Original Article

The Relationship between Depression and the Quality of Life among Elderly in Nursing Home

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Abstract

Background: Depression is prevalent and caused many problems in older people and negatively influence the quality of life. The relationship between depression and quality of life has increasingly addressed in many research. However, limited evidence conducted in Indonesia especially elder people in nursing home facilities.

Objectives: The purpose of this study was to assess the relationship between depression and quality of life among elderly in nursing home.

Methods: A cross-sectional study of a nursing home-based sample of 44 elderly subjects aged over 60 years old from a nursing home in Bandung, West Java. The data collection instrument was Geriatric Depression Scale (GDS) and quality of life measured by the WHOQOL-BREF. A Spearman rank test was used to evaluate the relationship between the two significant variables of interest.

Results: Forty-four elderly was participate in this study. More than half of the elderly was screened having moderate depression (61.4%) and above half had a good quality of life. Bivariate analysis found a significant relationship between depression and social domain of quality of life, $\rho=0.043$, p-value < 0.05. However, we did not found a significant correlation between other quality of life domain such as physical, psychological, and environmental domain.

Conclusion: Study finding highlights the relationship between depression and social domain of quality of life. Improvement in a social relationship may decrease depression as well increased their quality of life. A future study exploring factors associated with depression and quality of life is needed.

Keywords: depression, elderly, older, quality of life, long-term care.

Introduction

The World Health Organization (WHO) reported that 11.7% of total population in the world are people aged over 60 years old. Indonesia is predicted to be one of the countries with high number of elderly in the world, reaching 80 million in 2020 (Indonesian Ministry of Health, 2013). There was an improvement in the life of expectancy of Indonesian people from 68.6 to 70.8 in 2013 and estimated to continue increased become 72.2 in 2035.

A total of 154 million elder people suffer from depression globally. Currently, 5.8% of men and 9.5% of women in the world had experienced depression (WHO, 2013).Depression is a common mental illness with depressed mood, loss of interest or enjoyment, shame or low self-esteem, disturbed sleep or appetite, low energy and poor concentration (WHO, 2001). Depression will become the third leading cause of disability worldwide by 2020 (WHO, 2013). Depression in elderly is prevalent within the community and it is even more prevalent among elderly who have been hospitalized or institutionalized (Helvik, 2010). Depression for older adults is another important public health issue, since late depression can have devastating consequences, such as a death increase (Friske, 2009). In comparison to other countries in Eastern Asia and the Pacific, Indonesia is still below the global average. Only 25% of older people have a retirement age, while 75% of non-formal employees have no coverage whatsoever.

According to the latest World Social Protection Report 2017-2019, only 14% of people older than the statutory pensionable age in Indonesia receive an old-age pension (contributory, noncontributory or both) emphasizing the vulnerability (United Nations, 2019). These data indicate that the problems can be a trigger for depression in the elderly.

A systematic review involving 74 studies reported that depressed older people have poorer global and generic health-related Quality of Life (QoL) than non-depressed individuals. Most of the research was performed in hospitals and outpatients, however, and only 14 studies were done in primary care environments such as nursing homes, long-term care or living facilities (Sivertsen, 2015). Then, that evidence was mainly conducted in the USA or European countries. Quality of Life (QoL) has become a major issue due to demographic changes arising from population ageing. In fact, studies have suggested that older people's QOL levels vary from those of the general population (Natuveli and Blane, 2008).

According to Molzahn (2011), a regional and cultural differences can have an influence in the association with QoL, Furthermore, limited knowledge has accumulated on the association between the depression and QOL among elderly dwelling in the community in Indonesian. It is important to investigate correlation between depression and QoL among elderly for the future of health since Indonesia as one of the low-middle income countries whereas the facilities and resources were limited.

Methods

Study design and sampling

A cross-sectional study was applied to assess the relationship between depression and quality among older people in a nursing home in Bandung, West Java. A consecutive sampling method was used to collect data from participants. Participants were included in this study if they were aged over 60 years, able to communicate, and willing to join in this study.

Measures

Geriatric Depression Scale: Geriatric Depression Scale (GDS) was used to evaluate depression in older people. The validity and reliability of GDS have been supported through both clinical practice and research. In a validation study for self-rating of symptoms of depression, both were successful in differentiating depressed from non-depressed adults with a high correlation ($r = 0.84$, $p < .001$) (Sheikh & Yesavage, 1986). The GDS composed of 30 self-rating items with a yes/no response option. A score of 0–10 indicates no depression, 11–20 indicates mild depression and 21–30 indicates severe depression.

The Whoqol-Bref : Quality of life was assessed according to the World Health Organization Quality of Life (WHOQOL)-BREF (WHO, 1996). The Bahasa Indonesian version of the WHOQOL-BREF is available and has been proven as a valid and reliable questionnaire to be used in Indonesia (Salim, 2007). The WHOQOL-BREF had 26 items. The instrument consist of four domains, i.e., physical, psychological, environmental, social relationship. Each facet is scored from 1 to 5 points. The mean score of items within each domain was used to calculate the domain score. A transformed score between 0 and 100 was developed for each domain for final analysis.

Method for manual calculation of individual scores is as follows:

Physical domain – $([6 − Q3] + [6 − Q4] + Q10 + Q15 + Q16 + Q17 + Q18) \times 4$

Psychological domain – $(Q5 + Q6 + Q7 + Q11 + Q19 + [6 − Q26]) \times 4$

Social relationship domain – $(Q20 + Q21 + Q22) \times 4$

Environmental domain – $(Q8 + Q9 + Q12 + Q13 + Q14 + Q23 + Q24 + Q25) \times 4$

Procedure: Permission to conduct the study was obtained from the Ethical Committee of STIKEP PPNI West Java. The researcher explained about this study, including the sample criteria, the usage, and also the benefits to the manager of the nursing home. Then, the researcher asked participants who are appropriate based on the determined inclusion criteria. After receiving all information about participants, the researcher performed informed consent, which consists of explanations about participants' protection, including anonymous, unnamed signature box to ensure confidentiality, and a declaration that all information given is just for academic purposes. The researcher presented the questionnaire to the participants after obtaining their consent. Participant returned the completed questionnaires to the researcher in sealed envelopes.

Data analysis: A descriptive analysis was applied using the distribution of frequency to

describe data on demographic, depression, and quality of life. The relationship between depression and quality of life was evaluated using a crosstab analysis and Spearman Rank test.

Results

Demographic characteristics: The results of this study showed that majority of the subject were female (68.2%), and half of them were aged ranged from 75 to 90 years old, 61.4% were widowed, and 31.8% graduated from elementary school (Table 1).

Depression: The majority of elderly in the nursing home had a mild depression (61.4%) (Table 2). They were also suffering from severe of depression (4.5). Only 34.1% reported no depression symptoms.

Quality of life: Table 3 summarizes the quality of life of older people in the nursing home.

Above 50% of older people had a good quality of life in the physical domain, psychological domain, and environmental domain. However, for social domain, it seems that they experienced good and poor quality of life in the same proportion (40.9%).

The relationship between depression and quality of life: The results of crosstabs showed some people who reported had the good or poor quality of life based on depression level (Table 4). Older people with moderate depression had poor quality of life in the physical domain.

Based on data analysis result by using Spearman Rank test, showed that depression was significantly associated with the social domain in quality of life, $\rho=0.043$, $p <0.05$ (Table 5). There was no significant correlation between depression and psychological, social, and environmental domain.

Table 1. The demographic information of elderly in the nursing home (n=44)

Characteristics		n	%
Gender	Female	30	68.2
	Male	14	31.8
Age	Middle-aged (45-59 years old)	2	4.5
	Elderly (60-74 years old)	19	43.2
	Older aged (75-90 years old)	22	50.0
	Super-aged (≥ 90 years old)	1	2.3
Marital status	Unmarried	3	6.8
	Married	3	6.8
	Widowed	27	61.4
	Widower	11	25.0
Education level	Illiterate	3	6.8
	Elementary school	14	31.8
	Junior high school	7	15.9
	Senior high school	13	29.5

Table 2. The proportion of depression among elderly in the nursing home (n=44)

Depression	n	%
No depression	15	34.1
Mild depression	27	61.4
Severe depression	2	4.5

Table 3. Quality of life domain among elderly in the nursing home (n = 44)

Quality of life domain	n	%
Physical domain		
Good	25	56.8
Poor	19	43.2
Psychological domain		
Good	25	56.8
Poor	19	43.2
Social domain		
Good	18	40.9
Poor	18	40.9
Environmental domain		
Good	26	59.1
Poor	26	59.1

Table 4. Crosstab analysis of depression level and domain of quality of life (n=44)

	No Depression n (%)	Mild Depression n (%)	Severe Depression n (%)
QoL			
Physical			
Good	11 (25%)	13 (30%)	1 (2%)
Poor	4 (9%)	14 (32%)	1 (2%)
Psychological			
Good	10 (23%)	10 (23%)	10 (23%)
Poor	5 (11%)	5 (11%)	4 (9%)
Social			
Good	9 (20%)	9 (20%)	9 (20%)
Poor	6 (14.5%)	5 (11%)	6 (14.5%)
Environmental			
Good	7 (16%)	7 (16%)	7 (16%)
Poor	8 (18%)	8 (18%)	7 (16%)

Table 5. The relationship between depression and quality of life domain among older people in the nursing home (n=44).

Domain	p-value (Sig two-tailed)	coefficient correlation
Physical	0.136	
Psychological	0.366	
Social	0.043	0.043
Environmental	0.313	

Discussion

The study findings indicate that the majority of elderly suffer from moderate depression. The results of this study were consistent with research conducted by Widodo (2013), that 90% of the participant was had moderate depression. The possible reason for this finding that half of the elderly were aged ranged from 75 to 90 years old, that might cause the elderly tend to have less activity due to the decline in physical function. Moreover, the elderly in nursing home felt sadness, loneliness, and bored due to the routine and atmosphere of the nursing home (Hawari, 2011). The previous study reported that the elderly like to stay at home rather than the nursing home (Hadi, 2004). Family culture may give some contribution to elderly who experienced with depression. In Asian country like Indonesia living in the same house as grandparents and parents is the common thing. The concept that "young people are cared for by their mother, father, and elderly are cared for by their children" (Dao *et al*, 2018).

However, our current study found that more than half of elderly people have poor quality of life in their social domain. The possible reason from finding could be lack of attention and rare visit from the family. This finding was consistent with Sekarwiri (2008) that social support describes the assistance that individuals get from the surrounding environment. Social support received from the environment, including attention, appreciation, and compassion that help them a view of himself/herself (Karangora, 2012). This finding supported by Dao et al, (2018), that family connectedness plays an important role in mental and physical health of the elderly in Asian countries.

This study showed the relationship between the level of depression and quality of life-based in the social domain. In the elderly, a person will experience changes in psychosocial aspect (Rohmah *et al*., 2012). Quality of life is known as an indication of the level of social functioning in mental health (Rohmah *et al*., 2012). This is important in supporting social relationships, by increasing age, social activities will be reduced or called as "social disengagement," a process of mutual resignation in the elderly and social environment (Hurlock, 2002). According to Sanjaya *et al.* (2012), individuals who experience limited social relationships with the surrounding environment are more likely to experience loneliness that will affect the quality of life. Considering the changes in psychosocial aspect, elderly are required to be able to adapt to psychosocial conditions, but many psychological changes in the elderly cause psychosocial stressors and triggers depression.

Conclusion: We found the majority of the elderly had a moderate of depression and good quality of life in the physical, psychological, and environmental domain. It is important to provide screening regularly to recognize early depression for the elderly who live in the community. There was a significant correlation between depression and quality of life, particularly in the social domain. This finding suggests that direct intervention to reduce the depression and increase social support would help patients improve the quality of life among the elderly. Future research should tackle the issues in providing care to the elderly in the nursing home, especially exploring factors associated with the quality of life for the elderly living in nursing home.

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