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ORIGINAL ARTICLE

Living Alone: Elderly Chinese Singaporeans

Yang-Sheng Wong · Lois M. Verbrugge

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Abstract Asian societies maintain the norm that older people should live with their children. Yet some older people live alone. This is the first study to explore social isolation, strategies of coping, and preferences about living arrangements among Chinese Singaporeans aged 65+ who live alone. Data from 19 semi-structured interviews were analyzed. The elderly people who live alone either have no other alternative, or they choose it despite opportunities to live with others. Regardless of the initial reason, solo-dwellers in Singapore succeed at living alone by developing behavioral and psychological strategies that help overcome social isolation. Their main link to the "outside" world is access to medical and social services. Despite some hardships, many prefer living alone because it has become familiar and personally comfortable.

Keywords Aging · Alone · Elderly · Isolation · Living arrangements · Singapore

Introduction

A predominantly Asian society, Singapore has its cultural roots in China, the Malayan Archipelago, and India. The nation's main ethnic groups (Chinese, Malay, Indian) expect that elderly persons will be looked after for residence, finances, and health care by their children. Living together in multi-generational households facilitates transfers of money, affect, and services, but it can also cause tensions and undue expectations for help. When elderly have no children or their children are far away, or when they choose to live alone even with children nearby, they lose the comprehensive familial support that Asian cultures provide. This physical isolation makes them more susceptible to social isolation.

Conducted in 2006, this study is about older Singaporeans who live alone. Why do some of them live alone, and are they successful at living alone? Interviews of a small sample of mainly ethnic Chinese Singaporeans aged 65+ investigated the extent of social isolation,

Y.-S. Wong (✉) · L. M. Verbrugge
University of Michigan, Ann Arbor, MI, USA
e-mail: wongys@umich.edu

L. M. Verbrugge
e-mail: verbrugg@umich.edu

strategies for coping with daily needs and loneliness, access to healthcare, and preferences for living arrangements.

Background

Social isolation

Hortulanus *et al.* (2006) provide a thorough examination of theory and research on social isolation. They define socially isolated persons as having small social networks and being lonely. They present evidence that social isolation is exacerbated among those who have had negative life events that have predisposed them to lives of isolation.

A key study of social isolation is Klinenberg's (2002, 2005) "social autopsy" of the 1995 Chicago heat wave disaster. He found that the solo-dwellers are typically poor and live in poor neighborhoods, and they have been victims of crime and fear public places, which leads to more self-imposed isolation. Klinenberg concludes: "Seniors who are marginalized at the first, structural level of social networks and government programs are then doubly excluded at the second conjectural level of service delivery because they…do not always have networks of support" (2005: 94). Other studies of social isolation of elderly persons in the USA find similar results (Cattan *et al.* 2005; Findlay 2003; LaVeist *et al.* 1997), with profiles of "disconnected" people.

Research evidence shows that social and physical isolation are associated with poor health and mental wellbeing (Hortulanus *et al.* 2006). Klinenberg (2002, 2005) found that isolation among the Chicago elderly frequently leads to poorer health and healthcare access, and leaves older persons in difficulty far longer than those who are not isolated. Social isolation has been positively linked to higher stress levels, low self-esteem, disease susceptibility, cardiovascular reactivity, and mortality (Hobfoll 2001). Social isolation slows reparative functions in the body (Bath and Agada 2005; Cacioppo and Hawkley 2003; Walker and Beauchene 1991). These findings suggest that the lack of social networks may severely affect the health of older persons who are isolated.[1] The issue is crucial in a society like Singapore's that has no comprehensive safety net for the elderly who lack family care.

Singapore demography

About 3.6 million official residents live in Singapore. It is a multi-ethnic society, with 75% Chinese, 14% Malay, 9% Indian, and 2% Other (Singapore Department of Statistics 2007). Singapore is a "hyperdeveloping" economy that has increased its foreign reserves more than tenfold since 1980, to SGD $209 billion in 2006 (SGD $1=USD $0.66; Singapore Department of Statistics 2007; Tay *et al.* 2004). Singapore's success is due to its emphasis on education and economic innovations, which have especially benefited the postwar baby-boomer generation.

Singapore is the second fastest aging population in the world, behind Japan (Hateley and Tan 2003; Tay 2003). The number of Singapore residents aged 65+ is expected to rise from

[1] Older persons in Hong Kong are also similarly affected. Hong Kong's similar large ethnic Chinese population, ex-colony status, and economic development make it an interesting comparison to Singapore. Chan and Lee (2006) show that Hong Kong elderly with larger social networks are happier, while Chi *et al.* (2005) shows that elderly depression is related to social support. Phillips *et al.* (2003; 2005) have studied living arrangements and satisfaction for Hong Kong elderly people in public and private housing.

8% in 2005 to 19% in 2030 (Chan 2001; Singapore Department of Statistics 2005). This causes social pressures in a society that is strongly youth-oriented. Singapore's problem lies not just in rapid aging, but in the numbers of elderly who live alone and do not benefit from traditional avenues of social support. While current percentages of elderly solo-dwellers are low, a pattern of increase is evident: 3.3% of Singapore households had a single occupant aged 60+ in 1990, 6.2% in 1999, and 7.7% (ages 65+) in 2005 (Chan 2001, Singapore Department of Statistics 2006). Coming cohorts of baby-boomers are likely to opt for living alone more than current older cohorts (Teo 2004).

Singapore government attention to the elderly

Despite high international interest in aging populations and policies (Kinsella and Velkoff 2001; Department of Economic and Social Affairs 2005; World Bank 1994), Singapore's own response has been modest. Ministerial reports have addressed aging issues, describing demographic trends and existing programs (Committee on Ageing Issues 2006; Ministry of Community Development and Sports 1999). The government focuses on divesting itself from programs for older persons, and on promoting "Asian values" by emphasizing that eldercare is the responsibility of filial children (Teo 2004). Incentives to children take the form of tax breaks granted to families with one or more elderly dependents, and priority is given to children who seek to buy government housing near their parents (Ofstedal *et al.* 2002).

There is no broad universal or government-managed pension scheme for older persons in Singapore like those of the US and Scandinavian countries. Instead, Singapore's government has instituted a mandatory retirement account for all citizens (Phua 2001). A percentage of individuals' monthly income is reserved in their own Central Provident Fund (CPF) account, which they can start spending at age 55. But current Singapore seniors are typically poor, having missed the CPF due to timing (it was established in 1955), having been self-employed, or having worked solely in the informal sector. Twenty percent of older males and 33% of older females do not have retirement accounts or pension schemes (Phua 2001), and 50.9% of elderly above 65 have less than $5,000 in their CPF accounts (Teo *et al.* 2006). Further, personal savings accounts that would count towards medical expenses are insufficient for more than half the Singaporeans who will retire at age 62 (Chia and Tsui 2005). Government Public Assistance (PA) has a stringent means test and only the very poorest people are eligible. Welfare recipients get SGD $320 per month (SGD $260 when this study was conducted in 2006). This barely covers housing and food costs, and many recipients depend on social welfare organizations to provide food and household goods.

The Singapore government subsidizes older persons' visits to government healthcare providers, and has instituted programs such as Eldercare and Eldershield as ways to provide long-term healthcare (Ofstedal *et al.* 2002). But coverage levels are low, leaving people with high co-payments for visits and insufficient resources for long-term care services. The government does pay full healthcare costs for PA recipients.

The government does not directly administer social services, but instead chooses to subsidize non-profit organizations that provide social services for the elderly. Social service agencies typically bid for funding based on the numbers of people served and services rendered (Ministry of Community Development Youth and Sports 2000, 2005; Teo *et al.* 2006). Government subsidies typically cover 90% of capital costs and 50% of operating costs for social service agencies.

Government-subsidized public housing is available for the majority of Singaporeans and is administered by the Housing Development Board (HDB). A mix of one-room to five-room flats exists. A one-room flat is a 35 m^2 studio apartment and consists of minimal

kitchen and toilet facilities. A two-room flat is about 45 m^2 and has one bedroom. The majority of elderly who live alone rent flats from the HDB at subsidized rates and live in one- or two-room flats, some of which have elder-friendly facilities such as emergency buttons and grab bars.

Research on aging in Singapore

Academic research on older Singaporeans is small but increasing. Kong *et al.* (1996) examined "aging in place" and found that it allows elderly people to lead culturally richer lives. Teo (1997, 2004) investigated availability of public space and healthcare as a result of policy implementations for the elderly; she applauded their existence but cautioned that actual use might not meet policy expectations. Teo *et al.* (2006) have also published a comprehensive book on elderly policies and services.

Kua's study of elderly Chinese Singaporeans provides comprehensive insight into elderly psyches and neighborhood social integration (Kua 1994). Mehta has examined elderly "cultural scripts" about how older Singaporeans see their place in society (Mehta 1997a), and how different religious beliefs help them cope with aging (Xu and Mehta 2003). Regarding cultural respect for the elderly, researchers chart the change from formal (obedience) to less formal (courtesy) forms of respect (Ingersoll-Dayton and Saengtienchai 1999; Mehta 1997b).

Instrumental activities of daily living (IADL) disabilities have the same formal structure in Singapore as in Western countries, dividing into cognitive and physical components (Ng *et al.* 2006). But older Singaporeans' attitudes about independence, dependence, and disability are quite different from those of US seniors (Verbrugge *et al.* 2006). The Singaporeans have more diverse and positive views of dependence, and more empathic views of people with disabilities of all ages.

Intergenerational transfers of money and services often occur between Singaporean children and their parents (Biddlecom *et al.* 2002; Chan 1997). Older persons' income is typically based on cash support from children and personal savings, and sometimes from pensions. Subjective reports of income adequacy are higher than true economic status (Chan *et al.* 2002). Support exchange agreements are more likely to be explicit in ethnic Chinese families than other ethnicities (Mehta 1999). Older people typically prefer economic resources from their male children, and have higher expectations of caregiving from their female children (Ofstedal *et al.* 2004). Female caregivers for the elderly experience higher levels of stress than male caregivers (Mehta 2006). Verbrugge and Chan (2007) show that in return for financial support, older parents often provide household services to their children.

Mental health of older Singaporeans is being actively studied. Suicide rates have dropped over time for people aged 65+, from 40.1 per 100,000 persons in 1990 to 17.8 in 2000 (Kua *et al.* 2003). Chronic illness and low socioeconomic status are positively associated with depression (Niti *et al.* 2007; Soh *et al.* 2007).

This article is the first study of solo-dwelling older Singaporeans, a socially and structurally disadvantaged group in their family-oriented society.

Methods

The study's target population was ethnic Chinese aged 65 or older who live alone. Purposive sampling was used in three geographic areas: Kampong Arang (an old public

housing neighborhood on the southeast of Singapore), Telok Blangah (one-room HDB apartments in south central Singapore), and Bukit Merah (area with better-off elderly who own apartments in south central Singapore). The sample plan was a minimum of five interviews per area, and a gender mix (at least one male and one female) in each.

Two prominent government-subsidized social service agencies agreed to recruit subjects in these areas. Social workers visit clients regularly (once a month or more), and more generally, know a great deal about a community's older residents. The social workers acted as gatekeepers to the three communities. They were informed of the selection criteria, then contacted potential subjects and briefed them about the study purpose and procedures, then set up the meeting for the interview team to visit. Interviews were conducted in the participant's residence. The interview team was the first author (WYS) and a translator. Translators were two local university students fluent in Mandarin, Cantonese, and Hokkien.

At the start of the visit, an informed consent protocol was read to subjects and explained as necessary. The process was confusing for some subjects, and the protocol had to be simplified to ensure they understood it. Gaining assent often took close to 10 min, and it visibly bewildered some subjects, intimidating rather than reassuring them. The interview team made sure that assent was definite before proceeding with the interview.

The questionnaire had three sections, with items about sociodemographic characteristics, the experience of living alone, and interactions with the healthcare system. When the questionnaire was drafted, a pretest was conducted by approaching elderly persons sitting in void decks (open area on the apartment building's ground floor) in the Indus Road area of Singapore. The pretest interviews were tape-recorded and helped fine-tune the questionnaire and interviewing process. The final questionnaire had English (original) and Mandarin (translated) versions. It was rehearsed in English, Mandarin, and major Chinese dialects (Hokkien, Teochew, Cantonese) for Singapore. Questions were asked to subjects as written, and followed by probes as needed (often ample, with question repetition and friendly urging for replies). Interviewers were trained to be sensitive to subjects' emotional state and energy, and ended the interview if either was affected. The interviews were tape-recorded. On average, interviews took one and a half hours to complete. Subjects were given a box of biscuits (cookies) or comparable food package at the visit's end, whether an interview occurred or not.

The interview team took notes during each interview, and compared them afterwards for accuracy. On completion of all interviewing, the two translators transcribed the 19 tape-recorded interviews. The first author (WYS) annotated the transcriptions based on the interview notes. For each subject, themes arising in the questionnaire sections were then noted. Then themes across the interviews were categorized, and whether there were any differences by gender, age, or socioeconomic status.

This is a small exploratory study, and it has some limitations in the sample and interview process. First, the sample is geographically focused to three neighborhoods. Subjects were clients of two social service providers, not chosen from the general population of elderly Singaporeans. There was even some self-selection bias in one area. Although Bukit Merah is largely Chinese-speaking, mostly English speakers volunteered for the study. Social workers said this was due to rumors among the Chinese-speaking residents that the interviewers were "government spies". Second, Asian values dictate that hosts (subjects) are polite to guests (interviewers). This was the first survey interview in their lifetime for most subjects. It is difficult to assess their candor, yet the interview team felt that all but two subjects were comfortable during the interview. Subjects often used archaic place names and colloquial terms, and this hampered the team's understanding until probes clarified the meaning.

Table 1 Study Sample: Gender and Size of Domicile in Three Areas

	Gender		Size of domicile		
	Male	Female	1 Room	2 Room	3 Room
Kampong Arang	5	1	0	3	3
Telok Blangah	6	2	8	0	0
Bukit Merah	1	4	1	4	0
Total	12	7	9	7	3

Results

Sample characteristics

Twenty five subjects were approached for interview and 19 consented, for a 76% response rate. The sample plan for quantity and gender was met in all three areas. Table 1 shows numbers of subjects by area, gender, and size of domicile. The sample had 12 males and seven females. About half lived in one-room units, and the others in two- or three-room units.

The subjects' mean age was 74.2 years (median 74, mode 65). The age range was 65 to 86. Mean age for females was 75.6, and for males 73.4. All subjects were ethnic Chinese except one (Indian) who had grown up in a predominantly Chinese neighborhood and spoke Hokkien. Fifteen subjects (79%) were born in Singapore or Malaysia (together the country of Malaya when they were born), and the rest were born in China or Cambodia. They were largely Hokkien speaking (63%), and the others spoke Hakka, Cantonese, Teochew, or Hainanese; English and Mandarin were second languages for several. Despite the variety of Chinese dialects, subjects often used a mix of Mandarin and Hokkien during the interviews. Most were illiterate, and only four subjects (21%) had more than 2 years of education. Nine subjects (47%) were on Public Assistance, and thus very poor. The others (53%) were better off, usually owning their housing unit or living in units provided by their children; they had modest financial resources. All subjects reported having health problems, ranging from minor aches and pains to major conditions (stroke, bypass surgery, etc.). All recognized the importance of getting medical attention in an emergency and keeping their appointments with healthcare providers. Twelve subjects (63%) were ambulatory, four (21%) were semi-ambulatory, and three (16%) were nonambulatory (in wheelchair, use crutches, or require assistance to move).

Physical and social isolation

Two types of isolation were assessed, physical isolation (living alone) and social isolation (lack of social ties). Physical isolation was measured by the amount of time each subject had lived alone. On average, the subjects had lived alone 10.7 years (median 5.5, mode 5). The range was large; two subjects had lived solo for more than 20 years, and one for just 3 months. As the interviews continued, three people said they illegally sublet their apartments to a roommate, but had so little contact with the person, it was equivalent to living alone. All in all, the majority of subjects were very familiar with issues of solo-dwelling.

Social isolation was measured by how much contact subjects had with family and friends. Eleven subjects (58%) did not have children, and two others (10%) stated they were not on good terms with their children. This leaves just six subjects (32%) of the sample who had good relationships with their children. Regarding friendships, nine subjects (47%) said

they had few current friends and were unwilling to meet new ones. Eight (42%) said they had active friendship ties or would be willing to meet new friends.

Themes

The analysis produced eight overarching themes about isolation, coping strategies, and healthcare access.

1. Living alone in Singapore occurs by circumstance for some older people, and by choice for others.

The largest proportion of subjects lived alone due to circumstance. Twelve of the 19 respondents (63%) were forced to live alone because they outlived their family networks, never had children, or were estranged from their children. Unexpectedly, most subjects forced to live alone (10 of 12) said they now prefer it. For example, Subject 126 said that living alone is "not my choice. It's not by choice, [but] I think I'll be happier, I can do what I like….I have the freedom to do what I want." Others echoed this, saying they never wanted to live alone, but later discovered that being non-accountable to others and having independence is a welcome consequence. Living alone is a difficult prospect for Singaporean elderly, given their society's low public and private support services, but they grow accustomed to it over time.

For people who chose living alone (37%), two subgroups exist: those who were offered a home with others (children, relatives, etc.) but declined, and those predisposed to live alone and shun social contact. As an example of the first subgroup, subject 110 is age 76, relatively well-off, has four children whom she contacts regularly and who have asked her many times to live with them. Despite this, she maintains her independence: "I won't trouble anyone…So I don't go to any children, I have no intention of staying with them." She went so far as to say that she would sooner move into an old-folks (nursing) home than live with her children. Like her, three other subjects had equally good relationships with their relatives, but independence was more important than having daily company and assistance. Even questions about declining health did little to sway this group's opinions. For example, a wheelchair-bound amputee (subject 113) still insists on maintaining his independence despite his son's willingness to look after him.

The second subgroup made a conscious decision to live alone. Typically, they started living alone in early or mid-adulthood, and continued this into later life. They are reclusive, and often display antisocial attitudes during the interviews; they had typically lived alone for more than 10 years. For example, subject 111 has lived alone for more than 20 years and cherishes his isolation. The turning point in his life was his parents' deaths in early life. He summed up his life philosophy as: "You don't know what will come during the later part of your life. Some of them got stroke. Some of them got cancer. Some of them died of accidents, and these kind of things already calculated [figured out] long long ago when I was a child." He seems to have decided that the best way to avoid emotional loss is to withdraw from meaningful relationships completely. Similarly, subject 107's character prevented her from developing social ties. Admitting she was shy, she explained that it was a major stumbling block to finding a husband or expanding her social circle: "And then last time I was shy. So we just work and work….So there was no need to you know". When asked about her friends, she mentioned a few neighbors she knows in passing, and no one friend in particular to whom she is close. Several other subjects with similar predispositions had lived alone for more than 10 years, accounting for their continued social isolation.

2. Older people who live alone develop skills to cope with physical and social isolation.

Throughout the interviews, subjects repeatedly demonstrated that they developed specific skills that allow them to live alone effectively. Subject 110, an ex-social worker advised, "*Learn* how to live by yourself [emphasis original]." To her it is plainly obvious that there are specific skills that are needed to live alone, whether this is simply learning to pass the time by watching her favorite TV shows, or other more demanding skills.

Two kinds of skills were observed: those that allow the elderly to access formal, institutionalized help, which we call structural access repertoires, and those that subjects have developed and practice on a daily basis, which we call individual access repertoires.

Structural access repertoires were often similar among the elderly living alone. At a minimum, all of them (in this sample) had access to social workers, who in turn gave them access to other forms of institutional help. In all three neighborhoods of the study, social workers visited the elderly at least once a fortnight and provided opportunities for healthcare, meals on wheels, befriending services, home help services, physiotherapy, and religious outreach. While assistance is offered by the social worker at the regular meetings, the elderly subjects were also able to approach the social workers whenever they saw fit, or even bypass them altogether. For instance, while waiting for the government to approve his Public Assistance application, subject 113 asked his church to provide him with financial aid: "They know I am staying alone [so the church gave me] $150."

Individual access repertoires were more personal and distinctive, helping people ease loneliness and achieve a sense of security. A common adaptation is to leave the front grille of the unit entrance locked, but have the door itself open. This allows people who walk along the corridor, such as neighbors, to look in and check on them, while also ensuring that unwanted visitors cannot enter. Subject 122 matter-of-factly explained how this simple measure ensures his safety. Interviewer: "How would people know if you fell down at home?", Subject: "My door is open." Subject 113 said this procedure saved his neighbor's life. Looking through his neighbor's grille one day, he noticed the man was unconscious on the floor and he called emergency services. This experience reinforced his own practice of keeping the door open. Several other subjects mentioned doing so, and still others had their grille locked and door open when the interview team arrived, presumably with the same intention.

Other forms of individual access repertoires relied on tailored strategies for assistance. Elderly who live alone solve the issue of not having someone around in an emergency by having people regularly check up on them. Subject 126 stated bluntly: "So I told my friend…you call me once a week. To make sure I'm alive." Subject 108 gave her house keys to a friend with strict instructions to visit once a week, both to alleviate loneliness and to have the friend to check on her.

Skills adapted to deal with emotional issues were also developed by the solo-dwelling elderly people. Two subjects, who have lived alone over 20 years, regularly feed stray cats on the void deck of their apartment blocks. Subject 111 described how he does it: "Some of them like to feed the cats during the night ah, so I got the neighbor lah, last time, so I just follow him, about midnight time lah. He keeps about 40 cats. Today it's still about 40 cats. Stray cats. Downstairs, so we used to chit chat. Then I like cats, I used to stroke the cats sometimes. So the habit formed already. Every night at about that hour, I walk around the block two or three times the cat will come and meet me, I will stroke the cat feed a bit of the biscuit and then I leave." Feeding the cats breaks up the monotony of his day and makes him feel less lonely. Subject 126 also feeds stray cats and feels they are better than humans: "I want to help the poor, but not this kind of poor I tell you. That's why I help the cats. They don't bite me, they don't this one, me [as

opposed to humans].” She uses the cats’ company as a replacement for the human interactions that have ‘bitten’ her over the years.

Finally, Subject 118 lost his wife three months ago. He promptly developed a simple individual repertoire—he learned to cook: “I am 75 years old…then, when my wife is around, I don’t need to cook. I wash[ed] at times…so now I have to learn. I will think…which ingredient needs to be cooked first, I will think on my own now. Very practical.” He also copes emotionally by frequenting red-light districts to find women to accompany him: “When I look for the younger ones, they don’t want to hold my hands, so I look for older women; they are better.”

Developing individual access repertoires is an important part of learning to live alone and look after oneself. For those who are newly alone, they find themselves developing essential skills quickly. Long-term solo-dwellers have developed diverse structural and individual access repertoires to aid their emotional wellbeing and security.

3. Solo-dwelling elderly in Singapore develop strategies to counter restrictive public housing rules.

Public housing rules in Singapore state that Public Assistance (PA) recipients aged 60+ who want to rent housing from the government must have a coresident (roommate). The housing office can allocate a roommate who meets the eligibility criteria even if s/he is a complete stranger. Rules also state that the housing office must be notified if the roommate dies or moves out. It is also illegal to sublet the apartment to anyone else. Still, many of the elderly in Kampong Arang and Telok Blangah lived alone (in one, two, and even three room flats; Table 1) despite the regulations. Two types of strategy were observed, one involving fake roommates, and the other involving informal subletting. (1) For the first strategy, one subject’s friend volunteered his daughter’s name for the co-resident (the daughter lives in Malaysia) “so I would have two names so the [government] could give [the apartment] to me” (subject 114). Another never notified the housing office of his roommate’s death and hoped that would not be detected as long as he paid the other person’s bills: Interviewer: “Did the HDB ask another person to stay with you?”, subject 113: “No. We didn’t owe them anything…so they won’t disturb you. If you owe them money then they will ask why you are staying alone.” There were fears of theft by roommates; subject 113 also said: “I don’t want to stay with any roommates, they may steal things.” Social workers mentioned that many who managed to stay alone were afraid they would not get along with new roommates. Not talking to each other and fighting with each other were very common. (2) For the second strategy, four of the 19 subjects (21%) sublet a room to strangers or ex-colleagues. Subject 103 related a typical arrangement: “Sometimes I will have friends or relatives who will stay here…they will give me a little money for food.” Subjects use their only resource (their home) to supplement the small monthly PA allowance. This demonstrates that elderly can develop strategies to dodge the law, by giving incorrect information or using their housing unit as a financial commodity. That they make use of the few resources left at their disposal is a testament to their adaptability.

4. Cultural and environmental factors contribute to the older Singaporeans’ social isolation

Singapore has modernized so swiftly, older people feel disconnected from their social milieu. They feel they do not belong. Features of the built environment also make it difficult to get around their neighborhood or go other places.

Regarding cultural isolation, (1) subjects used many outdated or very colloquial names for places (lexical lag). The terms are unknown to the majority of Singaporeans, and are not

in popular written histories. Instances include calling the Singapore General Hospital (a major care center) by a colloquial name "see bye bor", which literally translates to Sepoy (see bye) Hill (bor) in Hokkien. The term dates back to the site on which the hospital was built in 1882 on railway lines built by Sepoy laborers. Other archaic names of landmarks (such as "tie ba sha" and "xiao po") and money (chut gok ngun) occurred during the interviews, which are no longer in contemporary use. Such terms are commonplace for these elderly people, but it makes communicating in public settings a bewildering experience and it discourages them for going out. (2) Basic communication technology and skills are absent for some subjects. Four (21%) do not have a telephone, and three more (16%) do not know how to call emergency services with their phone. (3) Lack of education contributes to cultural isolation. One subject said his inability to speak English was a primary reason he could not adapt to modern society: "My three elder children Chinese education and can't find jobs easily, but thank goodness for two younger male children had English education…times have changed, I have to change my way of thinking and cannot be a stick in the mud" (subject 118). The others (79%) are illiterate, and unable to read street signs, newspapers, or store placards. They have become uninterested in local events and issues. At the periphery of the modern fast-paced society, they further isolate themselves to avoid unfamiliar and embarrassing situations.

Isolation is exacerbated by problems using public transportation and barriers in the built environment. (1) Study subjects do not want to go beyond their neighborhood to see friends or family. Some (21%) are unwilling to use the electric rail system (MRT), an integral part of Singapore's public transportation system. Others said they were afraid of getting lost away from the neighborhood. Subject 101 summarizes the feelings of reluctant rail users: "I used to take the MRT (rail) when I was working. But I don't know how to read the words. I roughly gauge my stops. Once I reached the interchange, I am not sure of how the route works, there are too many stairways and I don't understand the words. If it is a straight route, I am fine with it." He was comfortable taking the bus, because he could see and recognize where he was going. Although many MRT signs are multilingual, this does not aid the many illiterate elderly in Singapore. For many subjects, the bus system feels safer and less bewildering. (2) Features of the apartment block make it difficult to go out. One subject who had a stroke lives in an old block of flats, and its lift (elevator) does not stop on his floor. Going away from home was painful and dangerous when he negotiated the stairs on crutches. He was effectively homebound and went outside his house once a month. Others have benefited from recent upgrading in their building, or they avoid buildings which have not been upgraded. For example, subject 115 stated: "My elder son's place doesn't have lifts on every floor so I don't feel like going." (3) Public walkways are often uneven, with breaks or angled slabs or unexpected steps. Subjects have tripped and injured themselves in their neighborhood, often because they missed a step. Subject 114 said: "I went to buy durian I think. I bought two durian, I don't know what happened on the stairs, I slipped and couldn't walk. Two sisters brought me back upstairs". Although the built environment is improving in Singapore, many places are not easy for the elderly to traverse. (4) Subjects with disabilities do not ride the bus or trains, saying they are not disabled-friendly. They prefer to hail a cab, but one amputee cited the rising cost of taxi fares as a reason for not going beyond his neighborhood: "Now taxi fare increase…next month the bus also increases fare. I don't take bus…MRT also increase…I take the taxis because of my leg. Can't survive…" (subject 113).

5. Crime is not a factor that affects isolation of the solo-dwelling elderly in Singapore.

Eleven subjects (58%) said they lived in neighborhoods in which crime was present. Despite this, only one stated that she was afraid and had changed her lifestyle significantly to

avoid crime. The rest continued to go about their daily lives, taking small precautions such as not carrying too much money or not staying out past midnight. One subject once challenged thieves to rob him, wryly stating that he had nothing of value worth stealing anyway.

6. All of the solo-dwelling elderly said they are lonely or depressed, and many said they live on a day-to-day basis.

Every subject said s/he was lonely, or depressed, or previously depressed. Two subjects broke down and cried while talking about their lives, and the interviews were stopped. Even the most well-adjusted admitted being lonely. An ex-social worker (subject 110) said: "I think if you are living by yourself, it is a lonely life. Number one it is a lonely life. You can't run away from it. Sometimes, you must know how to occupy your time." At least three subjects were severely depressed, based on social workers' comments. It is significant that all who live alone experience loneliness and depression, even when their isolation is a choice or an adapted preference.

The majority of subjects (63.1%) reported that they live on a day-to-day basis. Managing one day at a time, without thought of the future, was poignantly put by subject 101: "If [money] is not enough then we will have to scrimp and save a bit…if there's another bowl, we will eat another bowl." Many elderly felt that there was nothing to look forward to, and lack of planning reflected their lack of hope for a better quality of life. There was a slow sense of resignation among the solo-dwellers. Some referred to it as "reaching expiry" or "wait[ing] for tomorrow," while others were blunt about death: "There is no hope already… so now we can only sit and wait for death" (Subject 101).

7. Elderly people living alone are well taken care of medically, and they have regular doctor appointments that are subsidized or paid in full by the government.

Every subject was a regular user of the health system, both public and private services. All were comfortable having medical appointments (social workers often helped do this), and only two (10%) were irregular about obtaining medications. They were not afraid to see their healthcare practitioners, and Subject 111 spoke for many: "Not afraid, it's good for you." Almost all subjects had been to the doctor within the past year and scheduled regular appointments for checkups. The Public Assistance subjects receive free healthcare, and one subject aged 75 even obtained medication for erectile dysfunction from his physician. The non-welfare subjects noted some barriers to healthcare. Financial reasons were most commonly stated. Subject 108 said she preferred her private practitioner because she felt comfortable with him all these years, but costs were a big problem. Another stated that language barriers were a problem: "They know English….I don't know anything. I can't communicate" (Subject 103). One person mentioned that waiting times at clinics were a hassle, but could be overcome if needed. In sum, subjects made high use of healthcare services, and they had few complaints. While they lead isolated lives and limit their interactions with the rest of the world, they are able to access the healthcare system well.

8. Healthcare costs are the biggest contributor to financial instability.

Among the subjects on Public Assistance (47%), three said their CPF savings had been completely depleted by medical bills, and it was the main reason why they were on PA. All subjects not on Public Assistance (53%) worried that their savings would not last if illness occurred, and they would need to rely on someone else. Singapore's current system can cause people of modest means to spend down savings when illness occurs, pushing them into Public Assistance with its minimal monthly stipend (but full healthcare).

Discussion

This study's motivating questions were: Why do some Singaporean elderly live alone, and are they successful at living alone?

Reasons for social isolation

The analysis identified four factors that create and perpetuate social isolation for elderly Singaporeans who live alone: sociocultural, environmental, psychological dispositions, and physical limitations. The factors pertained regardless of gender, age, and financial resources.

First, sociocultural features of Singapore were the main factor for social isolation among the solo-dwelling elderly. Absent or weak family ties, few housing alternatives, and dislike for the cultural emphasis on family caregiving left the study subjects with only themselves to rely on. These included both the subjects isolated by circumstance and those who chose to live alone. Their isolation was exacerbated by the cultural disconnect between the social milieu they knew for much of their lives and the "new" Singapore. Uncomfortable communicating with people on the street, unable to read signs, and with little ability or finances for contemporary lifestyles, many feel they are outsiders in modern Singapore. The country's emphasis on education and on Standard Mandarin and English competence further alienates elderly ethnic Chinese from middle-aged and younger generations. Unable and unwilling to participate in mainstream society, they become increasingly isolated.

Second, environmental factors also keep the elderly at home. While Singapore does have safe and well maintained public spaces, such as parks, stadiums, and shopping areas, they are useless for the elderly when their near-home environment is challenging. Buildings and walkways with too many steps, absence of lifts, and difficulty using public transportation discourage them from venturing beyond their home or neighborhood, even to see family and friends.

Third, older people with certain psychological predispositions are more likely to live alone. This occurred especially among those who chose solo dwelling. They have had traumatic experiences, are extremely shy, or just prefer to withdraw from society. They often lived alone before growing old, then continue in their later years. Also among the solo-dwellers are some elderly with a strong sense of personal independence. They have confident personalities and want to lead separate lives from their children, in order to avoid intergenerational conflict or gain privacy.

Fourth, physical limitations are an important practical consideration for the elderly that limits time spent outside their homes. Subjects often mentioned physical limitations as a reason for staying home. Even semi-ambulatory subjects were reluctant to go beyond their homes and neighborhoods, restricting distances traveled to minimize risks of injury or fatigue. But an unexpected result also appeared. Despite physical disability, sometimes severe, the subjects want to live alone and cherish their independence. Their built environments are problems they decide to surmount lest they become completely homebound.

Successfully living alone

Older Singaporeans' ability to live alone stems from their own "agency" in surmounting societal barriers to achieving what they want. The skills they develop encompass a wide array of solutions to everyday and unique problems, allowing them to successfully age in physical and social isolation with minimal external intervention.

Two overt structural barriers exist for older people: Public Assistance eligibility requirements and public housing guidelines. Assistance and housing programs impose rules for living

arrangements, control finances, and dictate healthcare access. They are rigidly enforced by the government, and are difficult to bypass. Besides these barriers, scarcity of personal resources—such as few personal savings, lack of social networks, poor physical or mental health, little or no education, and speaking only dialects—also challenge individuals living alone. Taken together, overt structural barriers and individual constraints are formidable problems to circumvent or surmount in order to survive and manage daily life on one's own.

Tactical repertoires

There are two types of tactical repertoires for managing, and all solo-dwellers use both to some extent. Structural access repertoires involve getting institutional help from social workers, the healthcare system, and outside financial help. Individual access repertoires involve personal adaptations to stay safe, make meals, get laundry done in a tiny space, and the like. Subjects proved themselves capable of developing complex structural and individual tactics, and changing them as needed. For instance, many circumvented HDB policies by keeping officials in the dark about their solo living arrangement, or illegally subletting their unit to supplement meager Public Assistance allowances. They were just as resourceful in developing individual access repertoires. From keeping grilles locked but doors open, to learning how to cook, and dealing with emotional issues, the repertoires show that subjects are highly adaptable and able to cope with isolation. Structural and individual repertoires are powerful tools and should be acknowledged as resourceful adaptations to preserve their lifestyle.

Not only are solo-dwellers able to adapt, but they adapt so successfully that they no longer want to live with others even if the opportunity arises. Study subjects recognized consciously their success in living alone, and spoke of it with pride. This self-knowledge emboldens them to continue to want to live alone despite many difficulties. Results suggest that most, or all, will continue to fight for their independence despite health and safety concerns.

Routinized isolation

Besides tactical repertoires, elderly individuals who live alone for a long time have become used to isolation, loneliness, and depression. Daily routines performed alone and personal autonomy are so much a part of their experience that it has become normal. To propose a small change in the routine, such as getting up an hour later, would be disruptive for them. Moving out and living with someone else would be a terrible shock. Elderly who live alone find comfort and security in their routines. Control over these routines is the only stable thing they have in their hyperactive world-oriented society. This helps explain their resistance to meeting new people, trying new forms of transportation, and going somewhere outside their neighborhood.

Socially isolated but still connected

One of the seeming contradictions in the study is many subjects whose isolation is characterized by independence, antisocial behavior, and depression, juxtaposed with their ability to access healthcare and other services. They have regular outpatient visits and are compliant with medication and physiotherapy recommendations. They request needed services and help from social workers. It is as if these elderly stand on the threshold between their apartment and the rest of the world, with one foot firmly planted in the apartment for independence and security, while the other foot takes them outside for valued

formal services. They have distinctive savvy for controlling their interactions with the outside world, keeping them to a minimum but efficiently getting what they need.

This combination of "disconnected but connected" is a distinct contrast to the wholesale disconnection of the US solo-dwellers studied by Klinenberg. The Singapore solution is remarkable, given the elderly solo-dwellers complete lack of fit to their contemporary society.

Conclusion

For an elderly person in Singapore, living alone is not an easy circumstance. This study has found sociocultural and personal factors that cause and perpetuate their physical and social isolation. Solo-dwellers develop new skills to combat loneliness and get needed services. This requires energy and imagination, and focus on managing today without thought of tomorrow. Although all study subjects had adapted successfully, their future prospects are mostly bleak. Physical illness, deep depression, or ambulation problems are on the horizon for many. It will break their daily routines and force swift new adaptations.

As Singapore's population grows older, the numbers of elderly who want to live alone or are forced to live alone will rise. Exodus of children who live and work overseas, low fertility (more aging persons will have no children), and children who cannot afford parental expenses or take time for care, are all contributing factors. Indeed, intergenerational conflict may also play an increased role in elderly parents wanting to live alone, and children being more accommodating to agree. In a society that champions family ties and filial eldercare, the elderly who live alone are out of step with promoted social values. They are at the social periphery, watched over only by social service agencies and scarcely recognized by the government. The group is very disadvantaged for social opportunities and public esteem, and they rely on their own inventiveness to manage.

It would be more realistic for the government to acknowledge the diversity of living arrangements of older people in Singapore, and provide better buttresses for solo-dwellers. While public policy is needed to address some of these issues, it is not enough to prescribe policy for the elderly. Policy considerations should be planned in consultation with elderly persons, so they are empowered to change their own environment.

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