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Depression and social support between China' rural and urban empty-nest elderly

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ABSTRACT

This study compared levels of depression and social support among empty-nest elderly who living in the rural and urban area of Hunan province, China. This cross-sectional study enrolled 809 empty-nest elderly living throughout the province as the study respondents. The general information, depression conditions and social supports were investigated by using the self-made General Information Questionnaire, Geriatric Depression Scale (GDS) and Social Support Rating Scale (SSRS). Variables are presented as mean ± standard deviation (SD) or frequency. Independent *t*-test and χ^2-tests were used to compare the socio-demographic factors, depression score and social support scores of the rural empty-nest elderly to the urban empty-nest ones; multilevel modeling was used to analyze the socio-demographic factors and social support predicted the level of depression among the empty-nest old subjects. The differences in gender, education level, marital status, economic status, self-perceived income, insurance, children visit frequency and religious beliefs factors between rural and urban empty-nester old people were statistically significant ($p < 0.05$). The average GDS score of rural group was (14.57 ± 5.43), which was higher than the average GDS score (13.18 ± 6.51) of urban group ($p < 0.01$). Objective support scores showed statistical significance between the rural and urban empty-nest elderly ($p < 0.05$). There are differences between rural and urban empty-nest elderly in the aspects of general data, depression status, social support and so on, we should intervene them effectively according to their different characteristics.

1. Introduction

The empty nest has been variously defined but generally taken to refer to the post-parenthood phase (Barber, 1989). Several studies describe the effect of children's departure from home as one of major role loss for the parents who react with feelings of depression and loneliness: the so-called "empty nest syndrome" (Fahrenberg, 1986). China has the world's largest number of elderly population. At present, the "empty nest elderly family" in China account for almost 25% among elderly households, and the proportion of "empty nest elderly family" in Beijing has been increased to over 35%. It is estimated that the proportion of empty-nest elderly households will reach 90% by 2030, while all our elderly families will be "of the empty nest" (Li, Chen, & Li, 2003). Our previous study showed that the social support and depression differs between single person (26.8%) and couple (73.2%) households, single person households got less social support and suffer more depression (Su, Zhang, Zhang, & Zhou, 2012).

Depression is one of the most frequent psychiatric disorders in old age (Stoppe, 2008). Almost one in every six elderly suffer (often in silence) from late life depression (Keith, Puffer, & Miller, 2001). Depression damages the health of the elderly, decreases the elderly social and physical activities, generates unsociability and self-grief, reduces the quality of life, and it is one of the main reasons that affect the subjective well being (SWB) of elderly, and also one of the important factors which can cause the elderly to commit suicide (Kaneko, Motohashi, Sasaki, & Yamaji, 2007). With the increasing of medical standards and universal health awareness, the demand for elderly psychological health has become the focus of people. Empty-nest elderly is the group of today's social concern, their depression and relative factors are more worthy of people's further study.

Social support is a major contributor to depression. The empty-nest elderly living alone have a small scale on life and social intercourse, they have very limited social supports (Wang & Shi, 2008a). The lack of strong social support system may result in reducing positive emotion and experience, and lessening psychological well-being (Liu, Li, & Lian, 2008; Liu, Yu, & Pan, 2008). Social support network is an important factor that guarantees

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empty-nest elderly can spend a happy life in their later years (Xu, 2008), which further suggests that social support has positive effect on empty-nest elderly psychological and physical health.

There have been many studies to illustrate the depression status of empty-nest elderly living in the rural or urban area (Ding, Xu, & Huang, 2010; Li, Chen, & Wu, 2007; Xie & Gao, 2009; Xie, Zhang, & Jiao, 2009), but few studies compared depression levels and its relative factors between rural and urban areas' empty-nest elderly. As is well-known, there are significant differences between the rural and urban empty nest old people in the aspects of living environment, educational level, economic status and so on. Whether there are also differences in the aspects of their depression and social support worth discussing. This study used the standardization scale, designed a cross-sectional questionnaire survey, which was aimed at: (i) clarifying comparatively the general data between rural and urban empty-nest elderly; (ii) evaluating to discuss comparatively the depression and social support between the empty-nest elderly living in China's urban and rural areas; (iii) finding out how to provide an effective theoretical basis for decreasing the level of depression between rural and urban empty-nest elderly.

2. Study design and methods

2.1. Study design

In this cross-sectional study, we used a sampling procedure involving four steps. First, we selected Hunan Province as the study site and collected almost all villages and living quarters as possible as we can. Second, based on location (rural vs. urban) and population density of Hunan Province, we identified 20 villages and 20 urban residential quarters by random cluster sampling. Third, we arranged scales according the population density and chose corresponding quantity of the elderly living in those places as our samples by random cluster sampling too. Finally, we interviewed and distributed the questionnaires to each elderly subjects (aged 60 or more, i.e., he or she was voluntary to participate, who were not suffering from cognitive disorder at the time of the survey, could communicate in Chinese, primary school level or higher). All participants underwent assessments for general information with the self-made General Information Questionnaire, for depression symptoms with the GDS, for social support status with the SSRS.

2.2. Sample

This study used the random cluster sampling method, enrolled 809 participants from Hunan province, China. Inclusion criteria: the participants should be aged 60 years and or above; willing to participate in; could communicate in Chinese; primary school level or higher and complete the test by themselves; have no cognitive disorder.

2.3. Data collection

We used the random cluster sampling method, enrolled 5 cities such as Changsha, Zhuzhou, Xiangtan, Hengyang, Shaoyang, Changde from Hunan province. Based on the sample size, multiple research assistants (RAs) were used in data collection, to establish inter-rater reliability for GDS and SSRS, training content of RAs contained: unifying explanation oral before assessment; unifying standard for evaluation; different grader were independent when rating. Firstly, we told the elderly from rural and urban area the purpose and meaning of the study, and then obtained the approval of them. Secondly, during our door-to-door field survey, the trained RAs distributed the questionnaires to each participant and told or helped them on how to complete the instruments; face-to-face interviews were conducted in the subjects' homes and took half an hour on average. Finally, once completed, the RAs collected the questionnaires immediately.

This study continued from 2011 January to 2011 September Finally, 890 individuals enrolled, only 809 completed the questionnaire thoroughly. The response rate of questionnaires was 95.18% (809/850).

2.4. Instruments

2.4.1. General Information Questionnaire

A self-compiled questionnaire, consists of demographic data like age, gender, nation, dwelling place, educational level, marital status, economic status, self-perceived income, resident mode, insurance, children visit frequency, body diseases, physical exercise conditions, and religious beliefs.

2.4.2. GDS

The GDS is created by Brink (1982), we used its Chinese revision to assess the levels of depression. The retest reliability of GDS is 0.85 (Yesavage, Brink, & Rose, 1983), the convergent validity is 0.82. The scale is frequently used as special table for screening the elderly depression symptoms. Depression was measured by 30-item, GDS in which subjects were asked to the elderly to express their feelings in the previous 1-week period. Every item included two answers: "yes" or "no". 10 entries in 30-item scoring with inverse sequential (the negative answer means depression), and other 20 entries scoring with positive sequence (the affirmative answer shows the existence of depression), every answer that represent depression will be given one point. The scores ranged from 0 to 30, and it showed the degree of depression as reported by the elderly; higher scores indicate higher levels of depression the elderly experiences. In generally, the GDS score is 0–10 is considered to be normal, minimal to mild depressive if the GDS score is 11–20, moderate to severe depressive if GDS score is 21–30.

2.4.3. SSRS

The SSRS is revised by Xiao (1986–1993), the validity and reliability of the Chinese version of the SSRS have been confirmed. Previous study had improved that SSRS had good construct validity and content validity (Liu, Li, et al., 2008; Liu, Yu, et al., 2008). This instrument had an internal consistency of $\alpha = 0.89–0.94$ (Wang, 1999). The scale contained 10-item: objective support (3), subjective support (4) and support utilization (3). The scores for the scale range from 12 to 65, with higher scores indicating more social support and the diversity of social networks (e.g., family, friend, neighbor, marriage, and organization).

2.5. Data analysis

Data were analyzed with SPSS version 13.0 statistical software. Variables are presented as mean ± SD or frequency. Independent t-test and χ^2-tests were used to compare the socio-demographic factors, depression score and social support scores of the rural empty-nest elderly to the urban empty-nest ones; multilevel modeling was used to analyze the socio-demographic factors and social support predicted the level of depression between the rural and urban empty-nest old subjects. To predicted the level of depression we used a two-level linear mixed-effects model (LMM), with level 1 including individual covariates, level 2 accounting for the cluster effects (rural or urban empty-nest old subjects). All tests were two-tailed, and the level of significance was $p < 0.05$.