

Emotional well-being and social support in social housing neighbourhoods in China

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Abstract

Objective: This study investigated the effect of the number of close friends (within and outside of social housing neighbourhoods) on the emotional well-being of men and women in social housing neighbourhoods in China.

Methods: Data (n = 535) were collected in 13 social housing neighbourhoods in Guangzhou from September to December 2013 using the random sample method. The t-test, chi-square test, and linear regression analysis were used to analyse the factors influencing residents' emotional well-being.

Results: Having a greater number of close friends living within the social housing neighbourhood had a significantly positive association with the respondents' emotional well-being (regression coefficient = 0.473). The number of close friends living in nearby neighbourhoods was only positively related to women's emotional well-being (coefficient = 0.433).

Conclusions: These results highlight the importance of friendship for residents' emotional well-being. Especially for women, friendship outside the social housing neighbourhood is essential for good mental health. This conclusion is based on analysis of cross-sectional data, and reflects the directionality of social associations. The mental health of the poor warrants greater attention in China.

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Introduction

Social housing neighbourhoods, which have recently been constructed in increasing numbers in China, provide housing for many low-income urban individuals. The term social housing refers to housing provided by the government for low-income urban families. Social housing includes low-rent and affordable housing. In China, commercial/commodity housing is the primary type of urban housing, while social housing accounts for only a small proportion of total urban housing. Compared with commercial housing, most social housing construction is of substandard quality. Social housing is often located in the suburbs, with inadequate access to convenient transportation. However, the cost of social housing is relatively low. Accordingly, the income of residents in social housing is also relatively low, leading to a large-scale settlement of poor families. Social housing plays a major role in improving the living conditions of low-income households in China.¹ However, there are many social problems in social housing neighbourhoods. These neighbourhoods lack adequate public service facilities^{2,3} and the unemployment rate of the residents is high. Additionally, local newspapers commonly report the unfortunate event of resident suicide.

Emotional well-being refers to the emotional quality of an individual's everyday experience.⁴ Emotional well-being is closely related to mental health and mainly composed of personal emotional indicators,

such as joy, anxiety, sadness, and anger.⁴⁻⁶ Previous studies concerning emotional well-being in Western countries have indicated that friendship and individual emotional well-being are strongly associated.⁷⁻⁹ Sheikh found that quantity and quality of social support significantly mediated the association between childhood adversity and adult psychological distress.⁸ This author also found that the occurrence of childhood traumatic experiences more negatively affected an adult's mental health, while childhood socioeconomic status was an indicator of adults' mental health and well-being.¹⁰ Stafford and colleagues found that social contact among local friends protected the more financially deprived group against common mental disorders.¹¹ Fone and colleagues showed that elevated levels of neighbourhood social cohesion modified an adverse association between change in individual mental health and neighbourhood deprivation.¹² Further, Aneshensel and Frerichs showed that social support could directly and positively affect current depression, and indirectly effect subsequent depression.¹³ To date, only a few studies have examined the relationship between residents' emotional well-being and friendship in China. Especially for disadvantaged people who live in social housing neighbourhoods, friendship may be essential to their emotional well-being.

In China, social housing neighbourhoods are vulnerable to stigmatization. Some residents living in nearby

neighbourhoods may refuse to interact with residents living in social housing neighbourhoods.¹⁴ Because China's current social housing is mainly provided for low-income urban families, large-scale poverty-stricken populations have amassed in social housing neighbourhoods. Important questions posed by these circumstances include the following: whether the homogeneity of the neighbourhood's low-income population leads to the analogous emotional well-being of its residents; whether social interaction within the neighbourhood has a significant effect on the residents' emotional well-being; and which of the social interactions, both within and outside of the neighbourhood, has a greater effect on the residents' emotional well-being? However, few studies have compared the effect of the number of close friends within and outside social housing neighbourhoods on residents' emotional well-being.

Previous studies have shown that friendship has a positive effect on people's emotional well-being.¹⁵⁻¹⁸ Therefore, our first hypothesis is that the more close friends an individual has, the better will be his or her emotional well-being. Many studies have shown that women's emotional well-being is more susceptible to external influences than men's.^{19,20} Therefore, our second hypothesis is that the greater the number of close friends women have, the more positively this affects their emotional well-being compared with men. Additionally, help obtained from friends in the same neighbourhood is usually timelier than help obtained from friends in surrounding neighbourhoods. Therefore, our third hypothesis is that the number of close friends in one's neighbourhood will have a greater effect on one's emotional well-being than the number of close friends one has in surrounding neighbourhoods.

In this study, we analysed the effect of friendship on residents' mental health, and provided social workers in the social

housing neighbourhood with methods of conducting mental health interventions through social support and interaction. This study enriches our understanding of social housing residents' emotional well-being in China by evaluating the effect of social support.

Materials & methods

Data

Many social housing neighbourhoods have been built in Guangzhou, southern China. Specifically, as of 2014, the municipal government had built 19,560 homes as part of social housing neighbourhoods. The data used in this study were collected from 13 such neighbourhoods in Guangzhou, from September to December 2013, using the random sample method (see Figure 1). We distributed questionnaires inside the neighbourhoods. The questionnaires were completed face-to-face with investigators and interviewees. All respondents volunteered to complete the anonymous questionnaire. We obtained the participants' verbal, informed consent. Questions were related to residents' demographic characteristics, socioeconomic status, work experiences, public service facilities evaluation, social support, and self-rated health. Of the 582 questionnaires completed, after missing values were removed, 535 were included in the analyses (valid response rate = 91.92%). This study did not require ethical approval. Verbal consent was obtained from all participants before data collection of the questionnaire and all participants were anonymous.

Measures and statistical analyses

Linear regression analysis was used to analyse the factors influencing residents' emotional well-being. The dependent variable was participants' self-rated emotional

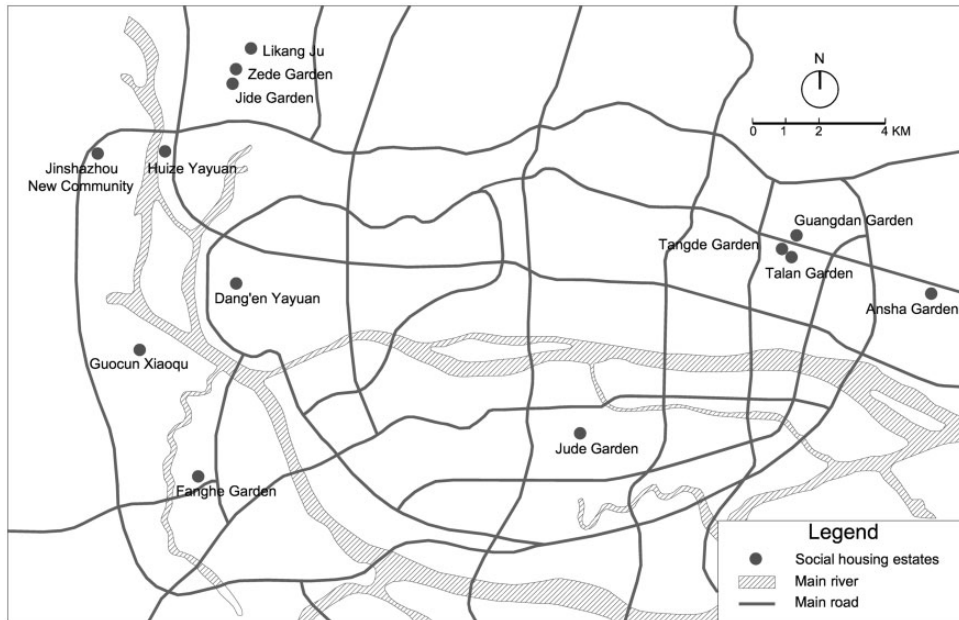


Figure 1. Location of sampled social housing neighbourhoods in Guangzhou.

well-being, which comprised six items as follows: boredom, depression, anxiety, stress, loneliness, and fear. These six items, which are associated with negative emotions, were extracted from the Self-rated Health Measurement Scale, a modified version of the Medical Outcomes Study 36-Item Short Form Health Survey. We asked respondents to rate emotions on a five-point Likert scale ranging from 1 (extremely) to 5 (very slightly or not at all). Scores were added to obtain an emotional well-being score (range = 6–30; scale reliability coefficient = 0.896). Higher scores indicated more positive emotional well-being.

In the regression analysis models, independent variables included the number of close friends living in the same neighbourhood, ranging from 1 (no close friends) to 5 (more than 20 close friends), and the number of close friends living in nearby neighbourhoods, ranging from 1 (no close friends) to 5 (more than 50 close friends). In

the analysis, these independent variables were regarded as continuous. Additionally, control variables included sex (reference: male), age (continuous variable), marital status (reference: single, divorced, or widowed), household income per month (continuous variable), education (reference: primary school and below), employment (reference: unemployed), length of residence (continuous variable), perceived housing quality (continuous variable), and perceived neighbourhood security (continuous variable). Stata 13.1 (StataCorp LLC, College Station, TX, USA) was used to perform the data analysis. Results were considered significant at the 10% level ($p < 0.1$).

Results

The respondents were 203 men and 332 women. Table 1 shows the sample statistics of the dependent and independent variables, stratified by sex. Men appeared to show better emotional well-being

Table 1. Descriptive statistics for men and women living in social housing neighbourhoods.

	Men (N = 203)	Women (N = 332)	t	χ^2	P
Dependent variable					
Mental health (range = 6–30)	24.50 ± 4.10	23.93 ± 4.12	1.55		0.121
Independent variables					
Number of close friends living in one's own social housing neighbourhood (range = 1–5)	3.60 ± 1.27	3.66 ± 1.19	0.513		0.609
The number of close friends living in nearby neighbourhoods (range = 1–5)	2.32 ± 1.27	2.29 ± 1.22	0.237		0.813
Control variables					
Age (years)	34.44 ± 11.80	30.40 ± 11.92	3.830		<0.001
Marital status				9.696	0.002
Married	151 (74.38%)	283 (85.24%)			
Single, divorced, or widowed	52 (25.62%)	49 (14.76%)			
Household income per month (Chinese Yuan)				8.992	0.343
<500	13 (6.40%)	10 (3.01%)			
500–999	18 (8.87%)	19 (5.72%)			
1000–1999	40 (19.70%)	56 (16.87%)			
2000–2999	28 (13.79%)	52 (15.66%)			
3000–3999	27 (13.30%)	55 (16.57%)			
4000–4999	27 (13.30%)	42 (12.65%)			
5000–5999	17 (8.37%)	39 (11.75%)			
6000–6999	12 (5.91%)	26 (7.83%)			
≥7000	21 (10.34%)	33 (9.94%)			
Education				10.664	0.014
Primary school and below	29 (14.29%)	49 (14.76%)			
Junior high school	87 (42.86%)	98 (29.52%)			
Senior high school	68 (33.50%)	142 (42.77%)			
College and above	19 (9.36%)	43 (12.95%)			
Employment status				2.678	0.102
Unemployed	143 (70.44%)	255 (76.81%)			
Employed	60 (29.56%)	77 (23.19%)			
Length of residence (years)	5.23 ± 4.46	4.99 ± 4.15	0.633		0.527
Perceived housing quality (range = 1–5)	3.35 ± 0.98	3.19 ± 1.02	1.807		0.071
Perceived neighbourhood security (range = 1–5)	3.38 ± 0.94	3.34 ± 0.85	0.472		0.637

Data are presented as proportions or mean ± standard deviation.

than did women, but this difference was not significant.

Table 2 shows the linear regression results of the emotional well-being of residents living in social housing neighbourhoods. Model 1 is the regression results of

all respondents. The independent variables of the number of close friends living in one's own social housing neighbourhood (coefficient = 0.473, $P < 0.01$) and the number of close friends living in nearby neighbourhoods (coefficient = 0.292, $P < 0.05$) had a

Table 2. Linear regression results of social housing neighbourhood residents' mental health.

	Model 1: all respondents		Model 2: men		Model 3: women	
	Coefficient	(SE)	Coefficient	(SE)	Coefficient	(SE)
Independent variables						
The number of close friends living in the social housing neighbourhood	0.473***	(0.140)	0.391*	(0.234)	0.552***	(0.182)
The number of close friends living in nearby neighbourhoods	0.292**	(0.143)	0.083	(0.240)	0.433**	(0.181)
Control variables						
Female (reference: male)	-0.549	(0.372)				
Age	0.030	(0.018)	0.064**	(0.029)	0.014	(0.024)
Marital status (reference: single, divorced, or widowed)	1.156**	(0.464)	1.020	(0.701)	1.223*	(0.634)
Household income per month (Chinese Yuan)	0.118	(0.081)	0.008	(0.142)	0.199**	(0.100)
Education (reference: primary school and below)						
Junior high school	0.408	(0.550)	0.210	(0.829)	0.512	(0.747)
Senior high school	0.751	(0.546)	0.765	(0.952)	0.777	(0.701)
College	-0.192	(0.788)	0.317	(1.356)	-0.465	(1.004)
Employment (reference: unemployed)	-0.084	(0.435)	0.842	(0.730)	-0.393	(0.555)
Length of residence	-0.069	(0.043)	-0.052	(0.071)	-0.092*	(0.054)
Perceived housing quality	0.623***	(0.201)	1.000***	(0.355)	0.498**	(0.243)
Perceived neighbourhood security	0.763***	(0.238)	0.192	(0.378)	1.078***	(0.299)
Constant	14.984***	(1.408)	15.528***	(2.192)	13.332***	(1.725)
n	535		203		332	
R ²	0.164		0.145		0.199	
Adjusted R ²	0.143		0.091		0.169	
Log likelihood	-1468.054		-558.210		-903.972	

SE = standard error. *P < 0.10, **P < 0.05, ***P < 0.01.

significant positive effect on residents' emotional well-being. Marital status, perceived housing quality, and perceived neighbourhood security were significant control variables as follows. Married residents' emotional well-being was significantly better than single/divorced/widowed residents' emotional well-being (coefficient = 1.156, P < 0.05). Respondents living in high-quality housing had better emotional well-being than did those living in poor-quality homes (coefficient = 0.623, P < 0.01). Finally, participants

who perceived that they lived in a safe (vs. unsafe) neighbourhood reported superior emotional well-being (coefficient = 0.763, P < 0.01).

Model 2 shows the linear regression results of men's emotional well-being. The number of close friends living in one's own social neighbourhood was significantly positively associated with men's emotional well-being (coefficient = 0.391, P < 0.10). Age was significantly positively related to men's emotional well-being

(coefficient = 0.064, $P < 0.05$). Perceived housing quality was also positively related to men's emotional well-being (coefficient = 1.000, $P < 0.01$).

Model 3 shows the linear regression results of women's emotional well-being. The number of close friends living in one's own social housing neighbourhood (coefficient = 0.552, $P < 0.01$) and the number of close friends living in nearby neighbourhoods (coefficient = 0.433, $P < 0.05$) were significantly positively associated with women's emotional well-being. Married women's emotional well-being was significantly better than that of single/divorced/widowed women (coefficient = 1.223, $P < 0.10$). Increased household income per month was significantly positively related to women's emotional well-being (coefficient = 0.199, $P < 0.05$). Finally, perceived housing quality (coefficient = 0.498, $P < 0.05$) and perceived neighbourhood security (coefficient = 1.078, $P < 0.01$) were significantly positively associated with women's emotional well-being (Table 2).

Discussion

More close friends in the same and nearby neighbourhood may indicate that residents find it easier to obtain social support. In this study, we showed that the number of close friends had a positive effect on individuals' emotional well-being, thus supporting hypothesis 1. This conclusion is consistent with Sheikh's findings.^{8,10} We further found that the influence of friendship on the emotional well-being of the each sex was different. Women's emotional well-being was more affected by the number of close friends compared with men. Further, the number of close friends outside one's social housing neighbourhood had a significant effect on women, but not men, thus supporting hypothesis 2. Finally, we found that the number of close friends living in one's own social housing neighbourhood

was positively related to men's emotional well-being, while the number of close friends living in nearby neighbourhoods had no significant effect on men's emotional well-being. Therefore, hypothesis 3 was partially validated. This finding indicates that, for men living in social housing neighbourhoods, social support from the same neighbourhood has a greater effect on their emotional well-being than does support obtained from the surrounding neighbourhoods.

As of 2009, there were an estimated 173 million Chinese adults with mental illness; 158 million of whom had never received any type of professional help.²¹ Many previous studies have shown a significant and positive correlation between poor emotional well-being and neighbourhood-level income deprivation.²²⁻²⁴ Therefore, the emotional well-being of residents living in social housing neighbourhoods is not as good as residents of other, more financially-secure neighbourhoods (e.g., commercial housing neighbourhoods). However, only a few studies have actually investigated the emotional well-being of residents living in social housing neighbourhoods.²⁵ Most of the residents of social housing neighbourhoods have low incomes, and when they are suffering from mental illness, they are less likely to seek professional mental health care than residents of more affluent neighbourhoods.

Most social housing neighbourhoods in China are considered poor enclaves with inadequate public service facilities, which is different from those in Western countries.²⁶ Residents living in social housing neighbourhoods may experience discrimination from residents living in nearby neighbourhoods (e.g., commercial housing neighbourhoods), which can negatively affect their social interactions. Further, the number of close friends living in nearby neighbourhoods may reflect their acceptance by other social groups.

Consequently, men may care less than women about acceptance by other social groups living in social housing neighbourhoods.

In line with previous studies,^{27–30} we also found that housing quality and neighbourhood security had a significant effect on residents' emotional well-being. In China, construction of social housing relies entirely on the local government's financial investment. The supply goal of social housing set by the Chinese Central Government is too large for the local government to achieve. Therefore, to achieve the construction goals in a brief period, some local governments focus on quantity instead of quality. Moreover, after completion of social housing construction, the follow-up investments (e.g., property management) may be insufficient. This can lead to social problems (e.g., high crime rate, lack of public service facilities, and ineffective neighbourhood management) once low-income residents move in. Perhaps women are more vulnerable to these unsafe living environments.

Our results have some important policy implications. First, although the Chinese government has recently heavily invested in promoting social housing construction, its investment in social services is insufficient. We suggest that there is an urgent need to increase social services to help residents suffering from poor emotional well-being in social housing neighbourhoods. Second, providing more employment opportunities for residents living in social housing neighbourhoods is necessary. Third, discrimination against social housing neighbourhoods' residents needs to be reduced and social support and interaction between diverse neighbourhoods need to be increased. Fourth, large-scale construction of social housing leads to a large population of poor people in one neighbourhood, which may create more social problems (e.g., an increase in the numbers of those experiencing mental

illness). Therefore, social housing construction should be more diversified, to reduce the proportion of social housing in neighbourhoods and to mix residents of diverse social strata. Consequently, this could avoid substantial numbers of poor people living together.

Despite these critical implications, this study has some limitations. First, the number of close friends a person has may be related to the location and number of inhabitants of each social housing neighbourhood. Some social housing neighbourhoods are in suburban areas with little access to public transportation. Residents of such neighbourhoods may find acquiring social support more difficult than for those in urban centres. This could undermine the effect of social support from surrounding social housing neighbourhoods on residents' emotional well-being. Second, social support is also related to residents' physical health. Social support for disabled residents might be limited in social housing neighbourhoods. Third, although this study showed that the number of close friends had a significant effect on respondents' emotional well-being, the quality of the friendship is also an important factor affecting emotional well-being. However, because we did not collect indicators of the quality of friendships, we cannot address this concept in this study. Fourth, the findings in this study were based on cross-sectional data. We did not study changes in the emotional well-being of residents in social housing neighbourhoods. Subsequent investigations should further clarify the relationship between social support and emotional well-being.

Conclusion

This study shows that the number of close friends within and outside of social housing neighbourhoods distinctly affects the emotional well-being of men and women.

For all residents, the number of close friends living in one's own social housing neighbourhood is significantly positively associated with his or her emotional well-being. However, the number of close friends living in nearby neighbourhoods is positively related only to women's emotional well-being. Furthermore, neighbourhood characteristics, such as housing quality and neighbourhood security, are also principal factors influencing social housing residents' emotional well-being in China.

Declaration of conflicting interest

The authors declare that there is no conflict of interest.

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