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The Prevalence of Loneliness Among U.S. Chinese Older Adults

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Abstract

Objective: Loneliness is an important indicator of well-being. However, we have limited understanding of loneliness in minority aging populations. This study aims to identify the prevalence of loneliness among U.S. Chinese older adults.

Method: Data were drawn from the PINE study, a population-based study of 3,159 U.S. Chinese older adults in the Greater Chicago area.

Results: Our findings indicated that the prevalence of loneliness was 26.2%. Older adults with older age, female gender, and living alone reported higher prevalence of loneliness. Older adults with worsened health status, poorer quality of life, and negative health changes over the past year were also more likely to experience loneliness.

Discussion: Loneliness is common among U.S. Chinese older adults in the Greater Chicago area. Future longitudinal studies are needed to improve the understanding of risk factors and outcomes associated with loneliness in Chinese older adults.

Keywords

population studies; older adults; psychological distress

Introduction

Loneliness is an important health indicator of psychological and social well-being. Manifested by intense feelings of emptiness, abandonment, and for-lornness, the insufficient quality or quantity of an individual's network of social relationships is closely linked to the cause of loneliness (Peplau & Perlman, 1982). The evolutionary perspective suggests that humans naturally perceive loneliness as an aversively condition to increase inclusive fitness through enhancing social connections (McGuire & Clifford, 2000). In particular, older adults may be more vulnerable to loneliness due to the increased risk of multiple losses, health-related problems in aging, and lowered resilience to transitions in late life

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(Donaldson & Watson, 1996; Ryan & Patterson, 1987). The chronic feeling of loneliness has serious consequences on the health of older adults. Studies show that loneliness predicts greater physical, mental, cognitive health decline (Luanaigh & Lawlor, 2008; Ryan, 1998; Stek, Vinkers, & Gussekloo, 2005), lowered self-esteem, fear, and anxiety (Cacioppo et al., 2006). More importantly, loneliness has been associated with increases in mortality and suicidal ideation (Chen, Hicks, & While, 2014; Ryan, 1998; Stravynski & Boyer, 2001).

There is a growing body of literature that began to address loneliness in the Chinese population. To date, most of the studies investigated loneliness among Chinese older adults in Mainland China. Depending on the population settings and methodology, the prevalence of loneliness varies across studies. A study drawn from the China National Survey indicated that the prevalence of loneliness among Chinese older adults was 15.6% in 1992 and 29.6% in 2002 (K. Yang & Victor, 2008). Among rural older adults, 50.8% of them reported some level of loneliness and 40.7% reported a moderate level of loneliness (Lin & Guo, 2007). Notably, among those Chinese older adults who lived alone from the “empty nest family,” the prevalence of moderate loneliness was 56.3% (Wu et al., 2009). In aggregate, demographic factors as marital status, gender, age, educational level, economic level, living arrangement, health status, and social support were associated with loneliness (Chen et al., 2014).

Existing evidence indicates that immigrant older adults may be even more vulnerable to loneliness, compared with their counterparts in the country of origin (Victor, Burholt, & Martin, 2012). Immigration often brings about tremendous lifetime change socially, economically, and environmentally. Older adults’ social relationships and social networks may be corrupted during the course of immigration (Dong, Chang, Wong, & Simon, 2012). A recent qualitative study calls for the attention on the high prevalence of loneliness among Chinese older adults living in the United States (Dong et al., 2012).

Chinese community is the oldest and largest Asian American subgroup in the United States with the population of 4 million (U.S. Census Bureau, 2010). In total, 15.4% of Chinese immigrants in the United States are aged 65 or older. Chinese traditional culture may have particular implications on the experience of loneliness among older adults. The Chinese family-oriented cultural belief suggests family is the most important social support resource for Chinese older adults, and subsequently older adults may be vulnerable to loneliness if desired family support is not available (Dong, Chang, Wong, Wong, Skarupski, & Simon, 2011). Children’s obligation in providing filial care to older parents in Chinese culture may further indicate older adults’ dependent roles, both emotionally and physically (Ho, 1994). Moreover, saving face, an important traditional Confucian concept to avoid embarrassment and negative interaction with others, may indicate the Chinese older adults would be more reluctant to connect with social network to share about their negative emotions and life difficulties (Kwong & Kwan, 2004). These traditional cultural ideals may be further modified on the foreign soil and hence provide fertile ground for loneliness (Park & Chesla, 2007; Smith & Hung, 2012). Therefore, this study aimed to describe the overall prevalence of loneliness, identify the prevalence of specific symptoms, and examine loneliness prevalence by various socio-demographic characteristics among Chinese older adults in the United States.

Method

Population and Settings

The Population Study of Chinese Elderly in Chicago (PINE) is a community-engaged, population-based epidemiological study of U.S. Chinese older adults aged 60 and over in the Greater Chicago area. Briefly, the purpose of the PINE study is to collect a community-level data of U.S. Chinese older adults to examine the key cultural determinants of health and well-being. The project was initiated by a synergistic community-academic collaboration among Rush Institute for Healthy Aging, Northwestern University, and many community-based social services agencies and organizations throughout the Greater Chicago area.

To ensure study relevance and increase community participation, the PINE study implemented extensive culturally and linguistically appropriate community recruitment strategies strictly guided by community-based participatory research (CBPR) approach (Dong, Chang, Wong, & Simon, 2011a). With more than 20 social services agencies, community centers, health advocacy agencies, faith-based organizations, senior apartments, and social clubs serving as the basis of study recruitment sites, eligible participants were approached through routine social services and outreach efforts serving Chinese Americans families in the Chicago city and suburban areas (Dong, Chang, Wong, & Simon, 2011b). All participants were consented and interviewed by trained bicultural research assistants in English or Chinese dialects, including Mandarin, Cantonese, Toishaness, and Teochow, according to their preference. Out of 3,542 eligible participants who were approached, 3,159 agreed to participate in the study, yielding a response rate of 91.9%.

Based on the available census data drawn from U.S. Census 2010 and a random block census project conducted in the Chinese community in Chicago, the PINE study is representative of the Chinese aging population in the Greater Chicago area with respect to key demographic attributes including age, sex, income, education, number of children, and country of origin. The study was approved by the institutional review boards of the Rush University Medical Center.

Measures

Socio-demographics.—We collected demographic information including age (years), sex, education (years), and income (in US$), marital status, number of children, and current living arrangement. Immigration data relating to participants' years in the United States and years residing in the current community were collected. Participants who have lived in the United States for less than 1 year were recorded as 0 years of living in the United States. Education was assessed by asking participants the years of highest educational level completed, ranging from 0 to 17 years or more. Living arrangement was assessed by asking participants how many people live in their household besides themselves. The annual income variable referred to the annual personal income from all sources such as wages, salaries, social security or retirement benefits, help from relatives, rent from property, and so forth. Annual income was categorized into four groups: (a) US$0 to US$4,999 per year; (b) US$5,000 to US$9,000 per year; (c) US$10,000 to US$14,999 per year; (d) more than US$15,000 per year.

Overall health status, quality of life, and health changes over last year.— Overall health status was measured by "in general, how would you rate your health" on a 4-point scale (1 = poor, 2 = fair, 3 = good, 4 = very good). Quality of life was assessed by asking "in general, how would you rate your quality of life" on a 4-point scale ranging from (1 = poor, 2 = fair, 3 = good, 4 = very good). Health change in the last year was measured by "compared to 1 year ago, how would you rate your health now?" on a 5-point scale (1 = much worse; 2 = somewhat worse; 3 = about the same; 4 = somewhat better; 5 = much better than 1 year ago) and were categorized into three groups: (a) improved health, (b) same health, (c) worsened health.

Loneliness scale.—Loneliness was assessed using a validated three-question survey derived from the Revised–University of California at Los Angeles Loneliness (R-UCLA) Scale. Questions were asked regarding feelings of lacking companionship, left out of life, and feelings of isolated from others. The three scale-question measures loneliness by examining the three-level interaction with intimate others, social others, and broader environment. Responses were recorded on a 3-point scale including hardly ever, sometimes, and often. The alpha coefficient of reliability for this three-question survey has been shown to be .72, with internal consistency of .82, indicating good reliability and internal validity in the general population (Hughs, Waite, & Hawkley, 2004). The scale demonstrated satisfactory reliability in our study sample of Chinese older adults, with the standardized alpha of .78 (E. Chang, Beck, Simon, & Dong, 2014).

Content validity of the scale was assessed by bilingual and bicultural researchers and experts. The original English versions of the instruments were first translated into Chinese by a bilingual research team. Due to the vast linguistic diversity of our study population, the Chinese version was then back translated by bilingual and bicultural investigators fluent in dialects including Mandarin and Cantonese to confirm consistency in the meaning of the Chinese version with the original English version. Both written scripts (traditional and simplified Chinese characters) were subsequently examined. A group of community stakeholders led by an experienced bilingual and bicultural geriatrician then went over the wording of the Chinese versions to ascertain that the meanings of the items in Chinese conveyed the meanings to Chinese older adults and to ensure validity.

Data Analysis

Descriptive analyses were used to describe the general demographic characteristics of the sample population. Symptoms of loneliness were tested as a dichotomous measure ("often" or "sometimes" vs. "never"). Chi-square tests were used to evaluate the socio-demographic differences between participants who screened positive to any of the loneliness symptoms and those who reported none. Statistical analysis was conducted using SAS, Version 9.2 (SAS Institute, Inc., Cary, NC).

Results

Characteristics of the Study Sample

In total, 3,159 participants were enrolled in the PINE study. Due to missing data, 3,129 were included in the final analyses. The participants had a mean age of 72.8 (*SD* = 8.3). About 58.9% were women and 71.3% were married. The participants had a mean education level of 8.7 (*SD* = 5.1), and 85.1% with an annual income below US$10,000. More than half of the older adults live in the community for less than 10 years. Characteristics of the study participants by any symptoms of loneliness were reported in Table 1. In total, 26.2% of the participants reported any loneliness. Those reported with any loneliness tended to be women (64.0%), with income less than US$10,000 (87.2%), and living alone or with one person (66.3%). With respect to self-reported health, participants with loneliness self-perceived fair or poor health status (70.8%), with fair or poor quality of life (56.4%), and with worsened health over the last year (53.6%). Significant differences were observed between participants who reported any loneliness and none in demographic characteristics including gender, marital status, living arrangement, years in the United States, years in the community, number of children, education level, overall health status, quality of life, and health change over the last year.

Prevalence of Loneliness

We examined the prevalence of loneliness by symptoms. The overall prevalence of any loneliness symptom was 26.2%. With respect to specific symptoms, 20.5% of the participants reported lack of companionship (20.5%), 18.7% reported left out of life, and 6.2% of the participants felt isolated (Table 2). As age increases, a larger proportion of older adults reported loneliness symptoms. A total of 23.1% of older adults aged 60 to 69, 26.6% of older adults aged 70 to 79, and 31.5% of older adults aged 80 and over have reported any level of loneliness symptoms (Table 3). Overall, women (28.4%) were more likely to report loneliness symptom in any levels compared with men (23%). With respect to specific symptoms, women were more likely to report lack of companionship than men (22.7% vs. 17.4%) and more likely to report feelings of left out of life (20.0% vs. 16.8%).

When examining the prevalence of loneliness by marital status, married participants (20.2%) were less likely to report any symptoms of loneliness compared with those who were widowed (41.1%), divorced (41.1%), or separated (40.0%; Table 4). Similar trends were observed with respect to specific loneliness symptoms. The prevalence of lack of companionship was 13.9% among married participants, compared with 37.3% among widowed participants, 32.7% among separated participants, and 34.3% among divorced participants. Living arrangement of older adults also influenced their likelihood of reporting loneliness symptoms. Among all four groups, older adults who lived alone were more likely to report feelings of lack of companionship (36.5%), feeling of left out of life (24.9%), and feeling isolated from others (11.9%). The more persons study participants lived with, the less likely they reported any symptoms of loneliness until it reached the point of living with more than three persons. The reported prevalence of any loneliness symptom is 40.2% among living alone group; 33.4% among living with one person group; 15.7% among living with two to three persons group; and 17.9% among living with four or more group.

Specifically, the older adults who lived with more than four persons were more likely to feel lack of companionship (15.2% vs. 14.5%) and left out of life (16.6% vs. 16.0%), than the participants who lived with two or three persons.

Participants were more likely to report loneliness symptoms if their overall health status was poor (Table 5). Overall, loneliness symptoms were reported by 16.8% of the older adults who perceived their health status as very good, 19.8% of the older adults who perceive their health status as good, 24.7% of the older adults who perceive their health status as fair, and 43.8% of older adults who perceive their health status as poor. Similar trends were reported when examined by quality of life. Loneliness symptoms were reported by 18.7% of the older adults who self-reported with good quality of life, 29% of the older adults with fair quality of life, and 45.8% of the older adults with poor quality of life. With respect to self-perceived health change since last year, participants who perceived their health remain the same since last year were less likely to report loneliness symptoms (20.6%) compared with those with self-perceived improved health (23.7%) or worsened health (33.1%).

Discussion

As the first population-based study that reported the experience of loneliness among U.S. Chinese older adults, this study indicates that loneliness is prevalent among Chinese aging population in Greater Chicago area. Lack of companionship was the most common symptom of loneliness. Participants were more likely to report any loneliness symptoms if they were female, with an older age, with poorer self-perceived health status and quality of life, and with worsened health change over last year.

A prior study of older Chinese immigrants in Britain reported the prevalence of loneliness was 20% (Victor et al., 2012). In our report, approximately 26% of older adults in the U.S. Chinese community reported loneliness symptoms. This prevalence is relatively higher compared with the loneliness prevalence among the general U.S. aging population (16.9%; Theeke, 2010), and comparable with that of Chinese older adults in Mainland China (K. Yang & Victor, 2008). The higher prevalence of loneliness among our study participants as compared with the general older population may be viewed in light of immigrant older adults' social isolation compounded by cultural and linguistic barriers.

Our findings also suggest that the prevalence of loneliness differed by symptoms. Lacking companionship is the most commonly reported loneliness symptom among U.S. Chinese older adults. This may be partially explained by the important role of traditional family-oriented culture. Chinese older adults may tend to expect more support and interaction from their family and less from their friends (Poulin, Deng, Ingersoll, Witt, & Swain, 2012). A systematic review of older adults in Mainland China also suggests that family as the most important source of social support among Chinese older adults while friends were inconsistent cross studies (Chen et al., 2014). In addition, feelings of lack of companionship are associated with the risk of elder mistreatment and elder self-neglect (Dong, Beck, & Simon, 2009; Dong, Simon, Gorbien, Percak, & Golden, 2007; Mosqueda & Dong, 2011), and further correlate with physical and social well-being of Chinese older adults (Dong, Chang, Wong, Wong, & Simon, 2011; Dong, Simon, Beck, & Evans, 2010).

Although “feeling isolated” was the least commonly endorsed item, it may be a result of the characteristics of our sample in communitydwelling population. Multiple dimensions of loneliness in different communities of Chinese older adults warrant more critical scholarly attention. Future investigation is needed to reach out to the most isolated population in the communities.

Consistent with prior findings, our study suggests that participants with an older age were more likely to report loneliness (Y. Y. Yang & Lee, 2012; X. Zhang, Yeung, Fung, & Lang, 2011). Whereas older age is associated with increased risk of losing significant others, partners, close friends, the feelings of loneliness may thus by intensified. With respect to gender, despite previous research in China suggesting that loneliness is more prevalence among men (S. H. Chang & Yang, 1999; Zeng et al., 2013), women in our study were more likely to experience loneliness. However, it is also imperative to consider gender in light of other factors including widowhood or living alone, when examining loneliness in late life. Women tend to have a longer life expectation and therefore more likely to be widowed, live alone, and experiencing the feeling of loss. Future studies are needed to further examine the associations between gender and symptoms of loneliness in diverse Chinese populations.

Older adults who reported living alone have the highest loneliness prevalence, suggesting that physically being alone may contribute to the feeling of loneliness. However, living with three or more persons seems to be the threshold of reporting loneliness. As previous study suggests, loneliness may not only include aloneness, but rather a subjective mood, desolation, empty feeling, and the perception of being isolated from others (Huang, Wang, & Chen, 2010). Other factors such as family-oriented relationships and social relations may help build up the resilience to living alone (Lou & Ng, 2012). However, our finding with living arrangement should be interpreted with the consideration of age, gender, income, and rural and urban disparities (Dong & Simon, 2010). The association between living arrangement and loneliness warrants more attention in future research.

Furthermore, our study suggests that there is a significant association between the number of children and loneliness among Chinese older adults. A prior study based on the Chinese National Healthy Longevity data reported the number of children was an important indicator for the psychological wellbeing of Chinese older adults (Liu, Dupre, Gu, Mair, & Chen, 2012). In particular, evidence has shown that childless was significantly associated with loneliness after controlling for age, gender, and education (W. Zhang & Liu, 2007). However, our finding should be interpreted in the context of marital status and gender. Future investigation is needed to provide a better understanding on the risk and protective factors of loneliness.

With respect to health status, our findings indicate that almost half of the participants who perceived their health status or quality of life as poor reported loneliness symptoms. Moreover, older adults were more likely to report loneliness if their health had gotten worse over the past year. This notable impact of physical health on loneliness was illustrated by previous research in global Chinese populations (Chen et al., 2014). Poorer quality of life may function as a stressor associated with psychological stress, including the symptoms of loneliness.

The findings of this study should be interpreted with limitations. First, this study was representative of Chinese older adults in the Greater Chicago area; however, its findings should not be generalized to other Chinese populations in the United States or in Asia. Future studies are needed to explore loneliness of diverse global Chinese populations. Moreover, due to an in-person interview design of the PINE study and the taboo perception towards psychological distress in traditional Chinese culture, it is likely that the experience of loneliness may be underreported. In addition, this study only collected quantitative data, which may be limited in cultural perceptions of loneliness among minority aging populations. Its cross-sectional design is limited in establishing causal associations. Future studies applying mixed research strategies and longitudinal design are needed to better understand the experience of loneliness and its adverse health outcomes among Chinese older adults.

Nonetheless, this study has wide implications for researchers, health professionals, social workers, and policy makers. First, this study points to the need of improving investigations on loneliness in Chinese older adults. A CBPR approach to overcome cultural barriers pertaining to psychological and social well-being research in older adults is a fitting model to further investigate these important health indicators among Chinese aging population. Special efforts should be given into developing culturally sensitive instruments for detecting loneliness. In addition, it is important to raise community awareness on loneliness. Community gatekeepers and social service providers should design culturally and linguistically appropriate prevention and intervention toward the needs of these vulnerable subgroups of older adults. In addition, in light of the traditional family values, interventions to alleviate loneliness among U.S. Chinese older adults could focus on creating the opportunities to foster older adults' contacts and interactions with family members, for example, to increase social gathering events and nurture intergenerational communications. Moreover, with the improvement of the new technology, the concepts of companionship can be expanded through a number of innovative strategies, for instance, online video chatting with their family members in China.

Conclusion

In sum, this study indicates that loneliness is common among Chinese older adults in the United States. Our findings call for further investigations on several subgroups of Chinese older adults who reported higher prevalence of loneliness. Future longitudinal studies are needed to improve our understanding of risk factors and outcomes associated with loneliness in global Chinese aging populations.

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Table 1.

Characteristics of Study Participants by Any Loneliness (n = 3,129).

	Any loneliness (n = 820)	No loneliness (n = 2,309)	χ^2	*df*	*p* value
Age groups, *n* (%)					
60–64	153 (18.7)	525 (22.7)			
65–69	151 (18.4)	488 (21.1)			
70–74	155 (18.9)	448 (19.4)			
75–79	152 (18.5)	400 (17.3)			
80–84	114 (13.9)	270 (11.7)			
≥85	95 (11.6)	178 (7.7)	20.6	5	.001
Sex, *n* (%)					
Male	295 (36.0)	988 (42.8)			
Female	525 (64.0)	1,321 (57.2)	11.6	1	<.001
Education level, *n* (%)					
0 year	62 (7.6)	126 (5.5)			
1–6 years	274 (33.7)	899 (39.0)			
7–12 years	279 (34.3)	821 (35.6)			
13–16 years	173 (21.3)	399 (17.3)			
≥17 years	25 (3.1)	62 (2.7)	14.9	4	<.01
Income, *n* (%)					
US$0-US$4,999	262 (32.3)	771 (33.6)			
US$5,000-US$9,999	446 (54.9)	1,167 (50.9)			
US$10,000-US$14,999	74 (9.1)	233 (10.2)			
US$15,000-US$19,999	12 (1.5)	55 (2.4)			
≥US$20,000	18 (2.2)	68 (3.0)	6.4	4	.17
Marital status, *n* (%)					
Married	447 (55.0)	1,769 (77.1)			
Separated	22 (2.7)	33 (1.4)			
Divorced	30 (3.7)	43 (1.9)			
Widowed	314 (38.6)	450 (19.6)	143.3	3	<.001
Number of children (%)					
0	45 (5.5)	83 (3.6)			
1–2	345 (42.1)	918 (39.8)			
≥3	429 (52.4)	1,305 (56.6)	8.0	2	.02
Living arrangement, *n* (%)					
Living alone	270 (32.9)	401 (17.4)			
Living with 1 person	274 (33.4)	1,027 (44.5)			
2–3	129 (15.7)	348 (15.1)			
≥4	147 (17.9)	532 (23.1)	93.6	3	<.001
Years in the United States, *n* (%)					
0–10	219 (26.8)	615 (26.7)			
11–20	211 (25.8)	748 (32.5)			

	Any loneliness (*n* = 820)	No loneliness (*n* = 2,309)	χ^2	*df*	*p* value
21–30	203 (24.9)	559 (24.3)			
>30	184 (22.5)	378 (16.4)	21.2	3	<.001
Years in the community, *n* (%)					
0–10	476 (58.3)	1,317 (57.2)			
11–20	187 (22.9)	550 (23.9)			
21–30	80 (9.8)	302 (13.1)			
>30	74 (9.1)	134 (5.9)	15.6	3	<.01
Overall health status, *n* (%)					
Very good	23 (2.8)	114 (4.9)			
Good	216 (26.3)	877 (38.0)			
Fair	325 (39.6)	989 (42.8)			
Poor	256 (31.2)	329 (14.3)	124.4	3	<.001
Quality of life, *n* (%)					
Very good	40 (4.9)	174 (7.5)			
Good	318 (38.8)	1,061 (46.0)			
Fair	418 (51.0)	1,021 (44.2)			
Poor	44 (5.4)	52 (2.3)	38.4	3	<.001
Health change over the last year, *n* (%)					
Improved	65 (7.9)	209 (9.1)			
Same	315 (38.5)	1,214 (52.6)			
Worsened	439 (53.6)	886 (38.4)	2	58.6	<.001

Table 2.

Presence of Types of Loneliness.

	n	%
Lack of companionship		
Hardly ever	2,492	79.5
Sometimes	445	14.2
Often	198	6.3
Left out of life		
Hardly ever	2,549	81.3
Sometimes	397	12.7
Often	188	6.0
Isolated from others		
Hardly ever	2,938	93.8
Sometimes	142	4.5
Often	51	1.6

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Table 3.

Prevalence of Loneliness by Age and Sex.

	60–69 years (*n* = 1,319)		70–79 years (*n* = 1,155)		≥80 years (*n* = 661)	
	n	**%**	***n***	**%**	***n***	**%**
Any loneliness	305	23.1	307	26.6	208	31.5
Lack of companionship	223	16.9	239	20.7	181	27.4
Left out of life	233	17.7	208	18.0	144	21.8
Isolated from others	55	4.2	65	5.6	73	11.0

	Men (*n* = 1,283)		Women (*n* = 1,846)	
	n	**%**	***n***	**%**
Any loneliness	295	23.0	525	28.4
Lack of companionship	223	17.4	420	22.7
Left out of life	216	16.8	369	20.0
Isolated from others	79	6.2	114	6.2

Note. Percentage represents the prevalence of loneliness within each of the subgroup.

Table 4.

Prevalence of Loneliness by Marital Status and Living Arrangement.

	Married (*n* = 2,220)		Divorced (*n* = 73)		Separated (*n* = 55)		Widowed (*n* = 765)	
	n	**%**	***n***	**%**	***n***	**%**	***n***	**%**
Any loneliness	447	20.2	30	41.1	22	40.0	314	41.1
Lack of companionship	308	13.9	25	34.3	18	32.7	285	37.3
Left out of life	343	15.5	22	30.1	16	2.8	201	26.3
Isolated from others	92	4.2	6	8.2	5	9.1	87	11.4

	Living alone (*n* = 672)		With one person (*n* = 1,306)		With two to three persons (*n* = 477)		With four or more persons (*n* = 679)	
	n	**%**	***n***	**%**	***n***	**%**	***n***	**%**
Any loneliness	270	40.2	274	33.4	129	15.7	147	17.9
Lack of companionship	245	36.5	193	21.4	102	14.5	103	15.2
Left out of life	167	24.9	209	20.1	96	16.0	113	16.6
Isolated from others	80	11.9	61	4.7	27	5.7	25	3.7

Note. Percentage represents the prevalence of loneliness within each of the subgroup.

Table 5.

Prevalence of Loneliness by Health Status.

	Very good (*n* = 137)		Good (*n* = 1,093)		Fair (*n* = 1,314)		Poor (*n* = 585)	
Overall Health Status	***n***	**%**	***n***	**%**	***n***	**%**	***n***	**%**
Any loneliness	23	16.8	216	19.8	325	24.7	256	43.8
Lack of companionship	16	11.7	173	15.8	251	19.1	203	34.7
Left out of life	12	8.8	139	12.7	236	18.0	198	33.8
Isolated from others	4	2.9	36	3.3	82	6.2	71	12.1

	Very good (*n* = 214)		Good (*n* = 1,379)		Fair (*n* = 1,439)		Poor (*n* = 96)	
Quality of life	***n***	**%**	***n***	**%**	***n***	**%**	***n***	**%**
Any loneliness	40	18.7	318	23.1	418	29.0	44	45.8
Lack of companionship	31	14.5	252	18.3	324	22.5	36	37.5
Left out of life	18	8.4	209	15.2	326	22.7	32	33.3
Isolated from others	6	2.8	68	4.9	101	7.0	18	18.75

	Improved (*n* = 274)		Same (*n* = 1,529)		Worsened (*n* = 1,325)	
Health change over the last year	***n***	**%**	***n***	**%**	***n***	**%**
Any loneliness	65	23.7	315	20.6	439	33.1
Lack of companionship	48	17.5	244	16.0	350	26.4
Left out of life	41	15.0	206	13.7	338	25.5
Isolated from others	10	3.6	64	4.2	119	9.0

Note. Percentage represents the prevalence of loneliness within each of the subgroup.