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Social Exclusion and Health Among Older Chinese in Shanghai: From the Social Determinants of Health Perspective

by

Hongmei Tong

A THESIS

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Abstract

China is experiencing dramatic socio-economic transitions, in which older adults are facing increasing challenges related to social exclusion. Several gaps in the study of social exclusion remain: (a) limited knowledge about social exclusion in older age; (b) existing research on social exclusion and older adults is limited to Western countries, with little known about social exclusion experienced by older adults in Asia countries; (c) knowledge on the relationship between social exclusion and health status of older adults is scant. By adopting a social exclusion framework, this study examined the characteristics of social exclusion and its relationship to the health status of older Chinese in Shanghai, China.

Chinese citizens aged 60 years and older were identified through a multistage sampling procedure from three communities in Shanghai and completed a structured questionnaire administered through face-to-face interviews. Social exclusion was represented by the variables related to six domains: material resources, housing conditions, social relations, civic activities, basic services, and neighbourhood. Health status was measured by four health variables including number of chronic illnesses, self-rated general health, depression, and life satisfaction. Hierarchical logistic regression analyses were used.

This study showed that the proportion of older adults reporting exclusion in the six domains ranges from 12% to 45%. Over a third (39%) of the respondents reported experiencing multiple exclusions. Being older, having a lower level of education, a lower level of self-perceived financial adequacy, living in the Jing An District, not being a member of the Communist Party, and living in poverty for a longer period of time were the most important factors that were significantly associated with one or more dimensions of social exclusion. The relationship between social exclusion and health status varied according to type of social

exclusion and health variables. Multiple exclusions were significantly related to a higher number of chronic illnesses, depression, and unfavourable life satisfaction.

Despite some limitations, this study is an important addition to the literature on social exclusion in older adults and social determinants of health. This study calls for greater attention to social exclusion and its relationship on the health of older Chinese adults.

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Dedication

To my love son and daughter, you are my future

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Chapter One: Introduction

Ever since the economic reform in the 1970s, China has experienced continuous economic expansion and dramatic social transitions. At the same time, China has experienced rapid growth in the aging population. However, remarkable economic growth does not necessarily bring equity and social justice to the general population (Carl, Zhao, &Li, 2001). During the dramatic social transitions, many people have been left behind and excluded from the benefits of economic prosperity, although many in society at large have also enjoyed the financial returns. Older Chinese adults have been reported as one of the most vulnerable groups in China (Qiao, Zhang, Sun, & Zhang, 2005; Wang & Zhang, 2005; Yang, 2010) while they also represent the largest aging population on earth.

The study of social exclusion has been a priority of social policy in European and other developed countries, such as Canada and Australia. Despite advances in social exclusion research, there remain three important gaps in the current research literature. First, existing studies on this topic emphasize social exclusion in the working population and largely ignore social exclusion in later life. Research knowledge on the social exclusion of older adults is still lacking, although research that has linked social exclusion and aging is increasing (Scharf, Phillipson, Smith, & Kingston, 2003; Scharf, Phillipson, & Smith, 2004, 2005a, 2005b, 2005c; Scharf & Keating, 2012). Second, most existing studies on social exclusion and aging have been limited to the aging population in European countries. Relatively little is known about social exclusion experienced by older adults in other countries, particularly in Asian countries such as China. Third, knowledge of the relationship between social exclusion and the health status of older adults is scant, even though social exclusion may affect older adults more than younger people. It is the goal of the current dissertation to bridge these gaps in our knowledge.

This study seeks to address these gaps by examining the characteristics of social exclusion and its association with health status among older Chinese in Shanghai, a leading economic centre in China with the largest proportion of older adults among major Chinese cities. This chapter briefly introduces the research context, the purpose of the study, the main terms used in this study, research questions and hypotheses, and the significance of this study.

1.1 Research Context

This study is driven mainly by the social transitions and the possible impacts on social exclusion in older adults in current China. During the past thirty years, China has been experiencing two types of transitions: social transition resulting from economic reform and demographic transition resulting from the rapid growth of an aging population. Both transitions have had a profound impact on older adults in China.

1.1.1 Economic reform and social transitions in China.

The reform of China's economic system after 1978 was one of the most significant events in the 20th century (Chen, 2002). It was started from December 1978 by reformists within the Communist Party of China (CPC) led by Deng Xiaoping. The purpose of reform was said to develop 'Socialism with Chinese characteristics' and toward a market-oriented economy. In the beginning of reform, trade was opened to the outside world and the Contract Responsibilities System was implemented in agriculture. By the end of the 1980s China had almost solved its food shortage problems. Around1990 six special economic zones were established, including the Shanghai Pu Dong zone, which was a pioneer attracting foreign capital. Since the mid 1990s, ownership restructuring has become the key focus of reform in order to complete the transition from a planned to a market economy.

Before economic reform, China had a centrally planned economy with low productivity

because economic development was ordered by official politics. The Chinese economy was a centrally-planned economy in which all companies were owned by the state. China has experienced rapid economic growth and social development over the course of three decades (Knight, 2008). For example, the per capita GDP of the Chinese population surged from 381 Renminbi (RMB)[1] in 1978 to RMB 29,992 in 2010 (National Bureau of Statistics of China, 2011). Similarly, the average per capita disposable income of one urban resident in 2010 was 19,109, which increased 54.7times from the per capita income of RMB343 in 1978 (National Bureau of Statistic of China, 2011). Compared to the slow pace of modernization and social transitions in Western countries, social-economic development in China is characterized by "time-space compression" (Jing, 1999); namely, experiencing modernization and tremendous social transitions during a very short period, which includes moving from a traditional society to a modern society, from a planning economy to a market-oriented economy and the risks and challenges from globalization. This rapid transition has led to fundamental changes in China's socioeconomic structures and individual lives (Zhou, 2004).

Some researchers have argued that contemporary China is experiencing "breakdowns" (Sun, 2004) and "deep changes" (Lu, 2010) in its social structure and social order. One illustration of these changes is the restructuring of stated-owned enterprise ownership. In the centrally planned economy before reform, China's industrial enterprises consisted almost exclusively of state-owned enterprises and collective-owned enterprises (Naughton, 2007). The socialist social contract existed between the communist state and their workers. Under this contract, the state promised "an egalitarian, redistributionist order that provided job security,

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[1]Renminbi (RMB) or Yuan refers to China's currency. USD 1.00 ≈RMB 6.2.

basic living standards, and special opportunities for those from disadvantaged backgrounds. In return, the state demanded sacrifices in current consumption, a leveling of individual aspirations, and obedience to the all-knowing party redistributors." (Tang & Parish, 2000, p.3). As a result, urban Chinese residents were entitled to lifetime employment, relatively egalitarian wages, housing, food, pension, medical care and insurance, and other social services through their work units that were directly or indirectly controlled by the state. With ownership reform and the introduction of a market-based system, the state no longer promises job security, basic living standards, and an egalitarian distribution of resources (Yu, 2008). In the changing social contract, the roles of the state, the market and the society were redefined and a new class ranking has evolved, in which political power (political resources), education (human resources) and economic resources became the key factors that influence the potential of individuals to become better off in contemporary Chinese society (Lu, 2010). Thus, differentiated by their political and social backgrounds, origin and education, some people are benefiting from the fast growth of the economy and gaining more opportunities while others are painfully paying the cost for the dramatic societal transition and being marginalized (Whyte, 2010).

Because of the widened gap between the rich and the poor and between rich urban areas and poor rural areas, and health disparities among different groups, social justice issues have become major concerns in contemporary China (Li, 2005; Jing, 2010; Wan & Zhang, 2006; Wong, 2004). The economic and social transition has also created some new vulnerable groups such as laid off workers who were previously well-protected by state enterprises, rural-urban migrants, older adults, and people with disabilities. Some have been trapped at the bottom of society and suffer from deprivation of various political, economic and social rights and are experiencing social exclusion (Li, 2005). The identification of older Chinese as a new vulnerable

group (Mu, 2005; Qiao et al., 2005; Wang & Zhang, 2005; Yang, 2010; Yang, Jiang, & Chen, 2010; Yu, 2003) echoes the modernization and aging theories that suggest socioeconomic and demographic changes could potentially diminish the status of old people (Aboterin, 2004; Cowgill, 1974; Cowgill & Holmes, 1972). Given the likely connection between social transitions and disadvantages of older Chinese adults, it is essential to examine these disadvantages as China is well-known as a rapidly 'graying' country.

1.1.2 Aging population in social transitions.

With the decreasing fertility rate and the steadily increasing life expectancy of the Chinese, China is experiencing a rapid growth of the aging population and has become the country with the largest aging population in the world. The most recent (sixth) national population census of 2010 showed that 177 million people in China were 60 years and above, accounting for 13.26% of the total population, which has increased 2.93% compared to the 2006 census data (National Bureau of Statistics of China, 2011). More importantly, the rapid growth of the aging population is expected to continue. Some researchers have predicted that by the year of 2020, the population of people 65 years and older in China will be 265 million, or comprise 16% of the total population (Du & Zhai, 2005). The United Nations has also predicted that Chinese over 60 years will be more than 453 million by 2050 (United Nations Population Division, 2006). Aging will be a primary and unavoidable social issue in contemporary China for a very long time and will need to be addressed from many aspects.

Despite the fact that the Chinese government has made efforts to address the challenges arising from the rapid growth of the aging population by developing aging-related laws and policies and providing community support services, a significant number of older Chinese (60 years and above) are in vulnerable situations. In Beijing, the capital of China, 17.9% of the

people who received a minimum standard of living for city residents were adults 60 years and older (National Aging Association of China Office, 2008). Besides poverty, in a survey of older adults from several cities in China, over 10% of older participants indicated that they felt it was "very hard" or "hard" to adapt to their life in old age (Chen, 2008).In a study of older adults who live alone in a community in Shanghai, over half of the respondents reported being feel very lonely or somewhat lonely (Tong, Lai, Zeng, & Xu, 2011). Another study also showed that older adults who indicated a feeling of often lacking companionship and feeling left out were positively associated with the risk of mistreatment (Dong, Simon, Gorbien, Percak, & Golden, 2007). Some studies have also indicated that many older adults are not actively participating in civic activities due to lack of opportunities and support services (Mjelde-Mossey, Wu, & Chi, 2007; Mjelde-Mossey, Chi, Lubben, &Lou, 2009).These findings provide a clue that some older adults are in a vulnerable or disadvantaged situation, compared to others. The vulnerability and disadvantages faced by older Chinese may be due to the following changes that have happened:

First, the vulnerability of older Chinese may relate to the reform of the welfare system. Before economic reform, China established an occupation-based and limited welfare system in which the workers were provided with social protection by their work organization (work units or *Danwei*), which were owned and run by the state or local governments (or their dispatches) in the cities. Non-workers were excluded in this welfare system. During this pre-reform period, the state took a residual responsibility for social welfare. This meant that for those older adults without family, work, or work ability (*San Wu*) in the cities, the civil administration departments provided basic social assistance (Chen & Liu, 2007). The old, occupation-based welfare system deteriorated because of the decay of many state-owned work units during the reform. At the same time, economic and political transformation have changed the government's role in social

service provision; the role of the state in social welfare has weakened as there is gradually more reliance on the market to provide social welfare (Li, 2008). Hence, to protect older adults, China is gradually establishing a “uniform” basic old-age insurance system in urban areas and some rural areas (Chen, 2009; China State Council, 2006; Wang, 2006). However, the old-age pension that older adults received was lower than what they have contributed to the country because the pension was developed based on their salaries and the type of work organization before retirement. Hence, China has made efforts to enhance the level of pension for older adults several times in more recent years. Nevertheless, there is still a high poverty rate among older adults although poverty measured by income is only one aspect of the deprivation and vulnerability faced by older Chinese.

Second, the vulnerability and disadvantages of older Chinese may stem from a decline in the strength of family support. Rapid social changes brought about from social transitions have posed great challenges to traditional values such as filial piety (Chen & Liu, 2009; Cheung & Kwan, 2009; Chi & Silverstein, 2011; Ge & Shu, 2002; Tam & Neysmith, 2006). Traditionally in China, filial piety was paramount and there was a social expectation that family took care of older relatives (Chen & Liu, 2009; Gui, 1994). The responsibility of adult children to care for older adults was also established by law in China. However, in recent years filial piety has eroded through modernization (Cheung & Kwan, 2009). Also, due to social transformations, the number of small families has increased and the average Chinese family structure is now a 4:2:1 ratio (four grandparents, two parents, one child) (Zeng & Wang, 2003). These changes have resulted in the rapid growth of “empty-nest” (*Kong Chao*) old people (Li, 2005; Chen & Liu, 2007) or one-person and one-couple households (Zeng & Wang, 2003). The current changes in traditional family values and family structure have fragmented traditional family support for

older adults (Chen & Liu, 2009; Ge & Shu, 2002). In China, it has become unreasonable to expect a single child or a young couple to provide care and support for both aging parents and in some cases grandparents (Gui, 2010; Li & Lemke, 1998; Yin, 1999; Mi & Xiao, 2000), when they lack time due to the high competition in work settings. More severely, in some cases adult children refuse to provide care for their aging parents and mistreat them economically and emotionally (Dong et al., 2010). Although the Chinese government has acknowledged the severe consequences of a rapidly aging population and weakening traditional family support, the public elder care system and high quality of social services in the communities are still limited and inadequate in many parts of China (Feng & Xiao, 2007), which increases the potential risks of vulnerability for older Chinese.

Rapid social-economic transformations have also brought remarkable stressors to old people, increasing their risk for health problems and causing a rise in health disparities as well. For example, research has shown that the overall coverage of the new medical insurance scheme decreased during 1998 to 2003 based on the data from the National Health Services Surveys of 1998-2003 (Xu, Wang, Collins, &Tang, 2007). In 2003, only 55% of urban residents had any health insurance and older adults complained about financial strain from high health expenditures (Flaherty et al., 2007). The hospitalization rate among older adults has increased since 1993 (Jun, Raven, & Tang, 2007). Rising health disparities among older Chinese has been explored by a number of studies that have focused on high mortality rates (Gu et al., 2009; Kaneda, Zimmer, Fang, & Tang, 2009; Zimmer, Kaneda, & Spess, 2007), the incidence of functional disabilities (Beydoun & Popkin, 2005; Liang, Liu, & Gu, 2001; Lowry & Xie, 2009), the incidence of chronic illnesses (Wen, 2010; Zeng, 2010; Zimmer & Kwong, 2004), poor self-rated general health (Liu & Zhang, 2004; Liu, Chao, Yang, & Jiang, 2009; Ma, 2002; Meng &

Zhang, 2010; Peng, Ling, & He, 2010; Tian & Zhen, 2004; Yip et al, 2007) and mental health problems (Chen & Short, 2008; Jiang et al., 2005; Wu & Schimmele, 2008; Xie & Gao, 2009). These studies support the assumption that the health of older Chinese is affected by a range of social and demographic factors such as age, education, gender, residence, living arrangement, and social context. However, studies examining the effect of social factors on Chinese older adults are lacking.

In summary, a great number of older Chinese adults have advanced their quality of life during the course of economic reform and social transition in the past three decades. However, many older adults in China have been shut out from this economic prosperity and are struggling with multiple social disadvantages and health disparities. Researchers, policy makers, and social workers need to gain knowledge about these vulnerable older adults and then respond to their issues by developing appropriate policies and programs for them.

1.1.3 Social exclusion: an emerging topic and useful lens.

Social exclusion has taken a prominent place in the explanation of social disadvantages experienced by different vulnerable social groups in recent years (Atkinson & Davoudi, 2000). The concept of social exclusion rose from a concern that poverty was only a one-dimensional measurement of disadvantages. Other factors such as political, social and cultural factors need to be taken into account when creating policy to improve the situation of those who are worse off in society. While some authors are critical of the ways in which the concept of social exclusion has replaced an analysis of poverty and tends to legitimize only modest policy reforms (Beland, 2007), others have suggested that social exclusion can represent a radical critique in particular contexts (Silver & Miller, 2003). The strength of a social exclusion framework to poverty is it involves not only the lack of fundamental resources, but the inability to fully participate in one’s

own society (Saraceno, 2001). The social exclusion framework offers a valid way of reconceptualizing and understanding social disadvantages or multiple forms of deprivation (Barnes, 2005; Burchardt, Grand & Piachaud, 2002; Gore, 1995).

Yet, in terms of policy and research, our understanding of social exclusion in later life is limited. Although research on social exclusion amongst older adults is scant, a growing body of research that has started to examine social exclusion in later life in recent years due to the expansion of the aging population and the increase in age-related disparities or inequalities among this age group (i. e., Barnes, Blom, Cox, Lessof, & Walker, 2006; Becker & Boreham, 2009; Odds, 2005; Patsios, 2006; Scharf, Phillipson, Kingston, & Smith, 2001; Scharf et al., 2005; Scharf & Keating, 2012). Some researchers have stated that the specific circumstances faced by older adults may pose particular challenges and make them more vulnerable than other groups in many ways (Scharf et al., 2005a, 2005c; Patsios, 2006). Older adults can face a range of problems that can be thought of as risk markers of social exclusion; for example, low income, limited contacts with other people, and poor health (Becker & Boreham, 2009). Moreover, older adults probably face specific obstacles, often resonating with physical, structural or attitudinal barriers, which marginalize them in society (Postle, Wright & Beresford, 2004). The characteristics, causes and consequences of social exclusion among older adults may be significantly different from those of younger or middle-aged people (Hoff, 2008; Scharf & Keating, 2012). Hence, the focus on social exclusion is important in casting light on the varied, and often hidden, nature of disadvantage experienced by older adults (Scharf & Bartlam, 2007).

Although there is no consensus on defining social exclusion and connotations of social exclusion (Levitas, 2006; Morgan, Burns, Fitzpatrick, Pinfolod, & Priebe, 2007; Peace, 2001), the multidimensional nature of social exclusion has been widely acknowledged. Economic (or

financial or material), social relation, political, neighbourhood, and access to basic services are often identified as the different dimensions of social exclusion experienced by older adults (Barnes, 2005; Barnes et al., 2006; Bono et al., 2007; Jehoel-Gijsbers & Vroman, 2008; Scharf et al., 2003; Scharf et al., 2004, 2005). Due to the various negative effects of social exclusion, it has been reported as a determinant of health (Raphael 2001; WHO, 2003). With respect to the aging population, social exclusion has been linked to poorer health status (Hyman, 2001; Wilson, Eyles, Elliott, Keller, & Devic, 2007), a higher risk for mental health concerns (Noh, Beiser, Kaspar, Hou, & Rummens, 1999; Payne, 2006), and lower quality of life in later life (Scharf et al., 2004).

In the existing literature, there are two key concerns relating to examining social exclusion among older adults. One is to find the dimensions of exclusion that are the most relevant in relation to the aging population. The second concern is to identify the drivers of exclusion in later life. These in turn, will help to develop potential policy and practice responses to older adults' exclusion and might promote social inclusion among older adults (Scharf & Keating, 2012), which fits well with the overall goal of creating a society with social cohesion in contemporary China. However, there is little knowledge about social exclusion in older Chinese in China, a country with the largest aging population in the world. Have older Chinese adults experienced social exclusion during the period of economic and social transitions that have occurred in China? If yes, what are the characteristics of social exclusion, and what are the factors contributing to it? How is social exclusion related to the health status of older Chinese? All these questions are left unexamined. Current research and policy debates in Western societies around social exclusion provide an ideal framework for exploring the situation of older adults in China. In addition, the social determinants of health perspective is used widely in population health research to explore the relationship between different levels of social factors and health.

Accordingly, in this study I use the social exclusion framework and the social determinants of health to facilitate an understanding of social exclusion and its association with health status among old Chinese adults in Shanghai, China.

1.1.4 Rationales for focusing on older Chinese in Shanghai.

As has been noted, older Chinese are a potentially vulnerable population in contemporary China. Some of them are experiencing a great number of challenges and a rise in health disparities owing to the dramatic social-economic transitions. When compared with older adults in rural areas, older adults in urban cities are often ignored because policy makers assume that urban older residents have more resources than those who live in rural areas. Hence, this study was conducted in Shanghai, which, as noted previously, is a key leading economic centre in China, with the largest proportion of older adults among major Chinese cities.

Located in eastern China, Shanghai is seen as a "miniature of China's current social transitions" (Lu, 2010, p.5). Since mainland China opened up to the world in the 1980s, Shanghai has developed rapidly and has been the leading financial centre in mainland China. The city has accomplished remarkable economic success and prosperity in building an affluent urban society. For example, with 0.1 % of its land area, Shanghai achieves 4.6% GDP for China. The average GDP per person in Shanghai is RMB 73,124, which is much higher than the average GDP of China, RMB 22,698 (National Bureau of Statistics of China, 2009). The strategic goals of Shanghai's development are to establish the city as an international economic, financial, trade and shipping centre by the end of 2020. Besides being the most modernized and globalized city in mainland China, Shanghai has the highest proportion of aging population in China with over 3.6 million or 25% of population aged 60 or above (Shanghai Statistics Bureau, 2012).

Profound changes in Shanghai have impacted all ages, including older adults. However, a

sizeable portion of the current cohort of older adults has not benefitted much from the trickle-down of the economic prosperity enjoyed by society at large, although older adults contributed in various degrees to the laying of a good foundation for Shanghai's economic prosperity and social stability. For example, one investigation conducted by the Shanghai Statistics Bureau on families in poverty showed that 18.8% of the 4,433 participants were older adults 60 years and above (Yu, 2003). Similarly, another Shanghai study also found that 18.6 % of women aged 60 and over were living in poverty (Zhang, 2007). Yu (2008) reported that the average monthly income of Shanghai older adults in 2005 is RMB1028, which is only half of the average income of Shanghai in 2005. One study also showed that almost 94.4% of older adults in Shanghai rely mainly on income from old age pension and the proportion of older adults with a monthly income less than the average income in Shanghai is 90% (Zhang, 2009). This means a large number of older adults have a socially disadvantaged status and unfavourable financial conditions in current Shanghai. As a result, these older adults may be denied or excluded from maintaining a good quality of living and social participation in society. Hence, it is very important to examine social exclusion among older Chinese in Shanghai.

1.2 Purpose of the Study and Research Questions

As mentioned previously, older Chinese adults in urban cities may experience different types of social disadvantages under the rapid social changes. As such, it is important to examine the disadvantaged social status of older adults in the fast modernization of social transitions in China and whether their socially disadvantaged status has affected their physical and mental health. Relatively few studies conducted among the Chinese population have examined the multiple disadvantaged social statuses of older adults in urban cities, although some studies have noted the importance of poverty among older Chinese adults. Moreover, previous studies on the

health of older Chinese adults have focused more on individual economic and demographic factors, such as income, education, gender, and age on health. Less is known about the health effects of social determinants such as social exclusion on older adults in the urban cities. In order to examine the social disadvantaged status of older adults and the relationship between social disadvantaged status and health status of older Chinese adults in this period of economic and social transitions, this study aimed to:

(a) identify the characteristics of social exclusion among older adults who reside in Shanghai,

(b) identify the significant correlates of social exclusion in older Chinese in Shanghai, and

(c) explore the relationship between social exclusion and health status of older adults.

In order to achieve above research objectives, three research questions were answered:

Question 1: What are the characteristics of social exclusion that have been experienced by older Chinese in Shanghai?

Question 2: What are the contextual factors shaping the characteristics of social exclusion (Q1) experienced by older Chinese in Shanghai?

Question 3: How is social exclusion related to health status of older Chinese in Shanghai?

Understanding the characteristics of social exclusion in old age and its relationship with health is essential, especially in China, which has a rapidly growing aging population and is undergoing the most rapid social-economic development in the world. Social exclusion is a vague term and the understanding and measuring of social exclusion is currently in its early stage. However, as Silver (2007) stated, each new study can potentially add to the theoretical understanding of the construct of social exclusion and can further enlighten our understanding of social exclusion. Hence, this study examined characteristics of social exclusion and its

association with health of older Chinese, which contributes to the theoretical understanding of social exclusion and social determinants of health among older Chinese adults in a transitional society. This research also provides implications for policy and social work in China.

1.3 Definitions and Terms

There are some key concepts that comprise the above research questions. These terms are older adults, social exclusion, multiple exclusions, and health.

(1) Older adults

Older adults in this study refer to those 60 years and above. In China, 60 is the official age for receiving many social services provided for older adults. In the Chinese calendar, 60 years is seen as a circle. The age of 60 is called “Hua Jia”, means the end of the circle and aged. Therefore, this study defines those aged 60 years and above as older adults. This definition is consistent with the WHO definition of older adults.

(2) Social exclusion

Social exclusion refers to a complex and multidimensional process that involves the lack or denial of resources, rights, goods and services, and the inability to participate in the normal relationships and activities, available to the majority of people in a society, whether in economic, social, cultural or political arenas. It affects both the quality of life of individuals and the equity and cohesion of society as a whole (adapted from Levitas et al., 2007). The detailed conceptualization and measurement of each dimension of social exclusion is presented in Chapter Four.

(3) Multiple exclusions

In this study, the concept of multiple exclusions is defined as exclusion across more than one domain or dimension of disadvantage (Levitas et al., 2007). In this study, multiple

exclusions refer to exclusion in any two or more of the six social exclusion dimensions measured in this study.

(4) Health

Health in this study is defined as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (WHO, 1946, p.100). Although this definition was formulated almost 60 years ago, it is the most commonly quoted definition of health even now.

1.4 The Organization of the Thesis

This first chapter introduced the research context of this study and the goal of the study. Chapter 2 presents a review of existing literature on social exclusion in general and specific to older adults, as well as social determinants of the health of older Chinese. Chapter 3 presents the theoretical framework that was adopted in the study, namely, the social determinants of health. Chapter 4 discusses the procedures used for data collection, measurement of variables, and analytic strategies used to test hypotheses. The results are presented in Chapter 5. Chapter 6 offers a detailed discussion of the results and describes study limitations and implications for policy and social work.

Chapter Two: Literature Review

There are two main purposes for the literature review. The first is to justify the importance of studying social exclusion among older Chinese adults and its impact on their health status based on the knowledge gaps. The second is to further clarify the research questions that will be answered in this study. This chapter consists of three parts. In the first part, I will review the determinants of older Chinese' health status. The second part will review the concept of social exclusion and its application to older adults from theoretical and empirical perspectives in Western and Chinese contexts. The third part reviewed the literature on social exclusion and health status by emphasizing the lack of research on the connection between social exclusion in older adults and their health status.

2.1 Determinants of Older Chinese's Health

Much research on health has found that there is no single fundamental cause of health but rather a multiple level of factors, such as social structural factors, individual-level factors, and biological factors, working together to facilitate healthy aging in later life (Ryff & Singer, 2009). A range of demographic and social factors have been reported being related to the health status of older Chinese in urban cities, such as age, gender, education, marriage status, social-economic status, and living arrangement. This section reviews the findings from some studies conducted in China in recent years.

2.1.1 Demographics and older Chinese's health.

2.1.1.1 Age.

Chinese studies showed that with the advance of age, generally, the health status of older Chinese people declines (Gu et al., 2009; He & Wu, 2009; Liuet al., 2009; Meng & Zhang, 2010; Tian & Zhen, 2004). For example, one national study reported that age was a significant factor in

older Chinese people's self-rated general health, and the oldest old reported having lower self-rated general health than the younger old (Gu & Qiao, 2006). However, several studies identified a contrary result that those 80 and over reported better self-rated general health than older adults in their seventies (Meng & Zhang, 2010; Ma, 2002). These contradictory results require more research on the relationship between age and health status of older adults.

2.1.1.2 Gender.

Among urban Chinese older adults generally, it appears that older men have better physical functional health and mental health than older women (Chan et al., 2009; He & Wu, 2009; Gu et al., 2009; Guo & Qiao, 2006; Kaneda, et al., 2009; Liu & Zhang, 2004; Tian & Zhen, 2004; Zeng, 2010), and gender difference in health increased at old age (Zeng, Liu, & George, 2003). For example, using data drawn from the 2002 Chinese Longitudinal Health Longevity Study (CLHLS), Wang et al. (2009) reported that older Chinese women were in poorer health in most of the health indicators including Activities of Daily Living (ADL), Instrumental Activities of Daily Living (IADL), cognitive ability, visual function, hearing or auditory function, and self-reported health. Furthermore, these gender differentials increased with age. Nonetheless, one cross-sectional household health survey in Beijing showed a contrary result. In this study, old men aged from 65 to 69 reported having better self-rated general health than their female counterparts in the same age group. However, older men 80 years and over reported worse self-rated general health than older women (Meng & Zhang, 2010). Similar results were found in one study on older adults aged 80 and over in the Fujian urban area (Wen, 2010).

2.1.1.3 Marital status.

Marital status appears to be a protective factor to older Chinese people (Meng & Zhang, 2010; Tian & Zhen, 2004). Being married and living with a spouse is associated with older adults'

better self-rated general health (Liu et al., 2009). On the contrary, divorce and loss of a spouse were seen as the greatest risk factors to the health of Chinese older adults (Guo & Qiao, 2006; Meng & Zhang, 2010).

2.1.2 Socio-economic factors and older Chinese's health.

2.1.2.1 Education.

Chinese studies reported that higher levels of education have been associated with better physical and mental health among older Chinese (Jiang et al., 2005; Liu et al, 2002; Liu & Zhang, 2004; Ma, 2002; Tian & Zhen, 2004) and inversely associated with incidence of functional status decline (Beydoun & Popkin, 2005). For example, one study conducted in Beijing demonstrated that older adults with a higher level of education (post secondary and higher) have higher self-rated general health, less limitations in physical function, less difficulty in self-care and less physical pain (He & Wu, 2009). However, one study based on a national trace survey showed that older adults with limited education or illiteracy conversely reported a higher level of self-rated general health than those with higher education achievement (Guo & Qiao, 2006). The author explained that the reason for this contrary result was that they included younger older adults with limited education in their study, whose expectation of health was low. Based on a sample of older adults aged 55 and older from China Health and Nutrition Surveys of 1997 and 2000, education was strongly and inversely related to combined functional status decline and IADL only, but not with the onset of ADL disability (Beydoun & Popkin, 2005).

2.1.2.2 Economic status.

Economic status (mainly referring to personal or household income in many studies) is a very important factor for older adults' health. Similar to Western literature that showed low income has a consistent influence on older adults' health (Buckley, Denton, Robb, & Spencer,

2003; Deaton, 2008; Gadalla, 2009; Veenstra, 2000; Huguet, Kaplan,& Feeny, 2008; Wanless, Mitchell, &Wister, 2010), numerous Chinese studies have found a positive relationship between socio-economic status and health. For example, some studies indicated that older adults with lower social status tended to negatively self-rate general health (Liu & Zhang, 2004; Zimmer, Wen, & Kaneda, 2010), have more mortality risks among the oldest old in China (Zhu & Xie, 2007) and chronic conditions (Zimmer & Kwang, 2005). Some studies found that older adults with low income have more health problems (Li, Chen, & Li, 2003; Wen, 2010). One study, based on the data collected from one Shanghai neighbourhood, showed that low monthly income and dissatisfaction with their economic status were significant to the mental health of older adults (Jiang et al., 2005). Due to Chinese society's greater emphasis on family integration, the impact of SES may depend not only on the older adults themselves, but also on the relative status of their children or other key family members. Economic independence and good family economic conditions reduced frailty for Chinese elderly based on the data drawn from the 2002 wave of the Chinese Longitudinal Healthy Longevity Survey (Gu et al., 2009). In addition, although low household income per capita was also associated with functional status decline in later life, this association was confounded by other demographic factors, such as urban versus rural area of residence (Beydoun & Popkin, 2005). Further, using recent data from China's 2005 inter-census survey, Lowy and Xie (2009) argued that the influence of socio-economicstatus on health is rather limited in China because of certain socio-political factors, such as political institutions and membership of the Communist Party.

Another indicator in the literature to reflect older adults' economic status is subjective economic status or perceived financial status or adequacy. Perceived financial adequacy is an integral part of one's economic capacity at any age and an especially important indicator for

older adults. That is because personal income of older adults usually declines in later life due to retirement, and health-related costs tend to rise. Perceived financial adequacy is seen as a reliable measure of economic status in late life. Rather than income, perceived financial adequacy was also found to be significant to older adults' health status in many studies. In terms of the relationship between perceived financial adequacy and health status, the literature reports that depression is strongly associated with perceived income inadequacy and there is an association between functional health and subjective economic status ((Litwin & Sapir, 2009).

2.1.2.3 Living arrangement.

In China, living arrangement has been identified as an important factor to old Chinese people's health. Within the scope of Chinese traditional culture, Chinese older adults may prefer or are expected to live with their children (Liu & Zhang, 2004) because intergenerational co-residence may give older adults a sense of pride, as well as instrumental and emotional support that could improve health (Li, Zhang, & Liang, 2009). Several studies from China have reported that older adults who are living with family members have a higher level of self-rated general health or subjective well-being than those who live alone (Chen & Short, 2008; Liu & Zhang, 2004; Wu & Schimmele, 2008). Furthermore, due to the fact that older adults are often forced to live alone rather than choose to do so (Cui, 2002), living alone was seen as having a stronger detrimental impact for Chinese elderly than older adults in Western society (Chou, Ho & Chi, 2006). Empirical studies have suggested that Chinese older adults who live alone, compared to those who live with others, perceive their health more negatively (Chou, Chi, & Kem, 1999; Chou & Chi, 2000), have lower life satisfaction (Chou & Chi, 2000), more depressive symptoms (Chou, Chi, & Kem, 1999; Chou & Chi, 2000; Mui, 1998), a lower level of quality of life (Chou & Chi, 2000), a higher level of financial strain (Chou, Ch,i & Kem, 1999; Chou & Chi, 2000),

weaker social networks and social support(Chou, Chi, & Kem, 1999; Chou & Chi, 2000) and a higher level of stress(Wang, Snyder, & Kass, 2001). Chinese studies showed that older adults living alone are more likely to report a higher level of mental health problems than the people not living alone (Hang, Xiao, Song, & Ma, 2009). Some researchers further identified that having a satisfactory balance between preferred and actual living arrangements may improve the well-being of older Chinese people (Sereny, 2009). However, as Li, Zhang and Liang (2009) pointed out, co-residence with family members could encourage dependence and speed up age-related loss of physical ability among older adults. Some studies have shown that the elderly who live alone are less likely to have ADL limitations than those who live with children based on the data from CLHLS (Li, Zhang, & Liang, 2009; Zimmer et al., 2007; Sereny, 2009). Results from the China Health and Nutrition Survey (CHNS) also showed that older adults living with a non-spouse had significantly higher risk of functional status decline compared to those living independently (Beydoun & Popkin, 2005). Hence, most of literature on living arrangement of older Chinese showed that older Chinese living alone had poorer health status than those not living alone while there are several exceptions.

Although there is a large body of literature on determinants of the health of older Chinese adults, the majority of them focused on individual demographics or socio-economicfactors such as income, education, social support and so on. More broader social factors such as social exclusion is largely ignored in research on the health of older Chinese while social exclusion has been identified as an important social determinants of health for people in different age. In addition, the previous results on the determinants and health are contrary in many studies. Thus, more research with different perspective will be helpful to examine the health status of older Chinese adults. Thus, this study aimed to examine social exclusion and older Chinese' health.

2.2 Social Exclusion

There is rapidly growing literature on social exclusion as the concept has gained prominence in the past twenty years. In spite of its wide use, social exclusion in old age is widely neglected. In order to have a general understanding on the concept of social exclusion, I will review the history of the concept of social exclusion and its main paradigms, and how social exclusion is defined generally. Then, I will review the literature to answer the following questions related to social exclusion in older adults: (a) How is social exclusion defined and measured when it is applied toward older adults? (b) Who is at risk of being socially excluded among older adults? (c) What are the causes of social exclusion of older adults, and (d) what are the effects of social exclusion on them? Then, I will review the literature on social exclusion in China and discuss the indigenization of social exclusion in the Chinese context and empirical studies on social exclusion in older Chinese.

2.2.1 General understanding of social exclusion.

2.2.1.1 Brief history of the concept of social exclusion.

Social exclusion is not a new phenomenon (de Hann, 1998). There is some debate about the historical origins of social exclusion in the literature. For example, some researchers (O'Brien & Penna, 2008; Silver, 2007) pointed out that the concept of social exclusion can be historically traced to the functionalist social theory of Emile Durkheim. Silver (2007) suggested that the notion of solidarity, which is intrinsic to the original meaning of social exclusion (i.e., loss of solidarity or rupturing the social bond), is evident in Durkheim's work. However, others have drawn connections between the concept of social exclusion and Weber's idea of social closure related to how some groups secured and maintained privileges at the expense of others different from their own group (Burchardt et al., 2002; Lister, 2004). Levitas (2000) suggested

that the concept of social exclusion in Britain found its origins in the work of Townsend (1979) and his conceptualization of poverty. Townsend (1979) stated that "Individuals, families and groups can be said to be in poverty when …their resources are so seriously below those commanded by the average individual or family that they are, in effect, excluded from ordinary living patterns, customs and activities" (p. 32). Townsend's (1979) conceptualization of poverty resonates with the eighteenth century economic philosopher, Adam Smith in the Wealth of Nations, in which Smith states, "By necessities I understand not only commodities which are indispensably necessary for the support of life but whatever the custom of the country renders it indecent for creditable people, even of the lowest order, to be without" (as cited in Johner, 2009, p.7).

The modern use of the concept of social exclusion may have originated from France during the 1960s and 1970s (Atkinson, 2000; Bhalla & Lapeyre, 1997; Jamet, 2008; Silver, 1994, 1995) and initial use of the term is attributed to Rene Lenoir. His work *Les exclus: un Français sudix* in 1974 is often seen as a milestone in the emergence of social exclusion (Bombongan, 2008; Estivill, 2003). This book identified various social categories of people including the mentally and physically handicapped, single parents, substance users and other social misfits as *Les exclus* (Silver, 1994), who are excluded from the economic and social gains of the French government because they are not protected by social insurance. At the end of the 1970s and the beginning of 1980, the economy of France came to grow after the economic oil crisis. However, a great number of people did not benefit from the economic growth, particularly the unemployed youth leaving school without adequate skills to obtain a job. Thus, during the late 1970s, the excluded referred to "the ones that economic growth forgot" (Silver, 1994, p.533).

By the mid 1980s, unemployment became a serious social problem because of the technological renovation and economy restructuring in France. Hence, social exclusion became widespread when it became the centre of debate on the nature of the new poverty. In response to the opposition's emphasis on the new poverty and inequality, the government chose the discourse of social exclusion to refer to more and more types of social disadvantages, but also to the process of social disintegration and a breakdown of social bonds between the individual and society, occurring as the result of long-term transformations in the structure and organization of economic life (Gordon, 2000; Levitas, 1998; Silver, 1994). This kind of tearing of the social fabric was regarded as particularly serious and attributed to a failure of the state. Hence, during this time (1980s) solidarity and societal integration of individuals, families and groups became the main objective in France's social policy administration (Gore, 1995). In addition, in French tradition, citizenship and social integration is a relationship between the individual and society. In this vein, social exclusion was also seen as the denial of the rights of citizenship or emphasizes the non-realization of civil, political and social rights, and to the failure of various social systems (Berghman, 1995; Room, 1995). Cannan (1997) believes that the French social interventions linked to the construct of social exclusion were one of the most "impressive social experiments of the 20th century" (p. 84).

From France, the concept of social exclusion rapidly spread across the rest of Europe and became a guiding concept in a wide range of research and policy making on deprivation and inequalities and more or less displaced poverty in the policy discourse in Europe. In 1989, the European Social Charter incorporated the term in its preamble. In the same year the Council of Ministers of Social Affairs of the then European Community passed a resolution to fight social exclusion and to foster integration and a Europe of Solidarity (Atkinson & Davoudi, 2000;

Bombongan, 2008; Sliver, 1994). Articles 136 and 137 of the Treaty of Amsterdam (1997) made the fight against social exclusion a core objective of the European Union (EU). In the same vein, eradicating social exclusion became one of the six objectives of the EU social agenda at the Nice European Council held in December of 2000 (Bombongan, 2008; Gordon, 2000). Now, all member states of Europe are required to produce biennial National Plans for Social Inclusion (Levitas, 2005).

The European Union is an important player in the diffusion of the concept of social exclusion. Social exclusion within the Commission was first established and developed as both a concept and policy in 1989 by the launch of the Poverty 3 initiative and the setting up of an Observatory on National Policies to Combat Social Exclusion (See Atkinson, 2000; Duffy, 1995). At this stage, social exclusion was "in relation to the social rights of citizens…to a certain basic standard of living and to participation in the major social and occupational opportunities of the society" (Room, 1992, p.14), which has combined the French approach focusing on citizen right and Anglo Saxon tradition on participation (Atkinson, 2000). However, social exclusion was further defined by the European Union as a process whereby certain individuals are pushed to the edge of society and prevented from participating fully by virtue of their poverty, or lack of basic competencies and lifelong learning opportunities, or as a result of discrimination (European Foundation, 1995). From this definition, EU has shifted the focus from citizen right to social participation, which more closely follows the British understanding on social exclusion.

In Britain, social exclusion also became central to debates, discussions in British policies and academic research in the 1990s (de Haan, 1998), although the term social exclusion did not appear in the official discourse of government prior to the election of the Labour government in 1997 (Atkinson & Davoudi, 2000).The British scholars prefer a more modest use of the term

social exclusion with *participation,* rather than with *cohesion* or *integration* in the French notion of social exclusion (Alden & Thomas, 1998, pp. 8-9). This tradition can probably be traced to Townsend's work on poverty in 1979, in which the whole thrust was that poverty resulted in exclusion from social participation (Levitas, 2005). In this context, the British scholars defined social exclusion as when an individual cannot fully participate in mainstream society or the activities that are seen as basically required in society (Gordon et al., 2000; Hills et al., 2002). In 1997, the UK Government established a new department, the Social Exclusion Unit (SEU) to enhance understanding of the key characteristics of social exclusion and to coordinate policy-making to prevent social exclusion (SEU, 2005). In 2006, the SEU merged with the Prime Minister's Strategy Unit and was renamed Social Exclusion Task Force, with the aim to ensure that Government departments work together to deliver services for the most disadvantaged members of society

From its Eurocentric origin, social exclusion received much attention outside of Europe, from the developed countries in North America and Oceania, such as Canada, United States, Australia and New Zealand to the developing countries in Asia, Africa and Latin America. For instance, Canada has applied the concept of social exclusion to at-risk groups combating poverty (Burstein, 2005; Eliadis & Spicer, 2004), including children (Frazee, 2003; Hertzman, 2002), recent immigrants (Basok, 2004; Preston & Murnaghan, 2005), lone parents (Kapsalis, &Tourigny, 2002), and aboriginal individuals (Hogeveen, 2005). Particularly, some researchers argued that the concept of social exclusion is also useful in developing countries although they may differ from developed countries in the dynamic mechanism of social exclusion owing to the different social context (de Haan, 1998; Saith, 2001). Bombongan (2008) and Munck (2004) further proposed that beyond its reformist, Eurocentric, and institutional flavours, social

exclusion is still a powerful and adequate tool to capture what is going on in a globalized world such as the experiences of polarization, instability between the rich and the poor, and the growing inequality between developing and developed countries. Hence, the concept of social exclusion not only became a major driver of policy within the EU, but also has gradually been taken up as "a powerful paradigm to describe the poverty in the era of globalization" (Munck, 2005, p 22). Social exclusion can serve as a global term for the social deprivation caused by globalization (Daly & Sliver, 2008).

2.2.1.2 Sociological paradigms of social exclusion.

There are numerous connotations and interpretations of the concept of social exclusion because social exclusion means different things to different people (Silver, 1994). Some researchers have made efforts to map out the different understandings and interpretations of social exclusion. Silver's (1994) three paradigms of social exclusion and Levitas' (1998; 2005) three typologies of social exclusion are the most frequently cited and have wide influences in the area of social exclusion research.

According to Silver, understanding the concept of social exclusion should be connected to "particular values and worldviews" (Silver, 1994, p.61) because these values and worldviews influence the usage of social exclusion in national policy to handle social problems relating to social exclusion. Based on the theoretical perspectives, political ideologies, and national discourse where the notion of social exclusion is embedded, Silver distinguished three sociological paradigms of social exclusion: a solidarity paradigm, a specialization paradigm, and a monopoly paradigm. Each paradigm attributes exclusion to a different cause and is grounded in a different political philosophy. Each paradigm has a different notion of social integration and has its unique approach to social exclusion (See Table 2.1).

Table 2.1. ***Sociological Paradigms of Social Exclusion***

Paradigms	**Solidarity**	**Specialization**	**Monopoly**
Conception of integration	Group solidarity	Interdependence	Social closure
Source of Integration	Moral	Exchange	Citizenship Rights
Ideology	Republican	Liberalism	Social Democracy
Discourse	Exclusion	Discrimination Underclass	Inequality Underclass
Seminal Thinkers	Durkheim	Locke	Marx, Weber, T. H. Marshall

In the French Republican tradition of solidarity paradigm, social exclusion is the expression of a rupture in the social bond (lien social) between the individual and society, known as social solidarity. The solidarity paradigm is dominant in France. It can be historically traced to the philosophy of Rousseau (1762) and sociological thoughts of Durkheimian (1893). Social order and social structure are “social facts”, external to the individual (Durkheim, 1982). Individuals are tied to the larger society through vertically interrelated mediating institutions by national consensus, collective conscience, or general will. The solidarity paradigm views exclusion not only as an economic or political phenomenon, but as a deficiency of solidarity, resulting from the failure of integrating processes, especially the cultural and moral infrastructure and group solidarity. In this sense, exclusion is the inverse of “integration” and the process of attaining it. Hence, this paradigm focuses attention on the “exclusion inherent in the solidarity of nation, race, ethnicity, locality, and other cultural or primordial ties that delimit boundaries between groups” (Silver, 1994, p.542).

The second paradigm, a specialization paradigm, is situated in the individualist frame of Anglo-American liberalism, dominant in the United States. It sees exclusion as a consequence of specialization and occurs when people lack access to economic and social exchanges required by specialization. This interpretation of social exclusion is determined by individual liberalism, and

draws on Hobbes (1651). According to individual liberalism, social order, like economy and politics, is conceived as networks of voluntary exchanges. Individuals are able to move across boundaries of social differentiation and economic divisions of labour. Liberal models of citizenship also emphasize the contractual exchange of rights and obligations. Exclusion happens when discrimination or group distinctions prevent people from exercising their choices in regards to exchanges and social interactions. Hence, in this paradigm, exclusion reflects discrimination, and the drawing of group distinctions denies individuals the full access to or participation in exchange or interaction.

The third approach termed the monopoly paradigm is influential in Britain and many Northern European countries, and draws heavily on Weber, while to a lesser extent on Marx. According to their social democratic or conflict theory, the social order is conceived as coercive, imposed through a set of hierarchical power relations. The monopoly paradigm views exclusion as a consequence of the formation of group monopoly. Social exclusion results from social closure through the monopolization of key resources by powerful interest groups and the interplay of class, status, and political power (Silver, 1994). The monopoly creates insiders and outsiders in the society. Within the insiders, a bond of common interest is enjoyed by them. Outsiders are excluded and dominated. Hence, in this paradigm, exclusion can be combated through citizenship, and the extension of equal membership and full participation in the community to outsiders (Silver, 1994).

Silver's (1994) sociological three paradigms of exclusion are idealized models of social exclusion with no particular paradigm more representative than another. However, these types of analysis allow us to understand the interpretations of social exclusion, and the usage of social exclusion are required to connect with different social and political contexts in which social

exclusion is embedded. De Hann (1998) believed that Silver's overview is extremely useful to help contextualize and understand debates related to issues of deprivation and social exclusion. Silver's three separate paradigms have subsequently been elaborated and applied to a UK context by Levitas (1996, 1998, 2005). Building on the different embedded meanings of the concept, its causes, and appropriate policy responses, Levitas (1996, 1998, 2005) distinguished three discourses of social exclusion, including: (a) a redistributive discourse (RED); (b) a moral underclass discourse (MUD); and (c) social integrationist discourse (SID).

The RED is exemplified by British critical social policy, in which poverty is seen as a prime cause of social exclusion. Thus, eliminating poverty would mitigate exclusion. In this discourse, the poor lack resources, not just money but also access to collectively provided services, and poverty remains core. Except for eliminating poverty, the antidote to social exclusion is the conferral of full citizenship rights to the excluded. The second, SID, was dominant in European discourse in the mid-nineties, in which social exclusion was primarily construed as labour market exclusion or lack of paid work, either at an individual or household level. Hence, social exclusion can be prevented when regular employment is created by the government. The third, MUD, concentrates on the delinquent behaviors of the excluded themselves, such as dependency on welfare provisions and pathology of the poor communities. This discourse is evident in the British Government's Social Exclusion Unit's focus on problem groups, such as runaways and teenage mothers.

All three discourses take paid work as a major factor in social integration and all of them have a moral content. However, where they differ is what the excluded are seen as lacking, namely, "in RED they have no money, in SID they have no work, in MUD they have no morals (Levitas, 2005, p.27). Levitas (2005) stressed that RED, SID and MUD are not types or

dimensions of exclusion, but ways of thinking about exclusion that imply different strategies for its abolition.

In summary, both Silver's three paradigms and Levitas's three discourses of exclusion are ideal types, not mutually exclusive, and can overlap in reality. Silver (1994)'s three paradigms explored national interpretations of social exclusion in relation to Espring-Andersen (1990)'s model of welfare regimes and place more focus on the analysis of social integration at the national level. Levitas's (1998, 2005) three discourses were mainly based on the analysis of British public discourse and policy in the 1990s with some reference to Europe and seem more focused on the population in the labour market. However, both Silver's and Levitas's ideal types of social exclusion emphasize the fact that theoretical models of social exclusion are dependent upon the social and political thought of individual countries and the multiple interpretation of social exclusion across nations will give rise to different approaches to combat it. As such, it is essential to understand the importance of the social and political context in which the social exclusion is applied.

2.2.1.3 Defining social exclusion.

Given its origins, rapid spread and multiple interpretations of social exclusion, the concept of social exclusion has been used in different ways at different times. In the literature, social exclusion was often described as a contested concept (Atkinson, 2008; Levitas, 2005) with "considerable debate" (Seck, 2009, p.4), "all things to all people" (Akinson, 1998, p.13), "embedded in different discourses" (Levitas, 2005, p.7), "continually redefined over time" (Mathieson et al., 2008, p.22) and "inevitably involves endless disputes" (Sliver, 1994, p. 536. Some selected definitions of social exclusion were listed in Table 2.2.

Table 2.2. ***Selected Definitions of Social Exclusion in English Academic Literature***

Author	Country	Definition
Barnes (2005)	UK	Social exclusion refers to the multi-dimensional and dynamic process of being shut out, fully or partially, from the economic, social and cultural systems that determine the social integration of a person in society.
Barry (2002)	UK	An individual is socially excluded if (a) he or she is geographically resident in a society but (b) for reasons beyond his or her control, he or she cannot participate in the normal activities of citizens in that society, and (c) he or she would like to participate.
Beall (2002)	UK	Social exclusion refers to processes resulting from the structural transformations happening in our times causing people to be excluded from the "spaces" they have previously occupied or are deprived of right access in the first place.
Byrne (1999)	UK	Social exclusion is defined as a multi-dimensional process, in which various forms of exclusion are combined: participation in decision-making and political processes, access to employment and material resources, and integration into common cultural processes. When combined, they create acute forms of exclusion that find a spatial manifestation in particular neighbourhoods.
Burchardt, Grand & Piachaud (2002)	UK	An individual is socially excluded if he or she does not participate in key activities of the society in which he or she lives…the individual is not participating for reasons beyond his/her control; and he/she would like to participate.
Duffy (1995)	European context	inability to participate effectively in economic, social, political and cultural life, alienation and distance from the mainstream society.
Collins (2004)	UK	Social exclusion is a process, and can be described more comprehensively as a lack of access to four basic social systems: democracy, welfare, the labour market, and the family and community… that is, what could be described in terms of the philosopher Rawls, or the social scientist Marshall, as limited or second class citizenship.
Estivill (2003)	UK	Social exclusion must… be understood as an accumulation of confluent processes with successive ruptures arising from the heart of the economy, politics and society, which gradually distances and places persons, groups, communities and territories in a position of inferiority in relation to centres of power, resources and prevailing values.
Gallie & Paugam (2000)	Unkown	Social exclusion refers to a situation where people suffer from the cumulative disadvantages of labour market marginalization, poverty, and social isolation. The different aspects of deprivation become mutually reinforcing over time, leading to a downward spiral in which the individual comes to have neither the economic nor the social resources needed to participate in their society or to retain a sense of social worth.
Levitas et al. (2007)	UK	Social exclusion is a complex and multidimensional process. It involves the lack or denial of resources, rights, goods and services, and the inability to participate in the normal relationships and activities, available to the majority of people in a society, whether in economic, social, cultural or political arenas. It affects both the quality of life of individuals and the equity and cohesion of society as a whole.

(continued)

Madanipour (1998)	UK	Social exclusion 'is a societal, that is a society wide, process, induced by wider changes and working itself through in specific ways shaped by national contexts and negatively affecting the ability of particular groups to participate in those social relationships which mean that 'living in a place' contributes to human flourishing'.
O'Brien & Penna (2008)	UK	Social exclusion consists of both "a lack of access to adequate resources and lack of integration into major social institutions, and thus captures the complexities inherent in marginalization".
Pierson (2002)	Unkown	Social exclusion is a process that deprives individuals and families, groups and neighbourhoods of the resources required for participation in the social, economic and political activity of society as a whole. This process is primarily a consequence of poverty and low income, but other factors such as discrimination, low educational attainment and depleted living environments also underpin it. Through this process people are cut off for a significant period of their lives from institutions and services, social networks and developmental opportunities that the great majority of society enjoys.
Reid (2002)	Canada	…disintegration from cultural processes, lack of participation in social activities, alienation from decision-making and civic participation, and barriers to employment and material resources
Room (1995)	UK	Social exclusion focuses on relational issues: in other words inadequate social participation, lack of social integration and lack of power. Social exclusion is the process of becoming detached from the organizations and communities of which society is composed and from the rights and ob-ligations that they embody.
South Australian Labour Party (2002)	Australia	social exclusion is created by harsh and unjust economic conditions compounded by difficult social environments and made worse by insensitive government policies and government neglect…
Valencia (2001)	France	"Exclusion is not only segregation and marginalization; it is a type of social relationship that does not recognize the other's right of existing.
	Yemen	"Social exclusion is the opposite of social integration. It is present when some individuals and groups cannot participate, or are not recognised, as full and equal members of society, at local community or national level".
Walker and Walker (1997)	UK	… the dynamic process of being shut out…from any of the social, economic, political and cultural systems which determine the social integration of a person in society.
Ziyauddin & Kasi (2009)	India	In its simplest understanding, social exclusion is lack of access to resources and consequent inability to utilize them. It is further accentuated by denial of opportunities which enhance access to resources and their utilization.
	WHO	Exclusion consists of dynamic, multi-dimensional processes driven by unequal power relationships interacting across four main dimensions - economic, political, social and cultural - and at different levels including individual, household, group, community, country and global levels.

The list is not exhaustive, but it gives a sense of recurring elements and subtle differences in the ways in which social exclusion was defined. These definitions differ in emphasis on one or more facets of exclusion. David Philips (2008) stated that there are three approaches to defining social exclusion, including: outcome-based social exclusion, process-based social exclusion, and causal-based social exclusion. For outcome-based social exclusion, people are considered socially excluded if they do not participate in the normal activities of their society. Several definitions in Table 2.2 are grounded in this approach, such as the definitions by Bally (2002), Burchardt, Grand, and Piachaud (2002), Duffy (1995), Gallie and Paugam (2000), O'Brien & Penna (2008), Room (1995), and Richardson and Le Grand (2002). Process-based social exclusion focuses on the failure of one or more of the democratic and legal system, labour market, welfare state system, communication system, and family and community system. In this vein, the definitions by Beall (2002), Barnes (2005), Collins (2004), Estivill (2003), Levitas et al. (2007), Madanipour (1998), Pierson (2002), and Walker and Walker (1997) are examples of this approach. Causal-based social exclusion refers to denial or unavailability of belonging, trust, and access to relevant resource structures required by social actors in order to possess positive self-concepts (Wessels & Miedema 2002). The definitions by O'Brien & Penna (2007), Fraser (2003), and Ziyauddin & Kasi (2009) can be categorized into this approach.

Influenced by Silver's three paradigms of social exclusion, Bhalla (1997) and Atkinson (2000) linked the different approaches of social exclusion to the context in which the definition was offered and identified several approaches of social exclusion, such as the French tradition, the Anglo-Saxon tradition and the European Community/Union discourse of social exclusion. The French tradition of social exclusion is linked to the tradition where integration is achieved by key state institution. Social exclusion is viewed as a failure of the Republican State in

protecting the cohesion of the society (Bhalla, 1997) and a rupture of social bonds. The Anglo-Saxon tradition views social integration as a freely chosen relationship between individuals rather than a relationship between the individual and society (Silver, 1994). Hence, social exclusion may reflect voluntary individual choices and patterns of interest (Bhalla, 1997). Based on this tradition, social exclusion is interpreted as the lack of participation in social activities. European Community/Union discourse of social exclusion attempts to integrate the French tradition and Anglo-Saxon tradition. At the same time, it also emphasizes the citizenship and social right in their concept of social exclusion. In recent years, Canadian research has linked social exclusion to poor perceived health outcomes and defined social exclusion as involving "…disintegration from cultural processes, lack of participation in social activities, alienation from decision-making and civic participation, and barriers to employment and material resources" (Reid, 2002, p.3).

While the term is contested, vague and lacking a generally agreed definition (Atkinson, 2008; Daly & Sliver, 2008; Peace, 2001), nevertheless, there is an agreement that social exclusion is a multidimensional, dynamic and relational concept across the literature (Atkison, 1998; Bombongan, 2008; Bhalla & Lapeyre, 1997; Burchardt, 2000; de Hann, 1998; Morgan, 2007; Room, 1992; 1995; Silver, 1994; Silver & Miller, 2003; Tskloglou & Papadopoulos, 2002; Vobruba, 2000; Walker & Walker's, 1997). First of all, social exclusion is a multidimensional phenomenon. The multidimensional nature of social exclusion refers to different dimensions (e.g., social, economic, political, and cultural aspects). Research that examines social exclusion typically includes economic (e.g.,income, education) and/or social relations (e.g., social supports/networks/feelings of aloneness) dimensions of exclusion, but may also include other dimensions such as political/civil (e.g., non-participation in voting) (Burchardt et al., 2002), or

environmental, social goods, spatial and living conditions (e.g., housing, access to services for the disabled, social security) (White, 1998, as cited in Galabuzi, 2004, p.176), community and social relationships (e.g., social supports/networks) (Tsakloglou & Papadopoulos, 2002), isolation (e.g., feelings of hopelessness/powerlessness/living alone) (Toronto & Community Neighbourhood Services, 2003), social integration (e.g., social networks) (Berkman et al., 2004), physical health and psychological well-being(Barnes, 2005) and socio-economic characteristics such as ethnic identity (Fleury, 2002) or disability (Burnstein, 2005). Multi-dimensions of social exclusion also include different levels (micro e.g., individual, household; meso e.g., neighbourhoods; and macro e.g., nation state and global regions) (Mathieson et al., 2008).

Second, for most, the dynamic process of social exclusion is often described as the mechanisms that cause people “being shut...from the key social economic, social and cultural systems” (Barnes, 2005, p.15), or distance them from the social mainstream (Giddens, 1998). This process is through depriving individuals and families, groups and neighbourhoods of the resources, which were required for participation in the social, economic and political activity of society as a whole. The dynamic process of social exclusion also refers to the changing and interactive nature of social exclusion along different dimensions and at different levels over time.

Third, a relational perspective of social exclusion focuses on exclusion as the rupture of relationships between people and society resulting in a lack of social participation, social protection, social integration and power (Barter et al,1999; Bombongan, 2008; Room, 1995).Alternatively, a relational perspective points to social exclusion as the product of unequal social relationships characterized by differential power, i.e., the product of the way societies are organized (Mathieson et al., 2008). In this vein, Silver (2007) indicated that “social characteristics that reflect the distribution of honour, respect, and social distance, not just the

distribution of material and non-material resources” (p.2) are central to unravelling and understanding social exclusion.

These three core elements of social exclusion provide insight into the nature, causes and consequences of social exclusion and are fundamental to achieving an understanding of the social exclusion concept. However, it is evident that the three core elements of social exclusion are inextricably linked. For example, each dimension of social exclusion (such as economical, social, cultural, and political) can be related to the relationship between individual and society (Bhalla & Lapeyre, 1997). In addition, the dynamic interactions between different dimensions and different levels of social exclusion over time contribute to multiple causes of social exclusion and bring on an accumulated effect on the excluded (Grant et al., 2004).

Based on the above noted understanding on social exclusion, some current social exclusion studies therefore distinguish between the terms “social exclusion” and “poor” (Barry 1998; Berghman, 1995; Room 1995; Samers 1998; Saraceno, 2001; Vrooman & Snel, 1999). They argue that social exclusion is more like a process, a multidimensional, relational concept whereas “poor” is a potential result of social exclusion, is linear in character, and is a distributional issue (Jehoel-Gijsbers & Vrooman, 2008; Samers, 1998). At the heart of social exclusion is the relationship between individual and society or between individual and individual and the focus on relational features is to be a great merit of the approach of social exclusion (Gore, 1995; Sen, 2000). Socially excluded individuals are those who lack access to social participation due to many reasons. Therefore, Room (1995) argued, social exclusion should be primarily used to describe relational issues (lack of social ties to the family, friends, local community, stated services and institutions or more generally to the society to which an individual belongs), while the notion of the poor, poverty focuses on the economic, distributional issues. However, focusing

upon relational issues of social exclusion does not mean to diminish the importance of the distributional issues of material resources (or poverty) in the conceptualization of social exclusion (Barter et al., 1999). Material deprivation can generate experiences of social exclusion because of limited available resources. Economic or material deprivation is an important dimension of social exclusion in many empirical research studies, which will be further examined in the subsequent measurement of social exclusion.

In addition, some researchers have noted voluntary or involuntary exclusion because some people may seek an "alternative lifestyle outside mainstream society" (Wessels & Miedema, 2002, p. 73). Involuntary exclusion refers to the otherness of individuals that experience disadvantages due to gender, age, ability, employment status, government policy legislation, social norms and values and so forth. The voluntarily excluded refers to those individuals who choose to exclude or disconnect themselves from others and society (Burchardt et al., 1999). For those involuntarily excluded, their experience of social exclusion will be more harmful than those voluntarily excluded. Hence, some argue that an individual is socially excluded only if he or she cannot participate in the normal activities of citizens in that society that he or she would like to participate for reasons beyond his or her control (Barry, 2002).

2.2.2 Social exclusion and older adults.

As noted, there is extensive literature on social exclusion. However, as Holf (2008) indicated, older adults as a group is not regarded as poor or socially excluded in most European Union member states. Even in the United Kingdom, where social exclusion has a priority in social policy, social exclusion among older adults is a late starter in social exclusion debates and received relatively little academic and policy attention (Naughtin, 2008; Scharf & Keating, 2012). With release of the report on social exclusion in old age by the Social Exclusion Unit, the

importance of social exclusion in later life is increasingly being emphasized (Baranes et al., 2006; Becker & Boreham, 2009; Scharf et al., 2005).

2.2.2.1 Defining and measuring social exclusion in older adults.

Some researchers argue that the conceptualization of social exclusion in general population studies cannot show the complexity of social exclusion among older adults because much of the literature on social exclusion focuses on labour market attachment (Bono et al., 2007; Patsios, 2000; Scharf et al., 2000, 2001, 2004). Scharf et al. (2004) pointed out that there are three difficulties when applying the concept of social exclusion to older adults. The first concerns the centrality of labour market participation as an indicator of social exclusion while many older adults have permanently withdrawn from their occupational roles. A second difficulty arises from an emphasis in exclusion debates on the dynamic nature of social exclusion. Some studies have shown exclusion boundaries are essentially fluid rather than rigid and the socially excluded individuals can move out of the situation of being socially excluded. However, as Scharf et al. (2004) argued, older adults' social situation is different and may be more permanent than other groups. This may change the way in which exclusion is experienced, leading to different types of questions about the process by which exclusion is addressed. A third problem concerns the neighbourhood dimension of exclusion and its impact on older adults' sense of identity, which is not adopted as a dimension of social exclusion in general. However, the local residential environment may represent a much more important aspect of exclusion for older adults than for other age groups because older adults may tend to spend more time than younger people in their immediate neighbourhood. Therefore, particular emphasis should be placed upon the neighbourhood dimension of social exclusion when applying the concept of social exclusion to older adults (Adoppt & Sapsford, 2005; Scharf et al., 2001; Scharf et al.,

2004). In addition, some suggest that much more attention should be paid on social networks and health because older adults have greater demands on them (Hoff, 2008; Scharf et al., 2004). In light of these considerations, some authors have attempted to quantify social exclusion specific to older adults.

Based on the awareness of the difficulties of the operationalization of an approach to measure social exclusion amongst older adults, in 2001, Scharf et al. (2001) provided a framework for conceptualizing the nature and scope of social exclusion with regard to the elderly that includes exclusion from participation and integration beyond the labour market, spatial segregation, and exclusion as a form of institutional disengagement. Furthermore, Scharf, Phillipson, and Smith (2004, 2005a, 2005b) suggested that older adults may experience one or more of the following forms of social exclusion from material resources, social relations, civic activities, basic services and neighbourhood exclusion.

The Social Exclusion Unit of UK (2005) also identified some similar dimensions of social exclusion by Scharf, Phillipson, and Smith (2004, 2005a, 2005c) through in-depth interviews with hundreds of low-income elderly people. These dimensions include income and poverty, absence of social participation, health, mental health and disability, lack of information, lack of adequate social care, and lack of access to decent housing or support with maintenance.

Barnes et al. (2006) presented seven dimensions of social exclusion experienced by older adults based on the first wave of the English Longitudinal Study of Ageing (ELSA). These dimensions are social exclusion from social relationships, cultural and leisure activities, civic activities, basic services, neighbourhood, financial products, and material goods.

Bono et al. (2007) also identified three dimensions of social inclusion for older adults: (a) need, access and quality of services, (b) provision of informal care, and (c) social participation

and social networks. According to Bono et al. (2007), being excluded from basic services (e.g., transportation, health services, and welfare services) captures the disadvantages that older adults face when unable to access facilities crucial to their quality of life. Providing care, especially towards living-in partners in ill health, could be such a demanding task that it may prevent the old from taking part fully in the social life of the community. It is therefore very important to consider all these different indicators of social inclusion within the same framework.

Jehoel-Gijsbers and Vrooman (2008) provided one conceptualization of social exclusion with two forms of economic-structural exclusion and socio-cultural exclusion. The former refers to distributional dimensions exclusion, material deprivation and insufficient access to social rights. The latter refers to relational dimension, in which insufficient social integration and insufficient cultural/normative integration are included.

The above examples of measurement provide a profile of various efforts designed to measure social exclusion in older adults. It is difficult to assess which methods of conceptualizing and measuring social exclusion in older adults are more valid than others. The difficulties in defining and measuring social exclusion in older adults can be traced to the different traditions of social and political thought in which the concept of social exclusion is embedded (Silver, 1994; Levitas, 1998, 2005). These problems may also result from the different approaches used to conceptualize social exclusion suited to different purposes (Abrams & Christian, 2008). These variances implied a definition of social exclusion in older adults that is not agreed upon (Scharf & Keating, 2012). Hence, more research is needed to understand social exclusion in older Chinese, particularly, in a context different with Europe.

2.2.2.2 Prevalence of social exclusion in older adults.

To what extent do older adults vary in the degree of social exclusion? Several studies have been conducted to examine levels of social exclusion. In the UK, in 2006 the Social Exclusion Unit of the Office of the Deputy Prime Minister (ODPM) published a report on the social exclusion of older adults aged 50 years and over, which is based on 2002-03 data from the English Longitudinal Study of Ageing (ELSA). In this study, social exclusion was measured using seven dimensions – exclusion from social relationships, cultural and leisure activities, civic activities, basic services, neighbourhood, financial products, and material goods. A key finding of this report was that 29% of the old population was excluded on one dimension, 13% on two dimensions, and 7% on three or more dimensions of life (Barnes et al., 2006). Another UK study by Becker and Borehan (2009) also reported multiple risk markers of social exclusion faced by older adults aged 60 and older, using 2004-05 data from the English Longitudinal Study of Ageing (ELSA) and nine years of the British Household Panel Survey (BHPS). In this study, social exclusion was measured using the risk markers outlined in the Bristol Social Exclusion Matrix (Levitas et al., 2007). They reported that 50% of the sample experienced multiple risk markers of social exclusion (two or more of the 16 risk markers). Based on this analysis, Social Exclusion Task Force (2009) further rendered a summary on social exclusion in old age, in which around 5% of older adults had an average of five risk markers of social exclusion that related to poor access to services and transport, physically inactivity, fear of their local area after dark, low social support, and poor general and emotional health. In addition, Jehoel-Gijsbers and Vrooman (2008) conducted a comparative study of EU Member States on social exclusion of the elderly based on three datasets in Europe. In this study, three dimensions measured the degree of social exclusion: material exclusion, access to social rights, and social participation. The results

showed that according to their study, 14% of the sample of the European elderly population (55+) suffered from material exclusion, 10% had inadequate access to social rights, 15% were excluded in terms of social participation, and 13% experienced economic–structural exclusion (summary scale over the first two dimensions). There were some variations on the degree of social exclusion across countries that they studied. It appears the elderly in the Nordic countries and the Netherlands are the least excluded and social exclusion among the elderly was generally higher in the Mediterranean countries. The highest social exclusion scores were found in the EU's new member states in Eastern Europe, especially in the Baltic States and Poland. The author indicated that country differences in household income contributed more in social exclusion than the differences in the composition of the population in connection with health, education level, age and gender, and poor health. Some country traits contribute to social exclusion of elderly persons in this study. It seems that a country that has a higher level of national wealth, spend more on social protection, has less income inequality and which generates higher life expectancy has less excluded elderly persons.

2.2.2.3 Social exclusion and specific older adults.

Several studies have attempted to identify the prevalence and degrees of social exclusion among older adults. It is still hard to compare them in different countries because of the variations in conceptualization of social exclusion across studies. However, there are specific groups of older adults who might be at significant risk of being affected by social exclusion. If it were possible to identify such risk groups, policies for combating social exclusion could be focused on these groups. A number of studies have attempted to identify older adults who are most vulnerable to social exclusion in the literature.

For example, Hoff (2008) attempted to identify particularly affected social groups in Europe through interviews with experts across Europe working in government, the NGO/voluntary sector, and independent experts. In the view of these experts, the most frequently cited risk factor to older adults' social exclusion is social isolation as a result of lack of family ties. The second most frequently mentioned risk factor was poverty, by which women were more severely affected than men. Need of care as a consequence of poor health, dementia and/or disability was indicated as a third major risk factor in 10 countries (Austria, Czech Republic, Denmark, France, Ireland, Lithuania, Netherlands, Portugal, Slovakia, and Slovenia). Other risk factors that were identified during the expert interviews included living in rural areas, immigration backgrounds, poor access to social services, social care, poor housing conditions, neighbourhood, early exit from labour market, no access to IT, poor access to public transport, lack of political representation, lack of support for family careers, being an old male, no experience with the benefit system, low educational attainment, and lack of coherent old-age policies. Living in rural areas was seen as posing a major risk of becoming socially excluded in six countries.

Other empirical research studies examining social exclusion among older adults also identified several individual factors to social exclusion among older adults, such as old age, living alone, low level of income, lower level of education, ethnicity, house condition and poor health status. These are probably individual correlates to social exclusion among older adults (Becker & Boreham, 2009; Demakakos, 2008; Jehoel-Gijsbers & Vrooman, 2008; Scharf et al., 2005a).

Specifically, several studies demonstrated an important relationship between age and social exclusion. For instance, Scharf et al. (2005) in their research on social exclusion among

older adults pointed out that the experience of multiple exclusions was significantly linked to age. Older adults aged 75 and over were more likely to be multiply excluded than those aged 60-74.Barnes et al. (2006) reported that the old old (aged 80 years and older) were found to be excluded in three or more dimensions of social exclusion in their analysis of data from the first wave English Longitudinal Study of Ageing (ELSA). In the analysis of the data from the 1st and 2nd waves of ESLA, Demakakos (2008) reported that the problem of multiple social exclusions intensifies after the ages of 75 for women and 80 for men. Similarly, using ESLA, BHPA data and Bristol-Social Exclusion Matrix, Becker and Boreham (2009) indicated that the old old were more likely to experience multiple risk markers than their younger counterparts on a wide range of measures. However, they also found that multiple social exclusions affected the lives of those at early old age (50 to 64) more than those 65 and over. Nonetheless, in an international comparative study of social exclusion in Europe, age was not found to be a serious risk factor for social exclusion after the impact of other variables had been controlled (Jehoel-Gijsbers &Vrooman, 2008).

Several studies indicate that low income, especially long term poverty, will increase the risks of social exclusion in old age. Jehoel-Gijsbers and Vrooman (2008) reported that household income has a strong effect on the dimensions of material deprivation and access to social rights: the lower their income, the more people are socially excluded. Scharf et al. (2005) analyzed the complex nature of social exclusion in the relationships between its constituent domains and identified the important role of poverty and deprivation in limiting older adults' ability to fulfill key social roles. In this study, of the respondents who were excluded in the material dimension, 58% were also excluded from social relations, 20% from civic activities, and 33% from basic services. Barnes et al.'s (2006) study on social exclusion in the UK found that low income was

related to three dimensions of social exclusion: financial products, material goods and cultural activities. In this study, older adults having no access to a car and having never used public transportation were often excluded in three or more dimensions. Becker and Boreham (2009) further suggested that older adults who have a combination of low income and transport problems are likely to experience multiple risk markers for the longest period of time. However, one study reported that income does not drive social exclusion at old age (Demakakos, 2008). The author argued that it does not mean that social-economic status does not relate to social exclusion in old age. On the contrary, it identified the importance of examining socio-economic factors that influence earlier stages of life (Demakakos, 2008).

Living alone was also often identified as risk factors to social exclusion. For example, older adults who live alone and have no living children were often reported as experiencing multiple exclusions or risk markers (Barnes et al, 2006; Becker & Boreham, 2009; Scharf, 2004). More specifically, Barnes et al. (2006) reported living alone was to be related to four dimensions of social exclusion including basic services, material goods, social relationships and civic activities. In Demakakos' (2008) analysis of the first and second waves of ELSA data, 45% of men 80 and over living alone felt lonely and the respective rate for men 80 and over not living alone was only 4%. Furthermore, the elderly living alone experienced more material deprivation and had less access to social rights than non-singles (Jehoel-Gijsbers &Vrooman, 2008). In addition, some researchers have argued that social exclusion and social isolation in old age are two multidimensional and possibly intertwined problems (Demakakos, 2008). In this respect, isolation and physical weakness results in social exclusion among older adults because they are often denied full participation in the economic, social, and political life (De Hann, 1998).

Marital status is also identified as a significant factor of social exclusion among older adults. For example, Scharf et al.'s (2005) study on older adults who lived in deprived neighbourhoods in Britain showed that widowed or divorced/separated people were most likely to be excluded from material resources and civic participation, among five dimensions of social exclusion. Demakakos (2008) also reported in their analysis of data from the ELSA that people who have never been married have the highest risk of being multiply excluded among all people aged 50 and over (even compared to their widowed counterparts) and about 45% of people 80 and over who have never been married are multiply excluded.

Gender may also have an influence on social exclusion of older adults. As mentioned previously, Bono et al. (2007) compared men and women aged 65 and over in Britain and their degree of social exclusion using secondary data. The analysis found gender differences in the older adults' degree of social inclusion. In Demakakos's (2008) study on social exclusion at old age in the UK, gender differences existed in all age groups over 70, with women consistently reporting higher rates of multiple social exclusions than men. Based on the data from the 1999 Poverty and Social Exclusion Survey, Patsios (2006) also reported that poverty and exclusion are highest among single women pensioners, particularly younger single women pensioners, who are the poorest and most excluded group of all pensioners. Similarly, Barnes et al. (2006) indicated that being female was related to three dimensions (cultural, civic and financial products) of social exclusion. Women were also reported as more likely than men to be excluded from civic activities in Scharf et al.'s (2005) study on older adults living in deprived urban neighbourhoods.

A lower level of education is also an important determining factor of social exclusion. For example, in a comparative study exploring the relationship between social exclusion and welfare regime, Ogg (2005) reported that a higher level of education appears to play a crucial role in

reducing the chances of being insecure or socially excluded during old age in all countries. Other researchers also indicated that higher education is an important protective factor from exclusion for older adults (Miranti & Yu, 2011).

It appears that ethnicity is also a factor of social exclusion among older adults. For example, in Barnes et al.'s (2006) study, membership of a non-white ethnic group was related to four of the seven dimensions of social exclusion, including cultural, civic, financial products and material goods.

Housing also seems to be a relevant risk factor to social exclusion among older adults in literature. Unfavourable housing conditions will increase the risk of social exclusion (Jehoel-Gijsbers & Vrooman, 2008; Becker & Boreham, 2009). Besides housing conditions, the renting of accommodations was also found to relate to social exclusion among older adults. Research found that those who do not own their accommodations or rent their accommodations have a higher risk of experiencing social exclusion, especially at the oldest old age (Barnes et al., 2006; Demakakos, 2008; Becker & Boreham, 2009).The characteristics of the neighbourhood can also be a risk factor of social exclusion in later life. Demakakos (2008) indicated that people who live in densely populated urban places are at much greater risk of being multiply excluded than people living in non-urban or less densely populated urban areas.

Poor health status was also reported to contribute to social exclusion among old age by some researchers. Barnes et al. (2006) indicated that older adults having poor health and suffering from depression were often reported as experiencing multiple dimensions of social exclusion. Further analysis on the characteristics that increase the chances of exclusion across several dimensions showed that depression and poor health were related to most of the dimensions. In Jehoel-Gijsbers and Vrooman's (2008) international comparison study, the

authors identified health status as the first individual risk factor to social exclusion and reported that on all dimensions and in each country, the elderly are more excluded the poorer their health is. Older adults with longstanding health conditions were more likely to experience increased social exclusion in later life (Scharf et al., 2005a; Becker & Boreham, 2009). In addition, older adults experiencing low well-being reported experiencing multiple risk markers (Becker & Boreham, 2009). Those with serious memory problems also reported experiencing multiple social exclusion dimensions more often than their counterparts with better memory (Demakakos, 2008).

Furthermore, empirical data identified some individual characteristics that contribute to social exclusion of older adults. For example, through in-depth interviews with older adults who experience more than one type of social exclusion, Scharf et al. (2005a) demonstrated that becoming a widow/er and the loss of close friends featured strongly as triggers of exclusion from social relations, as did the onset of chronic ill health. Older adults who have lived in their communities for longer are more likely to perceive the local environment negatively. In their quantitative findings, multiple social exclusion is significantly correlated with respondents' ethnic origin, educational status, housing tenure, perceived health status and quality of life.

Finally, social exclusion in old age can be explained as the continuation of deprivation experienced throughout the life course. In many cases, the risk of being affected by social exclusion in old age is a social risk inherited from the parents (Hoff, 2008). Scharf et al. (2005a) reported that exclusion from material resources in later life was generally related to a lifetime of financial struggle. Miranti and Yu (2011) also indicted that disadvantage among the elderly is cumulative in nature and some aspects of disadvantage starting at early life stages have long-term consequences for older adults.

The findings of these studies are helpful in identifying the possible correlates of social exclusion in older adults such as being old in age; having low income or being in poverty, especially being in long term poverty; widowhood, living alone and social isolation; having poor health status; being female; having a lower level of education; having bad housing conditions; and renting of accommodations, while these studies are not consistent in the measurement of social exclusion among older adults. Nonetheless, these studies were mainly conducted in a European context. Whether these individual factors are correlated factors to social exclusion in a different cultural context needs further examination. Although the above noted findings have presented the possible correlates to social exclusion among older adults, how these factors affect social exclusion among older adults is not very clear. Moreover, the majority of studies presume a one-sided causality, namely, risk factors are considered to increase the likelihood of being socially excluded. But empirically, the relationships between some variables may in fact be reciprocal. For instance, being socially excluded can be a consequence of poor health, but it can also cause deterioration in one's physical or psychological well-being. Thus, given the European focus of the empirical literature, it is particularly important to have more empirical research to explore social exclusion, correlates to older adults and its potential impacts on older adults in a non-European culture as well such as Asia.

2.2.2.4 Society/systemic cause and origins of social exclusion in later life.

While current findings on social exclusion and older adults have identified several individual factors to older adults, as the macro circumstances of older adults are different from those of younger or middle-aged people, the causes of social exclusion among older adults might also come about from factors at macro levels. Researchers have linked social exclusion among older adults to the varied and complex origins at the macro level.

For example, after reviewing the impact of government policy on the social exclusion of older adults, Phillipson and Scharf (2004) took a broad view of social exclusion and identified four groups of conditions that might cause exclusion in older adults, namely, age-related characteristics, cumulative disadvantage, age-based discrimination, and community characteristics. According to them, age-related characteristics are the first driver of social exclusion in later life. These refer to the ways in which older adults are disproportionately affected by certain kinds of losses or restrictions relating to income, health or reduced social ties. Second, social exclusion in later life probably arises from cumulative disadvantages in their life. For example, limited educational and work opportunities at early points in the life course may have long-term consequences in terms of reduced income at old age or limited awareness about how to access the full range of social and health services. Third, community characteristics relate to the specific features of neighbourhoods in which elderly people live that might constitute disadvantages or limitations to their daily living, typically the changes associated with population turnover, economic decline, and rising levels of crime and insecurity within neighbourhoods. Finally, age-based discrimination is another driver of social exclusion in later life, which refers to the impact of ageism within economic and social policies that contributes to various forms of social exclusion in old age.

Some scholars think that contemporary forms of exclusion in later life may be resulted from the impact of changes in societal frameworks such as labour market and institutions such as families, churches or voluntary associations (Cavalli et al., 2007). In this respect, the exclusion of older adults should be understood within the broader socioeconomic and political context (Simms, 2004). Consistent with this understanding, some scholars argue that social exclusion in later life is mainly influenced by the combined impact of social policy packages at the national

level, the history and legacy of the institutions of nation states and their future development, and welfare regimes (Mayer, 2001; Ogg, 2005). Jehoel-Gijsbers and Vrooman's (2008) analysis of the data from the first round of the new European Social Survey showed a link between developed welfare regimes and low rates of social exclusion in old age. The findings indicated that older adults were less excluded in countries with a higher level of wealth (GDP), a higher expenditure on social protection, less income inequality and higher life expectancy after controlling for the impact of variables at the level of individual respondents and households. Researchers posited that social exclusion in later life also relates to social-economic structural changes, such as economic change, changes to welfare programs, and demographic changes such as an ageing population, rather than to individual's behavior or characteristics (Bhalla & Lapeyre, 2004; Guildford, 2000). Exclusion of older adults is also a result of inequalities and social injustice that exist in the social system (Neysmith & Edward, 1994).

In addition to social policy context and structural factors, the social environment, which is determined in large measure by mainstream culture, may perpetuate conditions such as marginalization, stigmatization, loss or devaluation of language, and lack of access to culturally appropriate healthcare and services, all resulting in social exclusion in later life (Podnieks, 1997; Podnieks, 2006). Ageism has also been identified as a key factor of social exclusion of elderly people (Podnieks, 2007). For example, it was found that the attitudes and beliefs of younger people contribute to denying older adults opportunities and equitable treatment (Chui, 2009).

Finally, according to Blackman et al. (2001), social exclusion occurs when an older person cannot control the needed resources to meet the demands of an everyday life of autonomy that most take for granted. This kind of lack of power and status makes it challenging for older adults to access services and to navigate the system (HelpAge International, 2000).

There are multiple origins and causes of social exclusion among older adults. Some of them can be related to macro factors such social policy context, social changes and social environment, and ageism. Although these factors may be difficult to operationalize in empirical studies, they cannot be neglected when the researcher interprets the empirical findings.

2.2.2.5 Impacts of social exclusion on older adults.

A variety of research has addressed the diverse ways in which the dynamic and multi-dimensional nature of social exclusion might affect older adults.

First, there appears to be a connection between exclusion and the quality of life/well-being of older adults. For example, Scharf et al. (2004) in their study exploring interactions between social exclusion and quality of life for older adults living in socially deprived urban areas showed that older adults who rated their quality of life as good or very good were significantly less likely to experience social exclusion than those rating their life quality as poor or very poor. In other words, the research suggests that the condition of social exclusion acts to reduce older adults' quality of life, well-being and future life chances (Becker & Boreham, 2009). Similarly, Barnes (2006) reported that the overall quality of life falls as the number of dimensions older adults are excluded increases. Furthermore, Demakakos (2008) indicated that age is not related to a decrease in satisfaction with life and well-being. On the contrary, the author argued that social exclusion has a more detrimental impact on life satisfaction, particularly among those who were apparently socially excluded younger older adults (Demakakos, 2008).

Second, social exclusion can also contribute to some negative social consequences for older adults. For example, through a survey and supplemented by Community Futures Workshops on older adults aged 50 and over in an area of material deprivation, Abbott and Sapsford (2005) reported that living in a socially excluded neighbourhood, independently and in

interaction with other factors such as lack of financial capital and poor health, influences an older person's ability to participate in socially valued activities, and to access services and information. Older adults living in socially excluded places experience high levels of crime and are in constant fear of violent attack. Older adults in deprived areas are excluded from the streets by their fear of crime and harassment, and so from the community. Fear of crime is also lack of trust in other people, which inhibits the formation and maintenance of supportive networks (Abbott & Sapsford, 2005).

Finally, a few studies have identified the association between social exclusion and health status of older adults. These studies will be detailed in the section that reviews social exclusion and health.

2.2.3 Social exclusion in China.

With the rapid spread of the concept of social exclusion, literature on social exclusion in China has risen drastically in recent years. The next section will briefly review the development of the concept of social exclusion in China, the indigenization of social exclusion in the Chinese context and empirical research on social exclusion in older Chinese adults.

2.2.3.1 Development of the concept in China.

In Mainland China, social exclusion has been a popular research topic. The term "social exclusion" was first introduced to China through the agreements reached in the "World Summit for Social Development" held in Copenhagen in 1995 (Li, 2004, Tang, 2002). However, this term did not attract much attention from policy-makers and academic scholars in Mainland China at that time. As Tang (2002) pointed out, the term social exclusion (*She Hui Pai Chi*) had a lot of political connotations. The government authorities in China would not accept the concept of social exclusion, and it would not become part and parcel of social policy research unless

scholars are not too politically oriented, are not emotional about the difficulties faced by vulnerable groups, and do not seek direct confrontation with the government. Despite these challenges, the term social exclusion fell into the sight of Chinese scholars and appeared in academic journals in China at the beginning of the 21st century. In 2000, the China Social Security Research used the concept of social exclusion to analyze the Social Security System in mainland China (Labour and Social Security Research Centre, 2000). In 2001, social exclusion was seen as the new direction of social policy research in China (Editorial office of Study of Sociology, 2002). By 2003, some researchers requested that the elimination of social exclusion should be the goal of social policy (Meng & Fang, 2009; Tang, 2002; Zheng & Li, 2003).

Since then, there have been a number of papers using the term social exclusion in China. So far, in Chinese literature social exclusion mainly covers a wide ranges of people such as ones with disabilities (Peng, 2008), workers who have been laid off (Shi, 2004; Zhuo, 2008), unemployed youth (Zeng & Wei, 2004; Zeng, 2009), people living in poverty in urban areas (Peng, 2007; Xu, 2008; Zhu, 2006), rural to urban migrants (Fang, 2008; Huang & Zhang, 2008; Li, 2004; Li & Chui, 2010; Ren, 2008; Wang, 2008); displaced peasants (Wang, 2008), AIDS patients (Zhou, 2005; Xiang & Tang, 2006), ex-prisoners (Mo & Jin, 2008), retired athletes (Hu, 2008), and migrant children(Xu & Bai, 2009).

The adoption of this term reflects a need in searching for a comprehensive framework to understand the new “disadvantaged” groups that appeared in transitional China as a result of drastic social and economic changes during the past three decades since the Chinese economic reform generated new poverty and inequality (Li, 2004, 2005). For example, some disadvantaged groups have suffered more challenges than before and were pushed to the edge of poverty and social injustice due to the lack of personal and social resources during this period. How to

improve the quality of lives of disadvantaged groups has become a challenge for Chinese policy makers. Under these circumstances, social exclusion was quickly adopted and considered a useful and integrative framework to identify, interpret, and resolve the challenges that disadvantaged groups encountered in mainland China (Meng & Huang 2009) and thus promote social harmony of China (Ding, 2005, 2009). Some researchers argued that the concept of social exclusion could demonstrate the status of multiple disadvantages and deprivation and identify the agents and dynamics of social exclusion, when compared to old concepts such as poverty and other traditional approaches on disadvantages (Zhuo, 2008; Wang, 2008). Therefore, the concept of social exclusion has a strong theoretical and practical implication in China.

2.2.3.2 Indigenization of social exclusion in China.

As a European orientated concept, some researchers have argued the utilization of this concept in developing countries (e. g., de Haan, 1998; Saith, 2001; Sen, 2000). As the concept of social exclusion is dependent upon the social and political thought of individual countries in which the concept is embedded in (Silver, 1994), it is important to examine how the term social exclusion has been used in China and how it is defined in Chinese studies.

Chinese researchers agree that importance needs to be attached to the indigenization of social exclusion when examined in China, due to the different social structural context and social systems between China and Western developed countries (Fang, 2008a; Liu, 2009; Meng & Huang, 2009; Zeng, 2009, Ding, 2009). These differences will increase the challenges in the application of the concept of social exclusion in China. Accordingly, the framework of social exclusion should be carefully applied and examined in China (Liu, 2009), and unique mechanisms of social exclusion experienced by different disadvantaged groups in the social context of China should be further examined (Fang, 2008b).

While the term social exclusion is relatively new, Li (2004) argued that exclusion has a long history in China that needs to be taken into account when examining the concept. In the pre-reform period (1949-1978), people were treated as “insiders” (within system) and “outsiders” (out of system) in a planned socio-economic system. During the planned socio-economic system, people were treated differently because of social, political and economic factors. For example, a dual system divided urban and rural areas. The people living in rural areas were excluded from the state welfare system because urban areas served as the core of the economy and rural areas provided the support, while the majority (80%) of the total population lived in rural areas. In rural areas, people were expected to rely on family to provide basic and practical assistance. In urban areas, a welfare system was designed to minimize labour costs. Urban employees could receive basic benefits from the state through their work units. These benefits covered various basic needs, such as food, clothing, heating, healthcare, housing, pension, and childcare. People without work units would not be able to enjoy such benefits. In addition, politically, people were labelled based on their family roots, such as peasants, workers, and soldiers. Some people with “bad roots” such as Capitalists (in urban areas) and landowners and rich farmers (in rural areas) were deprived of many opportunities. For instance, the young people coming from these families were deprived from attending universities. However, the social and economic reforms since 1978 removed many controls of the planning era and rewrote many rules. The people who were excluded before were included in reforms and at the same time some new ‘‘left-outs’’ were created while ‘‘redefining the rules of games’’ (Tang, 2002). For example, the old social class structure based on class contradiction and struggle became obsolete and a new class structure based on the new socio-economic system started to evolve. Hence, Li (2004) further identified several important features about contemporary Chinese society that need to be borne in mind

when social exclusion is discussed. The most important one is that the socio-economic situations in China are changing and many legal and policy frameworks are still under reconstruction. Second, social exclusion is not only happening to a small number of marginalized people. A fairly large percentage of the population is vulnerable to social exclusion because of powerlessness and being voiceless. Thirdly, rapid urbanization and economic growth breaks down the tradition of strong reliance on social networks and kinship relationships for supporting the poor people at least in the short term. These features have a very big impact on social exclusion in China.

When compared to Western conceptualizations, there are minor differences in how this term is discussed in China. Chinese literature defines social exclusion as a process by which an individual, family, group, or community are excluded and marginalized from "other people, groups, and institutions, social structure or common activities" or "economic activities, political activities, family and social relationships, cultural rights and social welfare system" (Ren, 2008; Wen, 2005; Zeng & Wei, 2004), due to "economic, political and social factors" (Jin, 2009), "lack of economic, political, social, cultural and psychological resources"(Xiang & Tang, 2006; Shi, 2004), "own psychological reason, social policy and institutional arrangement" (Zhou, 2004), or "the agents of state, market and benefit groups" (Zeng & Wei, 2004) . Furthermore, Yang (2002) argued that social exclusion is a dynamic process in which disadvantages lead to social exclusion and exclusion will deepen disadvantages, and finally generate multiple long lasting deprivations and a breakdown of social ties. Social exclusion is also defined as a marginalized and disadvantaged situation or status, as a result of being excluded from social life due to political, economic, and cultural factors (Zhou, 2005).

Others identified the importance of participation when they defined social exclusion. For example, Chen (2009) defined social exclusion as a status of an individual living in a society who does not participate in the common activities in the society as a citizen. An individual who does not participate in consumption, production, politics and social activities can be seen as socially excluded. Therefore, similar to the literature on social exclusion in Western countries, social exclusion is also commonly recognized as not only a multi-dimensional dynamic process involving economic, political, social relational, educational and institutional facets (Fang, 2008; Meng & Huang 2009; Wang, 2008; Xiang & Tang, 2006; Zeng, 2004, 2009; Zhu, 2006), but also a social result or status (Zhou, 2005).Chinese scholars adopt a process-based approach to define social exclusion and view social exclusion as a process while some have emphasized a participation component in defining social exclusion.

In terms of measuring social exclusion, the majority of studies on social exclusion in China described the phenomenon of social exclusion among a particular group based on literature. Some reviewed social exclusion in Western society and brought forward a framework to analyze the disadvantages in China (Ding, 2009; Zeng & Wei, 2004). There is a lack of quantitative studies on social exclusion in China. One study (Peng, 2005) explored the influences of welfare triangles on the social exclusion experience of new poor in Tianjing using mixed methods. In this study, social exclusion was conceptualized into three dimensions, namely, exclusion from labour market, from social welfare, and from social relations. The results were based on data from 15 in-depth interviews and the additional survey sample of 122. A few studies adopted qualitative interviews to explore the social exclusion experience of some disadvantaged groups. For instance, in Zeng's (2005) research on the role of social policy in promoting social integration, the researcher interviewed 18 unemployed young adults aged 16 to

25 about the social consequences of unemployment. The findings showed that unemployed young adults faced risks of social exclusion in their lives, such as access to state welfare, economic condition, consumption, leisure activities, time structure, social relations and life transitions.

With respect to the impact of social exclusion, Ding (2009) indicated that "the disadvantage not only came from poverty, but also from the lack of social and political rights. These kinds of multiple disadvantages will deteriorate social justice in one generation. More importantly, the disadvantaged people will be excluded from daily life and trapped in long term deprivation, which will pass to the next generation and finally result in a terrible cycle" (p. 39). Therefore, in his view, social exclusion is more terrible than poverty and each government will have to treat it in an appropriate way. The reduction of social exclusion in China is inherently requested by establishing a harmonious society (Ding, 2009). Harmonious Society, a shortened phase of Socialist Harmonious Society, was first proposed by the Chinese government during the 2005 National People's Congress. The idea has changed China's focus from economic growth to overall societal balance and harmony, and serves as the ultimate goal of the Communist Party of China.

While social exclusion has a strong political orientation in Europe, it has not been widely accepted and discussed in political discourse in China as it has been in Europe and North America (particularly Canada). On the contrary, the concepts of "social cohesion" (*Shehui Ningju*), "social harmony" (*Shehui Hexie*) and "social inclusion" (*Shehui Ronghe*) are more commonly used and incorporated into public and social policies in mainland China (Mok et al., 2010). However, there is an assumption behind the social exclusion discourse in China that understanding and combating social exclusion will increase "social inclusion" and "social

cohesion" and finally achieve a society with "social harmony". It is hard to conclude which of Silver's three social exclusion paradigms has been adopted in China because the construct of social exclusion is framed within a context dominated by "social cohesion" or "social harmony" in political discourse while the term social exclusion has been wildly used in academia. The core idea of social exclusion explored in the Chinese context is how to reduce social exclusion and establish a more inclusive society and improve social solidarity and social cohesion (Ding, 2005, 2009; Tang, 2002).

There are various causes of social exclusion to different disadvantaged groups. However, the commonality of Chinese studies on social exclusion is to propose a link between social exclusion and the macro social and structural factors specific to contemporary China. For example, in a qualitative study on the social exclusion experience of unemployed youth, Zeng (2005) argued that social exclusion among unemployed youth resulted from the gap between integration of social policy and the family system. In his view, social policies in China put priority on system integration and allocate unemployment security to family without providing enough policies to facilitate the function of family, under the economic development as the first priority of society. Li (2004) indicated that social exclusion in China does not only reflect the shortage of resources to participate in mainstream social life, but also the deprivation of opportunities or social rights when she describes the social exclusion of migrant workers. For those disadvantaged groups such as migrant workers, the urban-rural dual structure in China is often seen as a main cause of social exclusion (Xu, 2000). Peng's (2005) study on new urban poverty identified that social exclusion is a form of social differentiation. Economic institutional transformation was the contextual factor to the social exclusion of the new poor in China and the social exclusion of the new poor was a result of the interactive processes of the three institutions

of the welfare triangle: labour market, social welfare and family. Tang (2002) holds the opinion that social exclusion in China is due to "rule of game" and the objective of policy research should revise these rules and make it more reasonable and equal to each individual.

The literature on social exclusion among older adults in China is still scant. One study (Li, 2007) mentioned the importance of social exclusion among Chinese older adults and advocated that the older Chinese people are marginalized and are experiencing social exclusion during the transition of institutions and modernization. Social exclusion increased when institutional problems intertwined with the exclusion from family that brought on double jeopardy and threats to older adults. While the author indicated that this study used multiple methods including survey, interviews, focus groups and literature review, a clear definition of social exclusion and clear descriptions of methodology was not provided. Another qualitative study (Yuan & Ngai, 2012) explored the role of neighbourhood support on reducing the risks of social exclusion for empty-nest elderly (ENE) in Shanghai. Based on the 10 interviews, they found risks the ENE participants faced in terms of scant material resources, weakened social relationships, limited participation in civic activities, restricted basic services, and poorly maintained accommodations. Neighbourhood support would reduce the risk of social exclusion by providing emotional, material, cognitive and labour support. Another recent study reported social exclusion in older Chinese adults using secondary data analysis of surveys from six provinces in China (Feng, 2012). In this study, older adults' social exclusion was conceptualized into economic situation, social rights, social participation, social integration, perception of loneliness and social support. The advantage of this study is that it included older adults from both rural and urban areas. This study found that older adults in rural areas were more likely at the risk of social exclusion in each dimension. While this study provides some insight about social exclusion in older Chinese, the

limitation of this study is that the conceptualization of six dimensions of social exclusion for older Chinese was established based on secondary data from different surveys. Multiple exclusions and the impacts of social exclusion on older Chinese adults were not examined in this study.

To conclude, to achieve the goal of the “establishment of a harmonious society” in China, the importance of social injustices relating to social exclusion issues need to be emphasized. Although the number of research studies on social exclusion is increasing, most of them described the phenomenon of social exclusion among a particular group based on secondary data or literature review. The majority of the existing Chinese literature lacks a clear definition of social exclusion and methodology when transferring the concept of social exclusion from other cultural contexts. Social exclusion among older Chinese adults and its impact on older adults has not yet been emphasized in China and there is a need for further research, particularly for quantitative studies.

2.3 Social Exclusion and Health

In recent years, there is growing evidence that suggests social exclusion may be a cause of poor health status, particularly poor mental health (Berkman & Melchior, 2006; Bryne, 2005; Galazuzi, 2004; Guildford, 2000; Johner, 2009; Raphael, 2007; Reid, 2004; Stewart et al., 2008). With this regard, recent research using quantitative and qualitative methods has shown that the experience and stress associated with dealing with social exclusion contributes to psychological effects and negatively impacts health status (Kawachi & Kennedy, 2002; Payne, 2006; Wilson et al., 2007). For example, Payne (2006) examined the relationship between social exclusion and mental health based on data from the 1999 Poverty and Social Exclusion (PSE) Survey. Mental health was measured by a short version of the General health questionnaire (GHQ). The findings

in this study indicate that all who experience poverty and exclusion are at an increased risk of suffering from poor mental health (Payne, 2006). Based on data from the British National Survey of Psychiatric Morbidity, Targosz and his colleagues (2003) reported that excluded lone mothers have rates of depression three times higher than any other groups. Based on one survey of disadvantaged people in 1999, Santanna's (2002) study on social exclusion among disadvantage people in Portugal demonstrated that disadvantaged people (e.g., single mothers, long-term unemployed, migrants, ex-prisoners, drug addicts and alcoholics) are at greater risk of adverse health statuses (musculoskeletal diseases, mental illness, respiratory illness, injuries) compared to non-disadvantaged individuals. In this study, there are two forms of social exclusion, namely labour market and health service utilization (Santanna, 2002).

Several studies explored the links between social exclusion and health among different groups. Raphael's (2001) review of heart disease and socioeconomic status revealed that social exclusion may be the mediator through which low income is linked to cardiovascular disease in Canada. Using a mixed method, another study in Canada (Wilson et al., 2007) examined the links between social exclusion and health by comparing the differences in the level of social exclusion and health status among residents aged 18 and over who live in two socially contrasting neighbourhoods in Hamilton, Canada. The findings of this study indicated that a higher percentage of residents from the neighbourhood with higher levels of social exclusion reported poorer health status. Stewart and his colleagues (2008) also adopted a mixed method design to look at the relationship between self-rated general health and social exclusion using a social determinant of health perspective. The findings showed that among the people living on low income, social exclusion affects their social and emotional well-being, and eventually their physical well-being. Social exclusion also creates a sense of apathy, hopelessness, and

resignation among low-income participants. Furthermore, in a study of a stratified random sample of 375 single mothers in Saskatchewan, Canada, Johner (2009) found that perceived health disparities of single mothers were linked to social exclusion (in forms of educational achievements, social network, and sense of control) particularly through differences in how few social supports they had in times of need and their level of perceived sense of control.

On the whole, the results of the above studies provide support for a relationship between social exclusion and health status of individuals. However, whether health should be seen as a risk factor, a constituent part of, or an outcome of social exclusion is still lacking empirical evidence. Particularly, some studies have included physical and mental health status variables in many indicators of social exclusion. For example, the CASE study of social exclusion (Burchardt et al., 2002) used measures of long term sickness and disability in its "production" dimension, and the Bristol Social Exclusion Matrix (Levitas et al., 2007) and Burchardt and Vizard's Capability Framework (2007) both include a "health" domain in their conceptualization of social exclusion. The inclusion of health domain increases the difficulties in exploring the complex relationship between social exclusion and health outcomes. The multi-dimensional, dynamic and context-specific nature of the concept of social exclusion, and its operational difficulties also increase the difficulties in exploring the relationship between social exclusion and health. In addition, the majority of previous studies did not directly investigate social exclusion (as a multidimensional concept) and health. For instance, Morgan and his colleagues (2007) stated that most of the studies relating to social exclusion or social inclusion and mental health did not provide a full definition of social exclusion. In addition, the domains and indicators of social exclusion and health considered in these studies were decided on the basis of what data were available.

Due to the above reasons, there is no consensus about the directions of causal pathways of social exclusion and health as questions about whether poor health status causes social exclusion or social exclusion causes poor health status have not been explored very well in the literature. Most current research on social exclusion and health suggests poor health status as a predictor or cause, rather than as an outcome of social exclusion. For example, it has been widely reported that people with mental health problems are among the most socially excluded in society (Evans, 2000; Huxley & Thornicroft, 2003; Parr, 2004; Sayce, 2000; SEU, 2004) and social exclusion is a valuable framework for understanding the experiences of those with mental health problems (Barnes, 2002; Bates, 2002; Dunn, 1999; Fryers et al., 2003; Huxley & Thornicroft, 2003; Morgan, 2007; Sayce, 1998, 2001).

For older adults, few studies have identified the association between social exclusion and health status among older adults while previous studies have suggested that social exclusion acts to reduce the older adult's quality of life, life satisfaction, well-being and future life chances (Barnes et al., 2006; Demakakos, 2008; Scharf et al., 2004). One study has linked multiple social exclusions and indicated that older adults who are more multiply excluded tend to have poorer self-rated general health and more chronic illnesses (Demakakos, 2008). In this study, based on the sample of 21,532 participants aged 50 and over who were from the first and second wave data of English Longitudinal Study of Ageing (ELSA), Demakakos (2008) examined the characteristics of multiply excluded older adults in the UK and reported that the more excluded a person, the worse their self-perceived health and the higher their chances of suffering from a long-standing illness or disability. Moreover, there was a significant health difference between those multiply excluded and those not experiencing social exclusion. Almost 58% of those multiply excluded perceive their health to be fair or poor, whereas the respective percentage for

those not experiencing social exclusion was just 14%. In addition, similar to the studies on social exclusion and health among general population, several studies included health status as the predictive factors to social exclusion in older adults (e. g. Barnes, 2005; Cavalli et al., 2007; Chui, 2009; Ogg, 2005) or included health as one dimension of social exclusion (Becker & Boreham, 2009).

2.4 Summary of Literature Review

Based upon the literature review, a few research gaps could be identified. First, the majority of studies, particularly in Europe, rely on secondary analysis of existing large-scale and often multi-purpose, data sets, rather than involving the collection of new data. This means that, rather than "moving, as social research ideally should, from definition to operationalization to measurement, the process is reversed" (Levitas, 2006, p.127). The choice of indicators to social exclusion in older adults is driven more by the data available than by conceptual imperative. Second, existing research on social exclusion and older adults were mainly conducted in Western countries (most of them were in Europe), with relatively little known about social exclusion experienced by older adults in Asia countries such as China. Particularly, there is limited knowledge on the predictors of social exclusion in older Chinese while previous studies have identified some specific older adults might be in the risk of social exclusion and social exclusion in later life may originate from social-economical and political contextual factors. Third, there is a scarcity of studies exploring the relationship between social exclusion and health even in Western countries, and even though this is a priority in terms of social determinants of health. In China, the majority of current health studies on the Chinese aging population focused on demographic and SEC factors. Hence, this study aims to address the above noted knowledge

gaps, through examining the characteristics of social exclusion, the correlates of social exclusion and the relationship between social exclusion and health status among older Chinese adults.

Chapter Three: Theoretical Framework

Although the terminology differs, there is considerable overlap between the concept of social exclusion and that of the social determinants of health, commonly utilized in health studies. There is a shared recognition between the two approaches that those who are socially excluded have worse health outcomes and reduced access to healthcare (Fish, 2010). Social exclusion itself has also been deemed to be a determinant of health (Deaton, 2002; Raphael, 2007). As Reid (2004) states, the social determinants of health approach provides a salient perspective for understanding and addressing issues in people's health outcomes and their exclusion in society. Thus, the theoretical framework of this study was drawn from two theoretical perspectives: (a) The social determinants of health perspective; (b) Scharf et al.'s social exclusion framework for older adults.

3.1 The Social Determinants of Health Perspective

Interest in the social determinants of health has a long history in public health research and policy discussion. As early as the beginning of the 20th century, Durkheim attempted to explain suicide, an individual phenomenon, by social environmental issues, such as common beliefs, customs, and religious ideology. This work led to a long tradition of sociological studies that examined the social factors behind individual health outcomes. However, the term "social determinants of health" made its debut in the 1996 volume of *Health and Social Organization: Towards a Health Policy for the 21st Century* (Raphael, 2008). The World Health Organization (WHO) followed this work up with its *Social Determinants of Health: the Solid Facts* document (Wilkinson & Marmot, 2003) and defined "social determinants of health" as the economic, social and cultural factors that influence individual and population health both directly and indirectly, through their impact on psychosocial factors and biophysiological responses (Marmot &

Wilkinson, 1999).

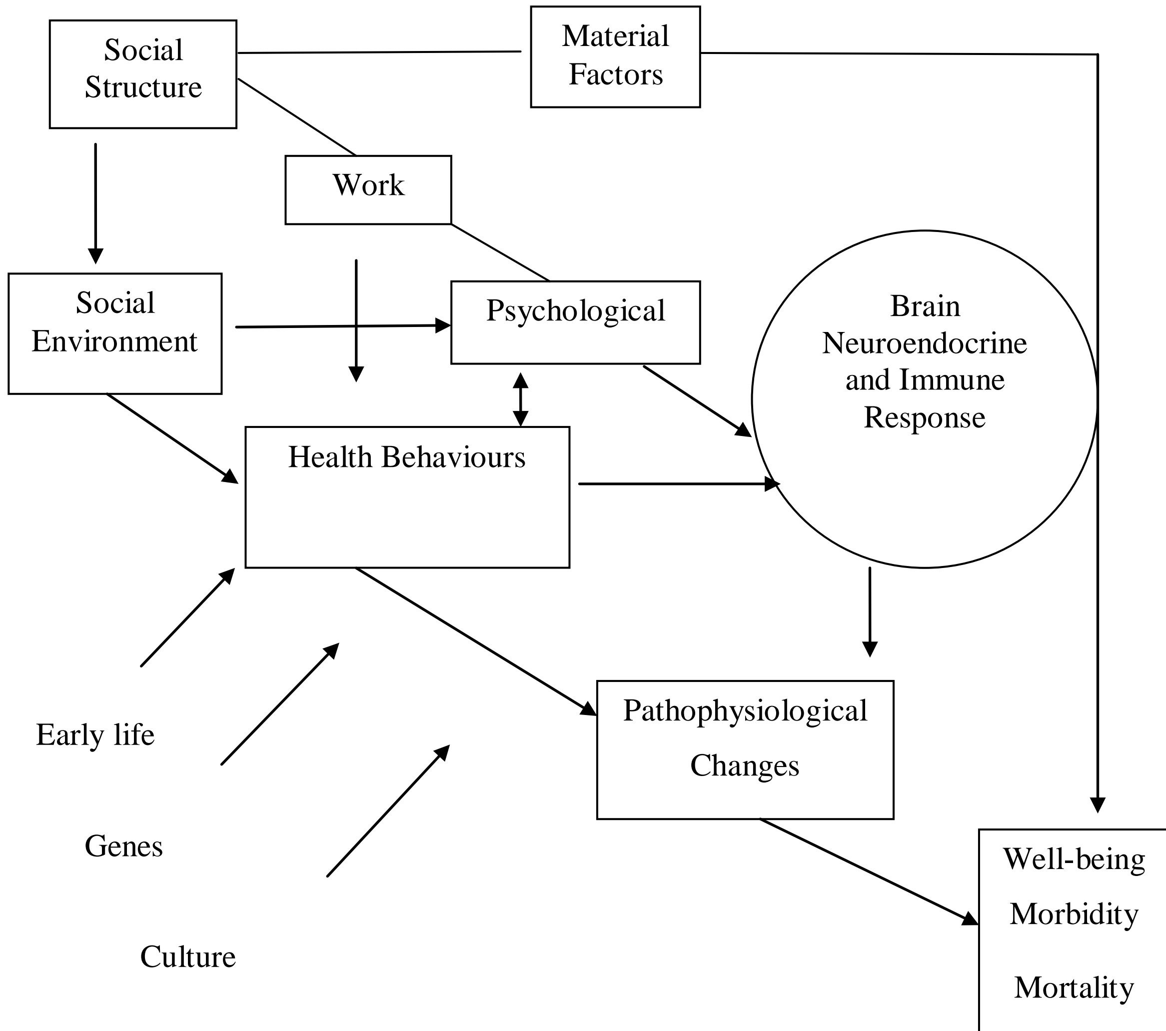
The social determinants of health concept seeks to shift the discussion of health away from biomedical and behavioral risks and toward emphasizing living conditions as the primary determinants of individual and population health (Raphael, 2008, preface). Despite keeping the importance of traditional biomedical and behavioral factors, it attempts to “identify the specific exposures by which members of different socio-economic groups come to experience varying levels of health status” (Raphael, 2008, p.5). In this respect, social determinants of health are the economic and social conditions that shape the health of individuals, communities, and jurisdictions as a whole..

There are a variety of contemporary approaches to social determinants of health (WHO, 2010). The most important and widely used at the international level is the social determinants of health perspective adopted by the WHO. The aim of WHO’s social determinants of health perspective is to help countries better understand the targeted causes of physical health and well-being from all levels of influences. These factors range from behavioral factors, such as nutrition and physical activity to one’s social environment, such as unemployment and poverty status (WHO, 2003). In an understanding of “how behavior is shaped by environment” (WHO, 2003, p.9), the WHO specified ten social determinants of health including: (a) the social gradient, (b) stress, (c) early life, (d) social exclusion, (e) work, (f) unemployment, (g) social support, (h) addiction, (i) food, and (j) transport. Elaboration on each factor is beyond the purpose of this study.

Other than to point to both specific features in the social context that affect health, the social determinants of health perspective point to the pathways by which social conditions

translate into health impacts through three overlapping pathways: material factors and psychosocial and behavioural pathways (See Figure 3.1).

Figure 3.1. Social Determinants of Health



Adapted from "Social Determinants of Health", by M. Marmot and R. G. Wilkinson, 2006, p.9. Copyright 2006 by the World Health Organization.

The first pathway is a direct link between social structure, environment, work, and material factors and health status (Marmot & Wilkinson, 2006). They consist of entities that affect health status and emerge from circumstances that exist outside of the health care sector (WHO, 2003). As a considerable body of research suggested, specific societal factors are the underlying causes

of disease and shape unfavorable health outcomes (Gehlert et al., 2008; LaVeist, 2005; Warnecke et al., 2008; Wilkinson & Marmot, 2003). These societal factors include the unequal distribution of educational opportunities, toxic environments, inadequate social support systems, substandard housing, and underemployment. In the second pathway, social structure shapes social and work environments to create psychological and behavioural responses that operate through brain mechanisms and impact health status (Marmot & Wilkinson, 2006). For instance, various forms of inequality or social disadvantages such as exclusion, insufficient income to meet daily needs, or poor living conditions have been posited to activate the biophysiological pathways that release high levels of glucocorticoid hormones. Prolonged exposure to high levels of this hormone results in acute or chronic stress that adversely affects mental and/or physical health. Subsequently, maladaptation to stress or the inability to cope with adversity could lead an individual to adopt unhealthy behaviours such as smoking, poor nutrition, or physical inactivity (Marmot & Wilkinson, 2006). Thirdly, an association between psychological characteristics and health behaviours were suggested to be the direct link to biological and pathophysiological changes in the body (Marmot & Wilkinson, 2006). These bodily changes are the proximal causes of diseases that result from the interactions of specific determinants of individuals' social and economic status, and the condition in which they live and work. In addition, Marmot and Wilkinson linked an individual's health status to the concepts of nature (early life and genes) and nurture (culture and social structure). Growth and development during early life has been postulated to influence health in childhood and, subsequently, adult life (Barker, 1998; Marmot & Wilkinson, 2006).

Although the social determinants of health perspective indicates that there is a direct relationship between social structure, social environment and health, it is inconsistent about what

these social factors would be. Some suggested social, political, economic and demographic changes that affect working conditions, learning environment, urbanization, food consumption and family patterns, as well as cultural values and the general social fabric of communities (WHO, 2010). These factors are difficult to measure in empirical studies. Given this, this study adopted the Scharf et al. (2003)' social exclusion framework as the second theoretical framework because this framework includes specific social, economic, physical, and environmental or community factors that affect the health status of older adults. These factors are presented more clearly in social exclusion framework when compared to the social determinants of framework.

3.2 Scharf et al.'s Social Exclusion Framework for Older Adults

In 2001, Scharf et al. provided a framework conceptualizing the nature and scope of social exclusion with regard to older adults, including exclusion from participation and integration beyond the labor market; spatial segregation; and exclusion as a form of institutional disengagement. The value of this framework that distinguishes it from others is its emphasis on the 'institutional disengagement' confronting poor elderly people. This concept actually encompasses all the multifaceted dimensions of exclusion or denial of access to services, information, facilities, social and other types of participation at large, which in effect 'disengage' the elderly. To recite the terminology of 'disengagement theory' (Cumming & Henry, 1961), it could be a facet of 'involuntary disengagement' experienced by the poor elderly people in which they become victims of various institutional arrangements that deny them from engagement, as contrasted with 'voluntary disengagement' in which the elderly choose to distance or withdraw themselves from such engagements.

Furthermore, Scharf et al. (2004, 2005a, 2005b, 2005c) identified yet another five forms of exclusion that old people may experience based on in-depth individual interviews and case

studies. These five forms of exclusion are material resources; social relations; civic activities; basic services, and neighbourhood exclusion. The five forms of social exclusion and indicators under each dimension of social exclusion were summarized in Table 3.1.

Table 3.1. ***Scharf et al.' s Social Exclusion Framework***

Dimensions	Indicators
Exclusion from financial and material goods	Index of multiple deprivation; poverty
Exclusion from housing circumstance	Expresses negative feelings about housing and conditions and circumstance
Exclusion from social relations	Social isolation, loneliness, non-participation in social activities
Exclusion from cultural and civic activities	Religious meetings or meetings of community groups, a list of 11 civic activities
Exclusion from basic services	Basic utilities (gas, electricity, water and telephone) at home; key services selected from a longer list of services and amenities beyond home (fitting into Shanghai's context)
Exclusion from neighbourhood	Expresses negative views about the neighbourhood; feels very unsafe when out alone after dark

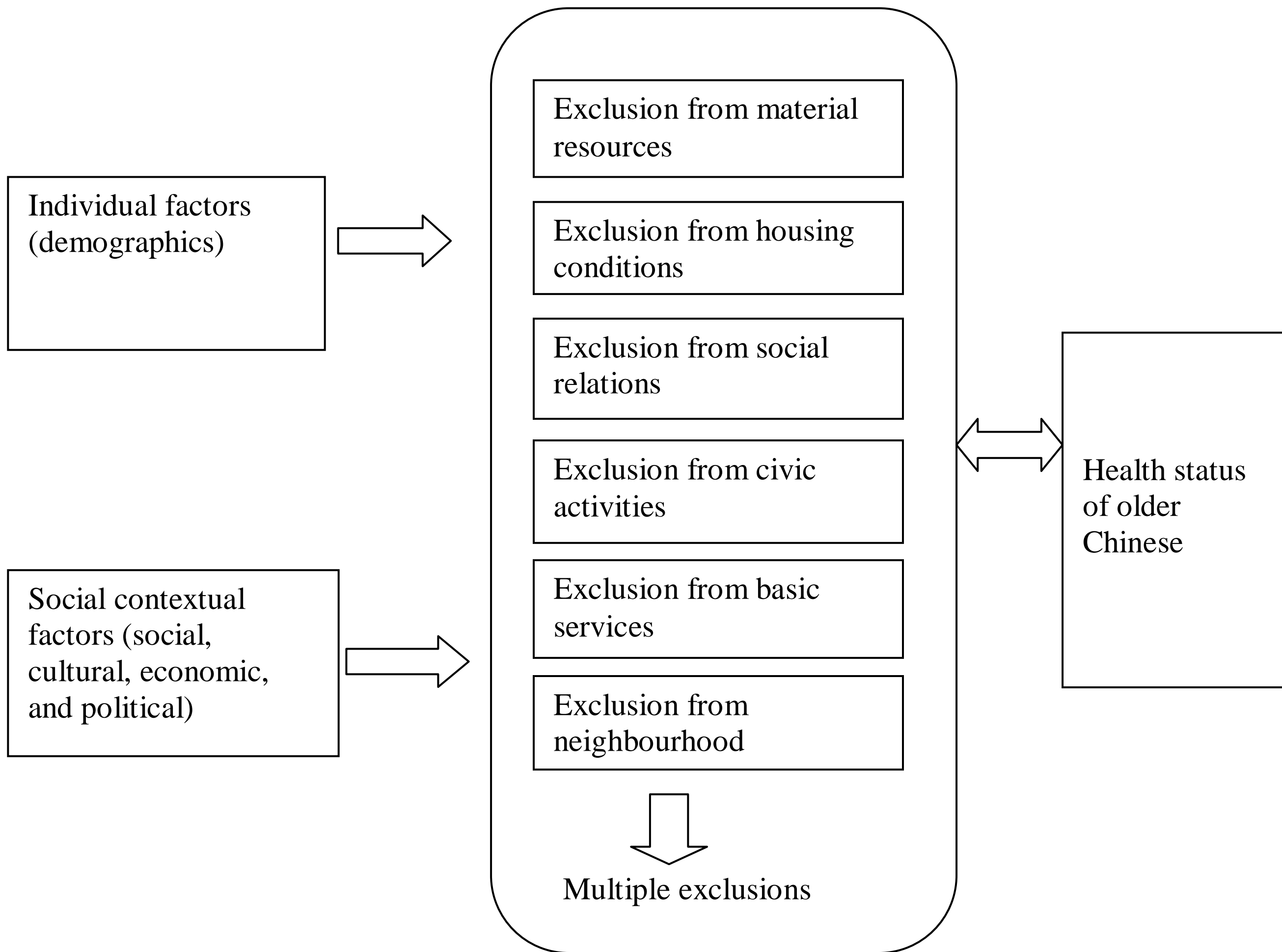
The concept of exclusion from financial and material goods considers the older adults 'economical disadvantage and the ownership of common consumer goods and housing circumstance. The social relationships dimension tries to capture the frequency of contact with family and friends and the density of these relationships. The civic activities dimension refers to participation in activities that contribute to a healthy civil society. These activities include being a member of a political party, trade union, or environmental group; going to senior centres, church or other religious organizations; and charitable associations. Other activities taken into consideration include doing voluntary work and voting in the last general election. Exclusion from basic services captures the disadvantage that older adults face from being unable to access certain services that provide basic provisions. The concept of neighbourhood exclusion captures older adults' feelings of the area surrounding where they live and their ability to rely on people

living close to them. Scharf et al.'s framework is the only one that was specifically developed to measure social exclusion in later life. This framework has considered the characteristics of social exclusion experienced by older adults through identifying the significance of social networks, basic services, and neighbourhood to older adults in this framework. Considering these advantages, I adopted it as the conceptual model to examine social exclusion among older Chinese in Shanghai.

3.3 Conceptualization Model of the Study

Psychological characteristics and health behaviours are the links between social structure and well-being. However, these factors were not able to be included in this study. Based on the social determinants and health perspective and Scharf et al.'s social exclusion framework, the conceptual model for this study is presented in Figure 3.2.

Figure 3.2. A Conceptual Model for Social Exclusion and Health in Older Adults



As illustrated in Figure 3.2, this study theorized that the health status of older adults is influenced by social exclusion, and social exclusion is influenced by demographics, social contextual factors. The main elements in the framework are described below.

First, six dimensions of social exclusion comprise the centre of the figure. Based on the Chinese context, the researcher adapted the dimensions and the indicators in Scharf et al.'s framework. First, considering the significance of housing to older Chinese adults and that housing has also been identified as a social determinant of health, the researcher added the domain of exclusion from housing conditions to the Scharf et al.'s original framework. As a

result, there are six domain of social exclusion in this study: (a) exclusion from material resources (e.g., multiple deprivation; material poverty), (b) exclusion from housing conditions (e.g., condition of accommodation; satisfaction toward accommodation); (c) exclusion from social relations (e.g., social isolation, loneliness, non-participation in social activities); (d) exclusion from civic activities (e.g., participation in religious meetings and community groups; participation in civic activities; being a volunteer); (e) exclusion from basic services (e.g., use of community services; use of basic services within the home; use of basic services beyond home); and (f) exclusion from neighbourhood (e.g., perceptions of neighbourhood; feelings of security in the neighbourhood; perceptions of friendliness of the environment). The measurements for the six domains of social exclusion are summarized in Table 4.1.

The reasons why the six domains of social exclusion can reflect social determinants of health of older adults were mainly based on previous findings. For example, having material poverty is related to a higher rate of depression, mortality and self-rated general health (Buckley et al., 2003; Deaton, 2008; Gadalla, 2009). The association between housing conditions and health status of older adults has also been widely reported (Gitlin, 2003; Iwarsson et al., 2007; McDonald et al., 2009). In terms of social relations and health, both structure and quality of social network can contribute to better health of older adults (White et al., 2009). Lack of social support, small network size, and perceived dissatisfaction with social support were found to predict mortality (Lyyra & Heikkinen, 2006) and poorer health (Garcia et al., 2005; White et al., 2009). Participation in civic activities was also found to contribute to older adults' health (Baker et al., 2005; Hinterlong, Morrow-Howell, & Rozario, 2007; Rozario, Morrow-Howell, & Hinterlong, 2004). In addition, the negative relationship between service barriers and health status of older adults has been established (Lau & Chau, 2007). Neighbourhood problems were

significantly related to self-rated general health and depressive symptoms (Bowling et al., 2006; Subramanian et al., 2006). Although a large number of studies have examined the relationship between one specific social exclusion dimension and health (i.e., poverty, income, social support, access to basic services and so on). There is extremely limited research that has examined social exclusion as a multidimensional concept and social determinants of health and its link to older Chinese's health status. Based on these findings, it is reasonable to take these exclusion variables as social determinants of health of older adults in China. .

Second, multiple exclusions is also seen as one social determinant of health in this study. Multiple exclusions refer to exclusion in two or more of the six dimensions of social exclusion. It is obtained by counting the number of social exclusion dimensions in which the older Chinese were excluded. Those who were excluded from two or more social exclusion dimensions were identified as multiple exclusions. The existing literature provides very limited knowledge on the relationship between multiple exclusions and health status while one previous study has linked multiple exclusions with worse self-rated general health and higher chances of suffering from a long-standing illnesses or disability (Demakakos, 2008).

Third, based on previous literature this study hypothesized that the six dimensions of social exclusion and multiple exclusions are influenced by various social contextual factors including social, economic, political and cultural factors that affect the life of older Chinese in Shanghai. In spite of limited knowledge, researchers studying social exclusion in older adults have indicated that social exclusion might be shaped by broader contextual factors (Scharf & Keating, 2012). In this study, these social contextual factors are represented by the neighbourhood the respondent currently resides in, retirement age, types of work organization before retirement, previous roles before retirement, and length of living in poverty, which were

constructed based on a Chinese context. Unfortunately, broader social structure factors could not be measured directly.

Fourth, previous literature on social exclusion in older adults has indicated that older adults with certain characteristics are more likely to experience social exclusion. These characteristics are being older, being female, living alone, and having a lower income (Barnes et al., 2006; Demakakos, 2008; Jehoel-Gijsbers &Vrooman, 2008; Scharf et al., 2005a, 2005c). Therefore, demographic characteristics (e. g., age, education, gender, living alone, personal annual income, self-perceived financial adequacy, and religion, etc.) were added to the framework as predictors of social exclusion.

Chapter Four: Methodology

Using the Scharf et al. (2003) social exclusion framework and social determinants of health perspective, this study aimed to examine the characteristics of social exclusion and the relationship between social exclusion and health among older Chinese in Shanghai, China. This study used a cross-sectional survey as the research design. This chapter presents the methodology of the study including the research questions and hypotheses, research design, instrumentation, conceptualization and operationalization of variables employed in this study and data analysis process.

4.1 Research Questions and Hypotheses

With the context of the literature and the conceptual framework presented in the previous chapters, this study examined three research questions and four related hypotheses as below:

Question 1: What are the characteristics of social exclusion that have been experienced by older Chinese in Shanghai?

Question 2: What are the social contextual factors shaping the characteristics of social exclusion (Q1) experienced by older Chinese in Shanghai?

Question 3: How is social exclusion related to health status of older Chinese in Shanghai?

Specifically, the following four hypotheses were tested:

Hypothesis 1: A higher level of social exclusion is related to more chronic illnesses.

Hypothesis 2: A higher level of social exclusion is related to poorer self-rated general health.

Hypothesis 3: A higher level of social exclusion is related to more depressive symptoms.

Hypothesis 4: A higher level of social exclusion is related to unfavourable life satisfaction.

Hypothesis 5: Having multiple types of social exclusion is related to a more negative impact on health status than having social exclusion in only one or none of the dimensions.

4.2 Research Design

4.2.1 Philosophic worldview.

Each research approach has its own set of philosophical assumptions, worldviews, principles and stance on how to do research (Creswell, 2009; Neuman, 2006), which is the foundation of research. The worldviews or paradigms are how we view the world and guide how we design and conduct research. Four philosophic worldviews have been identified in research, including positivism/postpositivism, constructivism, advocacy/participatory, and pragmatism (Guba & Lincoln, 2006). This study uses a quantitative survey, which is aligned with a positivist/postpositivist worldview. Researchers holding positivist/postpositivist worldviews make claims for knowledge based on (a) determinism or cause-and-effect thinking; (b) reductionism, by narrowing and focusing on select variables to interrelate; (c) detailed observations and measures of variables; and (d) the testing of theories that are continually refined (Slife & Williams, 1995, Cresswell & Clark, 2010).

While positivist/postpositivist worldviews have some common assumptions, they differ in ontology, epistemology and methodology. First, in terms of ontology (the nature of reality), positivists view society as stable with pre-existing patterns or order that can be discovered. Positivists believe in a singular “real” reality, whereas postpostivists view the reality as a “real” reality but only imperfectly and probabilistically apprehensible (Guba & Lincoln, 2006). Second, regarding epistemology (the relationship between the researcher and that being researched), the nature of knowledge is to discover natural laws and to verify hypotheses so that peoples can predict and control events in a positivist worldview. With a positivist view, the nature of

knowledge is to find what is true. From a postpositivist worldview, the nature of knowledge is to find what is probably true, which is relative true. Finally, they also differ in methodology (the process of research). Positivists use the experimental/manipulative method, verify hypotheses and chiefly adopt quantitative methods. However, postpositivist may use modified experimental/manipulative methods, accept falsification of hypotheses, and may include qualitative methods (Guba & Lincoln, 2006).

Researchers need to reflect on their own personal worldview and training experience before a decision about research design is made because the interpretation of findings is shaped by the cultural, historical and personal experiences of the researcher (Creswell, 2009). I have been involved in quantitative research for several years and have a bias toward this type of design. I adhere to postpositivist worldviews because my worldview is shaped by the classical French sociologist Emile Durkheim. According to Durkheim (1982), there are “social factors” that are external to the individual. These “social facts” include the values, cultural norms, and social structures, which are not controllable by individuals but they can be studied. The task of researchers is to find the relationships between social factors and reveal the law behind the social facts.

4.2.2 Survey design as strategy of inquiry.

There are different strategies of inquiry such as quantitative, qualitative and mixed methods and several alternative strategies of inquiry in each of them. In this study, a quantitative survey design was adopted as the strategy of inquiry. The selection of a strategy of inquiry is influenced by the research problem (Cresswell, 2009). The survey design is generally appropriate where the purpose of the research is to relate or compare variables (Nardi, 2006; Neuman, 2006). This study aims to explore the characteristics of social exclusion among older Chinese adults in

Shanghai and the relationship between social exclusion variables and health status of old Chinese. Although quantitative studies of social exclusion are criticized as being hard to identify the "cause of social exclusion" (Pierson, 2001, p.8), "with different scoring mechanisms and cut-off thresholds" (Levitas et al., 2007, p.81), quantitative studies of social exclusion have great value because they can describe the state of social exclusion using a wide range of indicators. This is a fit for the research questions in the study. Moreover, by containing a range of variables in a questionnaire, the quantitative survey can examine the relationship among variables and test hypotheses (Creswell, 2008), which is suitable for the research question/hypotheses examining the relationship between social exclusion variables and health of older Chinese adults.

A survey design is the most appropriate strategy for this study because it can provide a "quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population" (Creswell, 2009, p.145). The purpose of survey design generally is to identify if a relationship exists, and then to make generalisations about the relationship in the context of a broader population (Nardi, 2006). In this study, research findings from a quantitative survey will provide a multidimensional description of social exclusion among old Chinese adults and the relationship between social exclusion variables and health, which can be generalized to older Chinese adults in Shanghai and China to some extent although with its obvious limitations in sampling.

The survey was conducted using face-to-face interviews. Compared to other data collection methods, there are a number of sampling and data-quality advantages of this method (Czaja & Blair, 2005; Nardi, 2006). First of all, surveys can make measurement more precise through asking standardized questions. Surveys have a very rapid turnaround in data collection due to it being able to collect information from a large sample. Face-to-face administration of

surveys usually has a higher response rate than telephone interviews. As the face-to-face survey is usually conducted at the interviewee's home, the participants are allowed to have more control over the survey. Surveys can be easier to replicate by other researchers and the findings can be easier to compare with other studies. Open-ended questions can be used in the survey, which add richness to the survey data.

4.2.3 Sampling.

4.2.3.1 Target population.

The target population of this study was older Chinese who are 60 years or above who reside in Shanghai and have a Shanghai registered permanent residence (Hu Kou).[2]The age of the participants in this study was limited to 60 years and older because this is the typical age criteria used to define the term "old" according to Chinese traditional culture. The choice of Shanghai as the research location is based on the size of aging population, and the socio-cultural, and economic uniqueness of Shanghai in China. As the leading centre of the Chinese economy, Shanghai is a "miniature of China", experiencing rapid social-economic achievements in the past three decades. However, a number of older adults in Shanghai are shut out from this economic prosperity and struggling with multiple social disadvantages and health disparities as discussed earlier.

4.2.3.2 Sampling procedures.

The sample was identified through multistage sampling procedures, which combined a purposive sampling and simple random sampling strategy in different stages. Purposive sampling is a kind of sampling for special situations. Usually, the researcher selects cases with a specific

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[2]Hu Kou refers to permanent residence that is officially registered by local government and is shown in one's household registration record (戶籍本).

purpose in mind, not randomly selected (Neuman, 2006). As literature has shown that social and economic status of neighbourhood is related to an older adult's health, and neighbourhood is also an interdependent dimension of social exclusion, purposive sampling was used to identify the role of characteristics of neighbourhood on social exclusion and health. Simple random sampling is the basic method of sampling. It uses a random process to select participants from the population so each person has the same probability of being selected. The key goal of random sampling is to maximize external validity, referring to the degree to which results drawn from the sample can accurately be generalized (Vogt, 2007). The specific sampling procedures are described below.

Jing An District, Pu Dong District and Yang Pu District, from the total of nine major districts in Shanghai, were chosen as data collection districts. Previous literature review has shown that the social and economic status of a neighbourhood is related to the older adult's experience of social exclusion. Neighbourhood is also an interdependent dimension of social exclusion. In order to identify the effects of neighbourhoods with different characteristics on social exclusion and health, Jing An District, Pu Dong District and Yang Pu District were purposively selected due to their different levels of social and economic development of Shanghai according to the average per capita GDP: highly-developed (Jing An), mildly-developed (Pu Dong) and less-developed districts (Yang Pu)[3]. Due to the limited financial resources for this study, only one street community was selected from each of the districts. West Nan Jing Road Street Community in Jing An District, Jing Yang Street Community in Pu Dong

[3]In 2012, the average per capital GDP of Shanghai was 13434.75USD (2012 Shanghai Statistical Yearbook, 2013). Among the nine center districts, the average per capital GDP of Jing An District, Pu Dong District and Yang Pu District were 38,463.44USD (No.1), 18,187.60USD(No. 3) and 14,059.17USD (No.6), respectively.

District and Wu Jiao Chang Street Community in Yang Pu District were purposely selected as the places for data collection communities due to the different neighbourhood characteristics they represented.

West Nan Jing Road Street Community, is located in the centre of Jing An District with an area of 1.62 square kilometres and a population of 58,000 people (Census, 2000). Within the jurisdiction, there are more than 40 blocks of high-rise commercial buildings including Hang Lung Plaza and CITIC Pacific. Contrary to new commercial buildings, old “Li Long” house (i.e., Nong Tang), a traditional form of urban house in Shanghai, can be found within the jurisdiction. "Li" means neighbourhoods, "Long" means lanes. Most of these houses with low-rise row with high density were adapted from the western tradition to accommodate the families of Chinese workers before the establishment of Republic of China. Many of these houses have been removed for the purpose of commercial goals and or replaced by other types of urban housing (i.e., old type of apartment in 1960s and 1970s, new type of apartment in 1980s, 1990s, and commercial apartment after 2000s). This type of house can be only found in inner city of Shanghai, such as Jing An District, Lu Wan District, and Chang Ning District.

Jing Yang Street Community in Pu Dong District is located in the centre area of Pu Dong District with an area of 8.2 square kilometres and a population of 150,000 people. Many older residents within the jurisdiction were migrated from older districts including Jing An District during the development of Pu Dong District started from early 1990s. A smaller part of older residents in this street community is local farmers who lived in the Pu Dong area before 1990s. In terms of residence, new type of apartment and commercial apartment are the ones that most residents are living within the jurisdiction.

Wu Jiao Chang Street Community located in the centre of Yang Pu District, in the North West of Shanghai with an area of and a population of 100,000. There are several universities within the jurisdiction or close to the jurisdiction. As a result, many residents of this street community were working at the universities. In terms of residence, this area includes different types of apartments, such as old apartment, new apartment and commercial apartments.

Among the three selected street communities, only West Nan Jing Road Street Community had a registered and updated list of older adults each year. In the other two street communities, the neighbourhood community offices had the registration information of the older persons within their jurisdiction since they have not been required to report to the street community office. Hence, different random sampling procedures were used in these three street communities.

In West Nang Jing Road Street, the local street committee office had the registration information of older persons within their jurisdiction (i. e., 60 years and older), including the registration list of older adults who lived alone, lived with their spouse only, and lived with others. This information formed the sampling frame in West Nan Jing Road Street Community. Based on the registration information, there were 792 older persons who were living alone, 1568 older persons who were living with their spouse only, and 10,958 older persons who were living with others at the end of 2011. The aging office of the Shanghai Research Center on Aging[4]in West Nan Jing Road committee helped to randomly select 50 older persons from each group from the sampling frame: 50 older adults who lived alone, 50 older adults who lived with their spouse only and 50 older adults who lived with others. In order to make sure each eligible older person had the same chance to be selected, each of the older adults in the three groups was

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[4]Date collection of this study was supported by Shanghai Research Center on Aging. They helped in promoting this study to the district and street level of local offices and related worker, which made data collection possible.

assigned a number and 50 random numbers were generated by the researcher using the SPSS program as identifiers to determine 50 participants in each group. Hence, a total of 150 older persons were randomly selected from West Nan Jing Road Street Community.

Due to only the local neighbourhood committee offices of the Jing Yang and Wu Jiao Chang street communities having the registration information of older persons within their jurisdiction, the researcher randomly selected ten neighbourhood committees from the forty-nine local neighbourhood committees of Jing Yang Street Community and the thirty-nine local neighbourhood committees of Wu Jiao Chang Community. Then, the workers working for older adults in these ten neighbourhood committees further randomly selected five older persons from the registered lists of older persons living alone, living with a spouse, and living with others. In order to make sure each eligible older person in these ten local committees had the same chance to be selected, the worker in each neighbourhood committee was required to assign a number to each older adult in the lists and then selected five older adults from each group based on the random numbers generated by the researcher using the SPSS program.

Thus, a total of 450 potential participants were randomly selected from the street communities of West Nan Jing Road, Jing Yang and Wu Jiao Chang. Regarding sample size, a sample size estimate of 172 participants was calculated by the researcher prior to the study using the web-based A-priori Sample Size Calculator with an alpha level of 0.05, 20 predictor variables, an effect size of 0.15 and a statistical power level of 0.8 (Cohen, Cohen, West, & Aiken, 2002). However, the power for logistic regression analysis is based not only on the total sample size but also on the balance between the outcomes. A commonly used rule of thumb is: Number of observations in smaller outcome group >= 10 number of predictors. In order to have enough samples for the logistic regression, a target sample of 450 participants was used in the

research design. This sample size is sufficient to allow for missing, non-responding, and refusing cases. The numbers of participants from each street community is summarized below:

West Nang Jing Road= 3 groups x 50 older adults=150 participants

Jing Yang Street Community =10 neighbourhood committees x 3 groups x 5 older adults=150participants

Wu Jiao Chang Street Community=10 neighbourhood committees x 3 groups x 5 older adults=150 participants

4.2.4 Instrumentation.

Consistent with the survey research design, the main data collection tool in this study is a structured questionnaire. It was developed from the questionnaire used in the Quality of Life in Older Age research project undertaken at Keele University, funded through the Economic and Social Research Council under its Growing Older Programme. This research was led by Scharf at the Center for Social Gerontology, Keele University. The purpose of his research was to seek the nature of inequalities with older age through examining the conditions of social exclusion in deprived urban neighbourhoods (Scharf et al., 2003). Scharf and his colleagues developed this questionnaire for older adults living in deprived urban neighbourhoods based on the Millennium Survey of Poverty and Social Exclusion (PSE) (Gordon et al., 2000; Pantazis, Gordon, & Levitas, 2006), which was seen as the most comprehensive and scientifically rigorous social exclusion survey in the world. It was also the first national study attempting to measure social exclusion, and to introduce methodology for poverty and social exclusion that is internationally comparable (Payne, 2006). The PSE survey has been adapted into different international contexts such as Taiwan (Liu, 2010), Hong Kong (Lau, 2005), and Japan (Abe, 2006).

The reason for adapting and using this instrument was because it is the only available survey undertaken to measure social exclusion among older adults worldwide at the time in 2010 when the current study was designed. Scharf's framework has provided this study the basis to examine multiple disadvantages of older Chinese. Since, as discussed earlier, Scharf et al.'s (2003) framework was mainly developed in a British context and some indicators of dimensions are not suitable in the Chinese context, it was necessary to adapt the original questionnaire. Adaptation is an internationally recognized method when the instrument was intended for use on a target population that is culturally different from that of the original version (Beaton, 2000; Geisinger, 1994; Harkness, 2008). It is defined as the deliberate modification of a question or questionnaire to create a new question or questionnaire to better fit the needs of a new population, location, language, or any combination of these (Harkness, 2008, 2010). The adaptation process involves the adaptation of individual items, the instructions for the questionnaire, and the response options (Beaton, 2000).With the permission of the original questionnaire author, Dr. Scharf, the researcher adapted this questionnaire to fit within the Chinese context. The following three steps were used in adapting Scharf's questionnaire to the measures used in this study:

First, the researcher reviewed all of the questions in the original questionnaire and divided them into two types of questions. The first type of questions were those that were obviously not appropriate for the context of China, and these questions were removed from the questionnaire. For example, in the questions related to the necessities, the items such as "Carpets in living rooms and bedrooms in your home" were excluded from the questionnaire because living rooms and bedrooms are not covered carpets in most Chinese families. The second type of questions were those that were culturally suitable for the context of this study but needed further adaptation to fit them within the Chinese context.

Second, when the second type of questions was identified, the researcher examined the items for each question firstly to ascertain whether the items in each question were suitable to the Chinese context and then if needed, adapted them to better reflect the realities in current China. For example, due to different social contexts, the questions and items that reflected material resources, basic services, and social and civic participation of older adults in the original questionnaire were not suitable for the old Chinese in Shanghai. In the original questionnaire, the participants were asked whether they attended “day and night class”, which cannot be found in Shanghai. It was changed to “senior colleague and interest group”. Another typical example is the items in the question “the types of state benefit”. Most state benefits in the original questionnaire were not appropriate in the Chinese context and they were adapted based on the forms of state benefits relative to China. In addition, older Chinese adults differ in social and economic background with the older adults in the UK. As a result, in keeping with the context, some special social demographic information of older Chinese was added in the new questionnaire. For example, in this study the respondents were asked whether one was a member of the Communist Party.

Third, when all the selected questions and items had been changed to fit the context of China, the researcher checked the wording and responses format of each question to ensure that they matched the habit of the Chinese in their response to the questions. For example, all the responses in each question in the original questionnaire presented vertically, which is different from common questionnaires in China. In order to match the habit of the Chinese, all the responses were changed to be presented horizontally.

Fourth, when all the questions and response options were adapted, the researcher checked whether the questions included really reflected the characteristics of social exclusion and health

status among older Chinese in Shanghai. For example, exclusion from housing conditions was separated from the dimension of financial and material resources in Scharf et al.'s (2003) framework as one additional dimension of social exclusion, due to the importance of housing cannot be replaced by material goods or other dimensions (Barnes et al., 2006). The second reason for this was that housing is particularly important for older Chinese in Chinese culture (Li & Chen, 2011; Xiong, 2008). As such, there were six dimensions of social exclusion that framed this study. Another example is exclusion from neighbourhood. Older adults with multiple physical barriers who live in an unsafe environment or area are less likely to go out and therefore are more prone to isolation, depression, reduced fitness and increased mobility problems. The original conceptualization of neighbourhood exclusion is counted if older adults expressed negative views about the neighbourhood in relation to at least two of the three related questions, and also reported that they would feel very unsafe in their neighbourhood after dark. This definition does not point out the significance of a friendly physical environment to older adults while it has been shown in the current trend of building age friendly communities in the worldwide. Therefore, in order to reflect the importance of physical environment in neighbourhood exclusion, one question was developed to ask whether unfriendly physical facilities have limited older adults' activities. The physical facilities in the neighbourhood included sport facilities, streetlights, sidewalk, traffic signal time, and handicap accessibility.

Fifth, when all the items and formats of the questions were adapted and approved by the supervisor, the fifth step of adaptation, translation, started. The researcher and research assistant, who were bilingual in both English and Chinese (Mandarin), each translated the English version of the questionnaire into simplified Chinese. The researcher checked the differences between the two Chinese versions of the questionnaire and revised the changes accordingly. When the second

draft version of the questionnaire was completed, the researcher invited a second research assistant, who has a background of master of social work, is experienced in aging research with the Chinese aging population and was not involved in this study prior to the procedure, to translate the Chinese version of the questionnaire back to the English version. The researcher and the first research assistant then compared the differences between the original English version and the forward-backward translated version of the questionnaire and revised the questions that had significant differences between the two versions. When all of the differences had been checked and revised accordingly, the first draft of the questionnaire was finalized.

Sixth, the finalized version of the questionnaire was sent out to two experts in the area of aging Chinese (including the supervisor), Shanghai Aging Research Center and the aging officers in the three street communities. The researcher revised the questionnaire based on their comments, feedback, and suggestions and further finalized the questionnaire. Then, five older adults from Jing Yang Street Community in the Pu Dong District were invited to fill out the further revised version of the questionnaire. The researcher recorded the time needed for the completion of the questionnaire and the participants' responses and feedback on the questionnaire. Then, the researcher and research assistant revised the questionnaire and created the final version for investigation.

4.3 Data Collection

Data collection took place during the spring of 2012. The structured questionnaire was administered using face-to-to face interviews. Forty college students with social work education or a related background and with experience in survey research were recruited and trained as interviewers for the study. Before the interview, the researcher provided a two-hour training session to the interviewers to prepare them for the basic skills of conducting face-to-face

interviews with older persons, for the administration of the questionnaire, and ethics consideration when interviewing. Specifically, the interviewers were trained on how to: (a) briefly introduce themselves and explain to participants the purpose of the study; (b) inform participants that participation in the survey is voluntary and they can quit the interview freely or withdraw their participation from the research at any time; (c) conduct data collection after the verbal content of older participants was obtained; (d) only read the questions to older adults and leave the older adults to choose response items or answer questions alone; (e) answer any questions older adults have about the research or questions in the questionnaire; (f) be alert to the physical, mental, and cognitive situations of the respondents during the interview; and (g) check the questionnaire after the interview to ensure the completion of all questions.

With help from the Aging Research Center of Shanghai and the approval of the local street community government officials, the researcher also provided three two-hour training sessions for the social workers who worked on issues related to aging population at the neighbourhood committee offices in the three street communities. They were the ones who also provided help in recruitment of the sample for this study. The social workers were trained to be alert to the physical, mental and cognitive situations of older adults. Many of them have much experience working with older persons and were trained as community social workers.

When a potential participant was selected, the social worker contacted him or her for the possibility of inviting one to participate in this study. A time and place for interview was scheduled if the participant wanted to participate in the interview. For those who preferred to be interviewed at home, home visits were arranged. For those who did not prefer a home visit, they were interviewed in a private office at the local street committee office. While this contact process is a common procedure in research in China, the potential risks of coercion need to be

noted and thus in the training sessions, interviewers were given the appropriate training related to ethical recruitment and invitation strategies.

The interviewers were asked to obtain verbal informed consent from each participant at the start of the interview based on the ethic approval from the University of Calgary. Prior to obtaining verbal consent, the interviewers introduced the participant to the purpose of the study, why they were selected, the types of questions to be asked and the expected time to complete the interview. The interviewers stressed to the participant that participation in this study was voluntary and they had the right to refuse to answer any question that makes the respondent uncomfortable, or to discontinue the interview at any time. The interviewers also emphasized to the participant the confidential nature of the information and assured them that their personal identity would not be included in the research results unless otherwise specified.The interviewers also emphasized to participants that there were no right or wrong answers to the questions and they could choose the best response answer for them. The interviewers started data collection after attaining verbal consent. At the end of interview, the interviewer debriefed the participant by asking if the participant had any questions about this study. To compensate participants for their time and to encourage participation, the participant was informed that remuneration in the form of a small gift valued at RMB 20 per questionnaire would be given to each participant at the end of the interview during the first contact by the social worker.

The older adults who had moved to other neighbourhoods were not included in this study. Participants were also screened for their health status, particularly for cognitive function. When an eligible participant showed signs of cognitive impairment when he/she was contacted by the social worker or from the social worker's previous experience of them, this potential participant was also not included in the study. A total of 27 potential participants were excluded from this

study due to their poor health status, unavailability, moved away and other undisclosed reasons. In addition, if a trained interviewer found that the participant showed signs of tiredness during the interview, the interviewer could shorten the interview and conduct a second interview with the permission of the participant. In this study, only two participants of 419 required this accommodation. The interviews were conducted in Mandarin or a local Shanghai language based on the preference of the respondents. All the interviewers were required to be fluent in these languages. Each interview lasted around 45 minutes to one hour.

The researcher and one research assistant supervised the data collection process. In the first submission of questionnaires during the first week, all questionnaires were checked by the researcher and research assistant at the end of the week. Interviewers were asked to report the numbers of interviews and report any difficulties in the interviews, the participants' reactions to the questionnaires, as well as the difficulties during contacts with the social worker in local neighbourhood committees. The interviewers were also encouraged to report difficulties to the researcher at any time during data collection.

4.4 Conceptualization and Operationalization of Variables

In this study, there were three types of questions measuring social exclusion variables, health variables, demographic and social-contextual variables. The following section will describe how each variable included in the study was conceptualized and measured.

4.4.1 Social exclusion variables.

Social exclusion was the key dependent variable examined in this study and it was represented by variables related to the six forms or dimensions: exclusion from material resources, exclusion from housing conditions, exclusion from social relations, exclusion from civic participation, exclusion from basic services, and exclusion from neighbourhood. Each

dimension of social exclusion was represented by different variables. Table 4.1 shows the details of the measures of the variables representing the various social exclusion dimensions.

Exclusion from material resources was represented by variables relating to multiple deprivation and material poverty. Deprivation was measured by seven material conditions, which were adapted from the work of Scharf et al. (2003) and literature on deprivation in China (Wang & Alkire, 2010) (See Table 4.1). An answer of yes to any of these seven items would yield a score of 1; and the total score would range from 0 to 7, with a higher score representing a higher level of deprivation. Followed the cut-off scores suggested by the Scharf et al. (2003), respondents with a score of 3 or above were considered as being in multiple deprivation. To measure material poverty, this present study followed the method used by Scharf et al. (2003). First, the respondents were asked to indicate either 0 (*no*) or 1 (*yes*) to a list of 28 necessities (e.g. television, telephone, refrigerator, washing machine, three meals a day etc.). Then, for the item in which they did not have, they were asked to indicate whether the lack of this item was because they could not afford it or that they did not want it. Same to the original study, the respondents were identified as in material poverty if they were unable to afford two or more items from the list. However, the respondents were identified as being excluded from material resources if they were in both multiple deprivation and material poverty because all participants were living in the deprived areas in the original study. Given the different sources of the respondents, this study used a less restrictive criterion to identify social exclusion from material resources: the respondents were classified as being excluded from material resources if they were either being in multiple deprivation or being in material poverty.

Exclusion from housing conditions was represented by two sets of questions; one was related to the condition of the respondents' accommodation while another was related to

satisfaction toward the accommodation. First of all, the respondents were asked to indicate either 0 *(no)* or 1 (*yes*) to whether their accommodation presented any of the following concerns: not having own room for the respondent and/or spouse or partner, not having a separate kitchen, not having a bathroom with a bath or shower that was plumbed in, not having an indoor flush toilet, shortage of space, being too dark, lacked adequate heating in winter, lacked adequate cooling facilities in summer, leaky roof, dampness, rot, lacked antiskid device in the bathroom, being unsuitable for one's physical disability or state of health, and having other problems with the accommodation. An answer of yes to any one of the questions would result in a score of 1, with the potential total score ranging from 0 and 14. A higher total score indicated a less favourable housing conditions or a higher level of exclusion in the housing condition domain. In terms of satisfaction toward the accommodation, the respondents were asked to indicate to what extent they were satisfied with their current accommodation along a 5-point Likert scale ranging from 1 (*very satisfied*) to 5 (*very dissatisfied*). In this study, a respondent would be considered as being in an excluded housing conditions if the number of unfavourable housing concerns reported was higher than the mean score, and when one reported an answer indicating either a slightly dissatisfied or very dissatisfied state toward the accommodation.

Exclusion from social relations was represented by social isolation, loneliness and non-participation in social activities. Social isolation was measured by a few questions asking the respondents to indicate: the number of children, the number of living siblings, frequency of visits with someone, frequency of talking to someone, and frequency of spending time and doing something with someone not residing with the respondent. A score of 1 was assigned to each of the following characteristics reported by the respondents: (a) has no relatives or children or sees a child or other relative less than once a week; (b) has a talk with others less than once a week; (c)

does something with others less than once a week. The total score ranged from 0 to 3, with a higher score representing a higher level of social isolation. Regarding to loneliness, loneliness was measured by the 11-item De Jong Gierveld Loneliness Scale in the original questionnaire,. In this study, loneliness was measured by a Chinese version of the 6-item De Jong Gierveld Loneliness Scale (Leung, De Jong Gierveld, & Lum, 2006). The reason for using the 6-item De Jong Gierveld Loneliness Scale is because this scale has been found to be reliable and valid in Chinese older adults (Leung, De Jong Gierveld, & Lum, 2006). Among the 6 items, the respondents were asked to provide their answers from the three choices of 1(*yes*), 2(*more or less*), and 3 (*no*). Following the developers' guidelines, the loneliness scale score was computed by counting the neutral and positive answers (i.e., "more or less", "yes") for the negatively phrased items, and the neutral and negative answers ("no" and "more or less") to the positively phrased items. The total score ranged from 0 to 6. A score of six would represent a state of intense loneliness (De Jong Gierveld, & Van Tilburg 2006, 2010; Kamphuis, 2010; De Jong Gierveld, Dykstra, & Schenk, 2012). In this study, the respondents with an intensive loneliness score of 6 were classified as being excluded in social relations, due to the different scoring methods used for the 11-items and 6-items scale.

Non-participation in social activities was measured by asking the respondents to indicate either 0 (*no*) or 1 (*yes*) to whether they had taken part in a list of eight social activities: (a) attend hobby or leisure activity, (b) attend tour groups or a holiday away from home each year, (c) have celebrations on special occasions, (d) treat visiting family or friends, (e) have friends or family around for a meal, snack, or drink, (f) visit friends or family, (g) visit friends or family in hospital or other institutions, and (h)attend weddings, funerals and other such occasions. For items that were given an answer of no, the respondents were further asked to indicate whether it

was due to not being able to afford it or just that the respondents did not want to participate. The respondents who did not participate in two or more social activities due to not being to afford them were classified as being excluded in terms of participation in social activities.

In this study, following the criterion suggested by Scharf et al. (2003), the respondents were considered as excluded from social relations when they (a) reported a total score of 2 or more in the questions measuring social isolation, (b) reported a score of 6 on the loneliness scale, and (c) did not take part in two or more social activities due to not being able to afford them.

Exclusion from civic participation was measured by asking the respondents three questions about whether they were engaged in different types of civic activities. The first question was to ask the respondents to indicate whether they attended any religious meetings or community groups from the choices of 1 (*yes, frequently*), 2(*yes, occasionally*), and 3(*no, never*). For the second question, respondents were presented with a list of nine types of civic activities to indicate 1 (*yes*) or 0 (*no*) to whether they had taken part in each of them in the past three years. The third question was to ask the respondents to indicate either 0 (*no*) or 1 (*yes*) to whether one was a volunteer at the time of the interview. In this study, similar to the criterion suggested by Scharf et al. (2003), the respondents were considered as being excluded from civic participation if they: (a) did not participate in any meetings of religious or community groups, (b) did not take part in any type of civic activity in the past three years, and (c) did not serve as a volunteer.

Exclusion from basic services was measured by asking about the respondents' use of and access to a range of community services and services within and beyond home. In terms of use of community services, it was measured by asking the respondents to indicate either 0 (*no*) or 1 (*yes*) to the use of 10 community services within the past year. These community services were: health services from community health agencies, home support services, adult day program, meals-on-

wheels, home visitors, legal consultation services, senior centre, senior university, senior home, and senior hospital. If a "no" answer was provided, the respondent was further asked to indicate whether the service was 1 (*needed*) or 0 (*not needed*). Respondents who reported two or more unmet needs for community services were considered as excluded from community services. Within the home environment, respondents were asked to indicate whether they had, in the past 5 years, used less water, gas, electricity, and telephone because money was tight. In terms of services beyond the home, respondents were asked to indicate the frequency of five key local services used from the choices of 1 (*within the last week*), 2 (*within the last month*), 3 (*less often but within the last year*), and 4 (*not at all in the last year*). The five key services were: public parks; post office services; bus services; train or subway services; and bank services. In this study, a respondent was classified as being excluded from basic services if one of the following conditions was met: (a) reported two or more unmet needs in community services, (b) used less than three or more services within their homes as money was tight, (c) did not use three or more key services outside of their home.

Exclusion from neighbourhood was represented by three variables: (a) the respondents' perceptions of their neighbourhood, (b)) their feelings of security in the neighbourhood, and (c) their perceptions toward the level of friendliness of the environment. Three questions were used to ask about the respondents' perceptions toward their neighbourhood. The first and second questions asked the respondents to indicate either 0 *(no)* or 1 *(yes)* about anything that they liked or disliked about their neighbourhood. The third question asked the respondents to rate their level of satisfaction toward their neighbourhood along a 5-point Likert scale ranging from 1 (*very satisfied*) to 5 (*very dissatisfied*). Feelings of security in the neighbourhood was measured by a question asking the respondents to indicate the degree to which one would feel secure when

leaving the home after dark from the choices ranging from 1 (*very safe)* to 4 (*very unsafe)*. The third variable of neighbourhood exclusion was developed by the first author, based upon the importance of age-friendliness in communities for older adults (WHO, 2007). The respondents were asked to indicate an answer of either 0 (*no*) or 1 (*yes*) to the question asking whether they have ever reduced the amount of time going out because of the unfriendliness of any public facilities including streets and business labels, handicap access, sidewalks, streetlights, traffic/pedestrian signal time, benches in public areas, elevators, sport facilities, and others. In this study, a respondent was classified as having experienced neighbourhood exclusion if any of the following conditions occurred: (a) expressed a negative view about the neighbourhood in at least two of the three questions measuring perceptions of neighbourhood, (b) felt either fairly unsafe or very unsafe when leaving home after dark, and (c) reduced the amount of time going out due to unfriendly facilities in the neighbourhood.

The concept of multiple exclusions or deep exclusion was noted in previous research (Levitas et al., 2007; Scharf et al., 2005b). In a study of older adults in deprived urban areas, Scharf and his colleagues (2005b) indicated that some older adults experienced simultaneously multiple forms of exclusion. Deep exclusion was introduced by David Miliband, who has argued that, "social exclusion exists in wide, deep and concentrated forms…" (Miliband, 2006, p 3). Wide exclusion referred to the large number of people being excluded on a single or small number of indicators. Deep exclusion referred to being excluded on multiple or overlapping dimensions. Concentrated exclusion referred to a geographic concentration of problems and to area exclusion (Miliband, 2006). Levitas et al. (2007) also defined deep exclusion as exclusion across more than one domain or dimension of disadvantage (Levitas et al., 2007). Although different terms were used, both multiple exclusions and deep exclusion denote multiple and severe disadvantages and it is more entrenched and deep-seated than

one form of exclusion (Miliband, 2006). The knowledge on multiple exclusions and its effect on older adults is still limited in literature, although some researchers have indicated that exposure to multiple forms of exclusion may result in severe negative consequences for quality of life and well-being (Levitas et al., 2007; Scharf et al., 2005b). In order to gain a more comprehensive understanding of the various forms of social exclusion experienced by the aging Chinese in China, this study also considered being in multiple exclusions as one form of social exclusion (Scharf et al., 2005b). Similar to previous studies, any respondents in this study who reported to be in exclusion in any two or more of the six social exclusion dimensions measured in this study would also be classified as in multiple exclusions status.

Table 4.1. *Measurement of Social Exclusion Variables*

	Indicators of exclusion		Criteria of exclusion for the indicator	Criterions for exclusion domain
Exclusion from material resources	Multiple deprivation	7 items were used to measure deprivation. A score of 1 was assigned to each of the following conditions: 1) Living in a household without an air-conditioner 2) Living in a household without a home or cell phone 3) Living in a household rented from or owned by others 4) Living in a household with more than one person per room 5) Don't have a formal profession qualification 6) Without health insurance 7) Receiving income support from government	1. No deprivation: Score 0, not disadvantaged in any of these characteristics 2. Low deprivation: Score 1-2, disadvantaged in one or two characteristics only 3. Medium deprivation: Score 3-4, disadvantaged in 3 or 4 characteristics 4. High deprivation: Score 5 or more, disadvantaged in at least 5 characteristics Deprived in 3 or more material conditions indicated multiple deprivation.	A respondent was classified as being in "exclusion from material resources" when either one of the following conditions was met: 1) being in multiple deprivation, 2) being in material poverty.
	Material poverty	A respondent was presented with a list of "28 necessities" and was asked to indicate whether the items they lacked were due to not being able to afford them.	Unable to afford 2 or more necessities indicated material poverty.	
Exclusion from housing conditions	Condition of accommodation	The respondents were asked to indicate either yes or no to a list of 14 accommodation concerns.	If the number of unfavourable housing concerns reported was higher than the mean score (i.e. mean=4.8), it indicated exclusion in housing conditions.	A respondent was classified as being in "exclusion from housing conditions" when both of the following conditions were met: 1) the number of unfavourable housing concern reported was higher than the mean score, 2) when one reported an answer indicating a dissatisfied state toward the accommodation.
	Satisfaction toward accommodation	The respondents were asked to indicate how satisfied they were with their housing along a five-point Likert scale ranging from 'very satisfied' to 'very dissatisfied' that were scored from 1 to 5.	Slightly dissatisfied or very dissatisfied with accommodation indicated exclusion in accommodation satisfaction.	
Exclusion from social relations	Social isolation	Five questions related to social isolation were asked. A score of 1 was assigned to each of the following conditions: 1) Has no relatives or children or sees a child or other relative less than once a week 2) Has a chat with others less than once a week 3) Does something with others less than once a week The total score ranged from 0 to 3, with a higher score representing a higher level of social isolation.	1. No isolation: Score 0, not isolated in any of these characteristics 2. Low isolation: Score 1, isolated in one characteristic 3. Medium isolation: Score 2, isolated in two characteristics 4. High isolation: Score 3 isolated in all three characteristics A score of 2 or higher indicated exclusion in social isolation.	A respondent was classified as being in "exclusion from social relations" when either one of the following conditions was met: 1) a score of 2 or higher reported for the social isolation questions, 2) a score of 6 (intensely lonely) reported for the De Jong Gierveld Loneliness Scale, 3) being unable to participate in two or more social activities due to affordability.
	Loneliness	A Chinese version 6-item De Jong Gierveld Loneliness Scale was used. The respondents were asked to answer each item from the choices of no, more or less, and yes. The final score ranged from 0 to 6, with a higher score representing a higher level of loneliness.	A loneliness score of 6 (intensely lonely) was considered as an indicator of exclusion from social relations.	
	Non-participation in	The respondents were asked to indicate yes or no to eight	Unable to participate in 2 or more social activities due to	

	social activities	social activities. For the no items, the respondents were asked to indicate whether non-participation was due to not being able to afford the activity.	affordability was considered as non-participation in social activities.	
Exclusion from civic activities	Participation in religious meetings and community groups	The respondents were asked to indicate yes or no to whether they had attended religious meetings and community groups.	Did not participate in any meetings of religious or community groups indicated exclusion in the indicator of religious meetings and community groups.	A respondent was classified as being in "exclusion from civic activities" when all the following conditions were met: 1) never attended in meetings of religious or community groups,2) did not take part in any type of civic activity, 3) did not serve as a volunteer.
	Participation in civic activities	The respondents were asked to indicate yes or no to 9 civic activities.	Did not take part in any civic activities in the past three years indicated exclusion in civic activities.	
	Being a volunteer	The respondents were asked to indicate yes or no to whether they served as a volunteer at the time of the interview.	Did not serve as a volunteer indicated exclusion in the volunteer indicator.	
Exclusion from basic services	Use of community services	The respondents were asked to indicate either "yes" or "no" to the use of 10 community services within the past year. For each "no" answer provided, the respondent was further asked to indicate whether the service was "needed" or "not needed".	Exclusion in use of community services was identified when 2 or more unmet needs were reported.	A respondent was classified as being in "exclusion from basic services" when either one of the following conditions was met: 1) reported 2 or more unmet needs for community services, 2) used less in 3 or more services within home as money was tight, and 3) did not use 3 or more key services beyond home.
	Use of basic services within home	The respondents were asked to indicate whether they had, in the past five years, used less water, gas, electricity, and telephone because money was tight.	Used less in 3 or more services due to affordability indicated exclusion from basic services within home.	
	Use of basic services beyond home	The respondents were asked to indicate the frequency of five key local services used from the choices of "within the last week", "within the last month", "less often but within the last year", and "not at all in the last year".	Did not use 3 or more key services indicated as exclusion from basic services beyond home.	
Neighbourhood exclusion	Perceptions of neighbourhood	Three questions related to perceptions of neighbourhood were asked. The respondent were asked to indicate: 1) either yes or no to whether there was anything that they liked about their neighbourhood; 2) either answer of yes or no to whether there was anything that they disliked about their neighbourhood; 3) how satisfied they were with their neighbourhood using a five-point Likert scale ranging from "very satisfied" to "very dissatisfied".	Expressed a negative view about the neighbourhood in at least 2 questions measuring perceptions of neighbourhood was considered as an indicator of neighbourhood exclusion.	The respondent was classified as in "neighbourhood exclusion" when one of the following conditions was met: 1) expressed negative views about the neighbourhood in at least 2 questions measuring perceptions of neighbourhood, 2) felt either fairly unsafe or very unsafe when leaving home after dark, and 3) reduced the amount of time going out due to unfriendly facilities in the neighbourhood.
	Feelings of security in the neighbourhood	The respondents were asked to indicate the extent to which one would feel secure when leaving the home after dark, from the choices of "very safe", "fairly safe", "fairly unsafe" and "very unsafe".	Felt either fairly unsafe or very unsafe when leaving home after dark was an indicator of neighbourhood exclusion.	
	Perceptions of friendliness of the environment	A respondent was asked to indicated yes or no to whether they have reduced the amount of time going out due to unfriendly facilities in the neighbourhood.	Reduced the time of going out due to unfriendly facilities in the neighbourhood indicated neighbourhood exclusion.	

4.4.2 Health variable.

Health status of older adults is a key dependent variable in this study, which was reflected by four different health variables: number of chronic illnesses, self-rated general health, depression, and life satisfaction.

The number of chronic illnesses was measured by one question in which the respondents were asked to indicate either 0 (*no*) or 1 (*yes*) to the question about whether they have chronic illnesses. If the respondents answered 1 (*yes)*, they were further asked the total number of chronic illnesses. A lower number of chronic illnesses or health concerns represents better physical health. In the regression analysis, the variable of number of chronic illnesses was further dichotomously coded as 0 (*number of chronic illnesses* < *2*) and 1 (*number of chronic illnesses* ≧ *2*).

The self-rated general health of the respondents was measured by asking the respondents to rate their health in general, along a 5-point scale ranging from 1 (*poor*) to 5 (*excellent*). A higher score represents better self-rated general health. In the regression analysis, this variable was further dichotomously coded as 0 (*poor self-rated general health*) and1 (*better self-rated general health*).

Depression was measured by a Chinese version of the 15-item Geriatric Depression Scale (GDS) (Chang &Tsai 2003; Lai & Tong, 2009; Tong et al., 2011). The scale used a response format of 0 (*no*) or 1 (*yes*) on each item. Scores were assigned to participants who indicated positive answers to items representing depressive symptoms, and a total score ranging between 0 and15 resulted after all the items were summed. Participants with a total score of 4 or below were considered 'non-depressive'. Those who scored between 5 and 15 on the scale were considered to have depressive symptoms. Previous research provided evidence on the validity of

the scale, indicating that the scale was valid in measuring depressive symptoms when compared with the ICD-10 criteria and DSM-IV criteria for Chinese older adults (Lai & Tong, 2009). The reliability of this scale is .90

Life satisfaction was measured by a question asking the respondents to indicate the degree to which they were satisfied with their quality of life ranging from 1 (*very poor*) to 5 (*very good*) on a five-point ranging scale. In the regression analysis, this variable was also dichotomously coded as 0 (*unfavourable life satisfaction*) and 1 (*favourable life satisfaction*).

4.4.3 Demographic and social contextual variables.

This study included demographic variables and social contextual variables as dependent variables.

In terms of the demographic variables, they included age, gender, marriage status, education, annual personal income, self-perceived financial adequacy, and living arrangement. Age referred to chronological age and was measured by asking the respondents to report their age. Gender was categorized as either female or male. Education refers to the level of schooling of the respondents and was measured by asking the respondent to indicate the highest level of formal education received. The respondents were asked to indicate their choice from five ordinal groups ranging from no formal education represented by a score of 1, to postsecondary and above, represented by a score of 5. A higher score indicated a higher level of formal education. Marital status was measured by asking the respondents to report their current marital status and their answers were grouped into a dichotomous variable of “in a marriage” or “not in a marriage” (i.e., widowed, never married, divorced or separated). The respondents’ religious background was measured by a question asking whether they had any religious affiliations. The respondents’ income referred to the personal annual income of the respondents in the previous year. The

answers provided were grouped into five ordinal income groups ranging from *1 (less than RMB 9,999) to 5 (RMB 45,000 and above)*. A higher score meant a higher level of income. Self-perceived financial adequacy was measured by a question asking the respondents to indicate their self-perceived financial adequacy to support their living, along a five-point scale ranging from 1 (*very inadequate*) to 5 (*very adequate*), a higher score represented a higher level of self-perceived financial adequacy. Living arrangement in this study was categorized into 1 (*living alone*) and 0 (*not living alone*).

This study also included several social contextual factors that could impact the social exclusion reported by the older Chinese. These social contextual factors were related to the social, economic, historical, and political characteristics of the older Chinese in this study and are useful for providing a better understanding of the background and life trajectories of the respondents. These variables were: (a) neighbourhood in which the respondents resided, (b) retirement age, (c) current employment status, (d) whether one had been sent to the countryside for labouring activities during the Cultural Revolution, (e) type of employment organization before retirement, (f) previous employment roles, (g) political affiliation, and (h) the length of time living in poverty.

Neighbourhood in this study referred to the three street-level communities in which the data was collected. They were West Nan Jing Road Street Community in Jing An, Jing Yang Street Community in Pu Dong, and Wu Jiao Chang Street Community in Yang Pu. Retirement age was measured by asking the respondents to report their age when retired. Current employment status was measured by asking the respondents whether they were retired or still in a paid employment at the time of the interview. The respondents were also asked to indicate either 0 *(no)* or 1 *(yes)* to whether they had been sent by the government to the countryside for

labour activities during the Cultural Revolution from 1966 to 1976. Type of employment organization was measured by two questions. The first question asked the respondents to indicate whether they had paid employment before the age of 60. If the respondent answered yes to this question, they were asked to report the type of employment organization before retirement from nine choices including government, public organization, state-owned enterprise, collective enterprise, private enterprise etc. These employment organizations were further regrouped into 1 (*government or public organization*), 2 (*enterprises*), and 3 (*never being in an employment*) for the purposes of analyses.

Previous employment role was measured by asking the respondents to indicate their employment roles before retirement from the choices of 1 (*general employee*), 2 (*senior level manager*), 3 (*middle level manager*), and 4 (*primary level manager*). The latter three groups were regrouped into 2 (*management position*). Political affiliation was measured by a question asking the respondents to indicate whether one was affiliated with a political organization. The length of time spent living in poverty was measured by a question asking the respondents to indicate the frequency of living in poverty from a five-point scale ranging from 1 (*never*) to 5 (*most of time*).

4.5 Data Analysis

4.5.1 Data screening.

Before entering the data using Statistical Package, the completeness was double checked again. Questionnaires that had 20% or more of the questions unfilled were excluded. The completed questionnaires were coded and the data were entered using the IBM SPSS Statistics version 18 (formerly SPSS Statistics). When all the data were entered, data screening was done before analyzing the data to check for errors, outliers, and missing values in this study. First, the

researcher checked the accuracy of data entry. For example, by outputting the frequency table, the researcher checked whether each variable contained only legitimate numerical codes or values, and whether these codes seemed reasonable. When improbable scores were found, the researcher inserted the correct numbers by examining the original questionnaire.

4.5.2 Handling of missing data.

Missing data is one of the most common problems in data analysis. It typically occurs when some participants do not respond to some items for some reason. Missing data are often problematic as when observations are missing for any reason, our ability to explain and understand the phenomena that we study is hindered (McKnight, McKnight, & Sinadi, 2007). Methods for addressing missing data can be divided into two categories: those that reduce the dataset (by deleting the records of some units) and those that make up the data so as to generate, structurally, a look-alike of the complete dataset. The latter are referred to as imputation methods (Longford, 2008). In the present study, the researcher checked the prevalence of missing data first and then examined whether the missing values were randomly scattered or not, and then two approaches for missing values replacement techniques were used.

Rubin (1976) provided a missing data classification system and categorized missing data into three broad types: missing completely at random (MCAR), missing at random (MAR), and missing not at random (MNAR). Each term refers to a probability of missing values, which was given on the information about the variables with the missing data, associated variables and a hypothetical mechanism underlying the missing data (McKnight et al., 2008). Each type of missing data differs in their mechanism. Hence, two considerations in analyzing missing data are the amount (quantity) and the pattern of how they are missing. In this study, the majority of variables did not have missing values or had only a few missing values (namely, the number of

missing values is less than five among the total of 419 potential responses). However, some values for the social contextual variables were missing. For example, when asking about whether they had been sent to the countryside during the Cultural Revolution, sixteen older adults did not respond to this question. The questions about the type of work unit they worked before retirement and their position in the work unit reported thirty-three missing values respectively. The reasons for these social contextual variables missing more responses could be explained by the nature of these questions. For the questions about their experience in the Cultural Revolution, it may arouse unhappy memories during the revolution and therefore they refused to answer this question. For the questions related to their employment organization, the missing information may be due to the vagueness of questions, and some older participants might not have understood the terms “employment organization” or the position in employment very well. In addition to the above social contextual variables, one health variable was also found to have more missing values. Nineteen participants did not answer the question “Do you feel full of energy?”, which is a sub-question in GDS-15. Nonetheless, the percentages of missing values in the above social contextual and health variables are less than 5%.

There are many procedures to replace missing values. In this study, the researcher replaced the missing values using constant replacement. Constant replacement procedure requires a single value to be computed and then subsequently imputed for a missing value (Graham, 2012; McKnight et al., 2007). Polit and Beck (2012) recommend this procedure when missing values are reasonably random and when the problem is not extensive. Median substitution usually performs well as a measure of central tendency and is a better estimate for missing values than the mean when data are not normally distributed, and if the data are normally distributed the

median is the same as the mean. Hence, the median value of those was used to replace to the missing values in this study.

4.5.3 Reliability of measures.

The measures of social exclusion in this study are not standardized instruments. As mentioned in above, this study adopted the measurements used by Scharf and his colleagues (2003) in their studies in the United Kingdom. These measurement items were mainly checklist style questions instead of be standardized scales. Thus, similar to the original study of Scharf's research team, the internal consistency for the measures to capture each of the social exclusion dimensions was unable to be tested. Nonetheless, two standardized scales were included in this study: the Chinese version of the 15-item Geriatric Depression Scale and the 6-item De Jong Gierveld Loneliness Scale. The Cronbach's alpha for the Chinese version of the 15-item Geriatric Depression Scale was found to be .741 for the participants in this study while the Cronbach's alpha for the 6-item De Jong Gierveld Loneliness Scale was .679.

4.5.4 Methods of analysis.

In this study, hierarchical binary logistic regression was used to examine the correlates of social exclusion. Binary logistic regression is well suited for testing hypotheses about relationships between a categorical outcome variable and one or more categorical or continuous predictor variables (Hosmer & Lemeshow, 2013; Menard, 2002; Peng, Lee, & Iingersoll, 2002). Due to its less stringent requirements on statistical assumptions than linear regression models, logistic regression is used in a wide range of applications (Hibe, 2009; Sarkar, Midi, & Rana, 2011). As respondents were identified as either "being excluded" or "not being excluded" in each of the six social exclusion dimensions as well as the multiple exclusions classification, binary logistic regression is suitable.

In order to examine the contribution of the different types of correlates, hierarchical multiple logistic regression was used, with social exclusion in each of the six dimensions and multiple exclusions classification as the dependent variable in seven separate analyses. The demographic variables were the first hierarchical block of correlates entered in the regression model. The social contextual variables were then added as a second variable block. This hierarchical analysis technique was used to identify the effects of the specific order of the predictors as determined by research hypothesis (Andrew, 2007). The change in -2 log likelihood would thus illustrate the significance of each of the variable blocks in the regression model.

Regarding the relationship between social exclusion variables to health status of older adults, logistic regression was also used. Linear regression model assume a linear relationship between the dependent and independent variables, with the independent variables needing to be interval, normally distributed, linearly related, and with equal variance within each group. In this study, except for the variable related to depression, all three other health variables (number of chronic illnesses, self-rated general health, and life satisfaction) are not continuous variables, which violated the assumptions for linear regression analysis. Moreover, health variables were measured differently. In order to make the interpretation easier, all the health variables were dichotomized for logistic regression. Separate hierarchical logistic regression analyses were used to examine the relationship between social exclusion variables and each health variable. Another four separate hierarchical logistic regression analyses were used to examine the relationship between multiple exclusions and health variables. Similar to the logistic regression for the correlates of social exclusion, the demographic variables were the first hierarchical block of predictors entered in the regression model. The social contextual variables were then added as a

second variable block. Finally, the six dimensions of social exclusion or multiple exclusions were entered into the model in the third block.

Multicollinearity is a statistical phenomenon in which two or more predictor variables in a multiple regression model are highly correlated, meaning that one can be linearly predicted from the others with a non-trivial degree of accuracy (Grapentine, 1997). Correlations coefficients in bivariate analysis did not show a very strong relationship between any two variables. In this study, it was further checked with the tolerance and variance inflation factor (VIF) levels before conducting logistic regression. The VIF was calculated for each predictor by doing a linear regression of that predictor on all the other predictors, and then obtaining the R^2 from that regression. The VIF is just $1/(1-R^2)$. The results indicated no evidence of such a problem because all VIF value were less than 4 and all tolerance was over 0.20, the cut-off criterion recommended by Garson (2007), while many suggested less strict cut-off points of 10 for VIF and 0.10 for tolerance (Hair et al., 2006; Kutner et al., 2005.Myers, 1990; Neter et al., 1996; Stevens, 2002). Thus, multicollinearity was not a concern in this study.

Before conducting logistic regression analysis, the researchers also ascertained whether there were influential outliers that would influence the results of analysis. Outliers are a set of observations whose values deviate from the expected range and produce extremely large residuals and may indicate a sample peculiarity (Sarkar, Midi, & Rana, 2011). Christensen (1997) suggested that if the residuals in binary logistic regression have been standardized in some fashion, then one would expect most of them to have values within ± 2. Standardized residuals outside of this range are potential outliers. A failure to detect outliers and influential cases would distort the validity of the inferences dawn from logistic regression analysis (Sarkar, Midi, & Rana, 2011). Thus, it is crucial to detect outliers and influential cases before the analysis. Using

the methods included in the procedure for binary logistic regression, influential outliers were identified and excluded in each set of logistic regression analysis.

Chapter Five: Results

5.1 Introduction

By adopting a social exclusion framework, this study examined the characteristics of social exclusion and the association of social exclusion and health in older Chinese adults in Shanghai. This chapter presents the results for each question/hypothesis. The first section of this chapter presents a general description of the characteristics of the participants in this study. Sections two to four present the findings of each of the three research questions. A brief summary of the research findings is provided at the end of this chapter.

5.1.1 Response rate.

Of the total 450 potential respondents, 31 were unable to be contacted, had relocated, passed away, or were unable to participate due to health status. Thus, the remaining 419 older adults completed the study, resulting in a response rate of 93.1%. This response rate is high and comparable to other similar studies on older Chinese in China (Guo & Lai, 2011). The high response rate could be explained by the fact that the officials in the local residence offices were involved in supporting the publicity for this study and the recruitment of respondents. These officials were known to the older Chinese residents in these neighbourhoods, resulting in the trust toward the implementation of this research. As in previous research studies in China, the older Chinese tended to be more willing to participate when the studies are supported by the officials of local residence committees.

5.1.2 Demographic and social characteristics.

Details of the demographic and social contextual information of the respondents are presented in Table 5.1. The average age of the respondents in this study was 73.4 years (*SD*=7.9

years), with a range from 60 to 97. Nearly two-thirds (64.4%) of the respondents were women. In this study, over half (58.9%) of the respondents reported being married and 41.1% were not in a marital relationship (i.e., widowed 36.2%, separated or divorced 1.7%, and never married 3.1%). Although a fifth of the respondents reported a post-secondary or above education level, one quarter of them reported having no formal education or having an elementary level education. While two-thirds of the respondents reported a personal annual income of less than RMB 30,000 (USD 1.00 ≈ RMB 6.8), over 30% reported their self-perceived financial status as adequate (24.8%) or very adequate (7.9%). Less than a third (31.7%) of the respondents reported that they lived alone while the remaining 68.3% reported living with others. Most (92%) of the respondents reported not working. Almost a third of the respondents reported that they were a member of the Communist Party. Only 15.5% of the respondents reported that they had been sent to the countryside to engage in labouring activities during the Cultural Revolution period.

Table 5.1 also presents the different characteristics of respondents in the three districts. When compared with the respondents from other two street communities in this study, the respondents from the Jing An District were older, with a higher percentage of reporting that they had worked in a government or public organization before retirement and a lower percentage of being a member of the Communist Party. On the other hand, when compared with respondents from the other two districts, the respondents from the Pu Dong District reported a significantly lower level of annual personal income and a larger proportion of having no formal education or elementary level of education. In terms of the length of time living in poverty, more respondents in the Jing An District and Pu Dong District reported the choices of 4 (*often*) or 5 (*most of time*) than the respondents from the Yang Pu District.

Table 5.1. ***Demographic and Social Contextual Characteristics of the Respondents -Part 1***

		Overall (N=419) %	Jing An (n=139) %	Pu Dong (n=144) %	Yang Pu (n=136) %.	χ^2
Age	60-69 years	35.3	25.9	37.5	42.6	20.390 **
	70-79 years	42.2	39.6	43.8	43.4	
	80 years and above	22.4	34.5	18.8	14.0	
Gender	Male	35.6	35.3	39.6	31.6	1.945
	Female	64.4	64.7	60.4	68.4	
Education	No formal education	11.9	5.0	17.4	13.2	25.743 **
	Elementary	13.4	15.1	17.4	7.4	
	Junior high	27.7	23.7	31.3	27.9	
	Senior high	27	32.4	17.4	31.6	
	Post-secondary & above	20	23.7	16.7	19.9	
Marital status	Married	58.9	54	63.2	59.6	2.525
	Never married	3.1	5.8	2.8	0.7	
	Divorced/separated	1.7	4.3	0%	0.7	
	Widowed	36.2	35.3	34.0	39.0	
Religion	Having a religion	20.5	32.4	19.4	9.6	22.093 **
	Not having a religion	79.5	67.6	80.6	90.4	
Living arrangement	Living alone	32	38.1	27.1	30.9	4.079
	Living with other	68	61.9	72.9	69.1	
Personal annually income	Less than RMB 10,000	6.9	5.0	12.5	2.9	45.626**
	RMB10,000 to 19,999	12.9	5.0	22.9	10.3	
	RMB20,000 to 29, 999	47.7	54	39.6	50	
	RMB30,000 to 44,999	22.4	24.5	22.2	20.6	
	RMB45,000 and above	10	11.5	2.8	16.2	
Self-perceived financial adequacy	Very inadequate	4.5	4.3	5.6	3.7	5.727
	Inadequate	16.7	17.3	19.4	13.2	
	Minimally adequate	46.1	43.9	44.4	50.0	
	Adequate	24.8	26.6	20.8	27.2	
	Very adequate	7.9	7.9	9.7	5.9	

*Note.** $p<0.05$, ** $p<0.01$

Table 5.1. ***Demographic and Social Contextual Characteristics of the Respondents-Part 2***

		Overall (N=419) %	Jing An (n=139) %	Pu Dong (n=144) %	Yang Pu (n=136) %	χ^2
Political affiliation	Member of the Communist Party	32.7	16.5	38.2	43.4	25.509*
	Not a member of the Communist Party	67.3	83.5	61.8	56.6	
Previous employment roles	General employee	55.4	61.9	47.9	56.6	26.027**
	Management position	38.2	33.1	38.2	43.4	
	Never in an employment	6.4	5.0	13.9	0	
Types of employment organization before retirement	Government or public organization	21.7	28.8	12.5	24.3	31.775**
	Business or enterprise	71.8	66.2	73.6	75.7	
	Never in an employment	6.4	5.0	13.9	0	
Had been sent to countryside during the Cultural Revolution	Yes	15.5	19.4	11.8	15.4	3.133
	No	84.5	80.6	88.2	84.6	
Retirement age	At or later than the regulated retirement age (55 for women and 60 for men)	47.3	42.4	48.6	50.7	2.057
	Earlier than the regulated retirement age (< 55 for women and < 60 for men)	52.7	57.6	51.4	49.3	
Current employment status	Retired	92.4	95	91	91.2	1.999
	In a paid employment	7.6	5.0	9	8.8	
The length of time living in poverty	Never	15.5	18.7	9.0	19.1	16.045*
	Rarely	25.5	28.8	27.1	20.0	
	Occasionally	38.7	28.8	42.4	44.9	
	Often	13.1	15.1	14.6	9.6	
	Most of time	7.2	8.6	6.9	5.9	

Note. * p<0.05, **p<0.01

5.1.3 Health status.

In this study, health status of Chinese older adults was represented by four health variables that measured the number of chronic illnesses, self-rated general health, depression and life satisfaction. The main results of health status are shown in Table 5.2.

Table 5.2 shows that close to three quarters of the respondents (72.4%) reported that they had at least one chronic illness. Among them, one fifth of the respondents reported having three or more types of chronic illnesses. On average, the older adults in this study reported having 1.40 chronic illnesses (*SD*=1.29).

In terms of self-rated general health, only slightly over one quarter (27.2%) of the respondents rated their general health to be excellent (1.7%), very good (8.8%) or good (17.2%). On the contrary, over half (59.9%) of the older respondents reported having only fair health and 12.4% reported having poor health.

Depression in this study was measured by a Chinese version of Geriatric Depression Scale (GDS) (Chang & Tsai, 2003; Lai et al., 2009; Mui, 1996). Out of the score range from 0 to 15, the average GDS score among the respondents was 3.89 (*SD*=2.90). Although 62.8% of the respondents reported not having depressive symptoms, 34.6% of the respondents reported a mild level of depressive symptoms and 2.6% indicated being moderately to severely depressed.

Life satisfaction was measured by one question in which respondents were asked to rate their level of life satisfaction. The results showed that slightly over half of the respondents (51.5%) rated their life to be very good (6.9%) or good (44.6%). However, 45.8% of the respondents in this study indicated that their life was neither good nor poor while only 1.9% of them reported having a poor life.

Table 5.2. ***Descriptive Statistics of Health Variables***

	N	Percent
Number of chronic illnesses		
Don't have any chronic illness	117	27.9
1 chronic illness	124	29.6
2 chronic illnesses	93	22.2
3 chronic illnesses	59	14.1
4 chronic illnesses	18	4.3
5 and above chronic illnesses	8	1.9
Self-rated general health		
Excellent	7	1.7
Very good	37	8.8
Good	72	17.2
Fair	251	59.9
Poor	52	12.4
Depression (GDS-15)		
Not depressed (0-4)	263	62.8
Mild depressed (5-9)	145	34.6
Moderately or severely depressed (10-15)	11	2.6
Life satisfaction		
Very good	29	6.9
Good	187	44.6
Neither good nor poor	192	45.8
Poor	8	1.9
Very Poor	3	0.7

5.2 Research Question 1: Characteristics of Social Exclusion

In this study, the first research question examined the characteristics of social exclusion that have been experienced by the older Chinese in Shanghai. This section presents the research findings related to this question. Table 5.3 presents the proportion of respondents classified as being in social exclusion according to the criteria in the various dimensions and related variables.

In terms of exclusion from material resources, material poverty was reported by 7.4% of the respondents who reported to be lacking two or more necessities due to affordability.

However, more than a quarter (25.8%) of the respondents were deprived in three or more material conditions. Overall, nearly a third (30.8%) of the respondents were classified as being excluded from material resources.

Close to one in five (19.8%) of the respondents were classified as being excluded from housing conditions. Specifically, 43.4% of the respondents reported over 4.8 types of unfavourable housing concerns and 26% of the respondents reported to be slightly dissatisfied or very dissatisfied with their current accommodation.

In terms of exclusion from social relations, 15% of the respondents reported a “yes” to two or more social isolation questions. Only 2.6% of the respondents reported a score of 6 (i.e., intensely lonely) in the De Jong Gierveld Loneliness Scale and 6.2% of the respondents were unable to afford to participate in two or more social activities. However, when considering these indicators together, one in five (19.6%) of the respondents were classified as being excluded from social relations.

In terms of exclusion from civic activities, 16.2% of the respondents reported that they did not participate in any meetings of religious or community groups. However, 63.7% of the respondents reported that they did not take part in any civic activities in the past three years. Over two-thirds (66.3%) of the respondents reported that they did not serve as a volunteer at the time of being interviewed. In total, 12.2% of the respondents were classified as being excluded from civic activities.

Close to half (45%) of the respondents reported to be in exclusion from basic services. Specifically, two or more unmet needs for community services were reported by 27.2% of the respondents. At the same time, 15.5% of the respondents reported that they used less than three

or more services within their home since money was tight. Over a tenth (12.2%) of the respondents reported that they did not use three or more key services outside of home.

Neighbourhood exclusion was reported by 22.5% of the respondents. In this regard, almost one in ten (8.9%) respondents expressed a negative view about the neighbourhood in at least two of the three questions measuring perceptions of neighbourhood. Over a tenth (11.5%) of the respondents reported that they had reduced the amount of time going out due to the unfriendly facilities in the neighbourhood, while only a small portion of the respondents (1.2%) felt very unsafe when leaving home after dark.

In this study, the respondents were classified as experiencing multiple exclusions when exclusion was reported in one or more dimensions. As a result, over a third (39.1%) of the respondents were considered to be experiencing multiple exclusions.

Table 5.3. ***Proportion of Older Chinese Excluded in Different Dimensions (N = 419)***

Dimensions of social exclusion	Indicators of social exclusion		Excluded according to the indicators (%)	Excluded in each dimension (%)
Material resources	Multiple deprivation	Deprived in 3 or more material conditions	108 (25.8)	129 (30.8)
	Material poverty	Unable to afford 2 or more necessities	31 (7.4)	
Housing conditions	Housing conditions	The number of unfavourable housing concern reported was higher than the mean score (i.e. mean=4.8)	182 (43.4)	83 (19.8)
	Satisfaction toward accommodation	Slightly dissatisfied or very dissatisfied with accommodation	109 (26)	
Social relations	Social isolation	Reported a "yes" to 2 or more social isolation questions	63 (15)	97 (19.6)
	Loneliness	Reported a score of 6 (i.e. intensely lonely) in the De Jong Gierveld Loneliness Scale	11 (2.6)	
	Non-participation in social activities	Unable to afford to participate in 2 or more social activities	26 (6.2)	
Civic activities	Attended religious meetings and community groups	Did not participate in any meetings of religious or community groups	68 (16.2)	51 (12.2)
	Participation in civic activities	Did not take part in any civic activities in the past three years	267 (63.7)	
	Served as a volunteer	Did not serve as a volunteer	278 (66.3)	
Basic services	Use of community services	Reported 2 or more unmet needs for community services	114 (27.2)	189 (45)
	Use of basic services within home	Used less of 3 or more services within home as money was tight	65 (15.5)	
	Use of basic services beyond home	Did not use 3 or more key services outside of home	51 (12.2)	
Neighbourhood	Perceptions of neighbourhood	Expressed a negative view about the neighbourhood in at least 2 of the three questions measuring perceptions of neighbourhood	37 (8.9)	95 (22.5)
	Feelings of security in the neighbourhood	Felt very unsafe when leaving home after dark	5 (1.2)	
	Perceptions of friendliness of the environment	Reduced the amount of time going out due to unfriendly facilities in the neighbourhood	48 (11.5)	
Multiple exclusions	--	Reported exclusion in 2 or more dimensions in above	--	164 (39.1)

5.3 Research Question 2: Correlates for Social Exclusion

The second research question in this study is "What are the social contextual factors shaping the characteristics of social exclusion experienced by older Chinese in Shanghai?" In

this study, each of the respondents was classified as either not being excluded or in exclusion according to the criteria of each of the dimensions examined. Being excluded or not in each of the exclusion dimensions was coded as a binary dependent variable.

Table 5.4 and Table 5.5 show the results of the hierarchical binary logistic regression for each of the exclusion dimensions and the multiple exclusions. The demographic variables were entered into the regression model first while the social contextual variables were added as the second block. The correlates for each dimension of social exclusion are presented first followed by a brief summary.

Respondents who reported a higher level of education were 35.6% less likely to be in exclusion from material resources. Similarly, respondents who reported one higher level of self-perceived financial adequacy were 31.5% less likely to report exclusion in material resources. When compared with the respondents residing in the Yang Pu District, those who lived in the Jing An District were three times more likely to report exclusion in material resources.

In terms of predictors of exclusion from housing conditions, the results showed that respondents who reported being older were 5.3% less likely to be in exclusion from housing conditions. Respondents who reported being married were 56.7% less likely to report exclusion from housing conditions. Having a higher level of self-perceived financial adequacy would decrease one's likelihood of being excluded from housing by 35.8%. When compared with the respondents residing in the Yang Pu District, those who lived in the Jing An District were 6.6 times more likely to report exclusion in housing conditions. Being in poverty for a longer time period increased one's likelihood of being excluded from housing by 31.1%.

In regards to exclusion from social relations, the results showed that being older would increase one's likelihood of being excluded in social relations by 5.4%. When compared with

women, men were 89.8% more likely to be in exclusion from social relations. Respondents who reported being a member of the Communist Party were 55.9% less likely to be in exclusion from social relations. Those who reported a longer period of being in poverty also were 30.3% more likely to be in exclusion from social relations.

For exclusion from civic participation, the respondents living in the Jing An District, when compared with the ones in the Yang Pu District, were 7.37 times more likely to be in exclusion from civic participation.

In terms of exclusion from basic services, respondents who reported being older would have increased likelihood of being excluded from basic services by 5.1%. Respondents who reported one higher level of education were 32.9% more likely to be in exclusion from basic services. Respondents who reported one higher level of self-perceived financial adequacy were 42% less likely to report exclusion from basic services. When compared with the respondents residing in the Yang Pu District, those who lived in the Pu Dong District were 1.76 times more likely to report exclusion from basic services. Being in poverty for a longer period would also increase one's likelihood of being excluded from basic service by 30.1%.

In terms of exclusion from neighbourhood, the results showed that respondents who were being older had an increased likelihood of being excluded from neighbourhood by 8%. Respondents who reported a higher level of education in this study were 1.9 times more likely to be in exclusion from neighbourhood. On the contrary, respondents who reported a higher level of personal annual income were 36.3% less likely to report neighbourhood exclusion.

As shown in Table 5.5 the respondents who reported being older were 5.2% more likely to be in multiple exclusions. When compared with the respondents in the Yang Pu District, those who lived in the Jing An District, which has the highest per capital GDP among the three

Districts, were 6.16 times more likely to report multiple exclusions. Being retired before the regulated retirement age increased the likelihood of being in multiple exclusions by 41.8%. Being in poverty for a longer time period increased one's likelihood of being in multiple exclusions by 53%. Respondents who reported one higher level of self-perceived financial adequacy were 37.2% less likely to be in multiple exclusions. Being a member of the Communist Party decreased the likelihood of being in multiple exclusions by 52.1%.

Table 5.4. ***Correlates of Social Exclusion (N = 419)-Part 1***

	Exclusion from material resources				**Exclusion from housing conditions**				**Exclusion from social relations**			
Demographics	**B**	**Exp(B)**	**B**	**Exp(B)**	**B**	**Exp(B)**	**B**	**Exp(B)**	**B**	**Exp(B)**	**B**	**Exp(B)**
Age	026	1.026	.022	1.022	-.012	.989	-.054	.947*	.041	1.042*	.052	1.054**
Gender-male[a]	-.108	.897	-.094	.910	.337	1.401	.510	1.665	.484	1.622	.641	1.898*
Marital status-married[b]	-.004	.996	.031	1.031	-.758	.469*	-.838	.433*	.094	1.099	.165	1.179
Education	-.406	.667**	-.439	.645**	.072	1.074	-.087	.916	-.206	.814	-.192	.825
Having a religion[c]	.380	1.462	.097	1.022	.510	1.665	.123	1.131	-.063	.939	-.289	.749
Personal annual income	-.205	.815	-.099	.906	.201	1.223	.170	1.185	-.024	.977	.113	1.119
Self-perceived financial adequacy	-.504	.604**	-.379	.685*	-.591	.554**	-.443	.642*	-.217	.805	-.061	.941
Living arrangement-living alone[d]	-.759	.468	-.771	.463	-.355	.701	-.515	.598	.259	1.296	.278	1.320
Social contextual variables												
Neighbourhood[e]												
Jing An			1.121	3.067**			1.887	6.600**			.395	1.485
Pu Dong			.638	1.893			-.343	.710			.176	1.193
Retirement age-retired at or after the regulated age for retirement[f]			-.038	.963			.142	1.153			-.496	.609
Employment status-retired[g]			-.550	.577			.118	1.125			-.409	.664
Had been sent to the countryside during the Culture Revolution[h]			.651	1.917			-.002	.998			.585	1.796
Types of employment organization before retirement[i]												
Business or enterprise			.223	1.250			-.070	.932			.454	1.575
Never in an employment			.243	1.276			.977	2.656			.727	2.069
Employment roles before retirement-General employee[j]			.270	1.310			-.089	.915			-.207	.813
Being a member of the Communist Party[k]			-.382	.683			-.049	.952			-.819	.441*
Length of time living in poverty			.205	1.227			.271	1.311*			.265	1.303*
Chi-square, df	63.714**, df=8		91.229**, df=18		23.186**, df=8		77.692**, df=18		19.171*, df=8		41.754**, df=18	
-2 log likelihood	453.659		426.144		393.923		339.418		395.127		372.544	

Note. Reference groups: (a) female, (b) not married, (c) not living alone, (d) not having a religion, (e) Yang Pu, (f) retired before the regulated age for retirement, (g) not retired, (h) had not been sent to the countryside during the Culture Revolution, (i) government or public organization, (j) management position, (k) not a member of the Communist Party.

* $p<0.05$, **$p<0.01$

Table 5.4. ***Correlates of Social Exclusion (N = 419)-Part 2***

	Exclusion from civic activities				Exclusion from basic services				Exclusion from neighbourhood			
Demographics	**B**	**Exp(B)**	**B**	**Exp(B)**	**B**	**Exp(B)**	**B**	**Exp(B)**	**B**	**Exp(B)**	**B**	**Exp(B)**
Age	.085	1.089**	.053	1.054*	.057	1.058**	.050	1.051**	.074	1.077*	.077	1.080*
Gender-male[a]	-.173	.841	-.028	.972	-516	.597*	-.412	.662	.122	1.129	.234	1.264
Marital status-married[b]	.185	1.203	.329	1.389	-.135	.874	-.017	.983	.769	2.158	1.054	2.870
Education	.040	1.041	-.179	.836	.251	1.285*	.284	1.329*	.555	1.742*	.665	1.945**
Having a religion[c]	-.209	.812	-.499	.607	-.233	.792	-.355	.701	-.267	.766	-.287	.750
Personal annual income	-.048	.919	-.226	.798	-.036	.965	.038	1.039	-.748	.473**	-.637	.529*
Self-perceived financial adequacy	-.084	.919	-.066	.936	-.545	.580**	-.447	.639**	-.162	.851	.132	1.141
Living arrangement-living alone[d]	.204	1.226	.263	1.301	.286	1.331	.399	1.491	.282	1.326	.411	1.508
Social contextual variables												
Neighbourhood[e]												
Jing An			1.991	7.326**			.468	1.597			-.725	.485
Pu Dong			.068	1.070			.565	1.760*			-.624	.536
Retirement age-retired at or after the regulated age for retirement[f]			.240	1.271			-.356	.700			-.272	.762
Employment status-retired[g]			-.713	.490			-.068	.934			-.312	.732
Had been sent to the countryside during the Culture Revolution[h]			-.275	.760			-.068	.934			-1.071	.343
Types of employment organization before retirement[i]												
Business or enterprise			-.380	.684			-.530	.588			.830	2.292
Never in an employment			-.724	.485			-.208	.813			2.102	8.181
Employment roles before retirement-General employee[j]			.160	1.174			.226	1.253			-.701	.496
Being a member of the Communist Party[k]			-.322	.725			-.271	.762			-.473	.623
Length of time living in poverty			-.157	.855			.263	1.301*			.443	1.558
Chi-square, df	20.193*, df=8		56.830**, df=18		44.863**, df=18		66.691**, df=18		19.383*, df=8		30.366*, df=18	
-2 log likelihood	290.148		253.510		531.976		510.148		135.293		124.310	

Note. Reference groups: (a) female, (b) not married, (c) not living alone, (d) not having a religion, (e) Yang Pu, (f) retired before the regulated age for retirement, (g) not retired, (h) had not been sent to the countryside during the Culture Revolution, (i) government or public organization, (j) management position, (k) not a member of the Communist Party.

* $p<0.05$, ** $p<0.01$

Table 5.5. *Correlates of Multiple Exclusion (N = 419)*

	Exclusion from multiple exclusions			
Demographics	**B**	**Exp(B)**	**B**	**Exp(B)**
Age	.063	1.065**	.051	1.052**
Gender-male[a]	.066	1.069	.334	1.397
Marital status-married[b]	-.300	.741	-.251	.778
Education	-.085	.919	-.226	.797
Having a religion[c]	.156	1.168	-.317	.728
Personal annual income	-.066	.936	-.028	.973
Self-perceived financial adequacy	-.635	.530**	-.464	.628**
Living arrangement-living alone[d]	-.269	.764	-.280	.756
Social contextual variables				
Neighbourhood[e]				
Jing An			1.817	6.156**
Pu Dong			.595	1.813
Retirement age-retired at or after the regulated age for retirement[f]			-.541	.582*
Employment status-retired[g]			-.617	.540
Had been sent to the countryside during the Culture Revolution[h]			.583	1.792
Types of employment organization before retirement[i]				
Business or enterprise			-.409	.665
Never in an employment			.091	1.095
Employment roles before retirement -General employee[j]			-.223	.800
Being a member of the Communist Party[k]			-.735	.479*
Length of time living in poverty			.425	1.530**
Chi-square, df	53.003**, df=8		128.102**,df=18	
-2 log likelihood	507.932		432.833	

Note. Reference groups: (a) female, (b) not married, (c) not living alone, (d) not having a religion, (e) Yang Pu, (f) retired before the regulated age for retirement, (g) not retired, (h) had not been sent to the countryside during the Culture Revolution, (i) government or public organization, (j) management position, (k) not a member of the Communist Party.

* $p<0.05$, ** $p<0.01$.

Among the various demographic variables examined, age and variables related to finance (i.e., personal annual income and self-perceived financial adequacy) were the most important ones affecting four or more social exclusion variables. Another social contextual variable related to finance was length of time living in poverty, which was significantly related to three social exclusion variables. Among all the significant variables, being older and living in Jing An District were the ones showing the strongest effect as indicated by the beta coefficients, on most of the social exclusion variables. Among the other demographic and social contextual variables including education, gender, marriage status, and being a member of the Communist Party were significantly related to one or two social exclusion variables.

5.4 Research Question 3: Social Exclusion and Health Status

The third research question to be examined in this study was, "How is social exclusion related to physical and mental health?" Based on this question, four hypotheses were developed. Bivariate and hierarchical logistic regression analyses were used to answer this question and the related hypotheses. In this section, the results from bivariate analysis are presented first followed by the results from a series of hierarchical models for different health variables. A summary of hypothesis testing based on the results from each health variable is provided at the end of this section.

Table 5.6 presents the matrix of Pearson's correlation coefficients for social exclusion variables and health variables. As shown in Table 5.6, among the seven social exclusion variables exclusion from housing conditions, exclusion from basic services, exclusion from neighbourhood and multiple exclusions were correlated with all the four health variables. Exclusion from material resources, exclusion from social relations and exclusion from civic activities were correlated with depressive symptoms and life satisfaction, but they were not related to the number of chronic illnesses and self-rated general health.

Table 5.6. ***Correlations between Social Exclusion and Health (N = 419)***

	Number of chronic illnesses	Self-rated general health	Depressive symptoms (GDS-15)	Life satisfaction
Exclusion from material resources	.054	-.009	.100*	-.137**
Exclusion from housing conditions	.100*	-.111*	.246**	-.217**
Exclusion from social relations	.042	-.081	.199**	-.134**
Exclusion from civic activities	.020	-.034	.255**	-.119*
Exclusion from basic services	.153**	-.146**	.310**	-.212**
Exclusion from neighbourhood	.214**	-.108*	.211**	-.137**
Multiple exclusions	.175**	-.132**	.322**	-.246**

Note. * $p<0.05$, ** $p<0.01$

Table 5.7 shows the bivariate relationship between the four health variables and demographic and social contextual variables. Self-perceived financial adequacy and length of time living in poverty were the variables having a significant relationship with most health variables in the bivariate analysis.

Table 5.7. ***Bivariate Analyses for Demographic and Social Contextual Variables and Health Variables (N = 419)***

	Number of chronic illnesses	Self-rated general health	Depressive symptoms (GDS-15)	Life satisfaction
Age	n.s.[a]	n.s.[a]	*p*= .005[a]	n.s.[a]
Gender	n.s.[b]	n.s.[c]	n.s.[b]	n.s.[c]
Marital status: being in a marriage vs. single	p= .041[b]	n.s.[c]	n.s.[b]	n.s.[c]
Education	n.s.[a]	n.s.[a]	n.s.[a]	n.s.[a]
Having a religion	n.s.[b]	n.s.[c]	n.s.[b]	n.s.[c]
Living arrangement: living alone vs. with someone	p= .014[b]	n.s.[c]	n.s.[b]	n.s.[c]
Personal annual income	n.s.[a]	n.s.[a]	*p*= .016[a]	*p*= .000[a]
Self-perceived financial adequacy	n.s.[a]	*p*=.000[a]	*p*= .000[a]	*p*=.000[a]
Neighbourhood currently resided	n.s.[d]	n.s.[c]	*p*= .000[d]	*p*=.012[c]
Current employment status: retired vs. working	n.s.[b]	n.s.[c]	n.s.[b]	*p*=.002[c]
Previous employment role: general employee vs. management	n.s.[b]	n.s.[c]	n.s.[b]	*p*=.024[c]
Types of employment organization before retirement	*p*=.044[d]	n.s.[c]	n.s.[d]	n.s.[c]
Had been sent to countryside during the Cultural Revolution	n.s.[b]	n.s.[c]	n.s.[b]	n.s.[c]
Retirement age: retired before vs. at/after regulated age for retirement	n.s.[b]	n.s.[c]	*p*=.022[b]	*p*=.035[c]
Being a member of the Communist Party	n.s.[b]	n.s.[c]	*p*=.002[b]	*p*=.000[c]
Length of time living in poverty	*p*=.000[a]	*p*=.000[a]	*p*=.002[a]	*p*=.000[a]

Note. n.s. = not significant
[a]Pearson correlation test
[b]T-test
[c]Chi-square test
[d]Oneway ANOVA test

In order to examine whether social exclusion variables were associated with health variables, represented as the number of chronic illnesses, self-rated general health, depression, and life satisfaction, hierarchical logistic regression was used for each of them. In the regression analysis, three types of predicting factors were entered into the regression sequentially with the demographic variables first, followed by social contextual variables in the second model. However, six social exclusion variables or multiple exclusions were added separately in the third model in order to assess the different roles of specific social exclusion variables and multiple exclusions on health variables. Table 5.8 presents results from the regression models for the six social exclusion variables and Table 5.9 presents the results for multiple exclusions. Specifically, regression models for the number of chronic illnesses and self-rated general health are presented in the first part of Table 5.8 and Table 5.9. Regression models for depression and life satisfaction are presented in the second part of Table 5.8 and Table 5.9.

Table 5.8. ***Hierarchical Logistic Regression Analyses for Social Exclusion and Health-Part 1***

	Number of chronic illnesses						Self –rated general health					
	B	Exp (B)	B	Exp (B)	B	Exp (B)	B	Exp (B)	B	Exp (B)	B	Exp (B)
Demographics												
Age	.022	1.022	.015	1.015	.006	1.006	-.010	.990	-.017	.983	-.019	.981
Gender-male[a]	-.509	.601*	-.637	.529*	-.669	.512*	.201	1.223	.059	1.060	.047	1.048
Marital status-married[b]	.013	1.013	.088	1.092	.097	1.102	.254	1.289	.120	1.128	.111	1.117
Education	.152	1.167	.075	1.078	.066	1.068	.043	1.043	-.032	.968	.055	1.057
Having a religion[c]	-.032	.969	.031	1.031	.034	1.034	.438	1.550	.335	1.397	.349	1.417
Personal annual income	-.172	.842	-.196	.822	-.213	.808	-.267	.765	-.308	.735	-.302	.740
Self-perceived financial adequacy	-.101	.904	-.055	.947	.035	1.036	.821	2.272	.887	2.427**	.907	2.477**
Living arrangement-living alone[d]	.453	1.573	.568	1.765	.619	1.856	.007	1.007	-.256	.774	-.132	.876
Social contextual												
Neighbourhood[e]												
-Jing An			-.107	.899	-.325	.722			.137	1.147	.014	1.014
-Pu Dong			.022	1.023	.078	1.081			-.300	.741	-.301	.740
Retirement age-retired at or after the regulated age for retirement[f]			.269	1.308	.369	1.446			.814	2.257*	.810	2.248**
Employment status-retired[g]			-.056	.945	-.001	.999			-.653	.521	-.627	.534
Had been sent to the countryside during the Culture Revolution[h]			.060	1.062	.041	1.042			-.212	.809	-.244	.783
Types of employment organization before retirement[i]												
-Business or enterprise			-.472	.624	-.448	.639			.715	2.043*	.695	2.005
-Never in an employment			-.471	.624	-.628	.534			.519	1.681	.591	1.805
Employment roles before retirement-General employee[j]			-.484	.616	-.491	.612			-.091	.913	-.078	.925
Being a member of the Communist Party[k]			-.008	.992	.039	1.040			-.567	.567	-.574	.563
Length of time living in poverty			.330	1.391**	.288	1.333**			-.296	.744**	-.277	.758*
Exclusions-excluded[l]												
Material resources					.244	1.276					.530	1.699
Housing conditions					.374	1.453					-.176	.839
Social relations					-.090	.914					-.145	.865
Civic activities					.337	1.400					.542	1.719
Basic services					.287	1.332					-.553	.575*
Neighbourhood					.700	2.013**					.012	1.012
Chi-square, df	18.545*,df=8		39.440**,df=18		53.593**,df=24		35.631**, df=8		60.817**, df=18		69.466**, df=24	
-2 log likelihood	549.367		535.597		514.318		437.790		412.361		403.956	
Observations				*N* = 417						*N* = 411		

Note. Reference groups: (a) female,(b) not married, (c) not living alone, (d) not having a religion, (e) Yang Pu, (f) retired before the regulated age for retirement, (g) not retired, (h) had not been sent to the countryside during the Culture Revolution, (i) government or public organization, (j) management position, (k) not a member of the Communist Party, (l) excluded from none or only one exclusion. Excluded outliers: Number of illness models: cases139 and 204; Self-rated general health models: cases 68, 115, 245, 248, 257, 333, 353, and 364.
* p<0.05, **p<0.01.

Table 5.8. ***Hierarchical Logistic Regression Analyses for Social Exclusion and Health-Part 2***

	Depressive symptoms						Life satisfaction					
	B	Exp (B)	B	Exp (B)	B	Exp (B)	B	Exp (B)	B	Exp (B)	B	Exp (B)
Demographics												
Age	.056	1.057**	.041	1.042**	.018	1.018	-.022	.979	-.019	.981	-.010	.990
Gender-male[a]	-.354	.702	-.160	.852	-.197	.821	.046	1.047	-.339	.712	-.324	.723
Marital status-married[b]	-.769	.463*	-.679*	.507*	-.979	.376*	-.800	.449*	-.987	.373*	-1.078	.340*
Education	.141	1.151	.034	1.035	-.073	.930	-.230	.795**	-.359	.699**	-.343	.710*
Having a religion[c]	.129	1.138	-.106	.900	.054	1.055	-.216	.806	-.036	.964	-.123	.885
Personal annual income	-.041	.959	-.143	.867	-.169	.845	.141	1.152	.110	1.116	.122	1.130
Self-perceived financial adequacy	-.621	.538**	-.520	.595**	-.394	.674*	1.422	4.145**	1.357	3.885**	1.392	4.021**
Living arrangement-living alone[d]	-.651	.521*	-.716	.488*	-1.199	.302*	-.998	.369*	-.966	.381*	-.960	.383*
Social contextual												
Neighbourhood[e]												
Jing An			.934	2.544**	.554	1.740			-.369	.691	-.119	.888
Pu Dong			-.327	.721	-.349	.705			.489	1.631	.432	1.540
Retirement age-retired at or after the regulated age for retirement[f]			-.293	.746	-.100	.905			.618	1.855*	.570	1.768*
Employment status-retired[g]			.231	1.260	.558	1.748			.689	1.992	.604	1.829
Had been sent to the countryside during the Culture Revolution[h]			-.456	.634	-.700	.497			.777	2.175*	.766	2.152*
Types of employment organization before retirement[i]												
-Business or enterprise			-.433	.649	-.430	.651			-.175	.840	-.307	.736
-Never in an employment			-1.459	.232*	-2.239	.107*			-1.052	.349	-1.035	.355
Employment roles before retirement-General employee[j]			-.231	.794	-.265	.767			-.389	.678	-.466	.627
Being a member of the Communist Party[k]			-.706	.494	-.720	.487*			.616	1.851*	.544	1.723
Length of time living in poverty			.386	1.470**	.242	1.274			-.288	.750*	-.244	.783*
Exclusions-excluded[l]												
Material resources					.160	1.174					.349	1.417
Housing conditions					1.121	3.067**					-.342	.710
Social relations					.709	2.033*					-.326	.722
Civic activities					.597	1.817					-.973	.378*
Basic services					1.378	3.969**					-.433	.649
Neighbourhood					1.140	3.126**					-.600	.549
Chi-square, df	45.258**,df=8		92.223**, df=18		158.870**,df=24		120.249**, df=8		157.779**, df=18		174.357**, df=24	
-2 log likelihood	487.175		440.210		373.562		446.332		408.802		392.334	
Observations			*N* = 407						*N* = 409			

Note. Reference groups: (a) female,(b) not married, (c) not living alone, (d) not having a religion, (e) Yang Pu, (f) retired before the regulated age for retirement, (g) not retired, (h) had not been sent to the countryside during the Culture Revolution, (i) government or public organization, (j) management position, (k) not a member of the Communist Party, (l) excluded from none or only one exclusion.
Excluded outliers: (a) depression models: cases 4, 31, 103, 178, 201, 220, 288269, 276, 349, 394, and 403; (b) life satisfaction models: cases 3, 4, 140, 142, 154, 267, 279, 351, 384, and 414.
* $p<0.05$, ** $p<0.01$.

Table 5.9. ***Hierarchical Logistic Regression Analyses for Multiple Exclusions and Health-Part 1***

	Number of chronic illnesses						**Self-rated general health**					
	B	Exp (B)	B	Exp (B)	B	Exp (B)	B	Exp (B)	B	Exp (B)	B	Exp (B)
Demographics												
Age	.022	1.022	.015	1.015	.009	1.009	-.010	.990	-.017	.983	-.017	.983
Gender-male[a]	-.509	.601*	-.637	.529*	-.664	.515**	.201	1.223	.059	1.060	.060	1.062
Marital status-married[b]	.013	1.013	.088	1.092	.099	1.104	.254	1.289	.120	1.128	.120	1.128
Education	.152	1.167	.075	1.078	.089	1.093	.043	1.043	-.032	.968	-.033	.968
Having a religion[c]	-.032	.969	.031	1.031	.083	1.087	.438	1.550	.335	1.397	.332	1.394
Personal annual income	-.172	.842	-.196	.822	-.194	.823	-.267	.765	-.308	.735	-.308	.735
Self-perceived financial adequacy	-.101	.904	-.055	.947	.007	1.007	.821	2.272	.887	2.427**	.885	2.424**
Living arrangement - living alone[d]	.453	1.573	.568	1.765	.587	1.799	.007	1.007	-.256	.774	-.255	.775
Social contextual												
Neighbourhood[e]												
Jing An			-.107	.899	-.349	.706			.137	1.147	.149	1.161
Pu Dong			.022	1.023	-.044	.957			-.300	.741	-.297	.743
Retirement age-retired at or after the regulated age for retirement[f]			.269	1.308	.316	1.372			.814	2.257*	.813	2.254**
Employment status - retired[g]			-.056	.945	.016	1.016			-.653	.521	-.658	.518
Had been sent to the countryside during the Culture Revolution[h]			.060	1.062	.023	1.023			-.212	.809	-.210	.811
Types of employment organization before retirement [i]												
-Business or enterprise			-.472	.624	-.470	.625			.715	2.043*	.714	2.042*
-Never in an employment			-.471	.624	-.548	.578			.519	1.681	.524	1.688
Employment roles before retirement-General employee[j]			-.484	.616	-.507	.603*			-.091	.913	-.089	.915
Being a member of the Communist Party[k]			-.008	.992	.071	1.074			-.567	.567	-.571	.565
Length of time living in poverty			.330	1.391**	.285	1.330**			-.296	.744**	-.294	.745*
Exclusions-excluded												
Multiple exclusions[l]					.281	1.324*					-.014	.986
Chi-square, df	18.545*,df=8		39.440**,df=18		46.159**,df=19		35.631**, df=8		60.817**, df=18		60.822**, df=29	
-2 log likelihood	549.367		535.597		521.752		437.790		412.604		412.593	
Observations			*N* = 417						*N* = 411			

Note. Reference groups: (a) female,(b) not married, (c) not living alone, (d) not having a religion, (e) Yang Pu, (f) retired before the regulated age for retirement, (g) not retired, (h) had not been sent to the countryside during the Culture Revolution, (i) government or public organization, (j) management position, (k) not a member of the Communist Party, (l) excluded from none or only one exclusion. Excluded outliers: (a) number of illness models: cases 139 and 204 ; (b) Self-rated general health models: cases 68, 115, 245, 248, 257, 333, 353, and 364.

* $p<0.05$, ** $p<0.01$.

Table 5.9. ***Hierarchical Logistic Regression Analyses for Multiple Exclusions and Health-Part 2***

	Depressive symptoms						**Life satisfaction**					
	B	Exp (B)	B	Exp (B)	B	Exp (B)	B	Exp (B)	B	Exp (B)	B	Exp (B)
Demographics												
Age	.056	1.057**	.041	1.042**	.024	1.024	-.022	.979	-.019	.981	-.013	.987
Gender-mal [a]	-.354	.702	-.160	.852	-.244	.784	.046	1.047	-.339	.712	-.313	.731
Marital status -married[b]	-.769	.463*	-.679	.507*	-.846	.429*	-.800	.449*	-.987	.373*	-.992	.371*
Education	.141	1.151	.034	1.035	.063	1.065	-.230	.795*	-.359	.699**	-.383	.681
Having a religion[c]	.129	1.138	-.106	.900	.085	1.089	-.216	.806	-.036	.964	-.115	.891
Personal annual income	-.041	.959	-.143	.867	-.107	.898	.141	1.152	.110	1.116	.108	1.114
Self-perceived financial adequacy	-.621	.538**	-.520	.595**	-.421	.656**	1.422	4.145**	1.357	3.885**	1.322	3.749**
Living arrangement-living alone[d]	-.651	.521	-.716	.488	-.870	.419*	-.998	.369*	-.966	.381*	-.974	.378*
Social contextual												
Neighbourhood[e]												
Jing An			.934	2.544**	.363	1.438			-.369	.691	-.109	.897
Pu Dong			-.327	.721	-.527	.590			.489	1.631	.558	1.748
Retirement age -retired at or after the regulated age for retirement [f]			-.293	.746	-.194	.824			.618	1.855*	.582	1.790*
Employment status-retire [g]			.231	1.260	.656	1.928			.689	1.992	.578	1.782
Had been sent to the countryside during the Culture Revolution[h]			-.456	.634	-.640	.527			.777	2.175*	.804	2.234*
Types of employment organization before retirement [i]												
-Business or enterprise			-.433	.649	-.438	.645			-.175	.840	-.209	812
-Never in an employment			-1.459	.232*	-1.936	.144**			-1.052	.349	-.940	.391
Employment roles before retirement - General employee [j]			-.231	.794	-.320	.727			-.389	.678	-.366	.694
Being a member of the Communist Party[k]			-.706	.494	-.603	.547			.616	1.851*	.524	1.689
Length of time living in poverty			.386	1.470**	.260	1.297*			-.288	.750*	-.235	.791
Exclusions-excluded												
Multiple exclusions[l]					.791	2.207**					-.295	.745
Chi-square, df	45.258**,df=8		92.223**df=18		131.872**,df=19		120.249**, df=8		157.779**, df=18		162.858**, df=24	
-2 log likelihood	487.175		440.210		300.560		446.332		408.802		403.723	
Observations				*N* = 407						*N* = 409		

Note. Reference groups: (a) female, (b) not married, (c) not living alone, (d) not having a religion, (e) Yang Pu, (f) retired before the regulated age for retirement, (g) not retired, (h) had not been sent to the countryside during the Culture Revolution, (i) government or public organization, (j) management position, (k) not a member of the Communist Party, (l) excluded from none or only one exclusion. Excluded outliers: (a) Depression models: cases 4, 31, 103, 178, 201, 220, 288, 269, 276, 349, 394 and 403; (b) Life satisfaction models: cases 3, 4, 140, 142, 154, 267, 279, 351, 384 and 414.

* p<0.05, **p<0.01.

5.4.1 Social exclusion and number of chronic illnesses.

In terms of the number of chronic illnesses, when only demographic variables were entered in the model, only gender was associated with the number of chronic illnesses. In Table 5.8 (Part 1), being male was found to have significantly lower odds of having more chronic illnesses than being female by 39.9%. There was no significant association between other demographic predictors and health status when only demographics were in the regression model. The relationship between gender and number of chronic illnesses did not disappear after the inclusion of social contextual predictors in the model. In addition, being male decreased the likelihood of reporting more chronic illnesses by 48.9%. Among the social contextual variables, the respondents who reported spending more time in poverty were 33% more likely to report more chronic illnesses in the model including demographics and social contextual variables.

When six social exclusion variables were added in the model, the significant associations between gender and length of time living in poverty and number of chronic illnesses were retained. According to the third model in Table 5.8 (Part 1), exclusion from neighbourhood was significantly related to number of chronic illnesses. The respondents who were identified as being excluded from neighbourhood were 2.01 times more likely to report more chronic illnesses.

When multiple exclusions were entered in the model instead of six social exclusion variables (See Table 5.9), multiple exclusions increased the likelihood of reporting more chronic illnesses by 32.4%. As shown in Table 5.9 (Part 1), being male and length of time living in

poverty were significantly increased the odds of reporting more chronic illnesses. In addition, respondents who were general employees before retirement were 37.7% less likely to report more chronic illnesses, when they were compared with those who were in a management position.

5.4.2 Social exclusion and self-rated general health.

For social exclusion dimensions and self-rated general health, none of the demographic predictors were significantly related to self-rated general health when only demographic predictors were entered into the regression model in Table 5.8 (Part 1). When social contextual variables were added in the model, a higher level of self-perceived financial adequacy increased the possibility of reporting a better self-rated general health. In addition, three social contextual variables were also found be associated with self-rated general health. Older adults who retired at or later than the regulated retirement age and worked in business or other enterprises were more likely to report better self-rated general health. Living in poverty for a longer period decreased the likelihood of reporting better self-rated general health.

When six exclusion variables were added in the model, the significant association between working in business or other enterprise and self-rated general health disappeared, while self-perceived financial adequacy, retirement age and length of time living in poverty were significantly related to self-rated general health. Respondents who reported a higher level of self-perceived financial adequacy were 2.5 times more likely to report better self-rated general health.

Respondents who reported that they retired at or later than the regulated age for retirement were 2.3 times more likely to report better self-rated general health. The regression model with in Table 5.8 (Part 1) also showed that living a longer period of time in poverty decreased the odds of reporting better self-rated general health by 25.5%. Finally, among six social exclusion variables, exclusion from basic service decreased the odds of reporting better self-rated general health by 42.5% (See Part 1 in Table 5.8).

When multiple exclusions were added into the regression model to replace six social exclusions, the results in Table 5.9 (Part 1) showed that multiple exclusions were not significantly related to reporting better self-rated general health. However, respondents who reported a higher level of self-perceived financial adequacy and were 2.42 times more likely to report better self-rated general health. Respondents who reported that they retired at or later than the regulated age for retirement were 2.25 times more likely to report better self-rated general health. However, respondents who worked in business or enterprises before retirement were 2.04 times more likely to report better self-rated general health than those who worked at a government or public organization.

5.4.3 Social exclusion and depression.

In terms of depression, the results showed that respondents who reported being older were 5.7% more likely to report depressive symptoms in the model when only demographic variables entered (See Part 2 in Table 5.8). Being male and having a higher level of self-perceived

financial adequacy reduced the likelihood of reporting depressive symptoms by 53.7% and 46.5%, respectively. After social contextual variables were enter into the model, the significant associations between age and self-perceived financial adequacy and depressive symptoms were retained, although the coefficients decreased slightly. Living in Jing An District and being a member of the Communist Party decreased the odds of reporting depressive symptoms. Being in poverty for a longer time period increased one's likelihood of reporting depressive symptoms. However, when six social exclusion variables were added into the model, the significant associations of age, residing in Jing An District and depressive symptoms disappeared. Self-perceived financial adequacy, living alone, and being a member of the Communist Party were associated with depressive symptoms when social exclusion variables were included in the model. Specifically, respondents who reported a higher level of self-perceived financial adequacy were 32.6% less likely to report depressive symptoms in model 3. Living alone decreased the odds of reporting depressive symptoms by 69.2%. Being a member of the Communist Party also reduced the odds of reporting depressive symptoms by 51.3% (See Part 2 in Table 5.8).

As shown in Table 5.8 (Part 2), when all demographics and social contextual variables were controlled, four exclusion variables were found to be significantly related to depressive symptoms. These were exclusion from housing conditions, exclusion from social relations, exclusion from basic services, and exclusion from neighbourhood. When compared with those

who were not excluded, those who were excluded from housing were 3.1 times more likely to report depressive symptoms, and those who were excluded from social relations were 2.03 times more likely to report depressive symptoms. Those who were excluded from basic services were 3.97 times more likely to report depressive symptoms, and those who were excluded from neighbourhood were 3.17 times more likely to report depressive symptoms.

When multiple exclusions was added in the regression model to replace six social exclusions, all significant demographic and social contextual variables identified in Table 5.8 (Part 2) were retained (i.e.,self-perceived financial adequacy, living alone, and being a member of the Communist Party). The association between marriage status and depressive symptoms became significant. When compared with those who were single, those who reported being in a marriage were 57.1% less likely to report depressive symptoms. When all demographics and social contextual variables were controlled, as shown in Table 5.9 (Part 2), the respondents who were experiencing multiple exclusions were 2.2 times more likely to report depressive symptoms.

5.4.4 Social exclusion and life satisfaction.

As shown in Table 5.8 (Part 2), marital status, education, self-perceived financial adequacy, and living arrangement were significantly associated with life satisfaction in the model when demographic variables were entered or when social contextual variables were added in the model.

When six social exclusion dimensions were added into the regression model, the respondents who were married were 66% less likely to report favourable life satisfaction. Having

one higher level of education decreased one's likelihood of reporting favourable life satisfaction by 29%. Respondents who reported a higher level of self-perceived financial adequacy were 4.02 times more likely to report favourable life satisfaction. When compared with the respondents who had not been sent to the countryside during the Cultural Revolution, those who had been sent to the countryside during the Cultural Revolution were 2.15 more likely to report favourable life satisfaction. Being in poverty for a longer time period also decreased one's likelihood of favourable of life satisfaction by 31.7%. When all demographics and social contextual predictors were controlled, exclusion from civic activities decreased the odds of reporting favourable life satisfaction (See Part 2 in Table 5.9).

When the variable representing multiple exclusions was added into the final regression model instead of six social exclusion dimensions, being a member of the Communist Party and length of time living in poverty were not significantly related to life satisfaction, which have been identified when six social exclusions were in the regression model (See Part 2 in Table 5.9). The significant associations between all other significant predictors and life satisfaction were consistent in Table 5.8 (Part 2) and Table 5.10 (Part 2). Multiple exclusions would reduce the odds of reporting favourable life satisfaction by 25.5%.

5.4.5 Hypotheses testing.

As mentioned at the beginning of this section, there were four hypotheses related to the relationship between social exclusion and health variables. This section summarizes the results of the hypotheses testing.

Hypothesis 1: A higher level of social exclusion is related to more chronic illnesses.

The findings from the regression models for the number of chronic illnesses were used to answer this hypothesis. This hypothesis was not supported by the findings because only exclusion from neighbourhood was significantly associated with the number of chronic illnesses. Most of social exclusion variables did not have a significant association with the number of chronic illness.

Hypothesis 2: A higher level of social exclusion is related to better self-rated health

The findings from the regression models for self-rated general health indicated that exclusion from basic services was the only significant social exclusion variable. Thus, the findings did not fully support the hypothesis.

Hypothesis 3: A higher level of social exclusion is related to more depressive symptoms.

The findings showed that several social exclusion variables were significantly related to depressive symptoms. Specifically, exclusion from housing conditions, social relations, basic services and neighbourhood increased the probability of respondents reporting more depressive symptoms. The hypothesis that a higher level of social exclusion is related to depressive symptoms was supported.

Hypothesis 4: A higher level of social exclusion is related to unfavourable life satisfaction.

In the case of life satisfaction, the findings showed that most social exclusion variables did not have significant association with unfavourable life satisfaction, which did not support the hypothesis very well. Only exclusion from civic activities significantly increased the likelihood of reporting unfavourable life satisfaction.

Hypothesis 5: Having multiple types of social exclusion is related to a more negative impact on health status than having social exclusion in only one or none of the dimensions.

As indicated in Table 5.9, although having multiple types of social exclusion was not related to self-rated general health in the participants in this study, multiple exclusions were significantly associated with other three health variables, including the number of chronic illnesses, depressive symptoms and life satisfaction. Therefore, this hypothesis was partially supported.

5.5 Summary

In summary, this study indicated that the proportion of older adults reporting exclusion in the six domains ranged from 12% to 45%. The results revealed that over one in three of the respondents reported experiencing multiple exclusions. For the predictors of social exclusion, the results showed that being older, having a lower level of education, lower level of self-perceived financial adequacy, living in the Jing An District, not being a member of the Communist Party, and living in poverty for a longer period of time were the most important variables that were significantly associated with one or more dimensions of social exclusion. For the relationship between social exclusion and health variables, the results varied according to the dimension of social exclusion and types of the health variables. Nonetheless, there is a potential relationship between social exclusion and health status, particularly, between multiple exclusions and health in older Chinese based on the findings in this study.

Chapter Six: Discussion

6.1 Introduction

Examining social exclusion and its potential association with health status of older Chinese is critically important for China. Since 2005 the headline targets of China's policy is to create a 'harmonious society' by 2020 (National Council, 2005). In order to achieve this goal, social injustices relating to social exclusion issues have been emphasized in recent discourse in China, noting that combating social exclusion will increase "social inclusion" and "social cohesion" and finally achieve a society with "social harmony" (Ding, 2009; Tang, 2002,). Yet, relatively little is known about social exclusion issues experienced by the aging population and its potential impact on older adults and on society as a whole. Simultaneously, aging is recognised as a substantial long-term challenge in China, which may impact China's health system and impede its economic and social sustainability (Peng & Hu, 2011; Xiong, 2002). While the impact of social exclusion on older adults has been noticed (Scharf et al., 2003, 2005a, b, c), a meaningful consideration of what this impact means for older adults in China has been absent. The majority of current health studies on the Chinese aging population have focused more on individual demographic factors while the significance of social exclusion and multiple exclusions to health have not been well documented in the Chinese context. As noted previously, social exclusion among older Chinese adults has not been addressed, specifically the relationship between social exclusion and health of older Chinese adults. Thus, this study aimed to address the above noted knowledge gaps, through examining the characteristics of social exclusion, the correlates of social exclusion and the relationship between social exclusion and health status among older Chinese adults.

The main results of this study showed that a substantial number of the respondents experienced social exclusion and both demographic characteristics and social contextual characteristics contributed to their experience of social exclusion. Being older, retired earlier than the regulated age for retirement, not a member of the Communist Party and being in poverty for a longer period of time increased the likelihood of experiencing multiple exclusions. Regarding the relationship between social exclusion and health status, the results showed that the relationship between social exclusion and health status was varied by type of social exclusion and health variables. Social exclusion was more likely to be associated with mental health variables than physical health variables. Multiple exclusions were significantly related to more chronic illnesses, depression and unfavourable life satisfaction.

In this chapter, the main findings of this study are discussed in reference to possible explanations for the findings and their convergence or divergence with previous literature. This is followed by a discussion of the limitations of this study. The implications of the findings for social work policy and practice, and suggestions for future directions for social exclusion and aging research is also be provided.

6.2 Discussion on the Findings

6.2.1 Correlates of social exclusion.

This study has shown that the proportion of older adults reporting exclusion in the six domains ranged from 12% to 45% (See Table 5.3). Other than multiple exclusions, which were reported by 39.1% of the respondents, the most deprived areas were related to basic services (45%) and material resources (30.8%). Previous research on social exclusion and aging

population has identified that the proportion of older adults experiencing two or more forms of social exclusion ranges from 10% to 50% (Barnes et al., 2006; Becker & Borehan, 2009; Jehoel-Gijsbers & Vrooman, 2008; Miranti & Yu, 2011; Scharf et al., 2003). In this study, 39.1% of the respondents were excluded in two or more dimensions of social exclusion, a result that is consistent with previous studies examining social exclusion of older adults in other socio-cultural contexts.

According to previous studies, the correlates of social exclusion among older adults were found to be old age (Barnes et al., 2006; Becker & Boreham, 2009; Demakakos, 2008; Scharf et al., 2005a, 2005b), low income or poverty (Becker & Boreham, 2009; Hoff, 2008; Miranti & Yu, 2011), long term poverty (Barnes et al., 2006; Jehoel-Gijsbers & Vrooman, 2008), not in a marriage (Scharf et al., 2005a; Demakakos,2008), living alone (Barnes et al., 2006; Becker & Boreham, 2009; Jehoel-Gijsbers & Vrooman, 2008; Scharf et al., 2004), being female (Barnes et al., 2006; Bono et al., 2007; Demakakos, 2008; Patsios, 2006), having a lower level of education (Ogg, 2005; Miranti & Yu, 2011), and being non-white (Barnes et al., 2006). Although this current study did not examine all of the above correlates, most of the significant correlates identified in this study were consistent with the findings previously reported while some findings are contrary to previous studies.

This study demonstrated the critical role of financial resources in social exclusion as illustrated by the significant effects of personal annual income and financial adequacy on social

exclusion related to material resources, housing conditions, basic services and neighbourhood. While the personal annual income variable was significantly associated only with social exclusion from neighbourhood, the findings have further illustrated the importance of subjective perception in influencing social exclusion in older life.

Contrary to previous research findings on the significant relationship between living alone and social exclusion in social relations, this study did not show the same result. In recent years, older adults who live alone have become a priority for social policy and local officials in Shanghai, and a great deal of work has been done to increase these older adults' community engagement and thus reduce their feeling of isolation (Tong et al., 2011). These efforts could have contributed to the non-significance of living alone in this study. As indicated by the bivariate analysis in Table 5.4, those who are living alone were not significantly different than those who were not living alone in material resources, housing conditions, social relations, neighbourhood and multiple exclusions. Therefore, living alone should not be taken as an automatic indicator of isolation or exclusion from social relations as older adults who live alone may still be able to sustain good social networks in their local communities.

Contrary to previous studies (Barnes et al., 2006; Bono et al., 2007; Demakakos, 2008; Patsios, 2006), gender effect was reported only in exclusion related to social relations and basic services. Men were more likely to report exclusion in social relations while women were more likely to report exclusion in basic services. Similar to other studies, more older Chinese women

than men in this study reported a lower level of education, not being in a marriage, living alone and living in long term poverty. All these factors were associated with deprivation in finances that affected the affordability of many basic services at home and beyond home. On the other hand, when compared with the older women, older men are more often less sociable and more likely to keep things to themselves (Liu, 2007; Zhang, 2010), thus resulting in a higher probability of being deprived in social relations.

Being older increased the likelihood of being in exclusion from martial resources, social relations, basic services and neighbourhood. These findings probably support the modernisation and ageing theory's description about the declining status and support of older people in modern societies (Aboterin, 2004; Cowgill, 1974; Cowgill & Holmes, 1972). The thrust of modernisation theory's explanation is that the decline in old age family support is the result of the decline of older people's status and roles as a consequence of the breakdown of the 'traditional' extended family and the emergence of the 'isolated nuclear' family, both of which are associated with urbanisation and industrialisation. In current China, although older Chinese is on the priority in social policies (State Council of the People's Republic of China, 2011; Sung, 1998), it become harder for older adults to receive traditional family support from young generation, particularly when they have only one child. It may as a result of the changes in traditional family values such as filial piety because some research have found that traditional values of caring for the older family members are no longer adhered to in China (Cheung & Kwan, 2009).

Although having a higher level of education reduced the likelihood of being excluded from material resources, in the current study a higher level of education was positively associated with a higher probability of one being excluded from basic services and neighbourhood. A probable reason is that older Chinese with higher levels of education are more sensitive about their needs and are more conscious about the neighbourhood environment.

This study has illustrated the significant role of some unique contextual factors in social exclusion in China. For example, when compared with those who reported being a member of the Communist Party, those who were not a member reported a higher probability of being excluded from social relations and in multiple exclusions. In China, members of the Communist Party often enjoy advantages and benefits in social and financial aspects. Chen (1997) indicated that Communist Party membership would have a significant positive effect on most of the income components, with the strongest effect being on housing subsidies and wages, which will decrease their possibility of experiencing social exclusion later in life.

This study also reported that the respondents who were retired before the regulated age for retirement were more likely to experience multiple exclusions. The reasons for their early retirement could be related to being laid off, health issues, and employment positions abolished in order to create opportunities for the younger people (Giles, Wang, & Cai, 2011). Therefore, many of those who left their employment before the regulated retirement age were likely to do so involuntarily, which may put them at risk of social exclusion. Another historical factor that

should be considered is the large number of people laid off from state-owned enterprises in the 1990s caused by government led ownership restructuring of state-owned businesses as a crucial measure in China's economic reform (Zhang, Lum, & Xu, 2011). For example, over 30 million workers were laid off during the period from 1998 to 2005 (OECD, 2005). For these people, early retirement did not only mean earning less, but more importantly, it meant the loss of social status and integration with society (Chan, Ngok, & Phillips, 2008). It is understandable that older adults who were forced to retire early would experience multiple forms of exclusion in their later life, as they did not have the gainful employment tenure to accumulate enough wealth for their old age. Another possible reason is that older people with poor health status may have retired earlier, increasing the possibility of them being excluded in many forms of social exclusion domains.

Previous findings have indicated the effects of some macro-structural factors such as the characteristics of neighbourhood on social exclusion (Demakakos, 2008). In the current study, as a general pattern, older Chinese living in the Jing An District were more likely to be in exclusion from various social exclusion dimensions. The demographic differences between the respondents in these three districts presented in Table 5.1 could provide the rationales for such a neighbourhood effect. For example, the respondents living in Jing An were older than those residing in the other two districts, and those living in Pu Dong seemed to have a lower level of annual income than those in the other two districts. In terms of neighbourhood context, the West

Nan Jing Road street community in Jing An District is densely populated with a higher percentage of oldest-old residents. The accommodations and neighbourhood were built during the 1950s or even earlier. The Jing Yang street community in the Pu Dong District was developed in early 1990s and the Wu Jiao Chang street community in the Yang Pu District is also quite newly developed. The accommodation conditions and neighbourhood environment are better in the latter two districts in terms of space and housing quality.

6.2.2 The relationship between social exclusion and health status.

The noteworthy findings of the present study are that there were potential linkages between social exclusion and health status of older adults while there are different linkages between different social exclusion factors and various health indicators of older Chinese adults.

For the relationship between individual social exclusion dimensions and the number of chronic illness, and self-rated health, the hypothesized relationships between them were not fully supported. Among the six dimensions of social exclusion, only exclusion from neighbourhood was significantly related to the number of chronic illnesses and exclusion from basic services was significantly associated with self-rated general health, when demographic and social contextual variables were controlled. The significance of exclusion from neighbourhood with the number of chronic illnesses is consistent with past findings that disadvantages of neighbourhood was related to poor health status of older adults (Aneshensel et al., 2007; Balfour & Kaplan, 2002; Day, 2007; Deeg & Thomese, 2005; Freedam et al., 2008; Kubzansky et al., 2005; Patel et

al., 2003; Subramanian et al., 2006; Wen, 2004; Wen & Christakis, 2005). The significant association between exclusion from basic services and poor self-rated general health reflects that older adults with poorer self-rated general health may report more unmet basic services than those with better physical health status. Several studies have linked poor physical health status with one specific dimension of social exclusion such as material poverty (Buckley et al., 2003; Deaton, 2008; Gadalla, 2009), poor housing conditions(Guo, Zhang, &Sherraden, 2009; Iwarsson et al., Oswald, 2007), less social contacts and limited social networks (Lyyra & Heikkinen, 2006; White et al., 2009), orpoor civic participation (Baker et al., 2005; Hinterlong, Morrow-Howell, & Rozario, 2007; Rozario, Morrow-Howell, & Hinterlong, 2004). However, these significant associations were not found in this study. These findings may imply that the relationship between physical health of older Chinese and social exclusion is complex in the Chinese cultural context. Different dimensions of social exclusion may contribute to physical health status in a different way and these relationships may be moderated by factors such as age, education, and income. However, the researcher could not test these due to the complexity of analysis and the many possibilities of interactions between the social exclusion variables and demographic variables as well. Future research is needed to explore these variables.

Regarding to the hypothesis that social exclusion is related to more depressive symptoms, the findings showed that exclusion from housing conditions, social relations, basic services, and neighbourhood increased the probability of reporting depressive symptoms. These results lend

support to previous findings that the experience and stress associated with dealing with social exclusion probably produces psychological effects and negatively impacts mental health status (Kawachi & Kennedy, 2002; Payne, 2006; Wilkinson, 1996; Wilson et al., 2007). However, the hypothesis that social exclusion is related to unfavourable life satisfaction was not supported in this study. Only exclusion from civic activities had a significant negative association with favourable life satisfaction. This is contrary to our previous expectation that social exclusion would decrease life satisfaction among older adults. It is interesting to note that participation in civic activities was related to favourable life satisfaction. This finding supports previous research about the significance of civic participation for older adults (Baker et al, 2005; Hinterlong, Morrow-Howell, & Rozario, 2007). This finding also highlights the importance of an active and socially meaningful life for older Chinese adults as indicated by other researchers (Tan, Ward, & Ziaian, 2010). Participation in civic activities could provide older Chinese adults with purpose, meaning, and identity in later life (Mjelde-Mossey et al., 2009), which may influence their perception of life satisfaction in this case.

This study also examined whether experiencing multiple exclusions would increase the possibility of poor health status. The findings of this study generally supported the hypothesized relationship between multiple exclusions and health. The finding that experiencing multiple exclusions increased the chance of reporting more chronic illnesses is consistent with the findings of a previous study that indicated older adults who are more multiply excluded tend to have more chronic illnesses (Demakakos, 2008). However, the reported significant association

between multiple exclusions and poorer self-rated general health (Demakakos, 2008) was not found in the present study. Why is the relationship between multiple exclusions and self-rated general health not significant in this study? Examination of the frequencies of self-rated general health showed that over 70% of the respondents reported their health was poor or fair, while close to 30% the respondents indicated they do not have a chronic illness, and the same percentage of the respondents indicated they only had one chronic illness. This suggests that more physical health variables may be required in future research to establish the relationship between multiple exclusions and physical health of older adults.

Another noteworthy finding of this study is that older adults experiencing multiple exclusions were more likely to report depressive symptoms and unfavourable life satisfaction than those who were not identified as experiencing multiple exclusions or experience exclusion in only one form of exclusion. These findings provide support for the statement that multiple exclusions probably would lead to poor mental health (Scharf et al., 2005b), or depressive symptoms in the case of aging Chinese in this study

In addition to social exclusion variables, several demographic and social contextual factors also contributed to poor health status among Chinese older adults. The impacts of some factors are consistent with what was documented in previous studies, while others are in contrary to previous findings.

First, the results showed that being male were negatively associated with the number of chronic illnesses. Being male decreased the odds ratio of reporting more chronic illnesses by 48.8%. This finding confirms previous studies that older men have better physical functional

health and mental health than older women (Chan et al., 2009; Gu et al., 2009; Guo & Qiao, 2006; He & Wu, 2009; Kaneda, et al., 2009; Liu & Zhang, 2004; Tian & Zhen, 2004; Zeng, 2010). Older Chinese women's disadvantages in number of chronic illnesses could be largely due to their lifetime of socio-economicdisadvantage. Chinese women's social status is historically lower than that of men, especially for the older generation who spent their childhood and adulthood in a patriarchal society (Zhang, 2006). Previous literature is inconsistent with findings about the relationship between gender and self-rated general health, depression and life satisfaction. Significant gender disparities were not found in self-rated general health, depression and life satisfaction in this study.

Second, the results of this study showed that respondents who lived alone were more likely to have favourable life satisfaction and less depressive symptoms than those who lived with others. These findings are contrary to the findings that were reported by most of the previous Chinese studies on health status and living alone. Numerous studies indicated that living alone bring older Chinese adults lower life satisfaction (Chou & Chi, 2000), more depressive symptoms (Chou, Chi, & Kem, 1999; Chou & Chi, 2000; Mui, 1998), and a lower level of quality of life (Chou & Chi, 2000). However, some studies also reported the same results with this study and argued that living with others could encourage dependence and speed up age-related loss of physical ability among the older adults (Li, Zhang, &Liang, 2009).One another possible explanation for the beneficial effect of living alone on health status could be due to the

problems in a cross-sectional dataset. In this case, the relationship between living arrangements and health could be the other way around, that is, it could be that those who are healthy choose to live alone and those who are living with others do so because they have to and not necessarily because they want to (Li & Zhang, 2011). Some research also indicated that living with others may lead to more conflicts between older adults and other people (Lou, 2010).

Third, numerous empirical studies have revealed that in general those with higher socioeconomic status (SES) experience better health than those from lower levels (Mirowsky, Ross, & Reynolds 2000; Robert & House 2000; Schnittker & McLeod, 2005). Moreover, there has been substantial literature on SES gradients in health, arguing that every increase on the socioeconomic ladder is associated with an improvement in health (Bartley, 2004; Culter et al., 2006; House et al., 1988; House, 2002; Williams & Collins, 1995). In this study, although I expected that the higher SES group (those with a high level of personal annual income, a higher level of education, in management positions and working in government or public organizations) would be more likely to report better health than their counterparts, this was not the. Only a higher level of self-perceived financial adequacy was significantly related to better self-rated general health, less depressive symptoms and favourable life satisfaction. Other SES factors were not related with poorer health status of older Chinese. Why is the seemingly universal relationship between higher SES and better health not fully supported in this study? A life course perspective is needed to understand how past experiences shape present conditions. In general, a

life course approach links large-scale social changes to the individual life course and addresses the influence of social events, social context, social network, and previous life history on individual life-course transitions and trajectories (Elder, 1974; Elder, 1985). It is suggested that large-scale social changes inevitably shape and alter individuals' life course, producing lasting effects on their perceptions and behaviours (Alwin, Cohen, & Newcomb, 1991; Elder & Clipp, 1988), and those significant impacts remain in one's later life (Elder, 1985). Using the life course perspective, scholars examine the historical events (e.g. depression, war, social movement) and life outcomes, and many empirical studies offer support to this thesis. They have found that historical events can produce both negative effects on subsequent life experiences (Elder, 1995; George, 1993; Hogan, 1981; Pavalko & Elder, 1990) as well as positive life outcomes (Elder & Hareven, 1993; Xie, 1992). It is reasonable to see that the older adults who retired at or later than the regulated age for retirement were more likely to report a favourable self-rated general health and life satisfaction. There is also no doubt that living in poverty for a longer period of time was significantly related to more chronic illnesses, less favourable self-rated general health, and more depression.

It is worth noting that a high level of education decreased the likelihood of reporting favourable life satisfaction in this study. The relative preference theory (Easterlin, 1974) may provide an explanation for this inconsistency. The relative preference theory (Easterlin, 1974) argues that the impact of wealth on individual well-being depends on changeable standards such

as adaptation, expectations, and social comparisons. In other words, the impact of wealth on individual well-being is relative to the individual's own previous wealth level or relative to other people. In this case, for those with a higher level of education, they were usually in higher social positions and had higher levels of income and more resources before retirement, and thus have a higher expectation on their later life. Hence, it may be harder for them to adapt to retired life and therefore they reported less favourable life satisfaction.

Taken together, although only a few studies have noted the significant relationship between social exclusion and health status of older adults, the findings of this study are consistent with the findings of past research suggesting that social exclusion would affect health status, particularly poor mental health (Berkman & Melchior, 2006; Bryne, 2005; Galazuzi, 2004; Guildford, 2000; Johner, 2009; Raphael, 2007; Reid, 2004; Stewart et al., 2008). Although when considered on individual basis, not all the social exclusion domains were significantly related to the health variables, more importantly the effect of multiple exclusions on older Chinese adults' health was quite adequately revealed. These findings fit with the theoretical model (Figure 3.2) suggested for this study.

6.3 Limitations of the Study

While this study adds to our understanding of social exclusion and health status of older Chinese in urban China, several study limitations must be noted.

The first limitation of this study is the conceptualization of social exclusion. There has not been consensus on how social exclusion should be conceptualized and the validity of the measurements of social exclusion for older adults has not been fully tested in previous studies. While consideration was given to the Chinese cultural context in measuring social exclusion in this study, the validity of the constructs measured should be subjected to further examination.

The second limitation concerns health indicators used in this study. Limited by the length of the questionnaire, physical health of older adults was measured only by self-reported number of chronic illnesses and self-rated general health. Specific physical health indicators such as difficulties in personal care and daily living tasks, functional limitations, and memory impairment were excluded in this study. In addition, all the health variables were dichotomized for logistic regression. While this is easy in terms of interpretation of results, there may be loss of information from the variables since the 5-point response category(e.g., self-rated general health and life satisfaction) or continuous variables (e. g., number of illnesses and depression) provides more differentiated information than the dichotomous variable.

The third limitation is related to the nature of cross-sectional data. First, this is a cross-sectional study so causality should not be implied. While the correlates of social exclusion and the relationship between social exclusion and health status were examined based on previous research and literature, the findings obtained from cross-sectional study are unable to establish a causal relationship between the significant correlates and various dimensions of social exclusion,

between social exclusion and health status. Thus, this study cannot address the knowledge gap on whether social exclusion is the cause of poor health status or outcome of poor health status. Secondly, due to the nature of cross-sectional study, the present study did not examine the dynamic interactions between different dimensions and different levels of social exclusion over time and how they may contribute to multiple causes of social exclusion and bring on an accumulated effect on the excluded (Grant et al., 2004). Finally, the existing literature on social exclusion among older adults, though relatively limited, suggests that disadvantage among the elderly is cumulative in nature. Some aspects of disadvantages starting in early life stages have long-term consequences (Scharf et al., 2001, 2003). In the current study, other than asking the respondents to report the amount of time spent in poverty, the longitudinal factors, particularly those from early life, were not examined. Thus, we cannot understand whether an older adult who experienced social exclusion in early life is more likely to report poorer health status.

Fourth, literature has indicated that social exclusion in later life may originate from broader social, economic and political contextual factors (Ogg, 2005; Simms, 2004). However, we did not examine whether broader social, economic and political factors such as dramatic social transitions, welfare regime reform, and social policies could affect the various types of social exclusion reported by the older Chinese in this study.

Finally, the sampling procedure and the method of recruitment used in this study is another limitation. First, the three districts of Jing An, Pu Dong and Yang Pu were purposively selected, instead of randomly selected. Second, the three street level communities for data collection were not randomly selected from the three districts. As a result, the sample included in this study was

not a random sample and was based on only a few local communities in Shanghai that were purposely selected. Therefore, the findings may not be generalizable to the larger older adult population in China. In addition, the respondents were selected and recruited through the local neighbourhood offices. Although the researcher provided the random numbers and assistance to select the sample during recruitment, there is the possibility that eligible participants were excluded from the study due to governance reasons.

6.4 Implications

6.4.1 Implications for policy and social work intervention.

Despite the limitations mentioned above, this study is one of the few to examine social exclusion and specifically social exclusion and health status of older adults in China using the social determinants of health perspective. The findings of this study may offer policy makers and social workers some insights to develop policy and services for the older Chinese in urban China to address social exclusion.

As indicated by the findings, the percentage of the respondents from the six dimensions of social exclusion ranged from 12.5% to 45%. Around 40% of the respondents were excluded from two or more social exclusion dimensions. These results imply that a significant number of older adults in Shanghai are experiencing social exclusion. Therefore, policy makers and social workers should be aware that social and economic growth does not necessarily bring about better life and equal opportunities for older adults. A number of older adults in China cannot enjoy their later life due to exclusion from material resources, housing conditions, social relations, civic activities, basic services and neighbourhood. Hence, policy makers and social workers need to better understand the types of social exclusion experienced by older adults in China, and how

multiple exclusions impact older adults before developing social policy or services for this age group.

First of all, due to social exclusion in older adults is related to demographic and social contextual factors, policies and social work interventions should address social exclusion in older adults requires a holistic and collaborative approach bringing main public services and resources together through partnerships to focus on key forces of exclusion (Pierson, 2002). Due to the findings that exclusion related to different and/or multiple domains are significantly related to health, using a collaborative approach is particularly important for social workers in China, particularly when social work in China is still in its early stage of development that allows for much room for growth in practice and training (Ku, 2013; Tsang, Sin, Jia, Yan, 2008; Wang, 2013). As an academic discipline and practice profession, social work was not fully recognized and accepted by the Chinese government in the past. With the increase of social problems, the Chinese government has begun to recognize the important role of social work practice in addressing challenges and issues faced by individuals and communities. With the support of the Chinese government, social work education and practice have developed significantly since 2000 and entered a new era of development after 2005 (Ku, 2013; Yep, 2007). It is recognized by the Chinese government that China needs a grand team of social workers with the goals to reach the targeted two million professional social workers by 2015 and three million by 2020 (Ku, 2013, Wang, 2013). Hence, during this great opportunity of growth and recognition of the occupation status of social workers, social workers could seek a holistic and collaborative approach to combat the issues related to social exclusion, balancing the expectations among the government, service agencies, and social work profession. As indicated in this study, social exclusion is related to both individual demographics and social contextual factors. It is important to develop

individual-level direct interventions and community-level interventions at the same time so as to attend to the needs of the individuals, communities, and government.

Secondly, the findings of this study suggest that social exclusion has potential effects on older Chinese's health status. Therefore, addressing health needs requires the attention to social exclusion issues. Based upon the findings regarding correlates of social exclusion, social policies and programs should be prioritized for those who are older in age, with a lower level of education, financially inadequate, living in the Jing An District, not a member of the Communist Party and have been in poverty for a longer period. Addressing the significant correlates of social exclusion will directly reduce the possibility of older adults being excluded and indirectly enhance their health status.

The significance of various predictors related to finances and poverty has indicated the need for policy makers and social workers to address the financial challenges of older Chinese (Qiao et al., 2005; Yu, 2003). Due to the hidden social class issues embedded in political party membership and contextual neighbourhood characteristics, remedial measures are needed to address the financial and material aspects of the disadvantaged, particularly the ones who reside in older neighbourhoods and those who do not have the social status and privileges to acquire and accumulate the resources for their old age. In addition, social workers could suggest or work with the government to develop appropriate social policies to reduce long term poverty. Meanwhile, social workers could develop community level programs to educate those in middle age about how to prepare for financial security after retirement.

Support programs to strengthen the social networks and social relations of older adults who reported exclusion from social relations and basic services are also essential, particularly for

those who are older in age. From a community development perspective, neighbourhood development work may be useful to facilitate more people in the community to pay attention to the social needs of the older adults who are excluded. Thus, increasing social and civic participation would further reduce the likelihood of neighbourhood exclusion (Chanan, 2000). One strategy is to strengthen the use of volunteers to facilitate the enlargement of the older adults' social networks, therefore reducing their exclusion in social relations. Social workers should encourage and train older adults how to provide volunteer assistance to other aging adults in need in their communities. Support groups of older adults should be developed to build the social networks among the older Chinese within the same community. In addition, social workers should design specific programs for those who are in oldest cohort with poor health status and to provide assistance to facilitate them to attend these programs.

In addition, the development of age-friendly facilities and programs are needed as they are crucial in facilitating older adults to get out of their home to take part in social and community events. At the same time, public facilities must be made age-friendly, and unfavourable housing conditions and neighbourhood environments should be improved. While relocation of older adults from their life-long accommodations to other new communities could be detrimental to the well being of these long term residents, local revitalization projects should ensure that the excluded older adults are fully engaged in providing input so that their need to remain living independently in their familiar neighbourhoods could be better met, and that they would not lose

their homes for the sake of new property development for solely business or profit making purposes.

Moreover, the results of this study have demonstrated that multiple exclusions increased the possibility of depression and reduced the life satisfaction of older Chinese adults. This highlights the potential need for developing a more comprehensive social policy and services for the older adults in multiple exclusions. For these older adults, it is not enough to focus on one or two dimensions of social exclusion, only. In addition, an empowerment approach may be useful to working with these groups. Empowerment is defined as the "process of increasing personal, interpersonal, or political power so that individuals, families, and communities can take action to improve their situations" (Gutierrez, 1994, p. 202). Through empowerment by social workers through different types of interventions, the older adults can find their own strength and resources to combat the challenges from multiple exclusions and then increase their respect and well-being.

In addition to reducing various forms of social exclusion, policy and programs that can enhance the health status of older adults are also essential for older adults because of the potentially reciprocal relationship between social exclusion and health status. For those with a higher number of chronic illness and poor self-rated general health, it is important to identify and reduce access barriers for their participation in society by developing more supporting services at the community level. In addition, it is also important to improve home care support services, so that they can be better cared for in their own community when they need support. In the current system, only older Chinese who live alone and have low income are eligible for the subsidized

home care support services, leaving many older adults unattended. Developing home support services for older adults with poor health status regardless of living arrangement or income may in turn reduce risks of being excluded from social relations, basic services and neighbourhood. In addition, mental health promotion and education programs may be required to help older adults become aware of their mood, as well as strategies to address depression. In this respect, social workers in the community may provide counselling service or referral services for those with depressive symptoms.

Finally, the use of the social exclusion framework and the resulting findings of this study have contributed to improve the social determinants of health framework by further delineating the role of social exclusion in understanding health of older adults, particularly for older Chinese. Although social determinants of health have been suggested to examine older adults' health, the directions and roles of specific social factors are largely unclear. Most research studies on health of older adults still focused on individual factors or simply regarded social determinants as social-economic factors, overlooking the broader social living conditions that older adults are living in such as opportunities of participation, housing conditions, usage of services, characteristics of community, and so on. Although this study did not cover all possible social exclusion factors as social determinants of health for older adults, it identified the potential linkage between social determinants represented by the six domains of social exclusion and older Chinese's health. Particularly, the role of multiple social exclusions was never discussed in

social determinants of health framework. Hence, this study has implications to bring further refinement for the social determinants of health framework in addressing health of older adults.

6.4.2 Implications for future research.

This study highlights the importance of paying attention to social exclusion in older Chinese and the relationship with health status in older Chinese adults. However, as we have mentioned, there are several limitations in the methodology due to the limited knowledge of social exclusion in older adults, which limits the generalization of the results. The following suggestions for future research on social exclusion and older Chinese are presented to address some of the limitations.

The quantitative survey used in this study demonstrated the prevalence of social exclusion in different dimensions and multiple exclusions. However, as a concept originating in a Western context, the validity of the concept used in a Chinese context is lacking. Moreover, although scholars are in an agreement that the concept of social exclusion is a social context embedded concept, cultural relevance of the concept has not been emphasized in the current conceptualization of social exclusion related to older adults due to the limited knowledge on social exclusion in older adults. Therefore, future research may require a qualitative study to validate the concept of social exclusion in a Chinese social and cultural context and then generate a culturally relevant understanding of social exclusion. For instance, this study identified that a number of older adults were experiencing multiple exclusions and more multiple exclusions were

related to more depression and unfavourable life satisfaction. A further qualitative study could focus on those who have been identified as multiply excluded to explore how they define social exclusion, whether they perceive themselves as socially excluded, and their thoughts on ways to address social exclusion.

Furthermore, exclusion is not the result of a single set of processes that affect all groups equally wherever they may live. There may be considerable and significant variations in the causes of exclusion depending on who you are and where you live. In order to be effective and efficient, policies need to be tailored to address local needs (Levitas et al., 2007). Due to the cross-sectional nature of the study, the present study cannot explain the dynamic mechanism between different dimensions of social exclusion and between social exclusion and health status. In addition, due to the limitations in the original question, broader structural factors were not examined in this study. Qualitative research, in particular, using a life course perspective, may be helpful in understanding the origins of social exclusion in later life and how social exclusion affects older adults' health status and well-being. Longitudinal data may also be useful to demonstrate possible mechanisms through which social exclusion affects older adults.

6.5 Summary of the Study

By adopting the social determinants and health perspective and a social exclusion framework, this study examined the characteristics of social exclusion, the correlated factors shaping social exclusion characteristics, and the association of social exclusion and health status of the older Chinese in Shanghai. Chinese citizens aged 60 years and older were identified through a multistage sampling procedure from three communities in Shanghai and completed a structured questionnaire administered through face-to-face interviews. Social exclusion was

represented by variables related to material resources, housing conditions, social relations, civic participation, basic services, and neighbourhood. Health status was measured by number of chronic illnesses, self-rated general health, depression, and life satisfaction. Number of chronic illnesses and self-rated general health were used to reflect physical health status of older Chinese adults. The latter two health variables were used to reflect mental health status of older adults. Hierarchical logistic regression analyses were used to study the correlates of social exclusion in six social exclusion domains and the correlates of multiple exclusions (i.e., the respondents reporting two or more forms of social exclusion). Hierarchical logistic regression analyses were also used to study the six domains of social exclusion, multiple exclusions, and health status.

The main results of this study showed that a substantial number of the respondents experienced social exclusion. Both demographic characteristics and social contextual characteristics contributed to their experience of social exclusion and multiple exclusions. In particular, being older, retired earlier than the regulated age for retirement, not being a member of the Communist Party, and being in poverty for a longer period of time increased the likelihood of experiencing multiple exclusions. The relationship between social exclusion and health status varied by type of social exclusion and the health variables. The findings suggest that social exclusion was more likely to be associated with mental health variables than physical health variables. The experience of multiple exclusions was significantly related to more chronic illnesses, depression, and unfavourable life satisfaction. These findings provide support for the potential effects of social exclusion on the health status of older adults in Shanghai, China.

Despite the limitations of this study, it makes two important contributions to the literature on social exclusion and older age, as well as social exclusion and health. First, this study extends a European-based research concept of social exclusion to a remarkably different culture. By

doing so, this study offers new knowledge of social exclusion in older adults. Therefore, this study is an important addition to the literature on social exclusion and older adults. Second, this study on social exclusion and social exclusion and health. In addition, this study has significant practice and policy implications for addressing social exclusion in older Chinese in urban China. This study calls for greater attention to address social exclusion in a holistic and collaborative approach and to reduce the possible negative impacts of social exclusion on health status of older adults.

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Appendix A: The Questionnaire

Questionnaire ID: ____________

Society and health of old Chinese in Shanghai

Date of 1st interview: _________________ Time: _______________a.m./p.m.
Date of 2nd interview (If needed):_________________
Total time of completion: _______________________ (minutes)
This interview was conducted in: __________ Mandarin __________Shanghai local dialect

Areas: ( ) Jing'An ( ) Pu'Dong ( ) Yang'Pu

Interview results: ( ) 1. Completed ( ) 2. Incomplete
Interview comments:

____

Name of interviewer: __________________________ Date: ____________________

Section A: Demographic information
First of all, I would like to ask you some questions related to your personal background.

A1 [Interviewer: Please record the gender of the respondent.]
1 Male 2 Female

A2 What is your year of birth? ______________

A3 What is your current marital status?
1 Never Married 2 Married 3 Divorced
4 Separated 5 Widowed 6 Other

A4 Who are you living with now? (Check all items that apply)

	Yes	Number
a/Spouse/Partner		
b/Sibling		
c/Son		
d/Daughter		
e/Son-in-law		
f/Daughter-in-law		
g/Grandchildren		
h/Other relative		
i/Friend		
j/Alone		Not applicable
k/Other(**Specify**)_______________		

A4.1 If you are living alone now, how many years have you been living alone?
_________________Year(s)

A5 What is your highest level of education?
1 Did not attend any type of school 2 Old style private school (home/teacher's home)
3 Elementary school 3 Junior middle school
4 Senior high school 5 Vocational or technical school
6 College certificate or diploma 7 Undergraduate university and above

A6 Do you have a religious faith?
1 No 2 Yes (**Please specify** _____________)

A7 What is your nationality?
1 The Han nationality 2 Minorities (**Please specify**______________)

A8 What is the form of registered permanent residence (*Hu Kou*)[5]?
1 Agriculture   2 Non-agriculture   3 Turned to non-agriculture

A9 What is your political affiliation?
1 The Communist Party member (A**sk A9.1)**
2 Democratic Party member (**Ask A9.1**)
3 None (**Go to A10**)

A9.1 When did you join the Party? 19___________ (yy)

A10 Have you been sent down to the countryside, Construction Regiments, or the Cadre School?
1 Yes (**Ask A10.1**)   2 No (**Go to A11**)

A10.1 How many years? _______________Years

A11 Have you ever retired from any job (including "internal retirement")?
1 Yes (**Ask A11.1**)   2 No (**Go to Next Section**)

A11.1 Did you retire as an ordinary retiree (*tuixiu)* or as a cadre retiree (*lixiu*[6])
1 Ordinary retiree   2 Cadre retiree

Section B: Housing
I would like to ask some questions about your housing situation.

B1 [Interviewer: Please record the type of accommodation the responder lives in
1 Detached bungalow
2 Semi-detached bungalow
3 Multiple-stories apartment (Less than 7 stories， usually not having elevator) } **Ask 1.1**
4 High-stories apartment (most are over seven stories with elevator) }
5 Villa
6 Other (**Please specify**________________)

B1.1 **If answer 3 and 4 at B1**, which floor does the responder live in? ________

B2 How long have you lived in this type of accommodation? _____________**Years**

---

5 There are two main forms of registered permanent residence (*Hu Kou*) in China, agriculture and non-agriculture. Those born in rural areas are usually agriculture. Those born in cities usually are non-agriculture. People can turn their permanent residence from agriculture to non-agriculture due to many reasons.

6 Those who *lixiu* enjoy better retirement benefits than ordinary retirees. In principle, one has to join the evolutionary cause before October 1, 1949 to be eligible to *lixiu*.

B3 In which of these ways do you occupy this accommodation?

1 Owned by respondent only
2 Owned by spouse/partner only
3 Owned by family member (such as son or daughter, etc)
4 Jointly owned-respondent and spouse/partner
5 Jointly owned-respondent and family member (such as son or daughter, etc.)
6 Renting (**Go to ask B4.1**)
7 Live here rent-free (including rent-free in relative's/friend's property)
8 Others (**Please specify_____________**)

B4 Excluding toilets, kitchens and bathrooms, how many separate bedrooms do you have in your accommodation? ________________ Separate bedrooms

B5 Do you have your own room for you and your spouse/partner (if applicable)?

1 Yes 2 No

B6 Do you have (the use of) a kitchen, that is, a separate room in which you can cook?

1 Yes 2 No

B7 Do you have (the use of) a bathroom with a bath or shower that is plumbed in?

1 Yes 2 No

B8 Do you have (the use of) an inside flush toilet?

1 Yes 2 No

B9 How old is the place where you live? _____________ Years

B10 Overall, how satisfied are you with this accommodation?

1 Very satisfied 2 Fairly satisfied 3 Neither satisfied nor dissatisfied
4 Slightly dissatisfied 5 Very dissatisfied

B11 Do you have any of the following problems with your accommodation (Check all that apply)?

	Yes	No
a/Shortage of space	1	2
b/Too dark, not enough light	1	2
c/Lack of adequate heating in winter	1	2
d/Lack of adequate cooling facilities in summer	1	2
e/Leaky roof	1	2
f/Dampness (e.g., walls, floors, foundations etc.)	1	2
g/Rot (e.g., window frames or floors)	1	2
h/Without antiskid in the bathroom	1	2
i/Unsuitable for my physical disability/ies /state of health	1	2

B12 Do you have any other problems with your accommodation?

1 Yes (**If yes, prompt for details**)

____

2 No (**Go to ask B13**)

B13 Has your health or the health of anyone in your household been made worse by your housing situation (such as falling down)?

1 Yes (**If yes, prompt for details**)

____

2 No

Section C: Neighbourhood

I would now like to ask some questions about the place and the community where you live.

C1 How long have you lived in this neighbourhood? _______________ Years

C2 In general, how satisfied are you with this neighbourhood as a place to live?

1 Very satisfied 2 Fairly satisfied 3 Neither satisfied nor dissatisfied
4 Slightly dissatisfied 5 Very dissatisfied

C3 Thinking about this neighbourhood, is there anything you particularly like about living here?

1 Yes (**Ask C3.1**) 2 No (**Go to C4**)

C3.1 If Yes, what do you like?

1. ____

2. ____

C4 Is there anything you particularly dislike about living in this neighbourhood?

1 Yes (**Ask C4.1**) 2 No (**Go to C5**)

C4.1 If YES at C4, What do you dislike?

1. ____

2. ____

C5 Could you please tell me how much you agree or disagree with each statement in relation to your own neighbourhood?

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
a/I feel that I am part of the neighbourhood	1	2	3	4	5
b/I know my neighbors well	1	2	3	4	5
c/I believe my neighbors would help me in an emergency	1	2	3	4	5
d/I like to think of myself as similar to the people who live in this neighbourhood	1	2	3	4	5
e/I frequently stop and talk with people in my neighbourhood	1	2	3	4	5
f/I feel I can trust the people in my neighbourhood	1	2	3	4	5
g/This neighbourhood is a good place to grow old in	1	2	3	4	5
h/During the last two years my neighbourhood has gotten better as a place to live	1	2	3	4	5

C6 I am now going to ask about your views regarding public facilities. Please tell me how the following public facilities are friendly to older people.

	Unfriendly	Neither unfriendly nor friendly	Very friendly	No idea
a/Streets, businesses, houses clearly labeled	1	2	3	4
b/Handicap accessibility	1	2	3	4
c/Sidewalks	1	2	3	4
d/Street lights	1	2	3	4
e/Traffic/Pedestrian signal time	1	2	3	4
f/Benches in public areas, along walkways	1	2	3	4
g/Elevators, particularly in busy areas	1	2	3	4
h/Sport facilities	1	2	3	4
j/Others (**Please specify_____________**)	1	2	3	4

C7 Have you ever reduced the time of going out because of the unfriendliness of any of the facilities listed in Question C6?

1 Yes 2 No

Section D: Crime

I'd like to ask you about some crimes that may or may not have happened to you in the last couple of years. As well as serious incidents, I'd like to know about small things.

D1 In the last year or two, has anyone….

	Yes	No
a/Broken into or tried to break into your home to steal something	1	0
b/Deliberately damaged or vandalised your home	1	0
c/Stolen anything you were carrying – out of your hands or from your pockets or bag	1	0
d/Defrauded you or cheated you out of money, possessions or property	1	0
e/Sold you a product or service at your doorstep that you later regretted buying (such as building work)	1	0
f/Physically attacked	1	0

D2 I am now going to read out some things that you may or may not worry about. How worried are you about each of the following possible situations:

	Very worried	Fairly worried	Not very worried	Not at all worried
a/Having your home broken into	1	2	3	4
b/Being mugged or robbed	1	2	3	4
c/Being physically attacked	1	2	3	4
d/Being conned or cheated at your doorstep	1	2	3	4

D3 How safe would you feel if you had to go out alone in this neighbourhood after dark?

1 Very safe 2 Fairly safe 3 A bit unsafe 4 Very unsafe

D4 How safe do you feel when you are in your own home at night?

1 Very safe 2 Fairly safe 3 A bit unsafe 4 Very unsafe

Section E: Social Network and Support

I would now like to gather a few facts about you and the other people in your household.

E1 How many children do you have? ___________________________________

E2 How far away in distance does your nearest son/daughter live?

1 Same house 2 Same neighbourhood 3 Same street
4 Same district 5 Another district in Shanghai 6 Not in Shanghai **(Please specify____________________)**

E3 Do you have any living sisters or brothers?

1 Yes **(Ask E4)** 2 No **(Go to E5)**

E4 If yes at E3, where does your nearest sister or brother live?

1 Same house 2 Same neighbourhood 3 Same street
4 Same district 5 Another district in Shanghai
6 Not in Shanghai

E5 In the past week, about how many times did you talk to someone – friends, relatives or others – on the telephone (either you called them or they called you) ? (If subject has no phone, question still applies.)

1 Once a day or more 2 2 times 3 Once 4 Not at all

E6 How many times during the past week did you spend some time with someone who does not live with you; that is, you went to see them, or they came to visit you, or you went out to do things together?

1 Once a day or more 2 2-6 times 3 Once 4 Not at all

E7 How many times did you visit with someone, either with people who live here or people who visited you here?

1 Once a day or more 2 2-6 times 3 Once 4 Not at all

E8 Is there anything that prevents you from seeing people who are important to you more often?

1 Yes (**Ask E8.1**) 2 No (**Go to E9**)

E8.1 **IF yes at E8,** *What?*

____

E9 Do you have someone you can trust and confide in?

1 Yes 2 No 3 Don't know

E10 Is there someone who would help you if you were sick or disabled; for example, your husband/wife, a member of your family, or a friend?

1 Yes (**Ask E10.1 & E10.2**). 2 No one willing and able to help (**Go to E11**)

E10.1. How often would that person help you?

1 would take care of you indefinitely (as long as needed)
2 would take care of you for a short time (a few weeks to six months)
3 would help you now and then (taking you to the doctor or fixing lunch, etc.)

E10.2. Who is this person? (Check one only)

1 Spouse/Partner 2 Siblings 3 Son
4 Daughter 5 Son-in-law 6 Daughter-in-law
7 Other relatives: (specify) ________________ 8 Friends
9 None 10 Other persons (specify)________________

E11 I'm going to ask some questions about the feelings. Please tell us the answers that are close to your feelings now.

	Always/ often	**Sometimes/ occasionally**	**Not at all/never**
a/I experience a general sense of emptiness	1	2	3
b/There are plenty of people I can lean on when I have problems	1	2	3
c/There are many people I can trust completely	1	2	3
d/There are enough people I feel close to	1	2	3
e/I miss having people around	1	2	3
f/I often feel rejected	1	2	3

Section F: Necessities

I would ask some questions about the types of things that you may or may not have in your home.

F1 Here is a list of items that you may or may not have. For each one, please tell me whether whether you have this item. For the item you don't have, please tell us if it is because you can't afford or if you don't want it.

		F1a Has item?		**F1b Why do you not have it?**	
		Yes	**No**	**Can't afford**	**Do not want**
1	A television	1	0	1	0
2	A DVD/CD player/VCR	1	0	1	0
3	Cable /Digital license	1	0	1	0
4	A telephone	1	0	1	0
5	A cell phone	1	0	1	0
6	An electric fan or heater	1	0	1	0
7	An air-conditioner	1	0	1	0
8	A washing machine	1	0	1	0
9	A refrigerator	1	0	1	0
10	A microwave oven	1	0	1	0
11	A rice cooker	1	0	1	0
12	Water heater	1	0	1	0
13	A computer	1	0	1	0
14	Internet	1	0	1	0
15	Three meals a day	1	0	1	0
16	Adequate meat or fish or egg or milk every other day	1	0	1	0
17	Fresh fruit and vegetables every day	1	0	1	0
18	A warm waterproof coat/vest	1	0	1	0
19	Buying some new clothes each year	1	0	1	0
20	An outfit to wear for social or family occasions such as parties and weddings	1	0	1	0
21	Two pairs of all-weather shoes	1	0	1	0
22	A small amount of money to spend each week on yourself, not on your family	1	0	1	0
23	Furniture	1	0	1	0
24	Replace any worn out furniture	1	0	1	0
25	Business insurance	1	0	1	0
26	Healthy food	1	0	1	0
27	Accessories such as glasses, false teeth, and hearing aid	1	0	1	0
28	Newspapers	1	0	1	0

Section G: Social Activities and Participation
I would now like to ask you some questions about your participation.

G1 I will list some activities. For each one, I'd like you to tell me whether you do it or not. For each activity not done, please tell us whether it is because you can't afford it, or because you don't want to do it.

	G1a Activity done?		**G1b Why not done?**	
	Yes	**No**	**Can't afford**	**Do not want to do**
a/Attend hobby or leisure activity (such as running, playing ping pong, TaiChi, raising birds, play mahjong or poker, going to parks)	1	0	1	2
b/Attend tour groups or a holiday away from home each year, not staying with relatives in their home	1	0	1	2
c/Celebrations on special occasions such as Chinese New Year, Moon Festival, birthday	1	0	1	2
d/Treat visiting family or friends		0	1	2
e/Have friends or family around for a meal, snack or drink	1	0	1	2
f/Visit friends or family	1	0	1	2
g/Visit friends or family in hospital or other institutions		0	1	2
h/Attend weddings, funerals and other such occasions	1	0	1	2

G2 Do you attend any religious meetings?**If yes, prompt: is that frequently or occasionally?**
1 Yes, frequently 2 Yes, occasionally 3 No, never

G3 In the past year, have you participated in the following organizations relating to older people in China?

	Yes	No
a/Professional associations	1	0
b/Recreational organizations (but formally registered, such philatelic society, fishing society, etc.)	1	0
c/Non-registered salons and clubs	1	0
d/Neighbourhood Committees or Street Committees	1	0
e/Age-related associations (such as Older People's Association, etc)	1	0
f/Other formal or informal organizations (**Please specify__________**)	1	0

G4 Do you attend meetings organized by the organizations above, or anything like that?**If yes, prompt: Is that frequently or occasionally?**
1 Yes, frequently 2 Yes, occasionally 3 No, never

G5 Which, if any, of the following things on the list have you done in the last three years?

	Yes	No
a/Being a national or Local People's Congress (LPC) member	1	0
b/Being a member of the Chinese People's Political Consultative Conference (CPPCC) national or local committee	1	0
c/Presented your views to a local or national LPC member or CPPCC committee	1	0
d/Written a letter to a leader or relative government office	1	0
e/Written a letter to a newspaper or other media to present your view		
f/Urged someone outside your family to vote	1	0
g/Urged someone to get in touch with a LPC member or CPPCC committee	1	0
h/Taken an active part in community affairs	1	0
i/Voted in the last election for neighbourhood committee	1	0
j/Voted in the last LPC and CPPCC election	1	0

Section H: Health and Well-being

I would now like to ask some questions about your health and general well-being. Answer every question by selecting the answer as indicated. If you are unsure about how to answer a question, please give the best answer you can.

H1 In general, would you say your health is:

1 Excellent 2 Very Good 3 Good 4 Fair 5 Poor

H2 Chronic conditions: do you have any long-standing illness, disability or infirmity? By long-standing, I mean anything that has troubled you over a period of time or that is likely to affect you over a period of time?

1 Yes (**Continue to Ask H2.1**) 2 No **(Go to H3**)

H2.1 How many long-standing illness, disability or infirmity do you have? __________

H2.2 Please specify what they are (Please list the first three that bother you most if the number of long-standing illness is over three)

A.____

B.____

C.____

H3 The following two questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

	Yes, limited a lot	Yes limited a little	No, not limited
H3a/Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf	1	2	3
H3b/Climbing several flights of stairs	1	2	3

H4 During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
H4a/Accomplished less than you would like	1	2	3	4	5
H4b/Was limited in the kind of work or other activities	1	2	3	4	5

H5 During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
H5a/Accomplished less than you would like	1	2	3	4	5
H5b/Did work or activities less carefully than usual	1	2	3	4	5

H6 During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

1 Not at all 2 A little bit 3 Moderately 4 Quite a bit 5 Extremely

H7 These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling.

How much of the time during the past 4 weeks...

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
H7a/felt calm and peaceful?	1	2	3	4	5
H7b/had a lot of energy?	1	2	3	4	5
H7c/felt downhearted and depressed?	1	2	3	4	5

H8 During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.)?

1 All of the time   2 Most of the time   3 Some of the time
4 A little of the time   5 None of the time

H9 The following questions are about your recent emotional status. During the past week ……

	Yes	No
H9a/Are you basically satisfied with your life? *	1	0
H9b/Have you dropped many of your activities and interests?	1	0
H9c/Do you feel that your life is empty?	1	0
H9d/Do you often get bored?	1	0
H9e/Are you in good spirits most of the time? *	1	0
H9f/Are you afraid that something bad is going to happen to you?	1	0
H9g/Do you feel happy most of the time? *	1	0
H9h/Do you often get restless and fidgety?	1	0
H9i/Do you frequently worry about the future?	1	0
H9j/Do you feel you have more problems with memory than most?	1	0
H9k/Do you often feel downhearted and blue?	1	0
H9l/Do you feel pretty worthless the way you are now?	1	0
H9m/Do you think that most people are better off than you are?	1	0
H9n/Do you frequently get upset over little things?	1	0
H9o/Do you frequently feel like crying?	1	0

H10 Over the past year, did you feel that you needed to see a doctor but did not go?

1 Yes (**Go to ask H10.1**)   2 No

H10.1 **If yes at H10**, what is the main reason for not going to see a doctor?

1 Not sick or severe by self-feeling
2 Financial difficulties
3 Family member has no time to accompany
4 Poor transportation conditions
5 Waiting time is too long in the hospital
6 Bad service
7 Having no benefits to my health condition
8 Others (please specify____)

H11 Do you have a health insurance to cover your medical cost?

1 Yes (**Ask H11.1 & H11.2**)   2 No (**Go to Next Section**)

H11.1 If yes at H11, what types of health insurance do you have?

1 Basic medical insurance
2 Public medical care
3 Commercial medical insurance
4 New rural cooperative medical scheme
5 Other (**Please specify**______________________)

H11.2 Does the insurance adequately cover your medical costs?

1 Very adequate   2 Adequate   3 Minimally adequate

4 Inadequate   5 Very in adequate

Section I: Local Services

The next questions are about aged related services that may exist in your local area.

I1 Over the past year, did you use the following age related community support services?

		I1a Did you use?		**I1b If no, do you need?**	
		Yes	**No**	**Need**	**Don't need**
1	Health services from community health agencies (i.e. health education, health consult, physical exam, etc.)	1	0	1	0
2	Home support services from community (i.e. Six "Helps")	1	0	1	0
3	Adult day program	1	0	1	0
4	Meals-on-wheels	1	0	1	0
5	Home visitors by volunteer	1	0	1	0
6	Legal consultation service	1	0	1	0
7	Senior centre	1	0	1	0
8	Senior university	1	0	1	0
9	Senior home	1	0	1	0
10	Senior hospital	1	0	1	0
11	Other, specify: ________________	1	0	1	0

I2 Over the past year, did you have difficulties getting or using the community services listed above?

1 Yes (**Ask I2.1**)   2 No (**Go to I3**)

I2.1 If yes at I2, please specify the main difficulty you had in accessing or using the above community support services?

____

____

____

____

I3 Using the phrases on the card, I'd like you to tell me how often in the past year you have used each of the local services I'm going to read out.

	Within the lastweek	Within the last month	Less often, but within the last year	Not at all in the last year
a/Libraries	1	2	3	4
b/Public sports facilities (e.g. swimming pool)	1	2	3	4
c/Public parks	1	2	3	4
d/Post office	1	2	3	4
e/Bus services	1	2	3	4
f/Train or subway service	1	2	3	4
g/A chemist	1	2	3	4
h/A corner shop	1	2	3	4
i/A medium to large supermarket	1	2	3	4
jA bank	1	2	3	4
k/A cinema or theatre	1	2	3	4
l/Art gallery or museum	1	2	3	4

I4 Thinking about this neighbourhood, are there any services for older people that you think are lacking?

1 Yes (**Ask I4.1**) 2 No (**Go to Next Section**)

I4.1 **If yes at I4,** which services?

____

Section J: Work and Retirement

The next questions relate to your (previous) work and retirement.

J1 Are you currently working for pay, including part-time or self-employment?

1 Yes (**Ask J2**) 2 No (**Go to J3**)

J2 **If in paid work,** is your job full-time or part-time?

1 Full-time 2 Part-time

J2.1 How many hours did you work last week? _______Hours/Day

J3 **If you are not in paid work**, would you like to do paid work now?

1 Yes, I would (**Ask J3.1**) 2 Does not matter (**Go to J4**) 3 No (**Go to J4**)

J3.1 **If you would like to work**, why are you not working currently?

1 Unable to work because of long-term disability or health
2 In full-time education or training (including government training program)
3 Looking after the family, home or dependants
4 Lack of job opportunities for the elderly
5 Doing something else (**Please specify**________________________________)

J4 **If you are not in paid work,** have you ever been in paid work (including self-employed)?
1 Yes (**Ask J5 &J6**) 2 No (**Skip to J7**)

J5 **If you have ever been in paid work,** what kind of unit you are working /were you working for?

1 Government agency	2 Institution	3 State-owned enterprise
4 Collective enterprise	5 Joint venture	6 Private business
7 Army	9 Others(**Please specify**___________________________)	

J6 In this job are you/ were you…
1 Senior head (such as GM, Director, Dean, etc.)
2 Middle level head (such as section head)
3 Primary level head (such as sub-section head)
4 General employee
5 Other

J7 **If you have ever been in paid work**, how old were you when stopped working for pay? ____ Years old
J8.**If you gave up work before age 55 for women or before 60 for men, or were never in paid work,** Could you tell us what your main reason was for not working?

____

____

J9 Are you currently doing a volunteer job?
1 Yes, I do (**Ask J9.1**) 2 No, I don't want to 3 No, but I want to

J9.1 How many hours did you volunteer last week? ________Hours

J10 Do you have a professional title?
1 No 2 Primary Rank 3 Middle Rank 4 High Rank

Section K: Person and Household Finance
The next questions are about financial matters. I would like to remind you that all answers you give are confidential.

K1 Below shows various types of state benefit related to elderly. Which, if any, are you receiving?

	Yes	No
a/Financial assistance to the oldest-old elderly	1	0
b/Social security scheme for the oldest-old elderly who don't have old pension (Gao Ling Na Bao)	1	0
c/Subsides for home care	1	0
d/Minimum Standard of Living Allowance for urban residents	1	0
e/Minimum Standard of Living Allowance for rural residents	1	0
f/Subsidies for poor elderly	1	0
g/Widow's or War Widow's Pension	1	0
h/Disability Living Allowance / Mobility Allowance / Attendance Allowance Severe Disablement Allowance / Industrial Disablement Benefit	1	0
i/Other state benefit(s) (**Please specify**______________________)	1	0

K2 Have you received any of the following payments in the last year?

	Yes	No
a/Pension	1	0
b/Earnings from employment or self-employment	1	0
c/Regular payments from family members (including children, grandchildren, etc)	1	0
d/ Income and dividends from shares and investments	1	0
e/Other kinds of regular allowance from outside the household	1	0
f//Income from other sources (e.g. rent)	1	0
g/None of these	1	0

K3 Take into account all sources of income (e.g. pension, from your children, benefits from investment), please tell me which best represents your total income from all sources last year?

1 Less than 4999 Yuan
2 5000 Yuan to 9999 Yuan
3 10,000 Yuan to 14,999 Yuan
4 15,000 Yuan to 19,999 Yuan
5 20,000 Yuan to 24,999 Yuan
6 25,000 Yuan to 29, 999 yuan
7 30,000 Yuan to 34,999 Yuan
8 35,000 Yuan to 39,999 Yuan
9 40,000 Yuan to 44,999 Yuan
10 45,000 Yuan to 49,999 Yuan
11 50,000 Yuan to 59,999 Yuan
12 60,000 Yuan to 79,999 Yuan
13 80,000 and above

K4 Taking all sources of income together, do you think the total amount of income you are receiving is adequate for daily life?

1 Very adequate 2 Adequate 3 Minimally adequate
4 Inadequate 5 Very in adequate

K5 Other than the above income, do you have savings for old age?

1 Yes (**Ask H5.1**) 2 No (**Go to H6**)

K5.1 Taking all sources of income (including savings) together, do you think the total amount of money you have is adequate for daily life?

1 Very adequate 2 Adequate 3 Minimally adequate
4 Inadequate 5 Very in adequate

K6.In the last 5 years have you ever used less of the following because money was tight?

	Yes	No
a/Water supply	1	0
b/Gas	1	0
c/Electricity	1	0
d/Telephone	1	0

K7 Have there been times during the past year when you had to borrow money from friends, family or others in order to pay for your day-to-day needs?

1 Yes 2 No

K8 Is there a family member who needs to receive financial support from you?

1 Yes 2 No

K9 Looking back over your life, how often have there been times when you think you have lived in poverty by the standards of that time?

1 Never
2 Rarely
3 Occasionally
4 Often
5 Most of the time

K10 Compared to 10 years ago, do you think your financial situation is…

1 Much better off
2 Better off
3 Neither better off nor worse off
4 Worse off
5 Much worse off

Section L: Culture Value and Attitude
I would like to ask you some questions about your culture value and attitude in this section.

L1 In comparison with young people how would you rate the social status of older people in this city?

Social Status	Very Low									Very High
	1	2	3	4	5	6	7	8	9	10

L2 How has the social status of older people in this city changed within the past 10 years?
1 Much better off
2 Better off
3 Neither better off nor worse off
4 Worse off
5 Much worse off

L3 Are there ever occasions when you feel isolated or cut off from society?
1 Yes (**Ask L3.1**)
2 No (**Go to L4**)

L3.1 **If yes at L3**, could you please tell me the possible main three reasons why you feel isolated or cut off from society?
1.______________________________
2.______________________________
3.______________________________

L4.Are there ever occasions when you feel mistreated or discriminated because of your old age? If yes, can you please describe the situation that you feel mistreated or discriminated.
1 Yes (**If yes, please describe the situation**
____
____
____
__________________)

2 No, never

L5. In very general terms, how would you rate your quality of life? Is it…
1 Very good
2 Good
3 Neither good nor poor
4 Poor
5 Very Poor

End of Interview
Thank you for your participation!

Appendix B: The Verbal Informed Consent

Research Project: Society and health of older people in Shanghai

Verbal Informed Consent Script

Principal investigator:
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Collaborating partner:
Shanghai Research Centre on Aging
Contact person: Mr. Feng Xue
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The University of Calgary Conjoint Faculties Research Ethics Board has approved this research study. This consent form, a copy of which has been given to you, is only part of the process of informed consent. This will give you the basic idea of what the research is about and what your participation will involve. If you would like to get more detail about the study, please feel free to clarify.

This is a research is conducted by Ms. Hongmei Tong, a doctoral student and her supervisor, Professor Daniel Lai, at the Faculty of Social Work, University of Calgary, in collaboration with the Shanghai Research Centre on Aging and Social Work Department at Fudan University. This research aims at examining the social characteristics of older people in Shanghai.The research targets of this research are the older adults aged 60 years of age and older who are residing in Shanghai and have registered permanent residence (Hu Kou) of Shanghai.

Your name is randomly selected from all the 60 years and older residents in this neighbourhood provided to us by your local neighbourhood office. We would like to invite you to take part in a face-to-face interview to answer questions from a questionnaire. The questionnaire will take about 45 minutes to one hour to complete. The questions asked are related to your social characteristics, living environment, and health, as well as your views toward status of older people in Shanghai. Your answers may contribute to the future development of programs and policies that facilitate social services for older people in future.

Your participation in this research is entirely voluntary. You can refuse to answer any questions that you do not feel comfortable with. In the course of interview, a minimal risk ofdistress might occur to you. However, you will be provided withcontact information for local resources and

services if that kind of distress occurs. You can also choose to withdraw from the research at any point. Refuse to participate or withdrawal from participating in the interview will not jeopardize any servicesyou are receiving or will receive from any organizations. However, all information collected up to the point of withdrawal will be retained and used by us for academic research purposes.

Information about your personal identity will be kept strictly confidential. The results you have provided to the questions asked is treated with anonymity. No government office(including the local street committee) will be informed as to the identity of anyspecific individual participant. In addition, All interviewers will also be asked to keep the information they hear in the interview confidential. However, absolute anonymity and confidentiality cannot be guaranteed due to the researchers will not have control over what is said outside the research project.

All the raw questionnaires and records of the data will be locked in a cabinet in a locked office. Only the researchers will have access to these data. The electronic data files that store the data will be stored in password-protected computers.The data will be analyzed and the findings will be used and reported in the academic research reports, journals, presentations, and community workshops. However, no personal identifying information will be revealed in reporting of this research.

In addition, the raw questionnaires, written interview records, raw data, interview notes, related consenting documents will continue to be kept indefinitely by the researchers for academic research and publication purposes. The information and data you provide us in this research study may also be used in future by the researchers' for academic research purposes. If necessary, the data may be accessible by other researchers/students in future for academic purposes. However, no personal identifying information will be revealed to them.

For any enquiry about this research, please contact: Ms. Hongmei Tong, Faculty of Social Work, The University of Calgary (Tel: +86 13917569558; Email: htong@ucalgary.ca) or Professor Daniel Lai, Faculty of Social Work, The University of Calgary (Tel: +1-403-220-2208, Email: dlai@ucalgary.ca); 2500 University Drive NW, Calgary, Alberta T2N 1N4. If you have any questions or issues concerning this project that are not related to the specifics of the research, you may contact the Senior Ethics Resource Officer, Research Services, University of Calgary at (403) 220-3782; e-mail rburrows@ucalgary.ca.

The Conjoint Faculty Research Ethics Board of the University of Calgary has approved this study. A copy of this consent form has been given to you to keep for your record and reference. Your signature on or verbal consent to this form indicates that you: 1) understand to your satisfaction the information provided to you about your participation in this research project, and 2) agree to participate as a research subject.

I, (Participant's Name): ______________________________, provide verbal consent to indicate that, I understand to my satisfaction the information provided to me about my participation in this research project, and agree to participate as a research subject.

Witnessed by:
Interviewer's Name: (please print)
____

Interviewer's Signature
___________________________________ Date: ______________