846
	I have a certain sense of togetherness with my peers	0.848
	I feel related to people	0.857
	I don't catch myself losing all sense of connectedness with society	0.830
	There is a certain sense of brother/sisterhood among my friends	0.819
	I feel that I participate with people or some groups	0.794
Interactions with Employees	The employees offered help	0.786
	The employees understood my needs	0.776
	The employees were knowledgeable	0.736
	The employees anticipated my needs	0.791
	The employees showed patience	0.820

	The employees were helpful	0.858
	The employees smiled at me	0.830
	The employees were polite	0.813
	The employees were relaxing to interact with	0.804
	The employees showed passion for their job	0.832
	The employees were cheerful	0.827
Interactions with Outsiders	Interactions with outsiders developed my self-confidence and social skills	0.872
	While interacting with outsiders, I felt included in the group	0.786
	Interacting with outsiders provides me with information	0.822
	I enjoy spending time with outsiders and my friends at the same time	0.888
	Fellow residents display proper behavior toward other peers	0.862
Interactions with Peers	Fellow residents value the privacy of other peers	0.798
	Fellow residents respect other peers by being peaceful	0.831
	Fellow residents are of an appropriate socio-economic level mix	0.812
	In most ways, my social life is close to my ideal	0.884
	The condition of my social life is excellent	0.916
Social well-being	I am satisfied with my social life	0.913
	So far, I have got the important things I want in my social life	0.900

The table above shows that all the loadings of indicators are within the acceptable range. This indicates that the measurement model is suitable for the next step in the analysis.

The characteristics of the data were then examined by SPSS. Given that various statistical methods are based on one basic assumption that the sample data from the population being studied is normally distributed, it is important to check and test the normality of the data (Kwak and Park, 2019). It is proposed that kurtosis and skewness are not only the most important indicators of the effect of non-normality on inferences in data analysis (Scheffé, 1959), but also a direct means to achieve normality (Cain et al., 2017). Thus, this research applied the statistical

methods of skewness and kurtosis to check the normality. It is suggested that absolute skewness values greater than 3 and kurtosis greater than 10 may indicate a problem (Kline, 2011). Fortunately, the absolute values of skewness and kurtosis in this study are within the acceptable range of <3 and <10 respectively. In Table 5.2. the results indicate that normality of the data points has been achieved. As a result, the data is normally distributed within the range.

Tables 5.2 Description analysis of constructs

Variables	N	Mean	SD	kurtosis	skewness
SIE	267	5.221	1.255	-1.084	0.532
SIP	267	5.094	1.143	-1.106	0.951
SIO	267	5.057	1.209	-0.963	0.765
SC	267	5.233	1.297	-1.400	1.685
SWB	267	5.157	1.385	-1.046	-0.040

The next step is assessing internal consistency reliability. There are two common measures used to test internal consistency reliability: Jöreskog's (1971) composite reliability and Cronbach's alpha. It is advocated that the true reliability of constructs is generally considered when the values of composite reliability and Cronbach's alpha avoid being too liberal or too conservative (Hair et al., 2019). It is proposed that the measurement used to measure a factor is fairly reliable when composite reliability is 0.60 or higher (Hair et al., 2019) and Cronbach's alpha is 0.70 or higher (Hair et al., 2017). Table 5.3 displays the results of the internal consistency reliability tests. The lowest composite reliability and Cronbach's alpha were 0.896 and 0.845 respectively for interaction with peers. The indices of both composite reliability and Cronbach's alpha were above 0.70 which indicated that all the constructs were internally consistent and reliable.

Table 5.3 Measurement model reliability result

Variables	N of items	Cronbach's Alpha	Composite Reliability

Interactions with Employees	11	0.946	0.954
Interactions with Peers	4	0.845	0.896
Interactions with Outsiders	4	0.864	0.907
Social Connectedness	8	0.937	0.948
Social well-being	4	0.925	0.947

Subsequently, the convergent validity of each construct measure was addressed. Convergent validity is the extent to which similar constructs are correlated (Chin and Yao, 2014). It was verified through Average Variance Extracted (AVE). Hair et al. (2017) suggest an acceptable AVE value for each factor is 0.50 or greater. Table 5.4 illustrates the AVE scores of the measurement model. The lowest AVE value was 0.652 for interaction with employees.

Table 5.4 AVE scores from the measurement model

Variables	N of items	Average Variance Extracted (AVE)
Interactions with Employees	11	0.652
Interactions with Peers	4	0.683
Interactions with Outsiders	4	0.710
Social Connectedness	8	0.694
Social well-being	4	0.816

Lastly, the discriminant validity of each construct was assessed. Discriminant validity refers to the extent to which constructs are not related to each other (Matthes and Ball, 2019). Cross-loading of indicators, Fornell & Larcker criterion and Heterotrait-monotrait (HTMT) ratio of correlation are common approaches to evaluating discriminant validity suggested by previous studies (e.g., Ab Hamid et al., 2017; Henseler et al., 2015; Rasoolimanesh et al., 2017).

Cross-loading can be obtained by comparing each of the latent variable scores with their corresponding items and other items in the model (Chin, 1998). Table

5.5 illustrates the results of the cross-loading analysis and the loadings marked bold represent the loadings on their corresponding constructs. This shows that the outer loadings of indicators on the assigned constructs are greater than the loadings of the item on other constructs. The lowest cross-loading is 0.736 which is higher than the suggested cut-off value of 0.70 (Hair et al., 2014). Thus, discriminant validity has been achieved.

Table 5.5 PLS Cross-Loadings for Discriminant Validity

Items	SIP	SIE	SIO	SC	SWB
SC_1	0.152	0.074	0.072	**0.828**	0.309
SC_2	0.195	0.102	0.137	**0.842**	0.327
SC_3	0.187	0.116	0.149	**0.846**	0.326
SC_4	0.238	0.133	0.160	**0.848**	0.361
SC_5	0.205	0.125	0.147	**0.857**	0.350
SC_6	0.203	0.124	0.093	**0.830**	0.342
SC_7	0.143	0.152	0.147	**0.819**	0.313
SC_8	0.133	0.102	0.099	**0.794**	0.300
SIE_ni_1	0.485	**0.786**	0.483	0.051	0.478
SIE_ni_2	0.561	**0.776**	0.535	0.141	0.575
SIE_ni_3	0.417	**0.736**	0.466	0.169	0.471
SIE_ni_4	0.469	**0.791**	0.441	0.128	0.499
SIE_sm_1	0.484	**0.820**	0.503	0.192	0.564
SIE_sm_2	0.573	**0.858**	0.505	0.107	0.562
SIE_sm_3	0.576	**0.830**	0.503	0.117	0.564
SIE_sm_4	0.528	**0.813**	0.497	0.097	0.512
SIE_sm_5	0.528	**0.804**	0.477	0.063	0.496
SIE_sm_6	0.538	**0.832**	0.453	0.109	0.521
SIE_sm_7	0.512	**0.827**	0.470	0.061	0.535
SIO_1	0.518	0.555	**0.872**	0.146	0.573
SIO_2	0.483	0.441	**0.786**	0.119	0.490
SIO_3	0.494	0.475	**0.822**	0.130	0.526
SIO_4	0.568	0.547	**0.888**	0.118	0.621
SIP_1	**0.862**	0.556	0.541	0.225	0.610

SIP_2	**0.798**	0.488	0.523	0.122	0.501
SIP_3	**0.831**	0.529	0.471	0.189	0.545
SIP_4	**0.812**	0.541	0.493	0.184	0.571
SWB_1	0.621	0.561	0.565	0.328	**0.884**
SWB_2	0.618	0.583	0.617	0.406	**0.916**
SWB_3	0.611	0.612	0.588	0.351	**0.913**
SWB_4	0.595	0.603	0.609	0.341	**0.900**

Fornell-Lacker compares the square root of the average variance extracted (AVE) of each construct with its correlation to any other construct (Fornell and Larcker, 1981). Table 5.6 displays the square root of AVE of all constructs *Social Interaction with Peers (0.826)*, *Social Interaction with Employees (0.807)*, *Social Interaction with Outsiders (0.843)*, *Social Connectedness (0.833)*, and *Social Well-Being (0.903)*, which shows that all are greater than the correlation with other constructs in the model, indicating the establishment of discriminant validity for this research.

Table 5.6 Fornell-Larcker Criterion for Discriminant Validity

Variables	SIP	SIE	SIO	SC	SWB
SIP	0.826				
SIE	0.641	0.807			
SIO	0.614	0.602	0.843		
SC	0.220	0.140	0.152	0.833	
SWB	0.677	0.653	0.659	0.395	0.903

Although cross-loadings and Fornell-Lacker are widely used to assess discriminant validity, Henseler et al. (2015) point out that they are not sufficient to reliably address discriminant validity issues. They propose Heterotrait-monotrait (HTMT) ratio of correlation as an additional technique to assess discriminant validity. Heterotrait-monotrait (HTMT) ratio of correlation measures the similarity between latent variables. It involves comparison with a predefined threshold. Henseler et al. (2015) suggest a threshold value of 0.90 or

0.85 when constructs are more conceptually distinct. Table 5.7 shows that all the results are within the accepted range for the HTMT at < .85 and discriminant validity is established.

Table 5.7 Heterotrait-monotrait results

Variables	SIP	SIE	SIO	SC	SWB
SIP					
SIE	0.713				
SIO	0.717	0.662			
SC	0.242	0.147	0.168		
SWB	0.763	0.696	0.734	0.423	

As the basic conditions of validation for the measurement model were met, the researcher could then proceed to assess the structural model. This is discussed in the following section.

5.2.2 Structural model assessment

The structural model is examined in this section. Before the structural model is examined, potential collinearity issues must be assessed to avoid bias caused by strong correlation between two constructs (Sarstedt and Mooi, 2019). The Variance Inflation Factor (VIF) is used to measure the severity of probable collinearity issues. It is suggested that VIF values below 5 are indictive of no probable collinearity issues among constructs in the structural model. Otherwise, higher-order constructs will be created if there are collinearity issues. Table 5.8 presents the results of the collinearity evaluation of predictor constructs.

Table 5.8 Results of collinearity evaluation of predictor constructs

Items	VIF
SC_1	2.777
SC_2	2.695
SC_3	2.752

SC_4	2.697
SC_5	2.933
SC_6	2.566
SC_7	2.493
SC_8	2.272
SIE_ni_1	2.480
SIE_ni_2	2.301
SIE_ni_3	2.378
SIE_ni_4	2.914
SIE_sm_1	2.685
SIE_sm_2	3.219
SIE_sm_3	2.930
SIE_sm_4	2.726
SIE_sm_5	2.596
SIE_sm_6	3.071
SIE_sm_7	2.777
SIO_1	2.335
SIO_2	1.790
SIO_3	2.004
SIO_4	2.473
SIP_1	2.120
SIP_2	1.780
SIP_3	1.980
SIP_4	1.764
SWB_1	2.751
SWB_2	3.496
SWB_3	3.479
SWB_4	3.043

As shown in Table 5.8, all VIF values are below the threshold of 5. Thus, there are no multicollinearity issues among the predictor constructs in the structural model.

Next, the standard criteria for the assessment of the structural model coefficient of determination (R^2) and the blindfolding-based cross-validated redundancy measure Q^2 (Hair et al., 2019) are examined.

The R^2 value of the endogenous construct reflects the explanatory power of the model (Shmueli and Koppius, 2011), which is the most widely used approach to assess structural models (Hair et al., 2017). The value of R^2 ranges from 0 to 1. As shown in Table 5.9, the R^2 result for this module is .590, which indicates that 59% of the reason for social well-being is explained by social interaction. The R^2 value suggests a moderate level of model fit. Q^2 is another means of evaluating the predictive accuracy of the PLS path model (Geisser, 1974; Stone, 1977). It is proposed that a Q^2 value above zero indicates the predictive accuracy of the structural model for the endogenous construct (Hair et al., 2019). The Q^2 result for this model is .450 which denotes success in terms of predictive accuracy.

Table 5.9 Endogenous Construct Coefficient of Determination (R^2) and Predictive Relevance (Q^2)

Construct	R^2	Adj-R^2	Q^2
Social well-being	0.590	0.585	0.450

A goodness of fit test was conducted next to evaluate the overall performance of the measurement and structural model. Henseler et al. (2014) suggest that the Standardized Root Mean Square Residual (SRMR) is considered appropriate to identify any incorrect specification of PLS-SEM models. Hair et al. (2017) propose that an SRMR value of less than 0.08 is considered a good fit. For this research, the SRMR value for both the saturated and estimated model was 0.047. Thus, the overall performance of the measurement and structural model is good.

5.3 Hypothesis testing

Referring to the previous assessments, the hypotheses generated in Chapter 3 were subsequently tested. Hair et al. (2014) suggest a path coefficient β and p values should be used to examine the relationships between variables. Thus, a path coefficient β and their corresponding t-values were calculated using a bootstrapping procedure with 5000 subsamples. Figure 5.1 demonstrates the findings, including the path coefficients related to hypotheses 1 to 3, the significance of the path coefficients, and the variance (R^2) described by the independent variable.
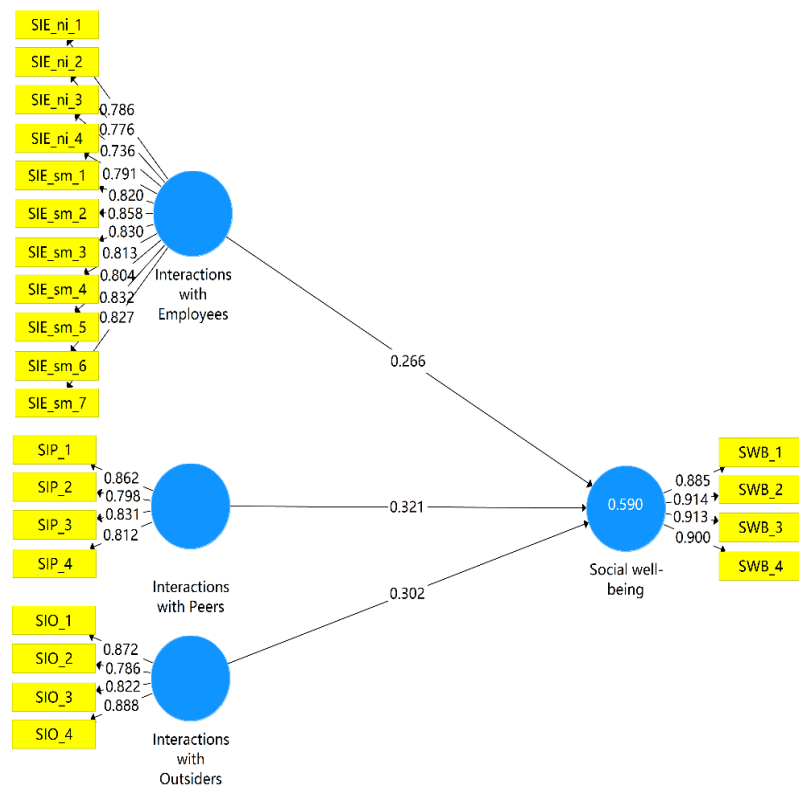

Figure 5.1 Diagram of main effect model

Accordingly, Table 5.10 illustrates the relationships identified between the path coefficient β and the p values, which are discussed in the following sections.

Table 5.10 Results of Hypothesis Testing

Hypotheses	Path relationship	β	T	P
H1	Interactions with Employees→ Social well-being	0.266	4.470	0.000
H2	Interactions with Peers →Social well-being	0.321	5.485	0.000
H3	Interactions with Outsiders→ Social well-being	0.302	4.719	0.000

5.3.1 Hypothesis 1: Positive social interactions with employees have positive effects on older customers' social well-being

As shown in Table 5.10, hypothesis 1 indicated that the path to social well-being from social interactions with employees (H1: β = 0.266, p <0.01) was positive and significant. Thus, hypothesis 1 was supported.

This finding is consistent with the findings of the research conducted by Falter and Hadwich (2020), which reveal that interactions between employees and customers can create value related to customer well-being. The positive effects of social interactions with employees on older customers' social well-being indicates that social interactions between employees and customers are not only important in healthcare, financial, social, higher education, and charitable organizations (Black and Gallan, 2015; Mulder et al., 2015; Reynoso et al., 2015; Sandstrom and Dunn, 2014; Taylor et al., 2017), but also in hospitality services. This finding also corroborates the findings from prior transformative service research illustrating the important role that employees play on customers' well-being (Anderson et al., 2018). Furthermore, this finding aligns with previous literature which has shown that resources exchanged during interactions between employees and customers, such as care and help, can generate transformative outcomes (Chen and Li, 2021).

In addition, the positive effects of social interactions between employees and customers corroborates the findings of a study conducted by Falter and Hadwich (2020). They postulate that positive social interactions between employees and customers generate positive emotions, engagement, relationships, meaning and accomplishment, and an absence of negative emotions during service experiences, which all contribute to greater customer well-being (e.g., Anderson et al., 2018; Mende and van Doorn, 2015; Sweeney et al., 2015). This is also supported by numerous studies that show that interpersonal factors such as support and engagement from social interactions with employees are crucial to increase compliance, communication, and trust (e.g., McColl-Kennedy et al., 2017a; Seiders et al., 2015), which all lead to positive well-being outcomes (McColl-Kennedy et al., 2017b).

When hypothesis 1 was explored further through focus group discussions, the qualitative findings revealed that the essential resources employees provided to meet older customers' needs also pertained to their social well-being. In the discussion around participating in social activities, it was identified that positive social interactions with employees could fulfill five needs of older customers leading to their social well-being. These needs were classified as the need for security, the need for affection, the need for behavioral confirmation, the need for status, and the need for connectedness to a society, which are evaluated below. These findings about the nature of social interactions with employees and how they influence the well-being of older adults contributes to the advancement of employee customer interaction research.

The need for security

Many participants mentioned that participating in social activities could enable older customers to experience a feeling of security. They would have no concerns about any danger or abuse. The commercial senior living facilities

provide safe spaces and physical settings for older customers to participate in social activities.

Li Min: I get up at 5 am every morning and take a walk (along the corridors) by holding the handrails on the side. The floor was specially treated to be anti-slip. We feel very secure when we meet our friends and walk around (Resident).

Furthermore, it was found that exercise equipment was installed indoors and outdoors to fit various needs. This reflected the fact that older customers' functional capacity was also considered when the living areas were designed.

Additionally, close management was implemented in commercial senior living facilities to ensure the life of older customers there was not disturbed by external factors and that the safety of older customers was protected. All visitors needed to make appointments before their visit and all the entrances were assigned security guards. Older customers could enter or exit commercial senior living facilities according to their health conditions.

Zhang Min: Our security is taken care of by the security guard. The older adults who are incapable of moving independently are given a red lanyard so that the security guards know they should not leave the facilities alone… Whereas, the ones with a blue lanyard are free to move around. We can go out for shopping or meeting friends etc. (Resident).

Here, as Zhang Min described, given that different older customers have different levels of functional abilities, either physically or mentally, a special security system was implemented to ensure the safety of the residential setting.

Meanwhile, the age-friendly environment providers established contributed to older customers' sense of security. Through the discussion, many participants

revealed the fact that older customers were free from fears about staff behavior. On the contrary, they felt that staff had created a family environment in the commercial senior living facilities.

Wang Fang: The staff here never say no to us…They are really fond of older people and respect us…The staff here call us grannies or aunties. This has made us feel loved and that we belong here (Resident).

Older customers were treated by service providers and their staff as family members and their safety was placed as their priority, especially when they planned and organized social activities.

Zhang Wei: (When we organize social activities, we have to consider issues for older customers) including transportation safety, walking safety, (we have to make sure) that they can't get lost, as well as some (potential) dangers. (Manager of events and activities).

Once this basic need was met, then they could move on to pursue the next level of their needs- the need for affection.

The need for affection

When older adults retired from their previous occupations where they used to realize their achievements, they intended to fulfil their social needs in the direction of the need for affection. Older customers' need for affection was reflected in the intimate relationships and social support they gained from social interactions with employees.

It was noted that when people enter old age, there were changes in relationships. For example, social networks decreased due to retirement or became unstable

due to the loss of loved ones. Thus, many participants revealed the important role that social relationships played among older customers when they experienced the transition from home to commercial senior living facilities. The intimate relationships older customers established in commercial senior living facilities with employees fulfilled their need for love and connection with others.

Wang Yan: Regardless of the money we paid, the love given by the staff here cannot be bought by money…(Resident).

Many participants reflected that the close relationships older customers established offered them an exchange of emotional, informational and instrumental/tangible support. Several of the accounts illustrated older customers residing in commercial senior living facilities received empathy, companionship or acceptance from employees to help them cope with difficult situations.

Wang Xiu Ying: The life assistant or myself sometimes stay to accompany her...We wanted to make sure that she didn't feel alone... She felt comforted with our presence and being cared for (Director of residents' lifestyle centre).

Meanwhile, it was clear that informational support was provided in the form of education and information exchange to older customers by employees through participating in social activities.

Wang Fang: There are instructors provided by the commercial senior living facility in each activity to teach us. They are professionals and we can learn from them systematically (Resident).

In addition, instrumental support, such as financial assistance, was provided by service providers to help older customers participate in social activities and

interact with outsiders. For example, service providers in commercial senior living facilities provided free materials to older customers, such as paint brushes and oil painting materials, as well as physical space to interact with outsiders.

Li Jie: There is no charge for the participants... I often paint with my friends on Wednesday afternoons. We talk while we paint. It is better than staying in the room by myself (Resident).

This support enabled older customers to get easy access to social activities and opportunities to socialize with friends to reduce their loneliness.

The need for behavioral confirmation

Once older customers' need for affection was met, they moved on to the need for behavioral confirmation. It was noted that the need for affection resulted from how older customers viewed themselves. Thereafter, their next level of need was the need for behavioral confirmation, which resulted from what they did. They found they were being useful and could contribute to others after retirement. Many participants indicated that one of the important purposes of participating in social activities for older customers in commercial senior living facilities was their need to feel useful to others and productive to their living environment. Positive social interaction with employees fulfilled this need.

Wang Xiuying: We asked Auntie Libin to help us practice for the fashion show. She was very happy to help us…She took it very seriously and she was very responsible (Director of residents' lifestyle centre).

Here, as Wang Xiuying described, employees provided opportunities for older customers to use the knowledge they had, which could potentially fulfil their desire to contribute. This delivered a sense of value to older customers through interacting with employees.

The need for status

Efforts were made by older customers to satisfy their need for status after the need for affection and behavioural confirmation were met. As older customers retired, their ability to meet their need for status decreased as this was previously fulfilled through their occupations. So it became harder for older customers to achieve this need. As a result, older customers needed to make more effort in other aspects in life to try to maintain their level of status before retirement. The fulfilment of the need for status was then based on older customers' lifestyle or specific talents. Positive social interactions enabled employees to identify older customers' talents, merits, abilities, contributions or other skills and encourage older customers to utilize them. In this way, older customers could restore some of their previous status.

> Wang Xiu Ying: Mr. Yu (who is in charge of the choir) didn't want to perform in public. I told him it was better to listen to other members' opinions. It turned out that all the members in the chorus wanted to get on the stage and perform in front of the audience...They really enjoyed it and talked about it all the time. It showed that older adults need recognition from others. They long for a stage to show their talent (Director of residents' lifestyle centre).

Here, as Wang Xiu Ying described, older customers's self-actualization decreased as they were ageing. They were reluctant and lacking in confidence to show their skills. However, with the encouragement of employees and the opportunity provided, older customers could gain the feeling that their skills or influence were recoginzed by others.

Moreover, the focus group discussions further explained the process of how social well-being was generated through social interactions with employees. It

was discovered that not only did service providers integrate older customers' resources, but older customers also integrated service providers' resources while participating in social activities. For example, a few participants reflected on the social activities they participated in.

Li Min: The employees take us to do morning exercise, Tai Chi... They also let us do some simple mathematics so that we can exercise our brain. We have small friendly competitions among each other and laugh at each other's mistakes (Resident).

The above illustrates above that the work-related knowledge of the service providers was successfully combined with older customers' physical and mental condition, which met older customers' needs and generated positive outcomes. It also improved the social relationships among older customers. Meanwhile, older customers also integrated their resources with service providers'. For example, a number of participants reported that the physical spaces provided by service providers were used for their family get-togethers and socializing with friends.

Wang Fang: My classmates are all over China, Beijing, Sichuan. I always send pictures taken from here to them. Thus, they always come to visit. My alumni group with more than 60 people from the national medical university has organized a number of get-togethers here already…We can catch up with each other, sing and dance here, like going back to old times. Additionally, we can make bookings in the dining hall, very convenient (Resident).

It was noted that not all the resources from both service providers and older customers were integrated simultaneously due to the various contexts of interactions. For example, as Li Min described above, when service providers designed social activities and interacted with older customers, they integrated their work-related knowledge with the older customers' physical and mental

health; whereas, as Wang Fang stated, older customers integrated their social needs with the physical spaces belonging to service providers.

The need for connectedness to a society

As discussed earlier, the need for security, affection, behavioral confirmation, and status lay a path to the need for connectedness to a society because the negative effects of not feeling connected to others, such as low self-esteem, lack of social contact and support, and depression leading to loneliness were reduced.

Having withdrawn from the society that older adults were familiar with before their retirement, they looked for another society where they could obtain a sense of belongingness, where they felt comfort and included. For example,

Liu Yang: I need to find a society suitable for older people and my own life, which is free from distress and disturbance. A place I can feel my belongingness (Resident).

As shown above, commercial senior living facilities were viewed as a new society where older customers could fulfil their need for connectedness.

In addition, many participants revealed that older customers could meet other older customers from various backgrounds, similar or dissimilar. Commercial senior living facilities were viewed by older customers as a mini reflection of society.

Wang Fang: People are around the same age here and are also from different backgrounds. I can really make many friends here. We can talk about our past experiences and share our common interests (Resident).

As Wang Fang stated here, older customers' desire for establishing close relationships with others remained the same as prior to their moving into commercial senior living facilities. Commercial senior living facilities served as a place where older customers' need for connectedness to a society could be fulfilled.

The findings of the focus group discussions revealed the essential resources employees provided to meet older customers' needs in order to enhance their social well-being. These needs were classified as the need for security, the need for affection, the need for behavioral confirmation, the need for status, and the need for connectedness to a society. Furthermore, it was noted that resources were integrated to generate the transformative value of social well-being during interactions between employees and older customers.

The findings corroborate the underlying assumption of SPFT which advocates that social well-being is achieved by obtaining affection, behavioral confirmation, and status (Lindenberg, 1996). This is also supported by Nieboer and Cramm (2018) who propose that social well-being can be fulfilled by achieving affection, behavioral confirmation, and status among older adults. Intriguingly, the findings of the focus group discussions add two further needs to achieve social well-being: a) the need for security; b) the need for connectedness to a society. These findings are consistent with previous studies which indicate that exercise equipment improves older adults' mobility and functional capacity (James et al., 2014) and that close management and a familiar environment (James et al., 2019) all contribute to older adults' sense of security after they relocate. Furthermore, positive interactions between employees and older customers were antecedent to a sense of security, which is consistent with previous findings (Giddens, 2013; James et al., 2019).

The need for connectedness to a society reflects older customers' need to develop a place-based relationship with employees. The beneficial outcomes generated by positive social interactions between employees and older customers demonstrate a form of connectedness. These findings are supported by Kearns et al. (2015) who discovered positive neighboring generated by friendship between neighbors is a form of connectedness. Gallagher (2012) points out that place-based friendship could deliver a sense of belonging to the people engaged within the social world they create. Older customers and employees in commercial senior living facilities share the same elevated understanding of older adults. Thus, commercial senior living facilities may be viewed as a social world created by service providers for older customers, which older customers as members could contribute to and benefit from.

The findings reveal useful resources are integrated by older customers, which generates the transformative outcome of social well-being. This finding is consistent with previous studies which demonstrate that the resources integrated during employee-customer interactions contribute to enhancing customers' well-being (e.g., Leo et al., 2019; Wang et al., 2016). The physical, financial, informational, and relational resources employees display mark the imbalance of resources between employees and customers in service encounters. As a result, older customers integrate employees' resources to fulfill their social needs. It corroborates with the finding that employees play a complementary role in maximizing positive outcomes for their customers (Ng et al., 2016).

The process of the resource integration between employees and older customers is consistent with the three steps of customers' resource integration by employees identified by Akaka et al. (2012), namely, access, adapt and integrate. Older customers are provided access to certain types of resources from employees at the start of their social interaction. Once older customers access

the resources, they adapt them to fit their needs for social interaction. Then, the resources are integrated to create a value of social well-being among older customers.

However, a surprising finding arises. It is noted that this process does not appear to be only one-way. This research demonstrates that older customers' resources are also integrated by employees. Thus, the resource integration between employees and older customers is reciprocal and takes place in a looped manner (shown as Fig 5.2).

Figure 5.2 Service providers and older customers' resource integration process during interactions
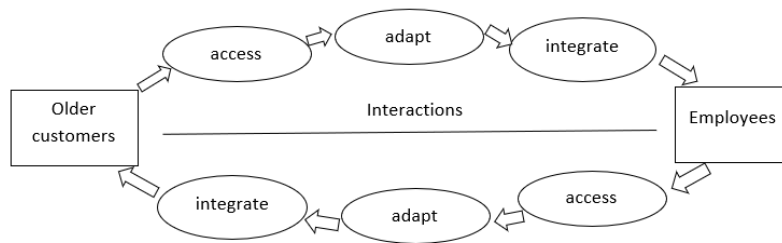
Adapted from Akaka et al. (2012)

Sandström et al. (2008) point out that the value co-created through employee-customer interactions focuses on positive customer experiences which is similar to customer well-being (Falter and Hadwich, 2020). This process demonstrates how social well-being is co-created through resource integration during older customers' social interactions with employees. It is consistent with previous studies which propose that a combination of resources can be used to create the new value of improved well-being among different entities (Vargo and Lusch, 2008). The findings of this study addressed the question of how customers' social well-being was facilitated by service providers through a value-generating process (Islam et al., 2021).

However, it has been revealed that not all types of resources are integrated during social interactions between employees and older customers. Previous studies point out that the nature and amount of resources integrated depend on the circumstances where interactions occur, such as the physical environment (Nilsson and Ballantyne, 2014), the relationships between employees and customers (Leo and Russell-Bennett, 2012), the interactions between employees and customers or among employees (Akaka et al., 2012). Despite the stated circumstances, this research indicates that the resource integration between employees and older customers is also built upon their needs and their perceived needs for each other.

As demonstrated above, the finding that positive social interactions with employees have positive effects on older customers' social well-being from both the quantitative and qualitative phases is consistent with the findings in transformative service research (TSR), which has been undertaken in healthcare, finance, charities, and social services in previous studies (e.g., Anderson et al., 2018; Sanchez-Barrios et al., 2015; Hepi et al., 2017; Mulder et al., 2015). Participants in the focus group discussions indicated that resource integration occurs during interactions between employees and older customers.

Interestingly, prior studies have discovered that only employees integrate customers' resources, but it is noted that older customers also integrate employees' resources in this research. The resource integration between employees and older customers is reciprocal. Furthermore, despite the three social needs proposed in SPFT, the findings also add two new social needs, namely the need for security and the need for connectedness to a society, pertaining to social well-being.

5.3.2 Hypothesis 2: Positive social interactions with peers have a positive effect on older customers' social well-being

As shown in Table 5.10, hypothesis 2 indicated that the path to social well-being from social interactions with peers (H2: $\beta = 0.321$, $p < 0.01$) was positive and significant. Thus, hypothesis 2 was supported.

This finding corroborates the findings of previous research on the positive effects of peer customer interactions (e.g., De Vries et al., 2017; Kim and Yi, 2017; Millán et al., 2016). It is aligned with prior literature which suggests social interactions among customers can establish trust and productive relationships (Zhao et al., 2015), can diminish anticipated risks and fear, and develop a sense of belonging (Archbold et al., 2018; Tufan and Wendt, 2020; Zhao et al., 2015). Furthermore, this finding provides empirical evidence that social interactions among customers can improve the evaluation of individuals' social value and confidence level (Wei et al., 2017), which in turn leads to a notable social contribution (Xue et al., 2021).

In addition, this finding is supported by McColl-Kennedy et al. (2017a) who discovered that the support and understanding from interactions among patients contributed to their well-being in health care sectors. Furthermore, this finding is in line with a study conducted by Song et al. (2018), which illustrates that social interactions among older customers can improve their consumption experiences leading to customer satisfaction and reduced loneliness in hospitality services. The finding of this research accommodates the growing senior market, in which are cultivated potential opportunities for the leisure, hospitality and tourist industries (Ismail et al., 2019). The social activities provided by commercial senior living facilities offered older customers a place and opportunities to interact with each other, which led older customers to collaborate with each other and generate social well-being. This also aligns with

the findings of the research conducted by Li et al. (2020) who proposed that active older adults had a positive influence on fellow residents in relation to participating in activities.

When this result was further explored through focus group discussions, the qualitative findings revealed that peers were one of the sources who could provide essential resources to meet older customers' needs pertaining to their social well-being. In the discussion about participating in social activities, it was identified that positive social interactions with peers could fulfill four needs of older customers leading to their social well-being. These needs were classified as the need for affection, the need for behavioral confirmation, and the need for status, which are illustrated below. This finding regarding the nature of the social interactions with peers and how they influence the social well-being of older customers contributes to the advancement of peer customer interaction research. It highlights the important role peer customers play in relation to older customers' social well-being.

The need for affection

Many participants expressed older customers could obtain the feeling that they were liked, accepted, and empathized. Older customers felt that others were willing to help them without expecting anything in return. In particular, older customers felt emotionally attached to fellow residents in commercial senior living facilities without being judged according to their financial status or their previous careers.

As discussed earlier, close relationships were found between employees and older customers. It was noted that older customers also established close relationships with peers in commercial senior living facilities, which helped

them build new social networks and fulfilled their need for love and connection with others.

Wang Fang: I can really make many friends here. People are around the same age here, so we have experienced similar periods of time in our lives...I feel I am included here (Resident).

As Wang Fang stated here, older customers' need for new social relationships did not seem to be affected by where they lived. Their desire to establish close relationships with others remained the same as prior to their moving into commercial senior living facilities. Moreover, being the same age indicates that older customers had experienced the same societal changes. They could share their feelings and experiences, which could generate a sense of connection and inclusiveness among each other.

Nevertheless, it was mentioned that not everyone was willing to make the effort to maintain his/her social networks. For example,

Liu Yang: Residents here are divided (into different groups), (because) people have different personalities. If the individualism was increased, people would be more closed to themselves. As a result, their social network would decrease and disappear eventually (Resident).

As Liu Yang described, individualism existed and the need for relationships was also determinied by older customers' personalities in commercial senior living facilities.

Meanwhile, it was also stated by many participants that older customers experienced an exchange of emotional, informational and instrumental/tangible support during social interactions with peers. Several of the accounts illustrated that older customers residing in commercial senior living facilities received

empathy, companionship or acceptance from fellow residents to help them cope with difficult situations.

Wang Xiu Ying: It was the resident who lives on the floor above her who gave her a lot of support... All the group members care for her (Director of residents' lifestyle centre).

Meanwhile, it was reported that informational support was provided in the form of education and information exchange to older customers by fellow residents by participating in social activities. It generated positive outcomes both for older customers and fellow customers.

Wang Fang: I give lectures on popular scientific knowledge to the residents here. I feel I am still useful and I can still contribute...I am happy people find my lectures interesting (Resident).

In addition, it was revealed that older customers provided intangible aid and service to fellow residents during social activities,

Li Jie: Mr. Zheng (a resident) plays piano and Mr. Wang (a resident) look up lyrics online. Mrs. Zhu (a resident) prints the lyrics out...They work as a team, and they all want the activity to be successful (Resident).

As Li Jie described, older customers could gain a sense of belongingness when they shared the same goal in a team.

Nevertheless, it was noticed in the focus group discussions that older adults' need for affection was fulfilled by a sense of superiority/looking down upon others on some occasions. For example,

Liu Yang: Some people here maintain their affective evaluation only through looking down upon others...They don't offer suggestions out of good

intentions but to show off. This would hurt others and disconnect them from others...It is a normal state when ageing (Resident).

As Liu Yang described, some older customers in commercial senior living facilities achieved their affective evaluation of their own value, confidence, and importance within a social group by sacrificing others. It was viewed as normal in the ageing process by older customers.

The need for behavioral confirmation

As discussed earlier, older customers' need for behavioral confirmation resulted from what they did. Several of the accounts illustrated that many participants felt that they were doing the right thing to participate in social activities, which made them a part of a functional group. As older customers pursued their new lives in commercial senior living facilities, they felt that they did the right thing to move and become an integral part of a new group/society where they could interact with people who were like themselves. They had a new perception of themselves within an interpersonal system.

Liu Yang: I need to find a society suitable for older people and my own life, where I should belong to when I am old (Resident).

Moreover, many participants indicated that social interactions with fellow residents enabled older customers to gain a sense of value. They believed their experiences, knowledge and skills could be valued and utilized by fellow residents.

Li Jie: I teach other older adults how to express their feelings through photograph. They all come to ask me how to take beautiful pictures. They like my knowledge and ideas. I also enjoy having interesting discussions with them (Resident).

Here, as Liu Jie described, successfully integrating his resources-his knowledge with other fellow residents gave him a sense of self-worth. This also illustrated that he expected social approval from others.

The need for status

Many participants demonstrated that older customers gained a greater sense of belongingness in commercial senior living facilities when their value was recognized. The positive feedback that older customers received from participating in social activities was viewed as a form of recognition of effort.

Wang Xiu Ying: Having watched their performance, fellow residents felt it was very successful and they were very proud of themselves. It showed that older adults need recognition from others (Director of residents' lifestyle centre).

Meanwhile, symbolic recognition of older customers' achievements or contribution received from peers during the social activities was also an efficient form of encouragement to keep them socially active.

Li Qiang: For example, when we organize social activities, we have gatherings from time to time. These gatherings are very important. They give older customers a sense of ritual when participating in social activities... They can paint or write something to be exhibited. Other older customers can visit and have a discussion with them. This is an opportunity for them to establish connections and relationships with others (Music, singing and painting instructor).

As Li Qiang depicted, symbolic recognition from, for example, gatherings and exhibitions made older customers feel that they were taken seriously. Thus, participating in social activities went beyond the opportunity to just entertain themselves, it became a way to show their skills and talents to their peers.

Moreover, gatherings and exhibitions provided opportunities to older customers to connect and socialize with others.

Moreover, it was shown that older customers could receive more confidence and responsibilities through the recognition of their knowledge and skills by fellow residents.

Li Jie: As I was selected to be in charge, I would be responsible for it. I am confident that I won't let them down (Resident).

As discussed above, it was noted that recognition from peers was important to older customers in commercial senior living facilities. Older customers gained status by making efforts to assist fellow residents by offering their time, skills or knowledge. Recognition was viewed as an award to older customers.

In the discussion about participating in social activities, many participants mentioned their experiences of participating in some of the important performances with fellow residents. They displayed proud and excited expressions during the discussions, and they were eager to share pictures taken from those performances. This illustrates that being able to pursue and maintain an interesting and healthy social life in commercial senior living facilities gives older customers a sense of pride, pleasure and joy.

Zhang Min: All these (performance tools) were made by us…and we had make-up on. We were really pretty. I am behind this person (in the picture) …This is from the handicraft group. It is the dyeing paper I made and look at all the paintings we did…This is the gala party for the spring festival…We were so happy! We had a make-up artist to do it for us…(Resident).

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It was illustrated that the need for status among older customers in commercial senior living facilities no longer came from their occupation. Instead, they made more effort to pursue recognition and a sense of achievement through social interaction with peers and participating in social activities to compensate for this loss.

In addition, focus group discussions further explained the process of how social well-being was generated through social interaction with peers. It was revealed that older customers integrated socially supportive resources in commercial senior living facilities. For example,

Li Min: ...Sometimes he needs more people to play Mahjong. That's what he loves. We play with him, because we are here like brothers and sisters. We have to care and love each other. We are happy when we can make him happy (Resident).

As Li Min described, older customers treated each other as family members. Resources provided by fellow residents such as company, care and love were integrated by older customers to fulfil their social needs. In addition, older customers donated their personal possessions to the commercial senior living facilities for fellow residents to use. For example,

Wang Xiu Ying: Uncle Xie Xian Ya donated that sewing machine...Residents here can register and use it to do some alterations...The Mahjong table there was donated by our residents, too...Older customers get acquainted with each other when they come here to use either the sewing machine or the Mahjong table (Director of residents' lifestyle centre).

Here, as Wang Xiu Ying described, older customers offered up their personal belongings to be used by fellow residents. Fellow residents could use these

donations as and when they wished, which provided convenience and entertainment.

Intriguingly, it was revealed that older customers did not always integrate each other's resources during social interactions. On the contrary, sometimes resources were rejected by older customers. For example,

Liu Yang: They (the reading group members) felt the book (*Getting Old Slowly*) was quite good... I felt it was much too negative after I read it…I proposed alternatives. I recommended watching other programmes instead (Resident).

As Liu Yang mentioned above, the integration was influenced by his own cognition. It was reported that, in some situations, older customers specifically rejected integrating some of their fellow residents' resources. They did not feel it was necessary to integrate their fellow residents' resources.

In addition, it was mentioned that some older customers did not want to integrate fellow residents' resources. For example,

Zhang Min: ...Not everyone here keeps in contact with others. People have many choices...Some people like us can make friends with each other even when we have a walk in the square; but some people can't even have a simple conversation even though they live in the same building. They like to be on their own (Resident).

Here, as Zhang Min described, some older customers in commercial senior living facilities discarded the social resources provided by fellow residents. As a result, they rejected integrating fellow residents' resources due to their own intentions or actions.

The findings of the focus group discussions explain the positive effects that social interactions with peers have on social well-being. The findings illustrate that there is an exchange of resources taking place during social interactions with peers. Useful resources are integrated by older customers, which then generates the transformative outcome of social well-being. This finding is consistent with previous studies which highlight that customers are involved with resources provided by other customers during positive social interaction with peer customers (Jaakkoa and Alexander, 2014; Verleye et al., 2014).

Meanwhile, the physical, financial, informational, emotional, and relational resources integrated by older customers corroborates the findings with regards to the resources customers integrated within and outside the firm-managed service contexts (Bianchi and Drennan, 2021; Bruce et al., 2019). As Hibbert et al. (2012) point out, customers seek out other resources when there is a shortage in their personal resource pool. Older customers draw on resources such as support, love, and care of peer customers as they relocate to commercial senior living facilities.

The findings of the focus group discussions also indicate that the process of older customers' resource integration with peers follows three steps which are the same as those with employees, namely access, adapt and integrate (see Figure 5.3). The research demonstrates that older customers are able to identify the resources they need from their fellow residents in commercial senior living facilities. This is consistent with previous studies which discovered that well-being outcomes can be affected by customer-to-customer social interactions through resource integration occurring when customers are immersed in a service experience (Luo et al., 2019; McColl-Kennedy et al., 2017b).

Moreover, older customers do not integrate all the resources they identify. Skills and knowledge are required for older customers to make sense of specific identified resources to fit their needs. It has been illustrated that older customers integrate more resources with learnt skills and knowledge to generate more transformative outcomes. Thus, the process of resource integration is also a process of learning. These findings are supported by previous studies which discovered that customers benefit from shared information/knowledge such as enquiries or feedback from other customers (Chen et al., 2018; Hibbert et al., 2012).

However, a surprising finding has been revealed from the focus group discussions. Although the positive effect of social interactions with peers on social well-being is examined in the survey and explained by the focus group discussions, it is interesting to note that rejected resource integration also occurs during older customers' social interaction with peers (as shown in Fig 5.3). This is incongruous with previous resource integration studies (Akaka et al., 2012; Edvardsson et al., 2012; Kleinaltenkamp et al., 2012; Löbler, 2013). As Kelle (2006) points out, older people, especially those in long-term care, tend to give answers which they think will please the researcher. However, in this research, the positive relationships the researcher established with the participants in the focus group discussions enabled participants to overcome their initial reserves.

Figure 5.3 Older customers' resource integration process during peer interactions
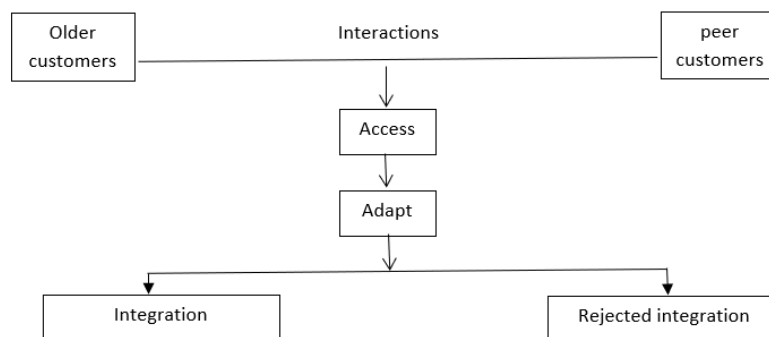
Adapted from Plé (2016)

As described by participants in the focus group discussions, rejected integration happened because some older customers felt it was not necessary to integrate or they lacked cognitive ability to integrate peers' resources. It corroborates the findings that customers' resource integration was influenced by their social needs (Mollen and Wilson, 2010) or cognitive and affective abilities (Bruce et al., 2019) as mentioned in previous studies. Older customers participate in social activities to meet their different needs. Eriksson and Hellström (2021) highlight in their study the importance of resource integration to meet users' needs. Therefore, older customers' rejected resource integration might be influenced by their needs.

It was noted earlier that knowledge and skills are important elements for older customers to integrate from peer customers' resources. This is in line with the findings of previous studies (Hibbert et al., 2012; Baron and Harris, 2008; Pareigis, 2012) which point out that knowledge and skills enable customers to achieve resource integration. Thus, a lack of knowledge and skills might result in rejected integration among older customers. For example, a participant stated that a resident donated a sewing machine for other residents to use. However, fellow residents might not use it due to a lack of knowledge or skills on how to operate it.

The rejected integration may also result from the influence of older customers' personality. Personality is defined as a system of thoughts, attitudes and behaviors exhibited in different situations (Hogan, 1987). Landers and Lounsbury (2006) point out that the personality of customers has a great impact on their intention and conduct. Older customers' unwillingness to try new ideas or socialize with fellow residents could be explained as a lack of openness and extraversion in their personality, as described by Thurstone (1934). As a result, the rejected resource integration of older customers might be influenced by their personalities. However, unlike previous studies of customers' resource

integration, there is no clear evidence in this research to show that this rejected resource integration had any impact on older customers' social well-being.

5.3.3 Hypothesis 3: Positive social interactions with outsiders have a positive effect on older customers' social well-being

As shown in Table 5.10, hypothesis 3 indicated that the path to social well-being from social interactions with outsiders (H3: $\beta = 0.302$, $p < 0.01$) was positive and significant. Thus, hypothesis 3 was supported.

The finding that social interactions with outsiders had positive effects on social well-being corroborates the effect of another dimensional concept of social interactions in transformative service research. As Echeverri and Skålén (2021) point out, interactions do not just take place between service providers and customers within service systems; other actors who share common goals with customers are also involved. The positive effects of interactions with outsiders are supported by Steverink and Lindenberg (2006) who state that peripheral relationships also contribute to older adults' well-being. Previous researchers argued that peripheral relationships can create diverse beneficial social networks (Fiori et al., 2007; Litwin and Shiovitz-Ezra, 2006) which provide specific resources such as a wide range of activities (Fingerman, 2009) and lead to improved well-being (Fingerman et al., 2020). This is supported by the findings of the current research. Interacting with outsiders enables older customers to engage in various activities and receive diverse resources, which help reduce their sedentary periods (Fingerman et al., 2020) and keep them socially active in commercial senior living facilities.

Furthermore, the findings of this research are supported by a study conducted by Sandstrom and Dunn (2014) who discovered that broader social interactions

beyond close social circles contribute to enhanced psychological well-being for college students and a greater sense of belonging for community-dwelling adults. This aligns with the findings of a study conducted by Goll et al. (2015). They identified that older adults who do not interact with outsiders are likely to experience the feelings of hopelessness and defeat which generally indicate a low mood. The findings of this research are also consistent with the results from Fingerman et al. (2020)'s study, which indicates that older adults interacting with people beyond their usual social circle, such as family and friends, are more likely to experience greater positive emotions and fewer negative moods.

Anderson et al. (2013) suggested that the term 'interaction' proposed in transformative service research should be viewed broadly. This is because it could refer to any contact during service encounters. This finding extended the traditional focus of transformative service research which was primarily on the interactions among and between customers, service providers and partners (Galeone and Sebastiani, 2017), by investigating the role of outsiders in relation to social well-being.

When the results were further explored through focus group discussions, the qualitative findings revealed that outsiders were one of the sources who could provide essential resources to meet older customers' needs pertaining to their social well-being. In the discussion around participating in social activities, it was identified that positive social interactions with outsiders could fulfill four needs of older customers leading to their social well-being. These needs were classified as the need for affection, the need for behavioral confirmation, the need for status, and the need for connectedness to a society which are illustrated below.

The need for affection

Many participants revealed that older customers develop closer social relationships and receive support by interacting with people from the wider community. The close relationships older customers established with people from the wider community played an important role when older customers made the transition from home to commercial senior living facilities. These relationships fulfilled their need for love and connection with others. It was demonstrated that older customers' need for close relationships was not limited to within commercial senior living facilities, but also expanded to include the wider community, which confirmed their ongoing desire to fulfil their social needs.

Liu Yang: When I visited photography associations in other communities, many older adults attended the events. They were all very happy and told me that I taught them something they needed (Resident).

Liu Yang's remark revealed that participating in social activities offered older customers additional opportunities to fulfil their need for close relationships.

Meanwhile, it was noted that older customers made increasing efforts to maintain their relationships with people outside of commercial senior living facilities, such as their family members and friends.

Wang Fang: Our children don't need to worry about us when we stay here. We send pictures to them every day, the food we have and the activities we do …I also organized a few get togethers with my old classmates from different cities (Resident).

It was not hard to see that older customers' need for close relationships was quite stable. It did not change regardless of where they stayed. Moreover, it indirectly

illustrated the facilitating role service providers play in enhancing older customers' social interactions with outsiders.

Many participants reflected that the close relationships older customers established offered them the experience of receiving support from various outsiders.

Wang Fang: We are not professionals, but there are instructors from nearby colleges or some art groups coming to teach us (Resident).

Here, as Wang Fang described, instructors with professional knowledge and skills were invited to commercial senior living facilities, which met the need for learning support among older customers.

The need for behavioural confirmation

This was consistent with the findings in relation to social interactions with employees and peers. Once older customers' need for affection was met, they moved on to the need for behavioural confirmation. Many participants expressed the view that older customers' need for behavioural confirmation was reflected in a sense of belonging to a group/society and a sense of value during their interactions with outsiders.

Many participants reported the negative experiences that some older customers had after being excluded from the society they were familiar with before.

Liu Yang: He said, 'Why do you old people come here? Don't give us more trouble by coming here.' Having heard that, I felt really upset…I suddenly realized I didn't belong to that society anymore (Resident).

Here, as Liu Yang described, negative interactions with outsiders resulted in hostile behaviour. Upset and disappointment emerged as soon as older adults realized they did not belong to the 'traditional' society. This indirectly illustrated their longing for belongingness.

Furthermore, many participants stated that older customers gained a sense of self-worth during their social interactions with outsiders. They felt their skills were valued and appreciated by outsiders. For example,

Li Jie: We all felt it was an opportunity. We were invited to participate in a metropolitan singing competition (Resident).

As shown above, participating in social activities and interacting with a large audience from the wider community brought meaning to the lives of older customers. These opportunities enabled them to actualize their skills and knowledge.

The need for status

In the discussion around participating in social activities, many participants mentioned their experiences of participating in some of the activities organized by the wider community. It was shown that some older customers used these opportunities to pursue the dreams they had when they were young. Being able to compete or perform with outsiders gave older customers more courage to present themselves to others. Moreover, it delivered a sense of achievement to older customers that they were able to fulfill their dreams.

Zhang Yong: (An older customer posted in his moment) 'This event gave me the courage to finally stand on this stage, face all the strangers and present myself.' These kinds of activities can enhance older

customers' confidence and give them the satisfaction of achieving their childhood dreams (Ageing development foundation officer).

Meanwhile, it was revealed that this sense of achievement was not time bound. Some participants pointed out that older customers could share their sense of achievement with outsiders who participated in the activities and recalled the experience.

Zhang Yong: Those older customers who were in the event shared the achievements gained from the competition with the other competitors. They could experience that achievement and pride repeatedly every time they talked about it (Ageing development foundation officer).

Here, as Zhang Yong described, the sense of achievement gained from social interactions with outsiders did not just occur during their participation in social activities. It also had a long-term effect on older customers, which could stay with them long after the social activities had taken place.

The need for connectedness to a society

Outsiders were viewed as a source of connectedness from the larger society to older customers. While talking about social activities in commercial senior living facilities, many participants commented that even though older customers had withdrawn from the society and their previous social relationships, they were still longing to be a part of a society, either the macro society they were familiar with before, or the micro society they had established since they moved into commercial senior living facilities. Older customers' need for connectedness to a society was reflected in their use of modern technology and their willingness to keep up to date.

As discussed earlier, modern technology was greatly used by older customers to interact with employees and peers. The research found that it was also used by older customers to interact with outsiders. Several of the accounts illustrated the positive experience of older customers in using WeChat to be connected to the society outside of commercial senior living facilities.

Wang Fang: We send WeChat messages to our children every day. Then they know what we have for our meals and what we do here (Resident).

Furthermore, it was noted that older customers were willing to adopt the use of technology. Their experiences reflected that technology gave them easy access to the information they needed for their social activities.

Wang Xiu Ying: They (people in the reading club) used to read paperback books and share them among themselves. Now, they have changed to using electronic books. They are trying different things to explore how to attract more people to participate (Director of residents' lifestyle centre).

Here, as Wang Xiu Ying described, older customers realized that the application of technology was a means for them to feel connected to the larger society and they were willing to make efforts to be part of it.

It was reflected that older customers followed the current issues in the world during the discussion about the social activities that older customers participated in. They liked to watch the news through multimedia and exchange ideas among themselves. In this way, they felt they were still engaged with the outside world.

Liu Yang: What older adults care about is current issues related to the country, such as the country being united…the issues between American and

China…I recommended we get to know more about the world through videos so that we know what is going on outside (Resident).

Liu Yang's description also revealed that older customers were still looking for opportunities which could show their usefulness. At the same time, it was indicated that older customers were reluctant to withdraw from the society they were familiar with before their retirement. They compensated for the loss of connection with the larger society by keeping up to date with current issues.

In addition, the focus group discussions further explained the process of how social well-being was generated through social interactions with outsiders. It was revealed that older customers integrated the socially supportive resources of outsiders in commercial senior living facilities. For example,

Li Jie: We feel very (proud). No matter which place we got, we performed on the stage of the Musical Academy and our vision was broadened...They only introduced our team on the stage, not any other teams, because we were so special (Resident).

As Li Jie mentioned, outsiders made older customers feel proud with their flexible approach, which provided a source of fulfilment and recognition. The older customers enjoyed their experience performing on the stage.

However, the concept of false integration of resources emerged in the discussion regarding interacting with outsiders. The resources of outsiders were integrated ineffectively by older customers.

Li Na: It is very stressful for older adults to join a competition in the wider community. First of all, they had to go through preliminary, semi-final and final stages, which was a long process. (Secondly) a competition is different from a performance, which causes a lot of nervousness among

older adults. Even though some of the older adults are with lots of experience, they would shake and get nervous (on the stage) (Director of events and activities).

The discussion above illustrated that outsiders' resources were sometimes misused. The combination of resources from outsiders and older customers was not congruent with older customers' expectations from social interaction while participating in social activities. As a result, the resources of older customers and outsiders were sometimes falsely integrated.

The findings of the focus group discussions illustrate the fulfillment of a sense of connectedness to a society generated by positive social interactions between outsiders and older customers which contribute to older customers' social well-being. This finding demonstrates that older customers seek connectedness with their close ties outside of commercial senior living facilities through their adaptation to the use of technology, which is consistent with previous research (Barbosa Neves et al., 2019; Delello and McWhorter, 2017). Communicative application or electronic books, as mentioned by the participants in the focus group discussions can provide different channels to a wider audience for older adults, which is consistent with the findings of a study conducted by Ibarra et al. (2020). Various resources such as social support, reading materials and information can be brought to older customers, which help reduce loneliness and social isolation in commercial senior living facilities.

Meanwhile, it has been illustrated by the focus group discussions that older customers are willing to keep up to date with the outside world, especially with current issues from the news. This is consistent with previous findings which showed that older adults tend to be highly news dependent which refers to their high consumption of and interest in the news (Fisher et al., 2019; Fisher et al., 2021). Keeping up to date with the outside world provides older customers with

a source of information. It makes them feel that they are still a part of the ongoing world since they can exchange ideas with friends or family members which in turn protects them from experiencing social isolation (Fisher et al., 2021).

The findings of the focus group discussions explain the positive effects social interactions with outsiders have on social well-being. This illustrates that there is an exchange of resources taking place during social interactions with outsiders. Useful resources are integrated by older customers, which generate the transformative outcome of social well-being. This finding is consistent with previous studies which highlight that customers are involved with resources provided by other actors from the wider community during positive social interactions (e.g., Eriksson and Hellström, 2021; Ho et al., 2020; Singaraju et al., 2016).

The findings of the focus group discussions also indicate that the process of older customers' resource integration with outsiders follows three steps, the same as that with employees, namely access, adapt and integrate (see Figure 5.4).

Figure 5.4 Outsiders and older customers' resource integration process during interactions
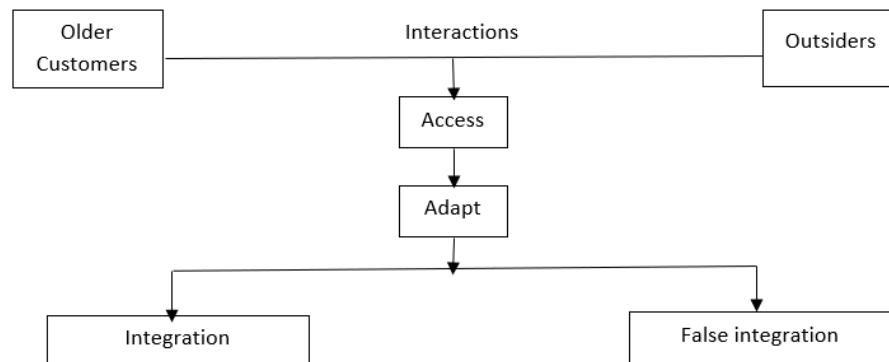
Adapted from Plé (2016)

It was shown in focus group discussions that resource integration occurred when older customers interacted with outsiders. The important contribution of

outsiders' resources has been noted in previous literature, such as those provided by public authorities or non-profit organizations (McColl-Kennedy et al., 2012).

Older adults are considered to have withdrawn from society once they retire, especially those who move to commercial senior living facilities with close management. However, it has been shown that older customers still long for connectedness with the wider community, and they still want to be active members of society. Therefore, they adapt their resources in order to combine them with outsiders' resources to fit their social needs. It is also noted that older customers integrate more operant resources than operand resources from outsiders, which is consistent with previous research which discovered customers are more likely to combine operant resources compared to operand resources (Pareigis, 2012).

However, a surprising finding was revealed in the focus group discussions. Although the positive effects of social interactions with outsiders on social well-being was examined in the survey and explained by the focus group discussions, it was noted that false resource integration also occurs during older customers' social interaction with outsiders (as shown in Fig. 5.5).

As described by the participants in the focus group discussions, false resource integration occurs, where resources are not integrated correctly or in the manner that is expected (Luo et al., 2019). Older customers unintentionally or voluntarily combine outsiders' resources with their own in a way that does not correspond to older customers' expectations. Older customers may feel stressed sometimes while interacting with outsiders during social activities. The stress might result from a gap between older customers' expectations and the frequency of interacting with outsiders, which might be accompanied by fatigue and distress.

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Although it was noted in previous studies that unintended false resource integration leads to negative outcomes (e.g., Baker and Kim, 2019; Vafeas et al., 2016), there is no evidence that false resource integration has negative impacts on overall social well-being among older customers in this research. This might be because false resource integration only happens to certain individuals among older customers, so it is not inevitable but occasional. Furthermore, the effect of false resource integration is time-bound. It only happens at specific moments and does not have a long-lasting impact.

5.3.4 Synthesized findings and discussion of Hypothesis 1, 2 and 3

The finding that social interactions have positive effects on social well-being indicates that social interactions with employees, peers, and outsiders are shown to fulfil older customers' five social needs, which lead to older customers' social well-being (Figure 5.5).

**Figure 5.5 Social well-being outcomes from social interactions**

Source: collated by the researcher

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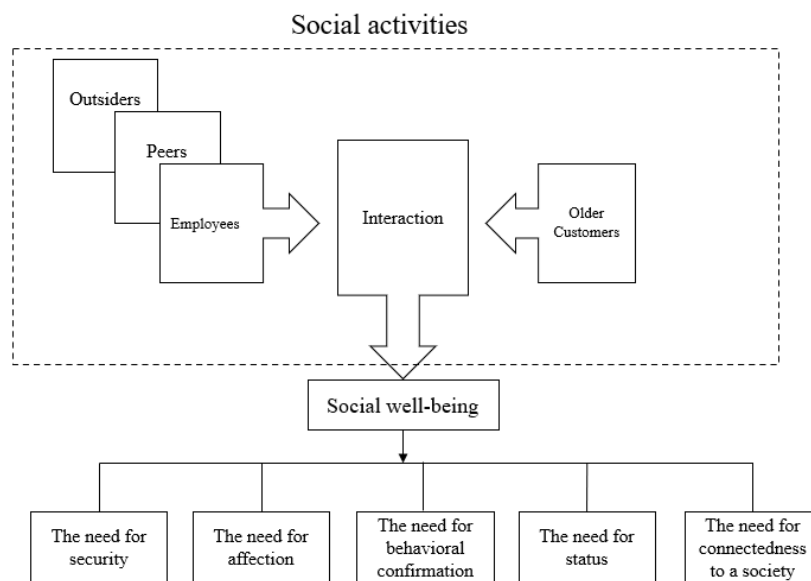
This is supported by Van Bruggen (2001) who examined the social well-being of older adults by outlining potential satisfiers of the three social needs: affection (positive relationships where individuals feel loved or liked, social support from others, and self-esteem), behavioral confirmation (a sense of belonging to a group and a sense of value) and status (recognition for skills or assets and a sense of achievement). In addition, this research demonstrates the importance of the need for security and the need for connectedness to a society in relation to social well-being.

The findings of this study indicate that social interactions with employees, peers and outsiders are necessary stimulators for older customers to achieve their social well-being. The research highlights the role that employees, peers, and outsiders play in promoting older customers' social well-being. The importance of employees' prosocial behavior is reinforced in achieving business success for service organizations (e.g., Chan and Wan, 2012; Kirillova et al., 2018). It corroborates previous findings that show that social support is also provided by employees other than in commercial contexts (Rosenbaum, 2009). The findings also exhibited that peers and outsiders are sources of support for older customers in achieving their social well-being through establishing social relationships in commercial contexts. The findings of this research also contribute to the advancement of TSR by identifying different types of social interactions as necessary prerequisites to fulfil social well-being.

As discussed earlier in relation to the findings of social interaction with employees, peers, and outsiders, the process of older customers' resource integration is summarized and illustrated in Figure 5.6 Social interactions enable actors involved in social activities to access, adapt and potentially integrate the resources needed to achieve transformative outcomes for older customers.

Figure 5.6 The process of older customers' resource integration
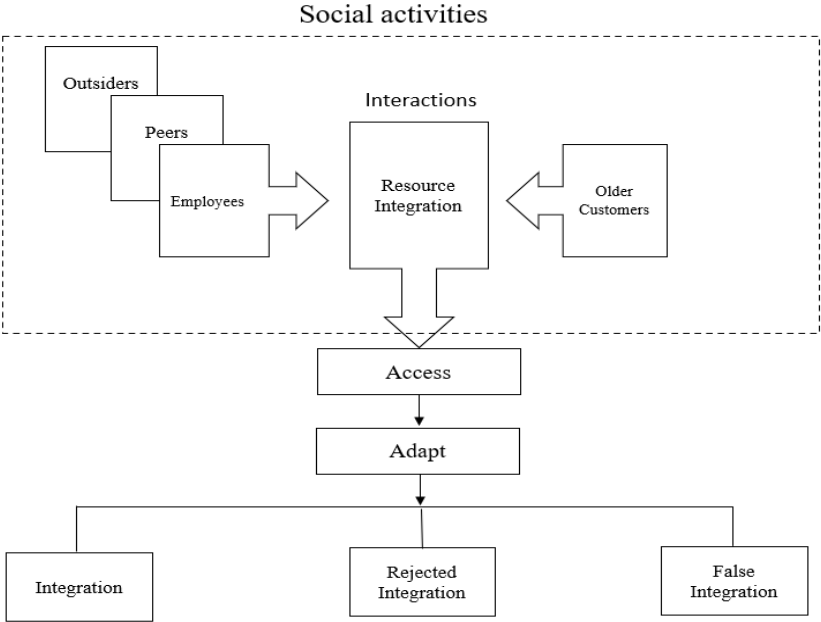
Source: collated by the researcher

The above is supported by Mele et al. (2010) who propose that interactions can lead to resource integration. During the integration process, service providers also play a role in facilitating and supporting older customers' social interactions with peers and outsiders in order to achieve older customers' social well-being, which is consistent with previous studies (Vargo and Lusch, 2008, 2012; Frow et al., 2015). Service providers contribute to the provision of resources accessible to older customers.

However, the findings of this research indicate that service providers are not the only resource integrator in older customers' social interactions. This is supported by Sweeney et al. (2015) who point out that there are other contributors to customers' well-being. Service providers provided operand resources such as spaces, opportunities, and the necessary materials for older customers to integrate the resources they need from employees, peer customers and outsiders to fulfil their social needs. In addition, the operant resources provided by service providers assist older customers in utilizing these resources.

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Moreover, the research indicated that the resources of employees are not sufficient to fulfill older customers' needs. For example, certain social activities require particular expertise and experience which employees may not have acquired. Thus, resources need to be provided by other actors. Social activities provided by commercial senior living facilities function as a platform for older customers to integrate the resources of peer customers and outsiders. The resources of peer customers and outsiders supplement the shortage of resources which older customers need to fulfil their needs.

Meanwhile, the resources provided by employees, peer customers and outsiders reinforce each other during the process of resource integration. Employees provided professional services and support to create opportunities for older customers to participate in social activities to fulfil their social needs. Peer customers reinforced the opportunities to older customers by providing support and encouragement. Together with employees and peer customers, outsiders produce connectedness through social activity opportunities for older customers within the wider community to fulfil their social needs.

The process of resource integration in this research demonstrates how resources provided by employees, peer customers and outsiders are integrated to supplement the shortage of older customers' personal resources to meet their needs. The finding is supported by Quist and Fransson (2014) who highlight the importance of understanding the source and process of customers' resource integration with different actors. This understanding can enable service providers to design better service offerings to address issues concerning the society, such as the challenges caused by the ageing population (Eriksson and Hellström, 2021).

5.3.5 Hypothesis 4: Social connectedness moderates the relationship between social interaction and social well-being

An interaction term has been added to the model as a latent variable by following the product indicator approach to test the moderation role of social connectedness in this research. The results of the moderating effect of social connectedness (SC) on social interactions with employees (SIE) and social well-being (SWB) are shown in Table 5.11. The latent variables representing the interaction of social connectedness and social interactions with employees has a positive significant impact on social well-being ($\beta = 0.250$, $p < 0.01$).

Table 5.11 The moderating effect of SC on SIE and SWB

Path relationship	β	SE	T	P
Interactions with Employees → Social well-being	0.288	0.054	5.364	0.000
Interactions with Peers → Social well-being	0.215	0.055	3.896	0.000
Interactions with Outsiders→ Social well-being	0.316	0.060	5.303	0.000
Social Connectedness → Social well-being	0.367	0.056	6.547	0.000
Social Connectedness*Interactions with Employees →Social well-being	0.250	0.094	2.675	0.007

The slope plots of results are applied to deliver a direct illustration of the results. This is shown in Figure 5.7.

Figure 5.7 The slope for the interactive effect of SC on SIE and SWB

The results of the moderating effect of social connectedness (SC) on social interactions with peers (SIP) and social well-being (SWB) are shown in Table 5.12. The latent variables representing the interaction of social connectedness and social interactions with peers has a positive significant impact on social well-being ($\beta = 0.219$, $p < 0.05$).

Table 5.12 The moderating effect of SC on SIP and SWB

Path relationship	β	SE	T	P
Interactions with Employees → Social well-being	0.271	0.055	4.909	0.000
Interactions with Peers → Social well-being	0.237	0.060	3.959	0.000
Interactions with Outsiders→ Social well-being	0.286	0.059	4.815	0.000
Social Connectedness → Social well-being	0.373	0.069	5.418	0.000
Social Connectedness*Interactions with Peers →Social well-being	0.219	0.101	2.167	0.030

The slope plot for the interactive effect of social connectedness (SC) on social interactions with peers (SIP) and social well-being (SWB) is shown in Figure 5.8
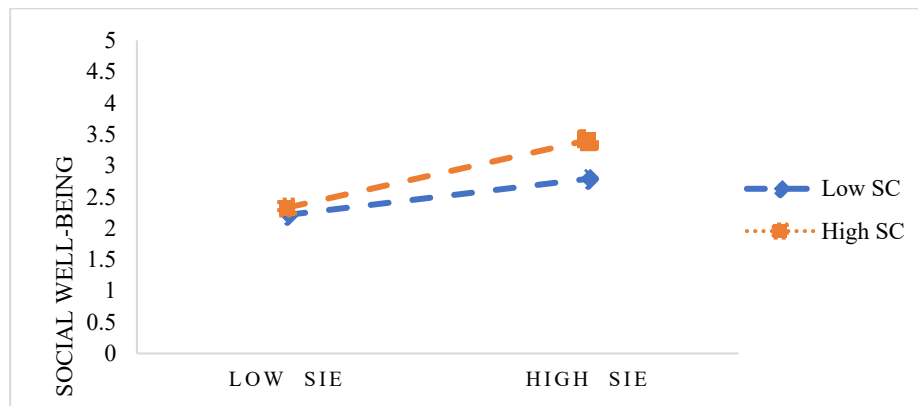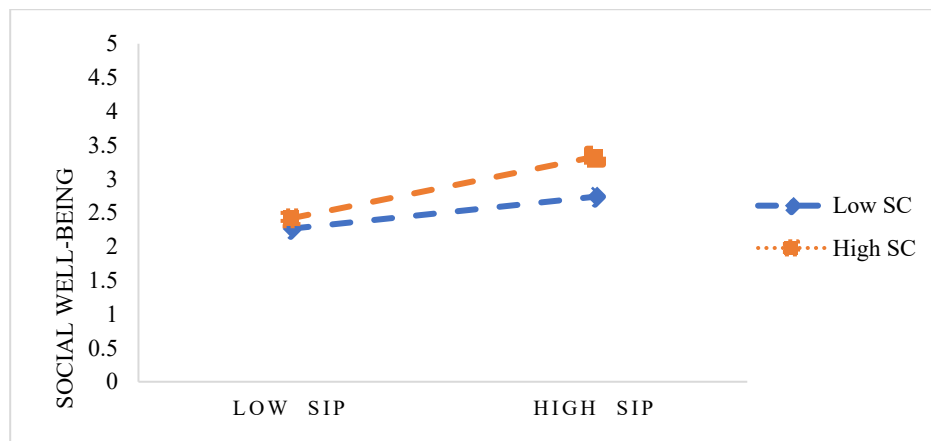

Figure 5.8 The slope for the interactive effect of SC on SIP and SWB

The results of the moderating effect of social connectedness (SC) on social interactions with outsiders (SIO) and social well-being (SWB) are shown in

Table 5.13. The latent variables representing the interaction of social connectedness and social interactions with outsiders has a positive significant impact on social well-being ($\beta = 0.239$, $p < 0.01$).

Table 5.13 The moderating effect of SC on SIO and SWB

Path relationship	β	SE	T	P
Interactions with Employees -> Social well-being	0.289	0.052	5.599	0.000
Interactions with Peers -> Social well-being	0.224	0.055	4.096	0.000
Interactions with Outsiders -> Social well-being	0.306	0.055	5.551	0.000
Social Connectedness -> Social well-being	0.375	0.058	6.413	0.000
Social Connectedness*Interactions with Outsiders →Social well-being	0.239	0.084	2.841	0.005

The slope plot for the interactive effect of social connectedness (SC) on social interactions with outsiders (SIO) and social well-being (SWB) is shown in Figure 5.9.
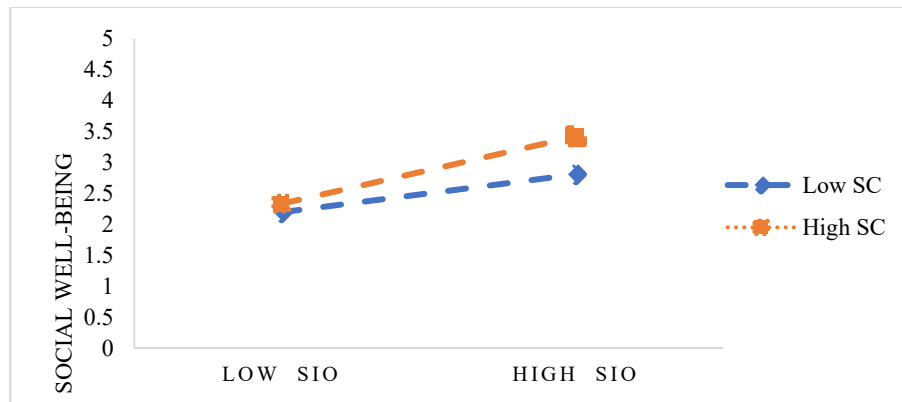
Figure 5.9 The slope for the interactive effect of SC on SIO and SWB

The results of the moderation analysis reveal that social connectedness positively moderates the relationship between social interactions and social well-being. Among the three different levels of social interactions older customers acquire from participating in social activities, social connectedness has the strongest moderation effect on the relationship between social

interactions with employees and social well-being, whereas it has the weakest effect on the relationship between social interactions with peers and social well-being.

The finding that social connectedness positively moderates the relationship between social interactions and social well-being strengthens the important role of social connectedness in improving older customers' social well-being. This is supported by numerous scholars who contend that social connectedness motivates individuals to seek health-related information (Kim and Fredriksen-Goldsen, 2017) and socially supportive resources (Yao et al., 2015) as well as to reconnect with other people (Maner et al., 2007).

This finding validates the moderation role of social connectedness which has been examined in several previous studies (Cruwys et al., 2013; Ong and Allaire, 2005; Yoon and Lee, 2010). It demonstrates that older customers are enabled by social connectedness to interact with employees, peers, and outsiders, which results in indirect influence on older customers' social well-being in a commercial setting. It is consistent with previous findings which reveal that the social connectedness of older customers can be facilitated by social interaction from participating in leisure activities such as tourism, shopping, drinking in a bar or going to a theatre (Toepoel, 2013; Kim et al., 2005; Neal et al., 2007; Uysal et al., 2016) to fulfill their enjoyment.

When this result was explored further through focus group discussions, many participants expressed that one of the reasons for older adults to move to commercial senior living facilities was to reduce loneliness as they were ageing due to changes in their physical condition.

Wang Yan: I lived alone. I used to live on the sixth floor and there was no lift. My family did not have time to look after me. I thought I'd better be independent and reduce the burden on my family. So, I decided to move here (Resident).

Here, Wang Yan described her personal situation such as her decreased health and living conditions resulting in a lack of attachment to a group/society, which reduced her opportunities for social interaction. Meanwhile, the absence of family members made her seek care elsewhere.

In addition, as older adults retired from their careers, they were likely to experience loneliness due to the decrease in their social contacts. It was disclosed in the focus group discussions by most of the participants that another reason for older customers to move to commercial senior living facilities was to maintain or expand their social relationships with others. Moving to commercial senior living facilities gave older customers a sense of belongingness which encouraged them to establish more social relationships with others. For example,

Zhang Min: Older people can make many friends here by participating in social activities together (Resident).

It was revealed that older adults longed to be socially connected and establish social ties with others, as this could possibly bring them joy.

Many participants mentioned that older customers were less lonely after they moved to senior living facilities as they participated in social activities and interacted with different people. It made older customers feel attached to the commercial senior living facilities, which contributed to a sense of security.

Wang Fang: We have a regular and colorful life here. It makes me feel very safe here (Resident).

Furthermore, the close relationships that older customers established with others through social activities in commercial senior living facilities helped them build social networks, receive social support, and strengthen social ties. These social components fulfilled older customers' need to feel cared for by others and gave them a sense of belonging to a group/community. For example,

Wang Yan: Regardless of the money we pay, the love given by the staff here cannot be bought by money…Some of the staff would come to keep us entertained even on their days off (Resident).

As Wang Yan described, older customers felt they were cared for, and they were satisfied with the quality of the relationships they established with employees in commercial senior living facilities.

Intriguingly, the focus group discussions revealed that even though a sense of belongingness generated by participating in social activities encouraged older customers to improve their social interactions with others, there were other factors which affected the relationships they had with others. For example,

Zhang Wei: I feel there is a psychological comparison among older customers, which is reflected in a sense of superiority. I feel superior to you and her. This may lead to certain conflicts...Besides, older customers feel there is a competition among themselves. The more older customers here, the fewer public resources they can share (Manager of events and activities).

Here, as Zhang Wei described, the psychological comparison provoked a connection barrier by creating a sense of superiority among older customers, which might leave a negative impact on their social interactions. Furthermore, older customers viewed each other as competitors in sharing public resources. This might lead to an irrational use of public resources and problematic social interactions.

The findings of the focus group discussions explain this positive moderation effect of social connectedness. Older customers receive love, care, and support from social interactions, which reduces their loneliness and gives them a sense of belongingness within commercial senior living facilities. As O'Rourke et al. (2018) point out, feelings of caring about others, being cared for by others and belongingness to a group are important indicators of social connectedness. The reduced loneliness and enhanced sense of belongingness encourage older customers to participate in social activities. The positive social interactions generated from their participation in turn contribute to various dimensions of social well-being which were discussed earlier, such as the need for affection and the need for connectedness to a society. This is consistent with a study conducted by Altinay et al. (2019) who found that when older customers' sense of belongingness to the wider community is stronger, the relationship between the social interactions older customers have with employees and their social well-being is greater in commercial places. Moreover, Sun et al. (2021) propose that the more socially connected people feel, the more time they spend interacting with others, and eventually the happier they become. This view is also supported by Macdonald and Hülür (2021) who discovered that when people have a lower level of loneliness, the relationship between social interactions and subjective well-being is stronger, especially during stressful situations such as the COVID-19 lockdown.

That the moderation role of social connectedness has the weakest effect on the relationship between social interactions with peers and social well-being might be caused by the following reasons. Firstly, as indicated by the findings of the focus group discussions, psychological comparisons can create barriers among older customers in commercial senior living facilities. The superiority of certain older customers might affect other older customers. It is supported by Hyun and Han (2015) who point out in their study that tourist attachment to a brand can be affected by the presence of other upper-class passengers. Secondly, according to

Brack and Benkenstein (2014), customers' willingness to interact with each other is driven by similarity. The different backgrounds and experiences of older customers might be another reason why they are not willing to interact with each other. Thirdly, the individual characteristics of older customers could be another possible reason affecting their willingness to interact with other older customers. Previous studies have discovered that customers may be affected by the appearance, behaviours and language of other customers (Grove and Fisk, 1997; Yin and Poon, 2016).

That the moderation role of social connectedness has the greatest effect on the relationship between social interactions with employees and social well-being might be caused by the family like environment created in commercial senior living facilities and the attentiveness of employees. Employees play an important role as they are people with whom older customers interact on a daily basis. Jones and Shandiz (2015) point out that customers value employees' ability to understand customers' feelings, anticipate their needs and respond accordingly. Older customers' requirements are acknowledged, and special assistance can be provided. As a result, older customers' willingness to interact with employees could be positively affected as a response to the trust and confidence they have in service employees during social interactions. This idea is supported by Iqbal et al. (2018) who suggested that customers are likely to develop confidence in a service when their expectations are met.

5.4 Summary

This chapter presented a summary and discussion of the findings, and the findings of this research were examined in relation to the previous literature in the relevant field. From the above discussion, it is clear that social activities play an important role in older adults' lives, especially among those who have relocated to commercial senior living facilities.

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Firstly, the findings demonstrate the positive role of employees, peers, and outsiders in promoting older customers' social well-being through social interactions. It corroborates previous studies which have used transformative service research and extends the scope beyond a focus on healthcare, finance, and social services and into hospitality services.

The findings of this research explore the process of how social interactions generate social well-being. The process includes the resources displayed by employees, peers and outsiders being accessed, adapted, and integrated. It has been illustrated that resource integration occurs during the social interactions of older customers with employees, peers and outsiders.

Surprising findings emerged from the process of resource integration during social interactions. Resource integration between employees and older customers appears reciprocal, happening in a looped manner. However, it was noted that not all the resources displayed by employees are integrated by older customers. Rejected resource integration occurs between peers and older customers, whereas false integration arises between outsiders and older customers.

Secondly, according to the results yield of the quantitative phase, the transformative outcomes generated by social interactions with employees, peers and outsiders are explained. The need for affection, the need for behavioural confirmation and the need for status is consistent with the previous literature on the dimensions attaining social well-being. In addition, two extra needs to achieve social well-being identified from the focus group discussions, namely, the need for security and the need for connectedness to a society.

Subsequently, the moderating role of social connectedness illustrates its indirect positive effects on the relationship between social interactions and social well-being. The reduced loneliness and enhanced sense of belongingness which are indicators of social connectedness enable and encourage older customers to participate in social activities. Moreover, it was noted that social connectedness has the greatest moderation effect on the relationship between social interactions with employees and social well-being. This may emanate from employees' attentiveness and their ability to understand older customers' needs. On the other hand, social connectedness has the weakest effect on the relationship between social interactions with peers and social well-being. This may be caused by psychological comparison, dissimilarity, and the individuality of older customers.

Lastly, the findings of the study should inform the future of hospitality services in facilitating older customers' social needs to improve their social well-being. Generally, there is a lack of social activity scheme and there is a need to improve the system of social activity provision. The findings provide a picture of the improvement needed to encourage social interactions among older customers in order to increase their social well-being.

The next chapter will focus on reviewing the key findings of the research. The theoretical contributions, recommendations and practical implications to enhance social interactions will be discussed. Finally, the possible direction for future research based on the findings of this study will be suggested.

Chapter Six

Conclusion and Recommendations

6.1 Chapter overview

This chapter concludes the research by first summarizing the key findings from both the quantitative and qualitative phases. Theoretical contributions are presented in response to each research gap summarized from the previous chapters. Thereafter, the practical implications with regards to the links between social interactions and social well-being in commercial settings are presented. Furthermore, this chapter presents the limitations of this research and the recommendations for future research. Finally, the researcher's personal reflection on their research journey is summarised.

6.2 Review of the study's findings

The researcher examined the direct links which exist between three different levels of social interactions and social well-being as well as the moderation role of social connectedness across the relationships above.

Based on the results of the survey, the researcher conducted focus group discussions to validate the findings with older customers, employees and government officials on social activities provided by commercial senior living facilities and the social well-being of older customers. The results of the quantitative and qualitative methods were integrated (Table 6.1). The extent of similarities, differences, and unexpected findings regarding the factors influencing older customers' social well-being were discussed.

Table 6.1 Summary of the integration of quantitative and qualitative findings

Quantitative	Qualitative
Positive social interactions with employees have positive effects on older customers' social well-being	• Social interactions with employees lead to the fulfilment of the following needs which help older customers attain social well-being the need for security the need for affection the need for behavioural confirmation the need for status the need for connectedness to a society • Resources between employees and older customers were integrated during their interactions to generate transformative outcomes. This process included accessing, adapting, and integrating these resources. • Unexpected findings Two more needs were identified pertaining to social well-being, namely the need for security and the need for connectedness to a society. The resource integration between employees and older customers is reciprocal and takes place in a looped manner.
Positive social interactions with peers have positive effects on older customers' social well-being	• Social interactions with employees lead to the fulfilment of the following needs which help older customers attain social well-being the need for affection the need for behavioural confirmation the need for status • Resources between peers and older customers were integrated during their interactions to generate transformative outcomes. This process included accessing, adapting, and integrating these resources. • Unexpected findings Rejected resource integration also occurs during older customers' social interaction with peers.
Positive social interactions with outsiders have positive effects on older customers' social well-being	• Social interactions with employees lead to the fulfilment of the following needs which help older customers attain social well-being the need for affection the need for behavioural confirmation

	the need for status the need for connectedness to a society • Resources between peers and older customers were integrated during their interactions to generate transformative outcomes. This process included accessing, adapting, and integrating these resources. • Unexpected findings False integration of resources also occurs during older customers' social interaction with outsiders.
Social connectedness positively moderates the relationship between social interactions and social well-being	The social components of participation in social activities such as building social networks, receiving social support, and strengthening social ties fulfilled older customers' need to feel cared for by others and gave them a sense of belonging to a group/community.

According to Baptista et al. (2015), the potential contribution of a doctoral thesis may be affected by originality, creativity, and innovation. Guetzkov et al. (2004) propose that originality covers a broad range of meanings in social sciences and humanities. It can refer to the application of a new approach, theory, research method and data, examining a new topic, investigating underdeveloped research areas, or developing new findings. Creativity is viewed as bringing about valuable knowledge relevant to the disciplinary society the doctoral thesis contributes to and it is constructed at individual, societal or economic levels (Baptista et al., 2015; Pope, 2005; Sternberg and Lubart, 1999). Innovation is defined as the production of the knowledge in the doctoral thesis, and it is useful in solving societal issues or improving societal conditions (Baptista et al., 2015). All these elements can be found in this thesis.

Originality- This research provides empirical evidence that commercial senior living facilities can be places where supportive resources are exchanged between older customers, employees, peers and outsiders, leading to enhanced social

well-being for older customers. The application of mixed methods provides a comprehensive understanding of the underdeveloped role of commercial senior living facilities in addressing the societal issue. Additionally, it provides further scope for recognizing the transformative potentials of services in commercial contexts.

Creativity- This research has demonstrated the positive effects of hospitality services in influencing customers' well-being. It offers an alternative avenue to generate uplifting changes in well-being outcomes and financial benefits for the hospitality industry. Meanwhile, it also provides a service model which can be duplicated by other businesses within or beyond the hospitality industry which is beneficial to both service entities and customer entities.

Innovation- This research provides evidence that older adults can benefit from commercial friendships which offer supportive resources in the marketplace. It highlights the important role of social connectedness in improving the social well-being of older customers. Furthermore, this research also provides a possible solution to alleviating rising issues such as loneliness and social isolation caused by the growing ageing population. The following section of the chapter discusses the contributions of the study in detail.

6.3 Theoretical Contribution

This study makes a significant theoretical contribution in several areas in response to the research gaps discussed in chapters 2 and 3. A summary of the research gaps and the corresponding contribution of this thesis are discussed in the following sections:

I) In contrast to the financial, economic, and health aspects of well-being, the social function of well-being has received very less attention from transformative service researchers (Kong et al., 2015). Meanwhile, previous transformative service research has focused on issues such as deprived neighborhoods in health services (O'Mara-Eves et al., 2015), vulnerable customers in financial services (DeVaney, 2016), or minority communities in social services (Hepi et al., 2017). Hospitality services have not been entirely explored through the lens of TSR (Galeone and Sebastiani, 2021). In addition, research into the association between services and well-being is still underdeveloped (Anderson and Ostrom, 2015).

The findings of this study have revealed that social interactions generated from social activity services provided by commercial senior living facilities contribute to older customers' social well-being. These findings are particularly important because they supplement the TSR literature with the understudied hospitality services and demonstrate the transformative features of hospitality services in improving individuals' social well-being. From these findings we can conclude that the transformative services provided by commercial senior living facilities can generate the social well-being of their customers, which highlights the positive relationship between hospitality services and the well-being outcomes of their customers.

II) The well-being of older adults has been investigated extensively from healthcare, psychological and sociological perspectives in previous studies. These studies have also demonstrated to some extent that the tourism and service industries have a great influence on addressing the worldwide challenge of older adults' well-being. However, there is still a dearth in understanding the well-being of this older market segment (Ferrer et al., 2016). Moreover, according to Coulthard et al. (2011), satisfying an individual's social needs results in the achievement of their total well-being. In order to improve overall well-being,

sub-dimension assessment provides more in-depth information (Ruggeri et al., 2020).

The findings of this study revealed that the social dimension of older customers' well-being could be enhanced through interaction opportunities provided by hospitality services. Furthermore, different actors of social interactions with older customers positively affect the fulfillment of older customers' social needs. These findings are particularly important because very few studies have examined different levels of social interactions and their impacts on the social well-being of older customers in commercial settings. From these findings we can conclude that employees' prosocial behavior is important in achieving business success for service organizations (e.g., Chan and Wan, 2012; Kirillova et al., 2018). Furthermore, along with employees, other actors, namely peer customers and outsiders also play a crucial role in promoting older customers' social well-being in commercial settings.

III) The direct and communicative interactions between consumers and service providers hold considerable transformative potential due to the dynamic nature of services (Anderson et al., 2013). Researchers have discovered the transformational potential of services (Sumardi, 2018). Interestingly, it is suggested that services such as hospitality, which are not considered to possess distinct transformative goals, may have positive impacts on consumers' well-being in unanticipated ways (Rosenbaum et al., 2011). There is multidisciplinary evidence that social relationships developed in the hospitality industry, such as in bars, restaurants and beauty shops, may have transformative effects on individuals' well-being (e.g., Altinay et al., 2019; Song et al., 2018). However, the social outcome of these relationships generated from various types of interactions on older consumers' well-being is still under-investigated (Altinay et al., 2018). Future researchers need to look beyond the commercial purposes of such services in order to have a better understanding of their transformative

potential. Moreover, Bruce et al. (2019) indicate that even though previous studies have provided partial evidence on resource integration (e.g., Edvardsson et al., 2014; Kleinaltenkamp et al., 2012), there is still a dearth in understanding the resources that customers could integrate.

The findings of this study have revealed that social interactions developed from services provided by commercial senior living facilities had transformative potential leading to the improved social well-being of older customers. In addition, there was evidence indicating resource integration occurred during social interactions, which resulted in transformative values. These findings are particularly important because they extend the traditional focus of transformative service research which was primarily on the interactions among and between customers, service providers and partners (Galeone and Sebastiani, 2017), by investigating the role of outsiders in relation to social well-being. The findings highlight the role employees, peers, and outsiders play in promoting older customers' social well-being.

The findings of this research also contribute to the advancement of TSR by identifying different levels of social interactions as necessary prerequisites to fulfil social well-being. Furthermore, the findings provide evidence of the fact that the resources between/among older customers, employees, and outsiders, such as physical, financial, informational, and relational resources, can lead to transformative outcomes. Furthermore, the findings also unveil the process of resource integration which occurred during social interactions which is viewed as a broad concept in TSR (Anderson et al., 2013). From these findings we can conclude that social relationships developed in hospitality services have transformative effects on customers' social well-being. Employees, peer customers and outsiders are substantial sources of resources which customers need to achieve their social well-being.

IV) Some researchers dispute that there is evidence to show that the more people are connected, the lonelier they will become, because it requires significant effort mentally and emotionally to interact with people in order to maintain one's social network which leads to the disruption in personal time and space (Turkle, 2017). In addition, it can be stressful to be available to others in a communication environment (Mheidly et al., 2020). It can also lead to health-related problems when people encounter disagreements in their intimate relationships (Kiecolt-Glaser and Wilson, 2017). Prior studies have examined the moderation role of social connectedness on health problems (e.g., Cruwys et al., 2013) and subjective well-being (Yoon and Lee, 2010). However, the moderation role of social connectedness in the relationship between social interactions and social well-being has not been investigated.

The findings of this study have revealed that social connectedness positively moderates the relationship between social interactions and social well-being. These findings are particular important because they enrich the very limited number of studies investigating the moderation role of social connectedness in the relationship between social interactions and social well-being. They validate the moderating role of social connectedness by highlighting the impact of social connectedness on improving social well-being among older customers. From these findings we can conclude that older customers are driven by social connectedness to interact with employees, peers, and outsiders which positively impacts their social well-being indirectly. However, social connectedness is not a prerequisite for older customers to experience social well-being.

V) The hospitality industry has been criticized for its negative impact on public order (e.g., Barnoya et al., 2016; Harnden, 2018) and limited effort in offering services which contribute to well-being outcomes (Martinsdottir, 2020). The role of hospitality services in facilitating older adults' well-being still calls for

empirical attention (Altinay et al., 2018) and how hospitality services address societal issues, such as the well-being of older adults is still under-investigated. Altinay et al. (2018) stated that hospitality plays an essential role in creating and promoting well-being regardless of its commercial or non-commercial forms. Moreover, Abaeian et al. (2019) urged the hospitality industry to provide transformative services in a holistic manner due to the increasing expectations of and responsibilities within society.

The findings of this study demonstrate that services provided by the hospitality industry have a positive effect on social well-being and these positive effects can be strengthened through the reduction of loneliness and social isolation. These findings are particularly important because they highlight the key role hospitality services can play with service offerings to address a societal problem that the ageing population is facing-older adults' social connectedness and social well-being. These findings also provide evidence on the feasibility of transformative services in hospitality organizations and enriched literature related to this emerging business model in hospitality services.

From these findings we can conclude that the approaches identified in commercial senior living facilities can be employed to improve customers' well-being, which cultivates potential opportunities for the leisure, hospitality, and tourist industries (Ismail et al., 2019).

VI) Most of the hospitality studies regarding ageing are greatly focused on tourism by European and Asian scholars (e.g., Mangunsong, 2020; Patterson et al., 2021; Zielińska-Szczepkowska, 2021). Only a limited number of studies on senior living facilities have been published in hospitality related journals (Bhat et al., 2016; Chaulagain et al., 2021; Lee and Severt, 2017; Lee and Severt, 2018; Lee, 2020a, 2020b; Pizam, 2014). Notably, research focusing on senior living

facilities will be in great demand in the future (Pizam, 2014). Additionally, previous studies have only examined the quality of food, services, care, and service delivery in senior living facilities (e.g., Abbey et al., 2015; De-ying et al., 2019; Martin and Powell, 2017; Vitale-Aussem and Andrews, 2016). Hospitality services, which may carry a much stronger multipurpose remit than has been traditionally known, should respond to the needs of this growing clientele.

The findings of this study have revealed that services provided by commercial senior living facilities have transformative potential and could be used to fulfill older customers' social needs. These findings are particularly important because they respond to the call to broaden understanding of how customers' lives can be improved by consumption settings (Friman et al., 2018), and provide an alternative perspective to further understand the social and societal benefits of customer involvement for both hospitality and healthcare services. These findings contradict the traditional view that commercial senior living facilities are places for decline or death (Ayalon, 2015) and the perception that people only reside in care institutions for health care purposes (Friedman et al., 2016). On the contrary, these findings illustrate that commercial senior living facilities play an important role in creating a positive customer experience and developing positive outcomes (Fisk et al., 2018) for older customers. From these findings we can conclude that services provided by commercial senior living facilities serve as social interaction platforms through which older customers' social well-being can be enhanced.

VII) Prior studies have revealed that older customers fulfill their social needs through their involvement in commercial activities (e.g., Altinay et al., 2019). Verbal communications with employees has been found to deliver companionship, emotional and instrumental support in retail and service contexts (Rosenbaum et al., 2017). Additionally, even indirect service

employees have been identified as providers of social support to customers (Rosenbaum, 2009). Burns et al. (2012) point out that changes in older adults' lives bring about negative outcomes such as social exclusion and insufficient affection. Therefore, older adults are noted to experience decreased social well-being (Lecovich, 2014) and more support is desired to help them reduce the possible negative effects of the relocation. This research illustrates that social interaction in service settings is considered more important to older customers than to any other age group (Liu et al., 2020). As a result, the role social interactions play in improving older adults' social well-being in commercial senior living facilities needs to be examined.

The findings of this study revealed that social interactions generated by participating in social activities positively influenced older customers' social well-being. Supportive resources from employees, peers and outsiders were integrated by older customers to create transformative outcomes. These findings are particularly important because they highlight an alternative way to address a societal problem: older adults' social connectedness and social well-being, by conducting an interdisciplinary study and examining constructs from various disciplines, such as social interactions with employees, social connectedness, and social well-being (healthcare, psychology, and sociology). These findings broaden Chinese cultural values in relation to older adults' care from family orientation and kinship to other sources outside of the family. Furthermore, the positive effects of social interactions can be duplicated by commercial senior living facilities or other commercial organizations to help the fast-growing older population overcome their loneliness and social isolation to achieve enhanced social well-being. From these findings we can conclude that commercial senior living facilities are places which can reduce older adults' loneliness through commercial activities and through their social interactions with employees, peers and outsiders. Moreover, diverse actors such as employees, peers and

outsiders can be sources of social support to older customers in commercial settings.

VIII) Subsequently, this study also makes several methodological contributions. This research is the first study which has employed a mixed methods research design to examine, explain and further explore the impact of different levels of social interactions on social well-being as well as the moderation role of social connectedness. The mixed methods design allowed the research to benefit from two methodological paradigms. A more comprehensive understanding of the link between social interactions and social well-being was provided by the integration of quantitative and qualitative methods than if only one method had been used. The utilization of surveys and focus group discussions commonly used for quantitative and qualitative research respectively ensured greater validity of the research. Explanation and further exploration of the preliminary results provided by a mixed methods research design is one of the methodological contributions of this research. The qualitative phase helped the researcher to bring out information which was hidden and unexpected from the quantitative phase. This research makes another contribution to the methodological literature by using data from a developing country, China, with the largest ageing population in the world to study the impact of social interactions on social well-being as well as the moderation role of social connectedness.

6.4 Practical and Managerial Implications

In addition to the above mentioned significant theoretical and methodological contributions, this research also offers several valuable practical and managerial implications which can be employed by hospitality businesses. This research demonstrates the crucial role that hospitality services play in providing social

interaction opportunities to older customers to generate social well-being outcomes.

First, service providers should identify the resources they need to create social interaction opportunities or to enhance the social interaction experience for older customers. Having identified these resources, service providers should locate the resources needed and establish partnerships with individuals, groups, organizations, or communities who can provide the resources, such as vocal music teachers and vocational schools, in order to design an inclusive service system. Service providers should create a service network resource pool to facilitate the resources required for older customers to participate in substantial social interactions. Creating a service network resource pool could enable resource providers to share information, co-sponsor social activities, provide financial support, and evaluate older customers' needs. Brewster et al. (2019) proposed the areas in which a service network could help strengthen service offerings, which included identifying customers' needs, reducing service gaps, drawing up plans, working together to complete current work or achieving shared goals. By creating the service network resource pool, service providers can receive support from the wider community in order to supplement their shortage of skills or assets for older customers' social interactions. In addition, it could improve the efficiency of delivering service offerings to older customers.

Secondly, service providers should create older customers' lived experience and preference profiles which would identify individual older customers' needs and preferences. The findings of this research show that social interactions have positive effects on social well-being and illustrate that older customers can benefit from meaningful social interactions. Older customers with passive personalities require more intrinsic motivation to participate in social interactions, such as self-esteem and a sense of value. Therefore, understanding

older customers' background such as their past experiences and preferences will help service providers provide social activities which meet older customers' needs.

Service providers should focus on rebuilding older customers' self-esteem. Social activities which can enable older customers to make achievements within a short period of time should be designed in order to create transformative outcomes and making them feel respected. In addition, social gatherings, such as photography/painting exhibitions, which could deliver a sense of ritual should be organized regularly, where older customers can make friends and expand their social network.

It was suggested that older customers who suffer from physical disabilities or cognitive impairment should also be included in social activities. A participant in the focus group discussions pointed out that social activities carry the potential of being expanded to wider audiences including frail older adults and those suffering from dementia. It was suggested that older customers who could not attend social activities due to physical or mental difficulties should not be excluded; rather service providers or employees should take the initiative and deliver social activities to them.

Thirdly, service providers should ensure different service offerings are available and accessible to older customers. All customers in commercial senior living facilities should be able to choose and participate in various services freely. Older customers who suffer from physical disabilities or cognitive impairment should also be included in social interactions. Service providers should design specific activities to facilitate the social needs of frail older customers. Occasions such as having a coffee & cake session or attending exhibitions which can be good opportunities for older customers to mix and make new friends

should be provided by service providers to assist older customers to interact with others. Service providers can inform older customers of interaction events or occasions through online and offline communication channels. For example, service providers can use WeChat groups or social media platforms as well as notice boards in public areas or canteens to reinforce the message.

Fourthly, the results of this research have reinforced the positive role that employees play in relation to older customers' social well-being. Attention and focus should be given to employees as much as that given to older customers in commercial senior living facilities. Recruiting and selecting the right people for positions is crucial for service providers. Service providers should conduct an overall evaluation during the employee recruitment process. The candidates' character, service awareness (Selzer et al., 2018), commitment to work (Gupta et al., 2018) and past customer service experience should be carefully considered and evaluated. Proper training, such as training in the taboos and boundaries which are important when communicating with older customers, and support in the workplace should be delivered to ensure employees' performance during service encounters.

Meanwhile, service providers should recognize outstanding service provided by employees as they can consider utilizing certain personal behaviors of employees which have received a positive response from older customers and set these as a standard for all employees. For example, employees calling older customers 'granny' or 'grandpa' cultivated a sense of belongingness as well as conveying love and respect to the older customers. This could be promoted within commercial senior living facilities to all employees to create a family environment for older customers.

Furthermore, service providers should review employees' performance regularly. Working for older customers requires employees to be patient and dedicated. If employers note a lack of patience or dedication during the performance review, service providers need to provide further training or offer an internal transfer.

Fifthly, older customers' voices should be heard. Service providers should provide opportunities or platforms to get older customers involved in the service experience and value co-creation (Rosenbaum et al., 2011). Older customers are the end users of service offerings in commercial senior living facilities. Thus, engaging older customers in planning or designing a product or service can provide service providers with real time experience and valuable feedback. Service providers would also be able to gain a comprehensive understanding of older customers' needs and strengthen service delivery quality in order to generate transformative outcomes among older customers. By doing so, service providers would benefit from creating satisfied and happy customers who are likely to promote the business through positive word-of-mouth. New customers would be brought into hospitality organizations through positive word of mouth from current customers. This would not only strengthen the competitiveness of hospitality organizations in the marketplace, but also increase their revenue and promote the sustainable development of the business.

Sixthly, due to the positive effects of the social interactions generated by service offerings in commercial senior living facilities, service providers or organizations from other industries providing services to older adults could duplicate the model to serve a wider audience. Service providers and the government should work together and endeavour to establish a social activity mechanism for older adults to enhance their social well-being. The State council has issued a guideline for regional departments to promote older adults'

education in cities and counties where local resources and markets are encouraged to be utilized according to the Development Plan for Elderly Education which was implemented in 2016. The mechanism for social activities should be added and used as a supplement to promote education and social life for older adults. Furthermore, an administrative organization should be assigned to manage these social activities, similar to how children's palace (a public facility where children participate in extracurricular activities such as singing, music and sports) is operated. Local community centres could be used as social activity centres for older adults and certain older adult participants in social activities could be given some authority and duties which would encourage more older adults to be actively involved.

6.5 Limitations and Future Research

This research filled the gaps identified in the literature by investigating the impacts of social interactions on social well-being as well as the moderation role of social connectedness. However, every research has limitations. Researchers can reflect on the research process and the improvements which the research could make through acknowledging and discussing the research limitations (Altinay et al., 2015; Merriam and Tisdell, 2015). As a result, opportunities for future research can be identified and recognized.

First, the research focused on service offerings in commercial senior living facilities in China. The idea of a collective life and personal relationships are significant features of the Chinese culture. However, there may be different perspectives on the same service offerings in other cultures. Therefore, the generalization of the results to other countries and cultures requires considerable caution. The key strength of this research is the application of a mixed methods design. More studies are welcomed to apply the same instruments to explore the

perspectives of various countries with different cultures in order to make a comprehensive comparison in the future.

Second, due to the time and financial constraints (mentioned in Methodology chapter 4.11), convenience sampling and cross-sectional data were employed in this research. A longitudinal study would be helpful to examine the impact of social interactions on social well-being in the future. In addition, the researcher was only able to collect data from five-star commercial senior living facilities. Other star rankings of commercial senior living facilities were not included in this research. Furthermore, not all older customers residing in commercial senior living facilities were among the target sample in this research. Only older customers who were independent in their daily activities in commercial senior living facilities were recruited to participate in this research. Future studies could expand the research domain into other star rankings of commercial senior living facilities and include all older customers residing there in order to comprehend more fully how social interactions and social well-being are related.

Third, the research model in this research was proposed within the transformative service domain. Other potential factors which may influence social well-being outcomes during customer consumption were not included. For example, customer satisfaction is found mediating peer customer interactions and social well-being (Altinay et al., 2019). Employee-customer interactions positively influence the customer experience and alleviate customers' loneliness (Song et al., 2018). Future studies could expand the scope of TSR studies to include variables such as customer satisfaction and customer experience in the proposed research model.

Fourth, the data was collected before the COVID-19 pandemic. Health measures such as social distancing and mask wearing might change the patterns of social interactions in service settings. Although the restrictions have been relaxed, the impact of these measures or if there is any impact at all remains unknown. Future studies can follow up and generate data on the proportion of older customers who participate in social activities post-pandemic. It could help fill the gaps in future transformative service research.

This research has recognized the significant impact of different levels of social interactions on social well-being as well as the moderation role of social connectedness. The relationship between social interactions and well-being has been studied in different disciplines and industries, but none has explored the three different levels of social interactions and the social dimension of well-being in hospitality services. This research has identified the positive role of social interactions with employees, peers, and outsiders on social well-being. In addition, social connectedness positively moderates the links mentioned above. The outcomes of this research will contribute to advancing understanding of the research topic and will add value to theoretical and practical fields.

6.6 Personal reflection

My research was inspired by my grandparents and my parents' lives. Witnessing their ageing day by day, I started to think about my responsibilities and what would happen when it was my turn. Therefore, I made a bold decision to take up PhD research to find some answers. Returning to education after eight and half years working in industry, my PhD journey was an experience with mixed feelings, during which time there were frustrations, doubts and self-questioning, as well as enjoyment, and excitement.

It was a challenge to adjust to being a student again at the beginning of the PhD journey. The library, the office and home became my routine. I had my struggles to find the meaning and direction for my research. Following the suggestions from the book written by De Vita et al. (2021), I realized that reading broadly and talking with my peer colleagues who had similar experiences could help me find the direction for my research and motivated me to explore some great ideas to improve my research.

Attending international conferences, networking events and academic workshops led me to an academic world I had never experienced before. Knowing other people's interest in my work and being able to exchange academic ideas gave me enormous confidence in completing this PhD thesis.

It was an exceptional experience to collect data in the field. I realized that establishing trust was extremely important between the participants and myself. The information I collected from the fieldwork did not only become the data for my research, but also turned into a lasting lesson for life. Moreover, the trust from my supervisor team in my academic abilities and the value of my research pushed me to progress further along the academic path. My first publication was definitely a milestone on my PhD journey.

With the breakout of COVID-19 and the birth of my first child during the lockdown, my PhD research has experienced a certain level of disruption. I learnt how to continue my research through these difficult times with extensive support and help from all directions. My mum flew to the UK from China when the COVID situation was the worst in the UK. My husband took over most of the parenting responsibilities. My friends and colleagues continuously sent me supportive messages and emails. My director of studies gave me direction for

my study as well as tips for parenting. All these made me feel that I was not alone in those situations.

The overall PhD journey was very beneficial to me, from both the academic and personal perspective. I am clearer and more determined to pursue my career in the academic world to keep on challenging myself and discover my unknown potential.

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APPENDICIES

Appendix 4.1 Participant information sheet for the survey

Participant Information Sheet

Study title

Social Connectedness: How commercial senior living facilities help enhance social well-being of the elderly through social activities in China

You are being invited to take part in a research study. Before you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully.

What is the purpose of the study?

This research aims to investigate how the engagement of elderly customers in interactive social activities provided by high-end senior living facilities help older adults socially connect. In doing so, it will examine the role that such social activities and the social connections engendered play in enhancing older adults' social well-being. This questionnaire is designed to examine the relationship between several constructs, namely, interaction with employees, interaction with peers, customer experience, customer satisfaction, social connectedness and social well-being. The duration of this study is three years. The overall design of this research includes relevant academic literature review, data collection via focus groups and questionnaires, and data analysis.

Why have I been invited to participate?

You have been invited as being someone who meets the following criteria:
1). Being over 60 years old.
2). Have had experience engaging in social activities.
3). Be independent in activities of daily living

Do I have to take part?

It is up to you to decide whether or not you want to take part.

What will happen to me if I take part?

You will be asked to fill in a paper questionnaire. This will take no more than 30-40 minutes. Should you feel tired or unwell, the questionnaire can be filled in at different times.

There are minimal risks associated with participation in this research. *You are free to withdraw at any time and without giving a reason.*

What are the possible benefits of taking part?

Taking part in the study will not provide any direct benefits. However, this will help understand how engagement in cultural activities help the elderly socially connect and the role cultural activities play in enhancing older adults' social well-being. A small gift will be given to the participants as an appreciation of thanks for taking part in this questionnaire survey.

Will what I say in this study be kept confidential?

All information which is collected about you during the course of the research will be kept strictly confidential (subject to legal limitations). Confidentiality, privacy and anonymity will be ensured in the collection, storage and publication of research material.

The collected data will be securely stored in Google Drive, for which the University has a security agreement. Data generated by the study will be retained in accordance with the University's policy on Academic Integrity. Please note that the data generated in the course of the research will be kept securely in paper or electronic form for a period of ten years after the completion of the research project.

What should I do if I want to take part?

If you want to take part, you will need to fill in the questionnaire. You will be asked a number of questions regarding your engagement in social activities, such as how long do you spend in social activities? How often do you engage in social activities? etc. This will not take more than 30-40 minutes.

What will happen to the results of the research study?

The results of the research study will be used in researcher's thesis for the Doctor of Philosophy degree and in academic publications. The PhD thesis will be published and held in Oxford Brookes University Library and will be available for public use. Moreover, any information about findings (the relationships between several constructs mentioned above) of this research will be available to participants upon request.

Who is organising and funding the research?

The researcher is conducting the research as a student at Oxford Brookes University, Faculty of Business, the Oxford School of Hospitality Management. This research is self-funded.

Who has reviewed the study?

The research has been approved by the University Research Ethics Committee, Oxford Brookes University.

Professor Levent Altinay and Dr Jackie Clarke are supervising my PhD research at the Faculty of Business, Oxford Brookes University.

Contact for Further Information

Should you have any further information about the research, please contact the researcher, Kuo Feng directly via email: kuo.feng-2016@brookes.ac.uk or via her mobile phone 15942014925. Or you can contact the supervisory team: Professor Levent Altinay laltinay@brookes.ac.uk, Dr. Jackie Clarke jrclarke@brookes.ac.uk

If you have any concerns about the way in which the study has been conducted, you should contact the Chair of the University Research Ethics Committee on ethics@brookes.ac.uk.

Thank you
Date

Appendix 4.2 Consent form for conducting the survey

OXFORD
BROOKES
UNIVERSITY

CONSENT FORM

Full title of Project:

Social Connectedness: How commercial senior living facilities help enhance social well-being of the elderly through social activities in China

Name, position and contact address of Researcher:
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Please initial box

1. I confirm that I have read and understand the
    information sheet for the above study and have had the
    opportunity to ask questions.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving reason.

3. I agree to take part in the above study.

☐

4. I agree to the focus group being audio recorded.

☐

5. I agree to the use of anonymised quotes in publications

☐

☐

6. I agree that my data gathered in this study may be stored (after it has been anonymised) in a specialist data centre and may be used for future research.

_____   _____   _____

Name of Participant   Date   Signature

_____   _____   _____

Name of the Researcher   Date   Signature

Appendix 4.3 Details of adjustments made during the pilot-testing of the questionnaire

Groups	Raised issues	Adjustment
The supervisory team	• Suggested defining two questions in demographic section more accurately Q3 was originally as follows: '*What social activities do you normally participate?* ' The supervisory team pointed out that 'normal' was not appropriate and it was more accurate to define a period. Similarly, Q5 was originally as follows: '*How long do you spend in social activities?* '	As a result, changes were made to Q3 and Q5 as follows: Q3: *What social activities have you participated the most over the last month?* Q5: *How long on average do you spend in social activities each time you participate?*
	• Clarified the heading for Part 1 The heading for Part 1 was originally as follows: '*Part 1- Social Interactions with Employees* ' It was described by the supervisory team as one that did not distinguish the employee type	As a result, the type of employee was specified. The heading for Part 1 became: *Part 1- Social Interactions with Employees involved in social activities*
	• Reworded the questions in Part 2 Questions in Part 2 were to examine the interaction between older customers with their peers in the commercial senior living facilities. Therefore, it was pointed out that the word '*customers*' was not specific/appropriate enough.	As a result, the word '*customers*' in Part 2 was replaced by '*fellow residents*'.
The focus group	• Reworded the questions in Part 4 The participants pointed out that the questions in Part 4 were quite negative and they felt reluctant to answer. They suggested rewording the questions to avoid the negative effect. The original questions were as follows:	As a result, the questions in Part 4 were adjusted as follows: *I feel connected from the world around me.* *I feel that I really belong to the people I know.* *I don't feel too distant from people.*

	I feel disconnected from the world around me. *Even around people I know, I don't feel that I really belong.* *I feel too distant from people.* *I have no sense of togetherness with my peers.* *I don't feel related to anyone.* *I catch myself losing all sense of connectedness with society.* *Even among my friends, there is no sense of brother/sisterhood.* *I don't feel that I participate with anyone or any group.*	*I have certain sense of togetherness with my peers.* *I feel related to people.* *I don't catch myself losing all sense of connectedness with society.* *There is certain sense of brother/sisterhood among my friends.* *I feel that I participate with people or some groups.*
The responses from 30 respondents	• In the demographic section, an item, asking the respondents about the marital status, was include. *Q6: Please select your marital status:* ☐ *Single* ☐ *Married* ☐ *Widowed* ☐ *Prefer not to mention* Several respondents seemed to be uncomfortable with the question and suggest not to include it.	Since the information about the marital status was not crucial, it was decided to delete this item.
	• In the demographic section, an item, asking the respondents about the social activities they have participated the most over the last month, was listed as follows: *Q3: What social activities have you participated the most over the last month? Please tick one.* ☐ *Leisure/Sports* ☐ *Cultural events (e.g. concerts, lectures, dance)* ☐ *Social-friendship activities (e.g. visiting friends/neighbors, being visited by friends/neighbors)* ☐ *Social group activities/associations (e.g. study group, hobby groups, residential committee)* A few respondents suggested adding 'All above' category to the response list.	As a result, this item was adjusted as follows: *Q3: What social activities have you participated the most over the last month? Please tick one.* ☐ *Leisure/Sports* ☐ *Cultural events (e.g. concerts, lectures, dance)* ☐ *Social-friendship activities (e.g. visiting friends/neighbors, being visited by friends/neighbors)* ☐ *Social group activities/associations (e.g. study group, hobby groups, residential committee)* ☐ *All above*
	• The sixth question in Service manner was originally stated as follows:	As a result, this item was adjusted as follows: '*The employees showed passion for their job*.'

	'*The employees were dedicated to their job.*' Several respondents seemed to be unclear about the word 'dedicate'. They described it quite abstract and suggested using another word which gave more specific meaning.	
	• The five questions in Part 5 were originally stated as follows: *In most ways my life is close to my ideal.* *The conditions of my life are excellent.* *I am satisfied with my life.* *So far, I have gotten the important things I want in my life.* *If I could live my life over, I would change almost nothing.* Several respondents felt the last question was quite sensitive and reluctant to answer. They explained that this last question was emotionally upsetting.	As a result, the last question was deleted. The questions in Part 5 were adjusted as follows: *In most ways my life is close to my ideal.* *The conditions of my life are excellent.* *I am satisfied with my life.* *So far, I have gotten the important things I want in my life.*

Appendix 4.4 Details of adjustments made during the pilot-testing of the focus group

Groups	Raised issues	Adjustment
The supervisory team	• Suggested defining the second question more accurately Q2 was originally as follows: '*What do you think about the interactions with employees in social activities?*' The supervisory team pointed out that not all employees belonged in the same category from outsiders' perspectives, and it was more accurate to define within a certain context. Similarly, Q4 was originally as follows: '*What do you think about the interactions with outsiders in social activities?*' The supervisory team pointed out that some groups of outsiders may be perceived as more beneficial than others.	As a result, changes were made to Q2 and Q5 as follows: Q2: *What do you think about the interactions with employees from senior living facilities in social activities?* Q4: *What do you think about the interactions with outsiders in social activities?(e.g., beneficial outcomes of social activities through interactions with outsiders, types of social activities older adults want to participate more with outsiders)*
Professionals	• Suggested word the question more relevant to older customers The professionals pointed out that older customers may not feel the word 'peers' so relevant in Q3. They suggested the use of 'fellow residents' would be more appropriate. The original questions were as follows: '*What do you think about the interactions with peers in the social activities?*'	As a result, Q3 were adjusted as follows: Q3: *What do you think about the interactions with fellow residents in the social activities?*
Participants of the first focus group	• Suggested reduced the length of the focus group. The first focus group lasted around 2 hours. Some participants felt a bit tired, and some needed to leave for their social activities.	The researcher paid attention to the time restraints of the following focus groups, which were conducted within approximately 1.5 hours.

Appendix 4.5 Focus group schedule

<u>Introduction to the session</u>

Hello everyone. Thank you for coming. My name is Kuo Feng, and I am a PhD student from Oxford Brookes University in the UK. I'm very grateful to you all for sparing time to talk about the social interactions occurring in social activities in commercial senior living facilities. I want to understand why and how social interactions with employee, peers and outsiders contribute to older adults' social well-being, particularly, among which social interactions with outsiders have the strongest impact. Moreover, I want to understand the reasons motivate older adults in senior living facilities to participate in social activities. I have no experience of it myself, so this focus group discussion will be very helpful for me to better understand your different experience in interactive social activities.

I would like to ask you several open questions. There are no right or wrong answers; I would like you to feel comfortable saying what you really think and how you really feel. This discussion will be audio-recorded. Opinions expressed will be treated in confidence for the purpose of research, and in the production of researcher's doctoral thesis. Everything you say today is confidential and no identifying information will be included in the final doctoral thesis. More details are given in the participant information sheet. Please treat others in the group as you want to be treated by not telling anyone about what it is said in this discussion today.

The duration of the discussion will be approximately one and half hours. If you have a mobile phone with you, may I ask you please to switch it off during the session? Should you feel tired or unwell, please let me know at any time. And we can take a break or get medical personnel immediately. Now, please let me know if you have any questions.

If everything is clear, I would like to start with demonstrating the important results from the survey I conducted from June to December in 2017 (A poster will be presented and the results will be explained to the participants).

Having discussed the results from my earlier data collection, I would like to ask a few questions for you to discuss. Let's start with introducing each other first.

<u>Questions:</u>

1. What did you like best about social activities in senior living facilities? (e.g., contents of the activities, space/opportunities to make friends, environment)

2. What do you think about the interactions with employees from the senior living facilities in social activities?

3. What do you think about the interactions with fellow residents in social activities?

4. What do you think about the interactions with outsiders in social activities? (e.g., beneficial outcomes of social activities through interactions with outsiders, types of social activities older adults want to participate more with outsiders)

5. What do you think motivate older adults to engage in social activities? (e.g., learn new knowledge, feel included, be needed)

6. How are older adults informed about the availability of social activities in the senior living facilities?

7. What problems did you see/feel about social activities in senior living facilities? (e.g., facilities, staff, design)

8. What do you think can be improved? (e.g., activities/event availability/design, space/environment)

We have had a good discussion. Just before we finish, I would like to ask each of you if there is anything else that you have thought about along the way that we have not covered. Please share these thoughts with me.

<u>Closing:</u>

Thanks for sharing your experience in social activities with us today. Your opinions will help understand the influence of social interactions on older adults' social well-being and the motivation of participating social activities in senior living facilities. Thank you for your time. Have a good day!

Appendix 4.6 Participant information sheet for participants in the focus groups

OXFORD
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Participant Information Sheet

Study title
Social Connectedness: How commercial senior living facilities help enhance older adults' well-being through social activities in China

You are being invited to take part in a research study. Before you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully.

What is the purpose of the study?

This research aims to investigate how the engagement of elderly customers in interactive social activities provided by high-end senior living facilities help older adults socially connect. In doing so, it will examine the role that such social activities and the social connections engendered play in enhancing older adults' social well-being. This group discussion will help the researcher to further explore the results from questionnaire survey and the role that social organisations or government departments can play in enhancing the social well-being of the elderly through their engagement in social activities. The duration of this study is one year. The overall design of this research includes relevant academic literature review, data collection via focus groups and questionnaires, and data analysis.

Why have I been invited to participate?

You have been approached as being someone who meets the following criteria:
1). Be over 60 years old
2). Have had experience living in high-end senior living facilities
3). Have had experience engaging in social activities
4). Be independent in activities of daily living

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and

without giving a reason. Please be aware that any data given will not be retrievable once received.

What will happen to me if I take part?

You will be asked to participate in a group discussion consisting of six people regarding your engagement in social activities experiences if you agree to take part. You will be contacted by telephone and a time will be arranged. The duration of the discussion is approximately one hour and will be audio-recorded. Field notes will be made to capture inaudible or circumstantial information.

There are minimal risks associated with participation in this research. The focus group will be arranged in a safe and convenient location and participants will be communicated with the details in advance. Reasonable expenses incurred in travelling will be reimbursed. Should any problem in transportation rises, the researcher will make arrangements for pick-up and drop-off.

What are the possible benefits of taking part?

There won't be direct benefit to the focus group participants. However, the information the researcher get from the focus group will help design further exploration in understanding older adults' engagement in social activities and the role it plays in enhancing their social well-being.

Will what I say in this study be kept confidential?

All information which is collected about you during the course of the research will be kept strictly confidential (subject to legal limitations). Confidentiality, privacy and anonymity will be ensured in the collection, storage and publication of research material. Any information about you will be replaced by a unique code so that you cannot be recognized for the storage and publication of research material. However, given the nature of focus groups and sample size, there is still a possibility, despite all the measures mentioned above, that you may be recognized by others. Therefore, anonymity cannot be guaranteed.

The collected data will be securely stored in Google Drive, for which the University has a security agreement. Data generated by the study will be retained in accordance with the University's policy on Academic Integrity. Please note that the data generated in the course of the research will be kept securely in paper or electronic form for a period of ten years after the completion of the research project.

What should I do if I want to take part?

If you want to take part, you will need to inform the researcher either by telephone or email about your decision and agree on time and place to take part for the focus group. You will also have to fill in a consent form prior to the start of the focus group. Reasonable expenses incurred in travelling will be reimbursed for focus group participants.

What will happen to the results of the research study?

The results of the research study will be used in researcher's thesis for the Doctor of Philosophy degree and in academic publications. The PhD thesis will be published and held in Oxford Brookes University Library and will be available for public use. Moreover, any information about findings of this research will be available to participants upon request.

Who is organising and funding the research?

The researcher is conducting the research as a student at Oxford Brookes University, Faculty of Business, the Oxford School of Hospitality Management. This research is self-funded.

Who has reviewed the study?

The research has been approved by the University Research Ethics Committee, Oxford Brookes University.

Professor Levent Altinay and Dr Jackie Clarke are supervising my PhD research at the Faculty of Business, Oxford Brookes University.

Contact for Further Information

Should you have any further information about the research, please contact the researcher, Kuo Feng directly via email: kuo.feng-2016@brookes.ac.uk or via her mobile phone 15942014925. Or you can contact the supervisory team: Professor Levent Altinay laltinay@brookes.ac.uk, Dr. Jackie Clarke jrclarke@brookes.ac.uk

If you have any concerns about the way in which the study has been conducted, you should contact the Chair of the University Research Ethics Committee on ethics@brookes.ac.uk .

Thank you

Date

Appendix 4.7 Consent form for participants in focus groups

OXFORD
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CONSENT FORM

Full title of Project:

Social Connectedness: How high-end senior living facilities help enhance social well-being of the elderly through social activities in China

Name, position and contact address of Researcher:
Kuo Feng

PhD student in Hospitality Management

Faculty of Business

Oxford Brookes University

Headington Campus

Gipsy Lane

Oxford Brookes University

Oxford

OX3 0BP

Mobile: +44 (0) 7392755025

E-mail: kuo.feng-2016@brookes.ac.uk

1. I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions.

☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving reason.

☐

3. I agree to take part in the above study.

☐

4. I agree to the focus group being audio recorded.

☐

5. I agree to the use of anonymised quotes in publications.

☐

6. I agree that my data gathered in this study may be stored (after it has been anonymised) in a specialist data centre and may be used for future research.

☐

Name of Participant   Date   Signature

Name of Researcher   Date   Signature

Appendix 4.8 The University Research Ethics Committee Approval

OXFORD
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Professor Levent Altinay
Director of Studies
Oxford School of Hospitality Management
Oxford Brookes Business School
Headington Campus

30 May 2017

Dear Professor Altinay

UREC Registration No: 171112
Social Connectedness: how high-end senior living facilities help enhance social well-being of the elderly through social activities in China

Thank you for the email of 19 May 2017 outlining the response to the points raised in my previous letter about the PhD study of your research student Kuo Feng 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 30 May 2019. 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

Morag MacLean
Deputy Chair of the University Research Ethics Committee

cc Jackie Clarke, Second Supervisor
    Kuo Feng, Research Student
    Sarah Quinton, Research Ethics Officer
    Jill Organ, Research Degrees Team
    Louise Wood, UREC Administrator