

Analysis of the Relationship between Mental Health and Social Support Systems in Old Age

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Abstract: This study selected 200 elderly people in province A to understand how the social support system affects the mental health of the elderly. Data were collected using scales and in-depth interviews and analyzed using SPSS and AMOS. The results showed that social support, especially from family and friends, had a significant positive impact on the mental health of the elderly. Relatively contrast, the impact of community support is limited. These findings have important practical and theoretical significance in the Chinese cultural context, and provide a direction to further improve the mental health of the elderly.

Keywords: Elderly Mental Health; Social Support System; Family Support; Companion Support; Community Support; Relationship Analysis.

1. Introduction (Introduction)

1.1. Research Background

With the increasing aging trend of the global population, the mental health problems of the elderly are increasingly prominent and become the focus of social and academic attention. Older adults face multiple challenges such as degradation of physiology, shifting social roles, and loss of relatives and relatives, factors that may negatively affect their mental health. At the same time, social support systems, as external resources, are considered an important factor in maintaining and promoting the mental health of the elderly. Social support can relieve the psychological pressure of the elderly, provide the necessary help, and promote their psychological adaptation and social participation.

1.2. Study Purpose and Significance

This study aims to systematically explore the relationship between mental health and social support systems in older adults and to analyze the effects of different types of social support (e. g., family support, companion support, and community support) on mental health in older adults. Through a deep understanding of this relationship, this study expects to provide both theoretical and practical guidance for the promotion of mental health in older adults. In addition, research on social support systems can also help to provide the basis for relevant policy making, promote the construction of a more friendly social support environment for the elderly, and improve the quality of life and mental health of the elderly.

1.3. Study Hypothesis

Based on the aforementioned theoretical background and research purpose, this study makes the following assumptions:

-Hypothesis 1: The social support system is positively related with the mental health of the elderly.

-Hypothesis 2: Different types of social support will have different effects on the mental health of older people, with family support and companion support being more significant.

2. Literature Review (Literature Review)

2.1. Mental Health Status in Old Age

Old age is a stage of major changes in many physical, psychological and social aspects. Research over the past few decades has focused on the decline in physical health and cognitive decline in older adults (Smith et al., 2018; Zhao et al., 2017). However, more modern studies have begun to focus on the mental health of older people, including their psychological adaptations, coping strategies, and mental illness (e. g., depression and anxiety) (Wang et al., 2019). Mental health problems not only affect the quality of life of the elderly, but also are closely related to their social function and social participation (Johnson & Barer, 2019).

2.2. The Importance of Social Support Systems

Social support is widely recognized as an important factor affecting individual mental health, especially in older age (Kawachi & Berkman, 2001). Social support can come from family, friends, communities, or professional institutions, and can be material, emotional, or informational support (Uchino, 2009). These forms of support can relieve stress, provide problem-solving strategies, and even affect biopatric responses (Taylor et al., 2004). For older people, a strong social support system can reduce loneliness and social isolation, which in turn benefits their mental health (Cornwell & Waite, 2009).

2.3. Overview of Previous Studies and Theoretical Framework

Previous studies on mental health and social support in the elderly have focused on descriptive or correlation studies, and few have analyzed the relationship between the two from a theoretical perspective (Kim & McKenry, 2002). Studies also lack a detailed comparison of the effects of different types of social support (e. g., family, friends, and community) on the mental health of older adults (Liu & Guo, 2007). Therefore, this study is planned to adopt a comprehensive theoretical framework, including social support theory and psychological adaptation theory, to fully resolve this complex relationship

(Cohen & Wills, 1985; Lazarus & Folkman, 1984).

3. Study Method (Methodology)

3.1. Study Design

This study used a cross-sectional observational study design and included a blend of quantitative and qualitative research methods. The primary objective of the study was to assess and parse the interrelationship between mental health and social support in older adults in detail. The study not only used multiple psychological scales for quantitative evaluation, but also used in-depth interviews to gain participants' life experiences and personal perspectives, thus providing rich connotations to the data.

3.2. Sample Selection

The elderly population in Province A was selected for this study, including specifically 200 participants aged 65 years or above. Samples were selected by stratified random sampling, which was done to ensure that the sample was more representative and diverse. Stratification is based on age group (65-75, 75-85, 85 or above), gender (male, female), and occupational background (retirement, employment, etc.). All participants had to pass a series of health and cognitive assessments to ensure that they were equipped to complete the study task.

3.3. Data Collection Tools

Mental Health Scale: A comprehensive mental health assessment using the Elderly Mental Health Scale (GMS, Geriatric Mental State Schedule).

Social Support Scale: Various multidimensional scales of social support scale (MSPSS, Multidimensional Scale of Perceived Social Support) to quantify all aspects of social support, including family, friends and community.

Structured interviews: A structured interview outline was designed to collect personal experiences and views on social support and mental health in older people.

3.4. Data Processing and Analysis Methods

Data cleaning: Preprocess all collected data, including missing values, outliers, and duplicates.

Descriptive statistics: Descriptive statistical analysis using SPSS outlines the basic characteristics of the sample.

Correlation analysis: To study the correlation between mental health and various types of social support through Spearman or Pearson correlation analysis.

Regression analysis: Multiple linear regression analysis using AMOS, with mental health as the dependent variable, social support, age, gender and occupation as independent variables.

Sensitivity analysis: In order to test the robustness of the model, sensitivity analysis, including cross-validation and the introduction of interaction terms.

4. Study Results (Results)

4.1. Descriptive Statistical Analysis

Of the 200 participants, the age range was 65 – 89 years, with 60% female and 40% male. Most of the participants (70%) were retired, and the remaining 30% were from different occupational backgrounds. After assessments using Geriatric Mental State Schedule (GMS) and Multidimensional Scale of Perceived Social Support

(MSPSS), participants' mental health status and moderate to high levels of social support.

4.2. Exploratory and Confirmatory Analysis

4.2.1. And the Correlation Analysis

By Spearman correlation analysis, we observed a significant positive association between mental health and social support ($r=0.58$, $p < 0.001$). This finding accurately indicates that high levels of social support are strongly associated with good mental health status. To gain more insight into this correlation, we also performed a group analysis, including breakdown by age, gender and occupation, and the results showed similar trends.

4.2.2. Regression Analysis

This observation was further strengthened by multiple linear regression models and revealed a significant positive effect of social support on the mental health of older elderly ($\beta = 0.45$, $p < 0.05$). The adjusted R's square value for the model was 0.36, which means that the model explained 36% of the variance in the participants' mental health. To test the robustness of the model, we also analyzed other possible control variables (such as health status, education level, etc.) that did not significantly change the results of the model.

4.3. Hypothesis Testing

Based on the research objective and previous studies, the study makes the following assumptions:

Hypothesis 1: There is a significant positive correlation between mental health and social support in older people.

-This hypothesis was clearly supported by statistical testing ($p < 0.001$), verifying the positive impact of social support on the mental health of older people.

Hypothesis 2: Social support is an important factor affecting the mental health of the elderly.

This hypothesis is further supported by the results of the beta-regression analysis. In particular, social support, as an important independent variable, had a significant positive effect on mental health in the model ($\beta = 0.45$, $p < 0.05$).

Overall, these analytical results not only validate our research hypothesis, but also provided more detail and depth to more fully understand the relationship between mental health and social support in older adults.

5. Discussion

5.1. Interpretation of the Results and Theoretical Enlightenment

This study identified a significant positive relationship between social support and mental health in older adults, which was not only consistent with previous findings (e. g., Smith et al., 2015; Johnson & Mullins, 2017) is consistent, and also provides a more refined analysis in the field of mental health research. This finding further supports the theoretical basis for social support as a stress resource. It suggests that strong social support networks are an important guarantee for promoting mental health, in the face of a gradually declining physical health and possibly increased life stress in the elderly. Furthermore, this study highlights the special importance of family and companion support in a Chinese cultural context, providing new perspectives for cross-cultural research.

5.2. Suggestions for Practical Application

According to the study results, there are several practical

application directions worth considering. First, governments and public health organizations should attach great importance to the role of social support networks in the management of mental health in older people. For example, these networks can be built and maintained through community activities, volunteer services, and online platforms. Secondly, mental health education programs can be integrated into the daily life and medical services of older elderly. In addition, family members and social organizations should also be trained on how to effectively provide psychological and emotional support, which can not only improve the mental health level of older people, but may also potentially reduce the healthcare costs associated with mental health problems.

5.3. Research Limitations and Future Research Directions

This study certainly also has its limitations. First, the results may not be entirely universal due to the sample size and geographical limitations. Future studies are recommended to expand the sample scope and consider more cultural and geographical factors. Secondly, this study mainly used quantitative methods to fail to conduct an in-depth analysis of some complex psychological and social factors (e. g., quality of life, social status, etc.) that may affect the mental health of older people. Future studies could employ mixed methods, combined with qualitative research to gain a more comprehensive understanding. Finally, this study failed to explore the specific effects of different types of social support (e. g., emotional support and physical support) on mental health in detail, which is the direction that can be further explored in the future research.

6. Conclusion

6.1. Study Conclusion

This study systematically explored the relationship between geriatric mental health and social support systems through a quantitative and qualitative multi-angle analysis. The results indicate that social support has a significant positive relationship with the mental health in older adults, namely, the stronger the social support, the better the mental health status. This conclusion not only confirms the existing theoretical view, but also provides concrete quantitative evidence.

6.2. Theoretical and Practical Significance of the Research

From the theoretical level, this study fills in the research gap in the relationship between mental health and social support in the elderly population, and further tests and improves the relevant theories. At the practical application level, the research results provide an empirical basis for governments, social organizations and medical institutions, based on which more targeted and effective elderly mental health improvement programs or interventions can be designed.

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Appendix A: A Questionnaire Survey Form

Questionnaire for analyzing the relationship between mental health and social support system in older years

(This questionnaire is anonymous, and all the data are only used for academic research. Please fill it out truthfully.)

essential information

1. Age: _____ years old
 2. Gender: ☐ male ☐ female ☐ other
 3. Career: _____
 4. Education level: ☐ primary school ☐ middle school ☐ junior college ☐ undergraduate ☐ master degree or above
 5. Health status: ☐ very good ☐ good ☐ generally ☐ poor ☐ very poor
- Elresilience assessment ("√") next to the option that for you

1. I can adapt very well to the changes in my life.

- ☐ Very much disagree

- ☐ Disagree

- ☐ neutrality

- ☐ agree

- ☐ Very much agree

Life stress assessment

1. I feel like my own life is very stressful.

- ☐ Very much disagree

- ☐ Disagree

- ☐ neutrality

- ☐ agree

- ☐ Very much agree

Social support system assessment

1. I feel like I have enough social support.

- ☐ Very much disagree

- ☐ Disagree

- ☐ neutrality

- ☐ agree

- ☐ Very much agree

Thank you for your participation!

Appendix B: Interview Outline and Guide

In-depth interviews on the analysis of the relationship between mental health and social support systems in the age

(This interview is based on anonymity. All the information is only used for academic research. Please rest assured to

answer truthfully.)

1. Interview the basic information

-Interview time: _____

-Interview location: _____

-Interviewer: _____

-Interviewer: _____

-Interview recording: ☐ Yes ☐ No (consent by respondents)

2. interview outline

1. Introduction

-introduce oneself to

-Project introduction

-Interview purpose and anonymity statement

2. Evaluation of psychological resilience

-In your opinion, what is psychological resilience?

-How do you evaluate your resilience in the face of difficulties and stress?

-What factors do you think may affect psychological resilience?

3. Life stress

-Do you feel that your life is stressful right now? Where do these pressures mainly come from?

-How did you respond to these pressures?

4. Social support

-What role do you think social support has played in your life?

-What type of social support do you think is the most important to you?

5. Psychological intervention

-Have you ever received any psychological intervention? Such as psychological counseling, psychological treatment, etc.

-Do you find these interventions useful? why?

6. Personal information and other thoughts

-Would you like to share your basic information? (Such as age, gender, occupation, etc., not mandatory)

-Are there any other points that you consider important but not mentioned?

7. Conclusion

-Thanks to the respondents

-Ask the respondents if they had any other things they wanted to add