

The Relationship Between Social Isolation and Psychological Well-Being Among Older Adults in the Community

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Abstract: *Objective:* To investigate the psychological well-being of the elderly in Baoding City, Hebei Province, and analyze its influencing factors, with a focus on exploring the relationship between social isolation and psychological well-being. This study aims to provide a reference for effective interventions that promote the physical and mental health of elderly individuals in the community. *Methods:* A total of 265 elderly individuals from six communities in Baoding City, Hebei Province were surveyed between November 2023 and March 2024 using the general information questionnaire, the Social Isolation Scale for the Elderly, and the Comprehensive Happiness Questionnaire. *Results:* The total score of the Social Isolation Scale for the elderly in the community was (14.15 ± 3.73) points, indicating a moderate level of social isolation. The average score of P50 on the Psychological Well-being Scale was 4.88, suggesting that the psychological well-being of the elderly in the community was moderate to high. Multivariate regression analysis showed that the level of social isolation significantly influenced the psychological well-being of the elderly ($P < 0.05$), with social isolation negatively correlated with psychological well-being. *Conclusion:* Healthcare professionals should pay attention to the social isolation of elderly individuals in the community and develop targeted interventions to improve their psychological well-being and quality of life.

Keywords: Elderly in the community; Social isolation; Psychological well-being

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1. Introduction

As of the end of 2022, China had 280.04 million elderly individuals aged 60 and above, accounting for 19.8% of the total population. Population aging has become one of the most important social trends of the 21st century ^[1]. The

mental health care of the elderly has thus become a crucial public health issue, attracting widespread attention from medical professionals.

A key characteristic of mental health in older adults is well-being^[2]. Psychological well-being refers to a relatively stable cognitive and emotional experience that individuals develop by comprehensively evaluating their quality of life based on self-determined standards^[3]. Well-being shapes the overall direction of mental health, making it essential to assess the current state of psychological well-being in older adults in the community to improve their mental health and daily quality of life.

Due to declining physical function and increasing psychological challenges, elderly individuals often experience reduced social contact and interaction, making them a high-risk group for social isolation. Social isolation further contributes to health problems^[4]. Social isolation is defined as a lack of contact and interaction with others, which can result in a shrinking or absent social network, leading to negative psychological and physical outcomes^[5].

Chen Hongyan^[6] suggested that social participation plays a moderating and mediating role in the psychological well-being of the elderly. Similarly, Wang Jing^[7] indicated that low to moderate levels of social participation are risk factors for social isolation. Previous studies have explored the relationships between social isolation, social participation, and psychological well-being, but have not thoroughly examined the correlation between social isolation and psychological well-being. Therefore, this study investigates the current psychological well-being of elderly individuals in the community and explores the relationship between social isolation and psychological well-being to provide new insights for promoting self-worth and mental health among older adults.

2. Materials and methods

2.1. Survey respondents

A total of 265 elderly individuals from six communities in Lianchi District and Jingxiu District, Baoding City, Hebei Province, were selected between November 2023 and March 2024 using the convenience sampling method.

Inclusion criteria: (1) Age ≥ 60 years; (2) Adequate comprehension and communication skills; (3) Resided in the community for ≥ 1 year; (4) Provided informed consent, voluntarily participated, and signed informed consent.

Exclusion criteria: (1) Presence of auditory, visual, or language impairments; (2) Neurological dysfunction or uncontrollable diseases.

This study was approved by the Ethics Committee of the Affiliated Hospital of Hebei University (Ethics No.: HDFYLL-KY-2024-101).

The study collected 14 general condition items regarding the elderly, along with 2 dimensions from the Social Isolation Scale for the Elderly and 6 dimensions from the Comprehensive Happiness Questionnaire. Based on Kendall's criteria^[8], the sample size was calculated as 10–20 times the number of items, resulting in a total sample size of 220–440. Accounting for a 20% sample loss, the final sample size was determined to be 176–352.

2.2. Research methodology

2.2.1. General information questionnaire

The questionnaire, designed by the researchers, contained 14 items, including gender, age, ethnicity, education level, occupation type, marital status, chronic illness, surgical history, use of mobility aid, children's situation, living situation, monthly income, hobbies, and attitudes toward the community elderly care environment.

2.2.2. Social Isolation Scale for the Elderly

The Social Isolation Scale for the Elderly (SIS) was developed by Nicholson ^[9] in 2019 to assess the level of social isolation among the elderly over the past month from both subjective and objective perspectives. The scale includes six items divided into two dimensions: sociality and belonging. The first three items measure sociality with friends, family, and others from an objective perspective, while the last three items assess the individual's subjective perception of social isolation. Each item is scored on a Likert scale ranging from 0 to 4, where 0 = strongly disagree, 1 = somewhat disagree, 2 = neutral, 3 = somewhat agree, and 4 = strongly agree. The 5th item is reverse-scored. The total score ranges from 0 to 24, with higher scores indicating a lower risk of social isolation. The Cronbach's α coefficient for the scale in this study was 0.72.

2.2.3. Multiple Happiness Questionnaire

The Multiple Happiness Questionnaire (MHQ) was developed by Miao Yuanjiang in 2012, integrating measurements of subjective and psychological well-being. It consists of 33 items across six dimensions: life vitality, health concern, self-worth, friendly relationships, altruistic behavior, and personality growth. Responses are measured on a Likert scale of 1 to 7, where 1 = obviously disagree, 2 = disagree, 3 = somewhat disagree, 4 = neutral, 5 = somewhat agree, 6 = agree, and 7 = obviously agree. Items 31 and 33 in the personality growth dimension are reverse-scored. The total score ranges from 33 to 231 points, with higher scores indicating greater psychological well-being. The Cronbach's α coefficient for the total scale was 0.95.

2.3. Data collection methods

Before the survey, investigators were trained to select eligible elderly participants from the community. The survey was conducted anonymously with the informed consent of the participants and their families, emphasizing confidentiality and the exclusive use of the data for academic purposes. During the survey, the purpose and instructions for completing the questionnaire were explained to the participants. Any questions were answered, and professional terms were minimized. Data were collected through one-on-one interviews, with oral assistance provided for elderly individuals with writing or literacy difficulties to ensure accuracy. A total of 300 questionnaires were distributed, and after review, 265 valid questionnaires were retrieved. Two individuals cross-checked the data to eliminate inconsistencies in positive and negative responses, resulting in an effective response rate of 88.3%.

2.4. Statistical analysis

Data entry was conducted using EpiData, with cross-checking by two individuals. SPSS 27.0 software was used for statistical analysis. For normally distributed metrics, the data were described as mean \pm standard deviation, while the median was used for non-normally distributed data. Spearman correlation analysis was applied to examine the relationship between social isolation and psychological well-being among the elderly. Statistical significance was set at $P < 0.05$, with a test level of $\alpha=0.05$.

3. Results

3.1. General information of the respondents

General information of the 265 community elders is shown in **Table 1**.

Table 1. General information of the respondents ($n = 265$)

Variable	Category	Number of people (n)	Percentage (%)
Gender	Male	136	51.3
	Female	129	48.7
Age (years)	60–69	148	55.8
	70–79	82	30.9
	≥ 80	35	13.2
Ethnicity	Han	240	90.6
	Minority	25	9.4
Educational level	Elementary school or below	122	46
	Junior high school	95	35.8
	High school and technical secondary school	35	13.2
	Technical secondary school or above	13	4.9
Type of occupation	Mental	60	22.6
	Physical	147	55.5
	Mixed	58	21.9
Marital status	Married	226	85.3
	Unmarried/single	39	14.7
Chronic disease status	None	62	23.4
	1	103	38.9
	2	59	22.3
	≥ 3	41	15.5
Surgery history	None	182	68.7
	Present	83	31.3
Use of mobility aid	Yes	77	29.1
	No	188	70.9
Number of children	None	16	6
	≥ 1	249	94
Living situation	Living alone	31	11.7
	Living with spouse	158	59.6
	Living with children	65	24.5
	Other	11	4.2
Monthly income (CNY)	< 3,000	154	58.1
	3,000–5,000	74	27.9
	> 5,000	37	14
Hobbies	None	75	28.3
	1	69	26
	≥ 2	121	45.7
Attitudes toward elderly care	Dissatisfied	11	4.2
	General	132	49.8
	Satisfied	122	46

3.2. Social isolation of older people in the community

The scores from the social isolation scale followed a normal distribution. The overall social isolation scale score was (14.15 ± 3.73) , with a connection dimension score of (6.05 ± 2.38) and a belonging dimension score of (8.10 ± 1.85) . The highest score on the Social Isolation Scale was 23, and the lowest was 10. A cut-off score of 14 was used, where a score of ≤ 14 indicated social isolation. Among the participants, 136 had scores below 14, resulting in a social isolation incidence of 51.3%. See **Table 2**.

Table 2. Analysis of social isolation scores of elderly people in the community

Variable	Number of entries	Dimension score (points, mean \pm SD)	Item average (points, mean \pm SD)
Connectivity	3	6.05 ± 2.38	2.02 ± 0.79
Belonging	3	8.10 ± 1.85	2.70 ± 0.62
Overall score	6	2.15 ± 3.73	2.36 ± 0.62

3.3. Current status of psychological well-being of the elderly in the community

The psychological well-being scores did not follow a normal distribution, so the median descriptive analysis was used. The P50 score was 4.88 (on a 1–7 scale). The scores, from highest to lowest, were self-worth (5.60), friendly relationships (5.33), altruistic behavior (5.20), life vitality (4.83), personality growth (4.67), and health concern (4.60). The overall psychological well-being of the elderly in the community was moderate to high, as shown in **Table 3**.

Table 3. Analysis of psychological well-being scores of the elderly in the community

	P5	P50	P95	Minimum	Maximum
Life vitality	2.33	4.83	6.00	1.50	7.00
Health concerns	2.60	4.60	6.00	1.20	6.90
Self-worth	3.20	5.60	6.8	1.80	6.80
Friendly relations	2.00	5.33	7.00	1.00	7.00
Altruistic behavior	2.60	5.20	6.80	1.00	6.80
Personality growth	3.33	4.67	5.89	2.00	6.33
Overall score	3.32	4.88	6.12	2.00	6.79

3.4. Correlation analysis between social isolation and psychological well-being among the elderly in the community

Correlation analysis revealed that psychological well-being scores were positively correlated with social isolation scores (social connection and sense of belonging) ($r = 0.319$, $P < 0.001$), as shown in **Table 4**. Since a higher score on the Social Isolation Scale indicates a lower level of social isolation, social isolation was negatively correlated with psychological well-being.

Table 4. Correlation analysis between social isolation and psychological well-being scores among the elderly in the community ($r = 0.319$)

Variable	Connectivity	Sense of belonging	Social isolation	Psychological well-being
Connectivity	1.000	-	-	-
Sense of belonging	0.543**	1.000	-	-
Social isolation	0.907**	0.836**	1.000	-
Psychological well-being	0.232**	0.315**	0.319**	1.000

Note: * $P < 0.05$, ** $P < 0.001$

4. Discussion

4.1. The level of social isolation among the elderly in the community needs to be reduced

According to the survey in this study, the total score of the Social Isolation Scale for the elderly in the community was 14.15 ± 3.73 , indicating a moderate level of social isolation, which was slightly higher than the findings of Yan Rui^[10]. This may be due to the fact that some of the elderly participants lived alone, without spouses, or were widowed, lacking the companionship of their children or spouses, and thus had reduced communication with the outside world. Currently, between 25% and 62% of older adults report feeling lonely^[11]. Prolonged social isolation can lead to numerous harmful consequences, including a 29% increased risk of heart events and death from heart disease for those who are socially isolated or autistic. Therefore, it is necessary to address social isolation in the elderly and promote both their physical and mental health. This highlights the need for caregivers to focus on elderly individuals in the community who are at high risk of social isolation and work to improve their well-being.

4.2. The level of psychological well-being among the elderly in the community needs to be improved

The average score of the psychological well-being scale for the elderly in the community was 4.88, indicating a moderate to high level of well-being. While most elderly individuals were relatively content, some experienced lower psychological well-being due to factors such as age, illness, and social isolation. Li Yanling^[12] conducted a survey on the psychological well-being of 268 elderly individuals and found a similarly moderate to high level of well-being, consistent with the findings of this study. Among the dimensions of the psychological well-being scale, the highest score was in the self-worth dimension, which aligns with the results of Zheng Ting's survey of 494 elderly individuals^[13]. This suggests that the elderly not only prioritize material satisfaction but also place a strong emphasis on the realization of self-worth. The lowest score was in the health concern dimension, indicating a lack of attention to health status and the absence of healthy living habits. This may be because the majority of elderly participants in this study were relatively young (aged 60–69), with fewer having a history of surgery, leading to less concern about physical health. Declines in mental health, though often below the threshold for clinical diagnosis, pose significant risks to the health and quality of life of older adults. As such, caregivers should focus on improving the psychological well-being of the elderly by fostering interpersonal communication, such as organizing social events, encouraging family and friends to visit, and helping the elderly in the community experience a greater sense of purpose in life.

4.3. Psychological well-being of the elderly in the community is affected by the level of social isolation

4.3.1. The more severe the social isolation, the lower the psychological well-being

The study found that loneliness-related cognitive impairment is often considered a precursor to depression, so the negative impact of social isolation on psychological well-being must be considered when examining the relationship between social isolation and psychological well-being in elderly communities. Bai Yali ^[14] suggested that social participation plays a partial mediating role in the influence of the community environment on the psychological well-being of the elderly. Therefore, elderly individuals experiencing social isolation may have lower psychological well-being. Correlation analysis in this study showed that social isolation among the elderly in the community was positively correlated with psychological well-being scores. Since a higher score on the Social Isolation Scale indicates a lower level of isolation, social isolation was negatively correlated with psychological well-being. In other words, the more severe the social isolation, the less likely the elderly are to be psychologically content. Elderly individuals experiencing social isolation in the community are more likely to have low psychological well-being. It is suggested that caregivers should promptly address social isolation in the elderly, helping them build beneficial social lives and relationships. Support from neighbors, community leaders, and volunteers should genuinely benefit the elderly, particularly those living alone, reducing their sense of loneliness.

5. Conclusion

The level of social isolation among the elderly in the community needs to be reduced, and their psychological well-being improved, as social isolation is an important factor negatively affecting psychological well-being. Therefore, caregivers should focus on elderly individuals at risk of social isolation and implement targeted intervention programs, such as offering companionship and frequent communication. These efforts can improve the psychological well-being of the elderly and enhance their quality of life.

However, this study has certain limitations. First, it only quantifies the social isolation and psychological well-being of the elderly in the community, which may not fully reflect their actual situation. Second, the sample size is relatively small and limited to the community in Baoding City, which has better education and economic conditions. While the results may reflect the mental health status of elderly individuals in economically developed areas, they may not be representative of other cities in the country. Future research should expand the sample size and include qualitative studies to obtain more detailed information and further explore the relationship between social isolation and psychological well-being.

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