ORIGINAL ARTICLE

The Possibility of Depression and Quality of Geriatric Life in Primary Health Care Setting: Biopsychosociospiritual Approaches

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ABSTRACT

Introduction: Depression is the most psychiatric disorder in elderly which has no specific symptom. This condition can affect quality of life in elderly patient. To determine the relationship between possibility of depression with quality of life in elderly in bio-psycho-socio-spiritual perspective. **Methods:** Cross sectional design, consecutive sampling with 202 respondents. Setting of study were 3 public health centers (puskesmas), puskesmas Ciputat, East Ciputat, and Pondok Ranji in 2018. Respondents filled out modification of Older People's Quality of Life-35 (OPQOL-35) questionnaire and Spiritual Need Questionnaire (SNQ). Assessment of depression used Geriatric Depression Scale (GDS-15). **Results:** Fifty four percent of respondents reported good quality of life, while 46% have bad quality of life. Prevalence of normal/not depression 86.1%, mild depression 12.9%, medium depression 0.5%, and severe depression were 0.5%. The result of bivariate analysis found relationship between possibility of depression with quality of life (p=0.04). There was relationship between possibility of depression with quality of life in elderly with bio-psycho-socio-spiritual aspect. **Conclusion:** The quality-of-life level in the elderly in general is good. The study shows that most respondents do not experience depression but are dominated by those with a poor and moderate quality of life. There is a significant relationship between the likelihood of depression and quality of life in the elderly

Keywords: Depression, quality of life, elderly, mental health, Bio-psycho-socio-spiritual aspect

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INTRODUCTION

By 2025, the world's elderly population aged 60 and over will be 1.2 billion, which is predicted to increase to 1.9 billion by 2050 (1). Based on projections for the Indonesian population, it is estimated that by 2025 there will be 33.69 million elderly, 40.95 million by 2030, and 48.19 million by 2035 (2). Indonesia is considered an old country because the elderly population is above 7% (3).

In biological terms, the functions of the elderly weaken both physically and mentally. One of the physical health disorders experienced by the elderly is the degenerative disease of hypertension (45.9%) (2). The aging process is explained by three theories. First, the increased free radical theory; second, the non-enzymatic glycosylation theory, which refers to glucose-protein linkages known as advanced glycation end products (AGEs) which accumulate, causing cell dysfunction in aging humans; and third, the repair theory proposed by Hart and Setiow (4). Those are what make the physiological process of aging so that changes occur in various organ systems.

Health problems in the elderly are complex. They include physical, psychological, social problems, economic ones, and social interaction with other people (5). Those problems have an impact on their mental health, including depression. This is the most common mental illness in patients over 60, with atypical symptoms in the elderly population.

Generally in Indonesia, the prevalence of depression in the elderly in primary healthcare is 5-17%. Data were obtained from the acute geriatric inpatient ward of Cipto Mangunkusumo Hospital, which sees an incidence of depression as high as 76.3% (4). On the other hand, the prevalence of mild depression in geriatric respondents at the Tresna Werdha Budi Mulia 4 Margaguna nursing home, South Jakarta, Indonesia, is 27.9% (5). Several biological, physical, psychological, and social factors make patients vulnerable to depression. In elderly patients, psychosocial factors play a role as a predisposing factor for depression because the elderly often experience periods of losing their loved ones. In addition, events such as retirement, reduced income and social support are also predisposing factors in geriatrics (4).

In 1947, the World Health Organization (WHO) set healthy limits related to three aspects, namely physical health (organology), mental health (psychological/ psychiatric), and social health. This changed in 1984 to four aspects, with the addition of a religious (spiritual) aspect. Therefore, the American Psychiatric Association (APA) terms these four aspects "biopsychosociospiritual" (6). Ministry of Health regulation number 36 year 2009 indicates health is a health condition, both physically, mentally, spiritually and socially that enables everyone to live productive life socially and economically (7). The health of the elderly dramatically affects their quality of life. According to WHO, the definition of quality of life is individuals' perception of their worth and dignity in the context of culture and value systems and in relation to life goals and individual targets (8).

Azzahro's research shows a relationship between the level of depression and the quality of life of the elderly at the Darma Bhakti Pajang nursing home, Surakarta, Indonesia (9). Research studies on the possibility of depression in relation to the quality of life of the elderly in Indonesia are still limited, especially in the setting of primary healthcare facilities and the aspect of biopsychospiritual in geriatric. Therefore, the authors of this study are interested in examining the relationship between the incidence of depression and the quality of life of the elderly by taking a biopsychosociospiritual approach at the 'puskesmas' (public health center) as primary health care.

MATERIALS AND METHODS

Samples

In this study, the researchers used a cross-sectional research design. The research was conducted in Ciputat, East Ciputat, and Pondok Ranji public health centres, Indonesia, from July to November 2018. The Ciputat Health Center was included in the Ciputat Distric area specifically Ciputat Village with an area 279,153 Ha. This Public Health Center have 11 'posbindu' (is a form of public participation to conduct early detection and monitoring of risk factors for non-communicable diseases) and one clinic for elderly treatment. East Ciputat Health Center and Pondok Ranji Health Center were included in the scope of work of the East Ciputat sub-district. This study involved 202 patients aged over 60 years from Ciputat, East Ciputat, and Pondok Ranji public health centres, who were selected by consecutive sampling.

The inclusion criteria were that they were new and old patients aged over 60, willing to follow the research procedures and to complete the questionnaires. Patients who were uncooperative or had communication and mental barriers such as schizophrenia and demensia were excluded from the study sample.

Developing and completing the questionnaire and data analysis

The study used the Older People's Quality of Life-35 (OPQOL-35) questionnaire developed by Bowling et al (10) together with questions from the Spiritual Needs Questionnaire (SNQ) of Arndt Bussing (11) regarding the quality of life variable.

The OPQOL-35 questionnaire has high validity and reliability and consists of 35 statements with responses on a Likert Scale (from 1 to 5, strongly disagree to strongly agree). It assesses patients' quality of life by taking a biopsychosocial approach based on the patients' opinion of their daily conditions, namely life overall, health, social relationships, independence, control over life, freedom, home and neighborhood, psychological and emotional well-being, financial circumstances, leisure and activities (10).

The Spiritual Needs Questionnaire (SNQ) is an instrument for assessing spirituality in patients with chronic diseases. It comprises 11 questions about spiritual needs covering relationship with God, peace, purpose in life, transcendence (psychological, emotional, and existential), and religious obedience in worship (11).

The Geriatric Depression Scale (GDS-15) was used to assess the presence or absence of depression in the elderly. The GDS instrument has a sensitivity of 92% and specificity of 89% and comprises 15 questions (12). The research was explained to the respondents, who were then given an informed consent sheet. If they were willing to participate in the study, they were interviewed by the enumerator to complete the questionnaire. The resulting data were input and analyzed using the Kruskal-Wallis test with SPSS 22 software.

Based on the validation results of the OPQOL-35 and SNQ questionnaire items, it was found that, in general, the validity was good, with r-count values of 0.212 - 0.705, although for eight questions, it was weaker, with values of 0.045 - 0.121. The GDS was adopted by the Ministry of Health of the Republic of Indonesia as a

measuring tool to detect the possibility of depression in the elderly. The validity test results of the questionnaire obtained by Hidayati et al (13) gave r count values of 0.406 – 0.826. The reliability test results from the OPQOL-35 questionnaire had a Cronbach's alpha value of 0.867 (very good), which Chiquita (14), had previously tested. The reliability test results of the GDS questionnaire item had a value of 0.895 (very good), which had been previously tested by Hidayati et al (13).

Ethical clearance

This study was approved by Research Ethics Committee, Faculty of Medicine Syarif Hidayatullah Jakarta State Islamic University No. B-031/F12/KEPK/TL00/12/2019.

RESULTS

Based on Table I, female respondents (70.8%) outnumbered males (29.2%). Eighty five point six percent (85.6%) were classified as elderly and 14.4% as old-elderly. Most respondents were active (still working) elderly (77.7%), while the remainder were not actively working or retired. The majority of respondents were muslim (97%), and the remainder (3%) were non-muslims.

Table I: Characteristics of respondents

Variables	Category	Results	
		N	%
Sex	Male	59	29.2 %
	Female	143	70.8%
Age	Elderly (60-74 years old)	173	85.6%
	Old Elderly (75-90 years old)	29	14.4%
Employment	Employed	157	77.7%
	Unemployed/retired	45	22.3%
Religion	Muslim	196	97%
	Non-muslim	6	3%

Table II shows that most of the general quality of life of the elderly was good (54%) It was accumulated from the total percentage that includes sufficient category. The number of respondents with lousy quality of life was relatively high, at 46.81%. This is supported by the generally low average quality of life of the elderly in biological, psychological, social, and spiritual aspects (below 3), as shown in Table II The majority level of depression in the elderly from the total elderly was no depression/normal (85.6%), mild depression (13.3%), moderate depression (0.5%), and severe depression (0.5%). The study found that the majority of respondents with a poor to very poor quality of life were not depressed/normal (46.81%). In addition, the majority of those with mild, moderate, or severe depression stated that they had a poor and moderate quality of life.

In Table III, it can be seen that the average quality of life of the respondents in the life domain was in general poor, with an average of <3 (2.67±0.66). The health domain (2.58±0.84) and financial situation (2.60±0.82) were the domains with the highest average. On the other hand, the domains of home and neighbourhood (1.83±0.54) and social relations (1.86±0.64) were those with the lowest average. The researchers used the Kruskal Wallis test to determine the relationship between the possibility of depression and quality of life in the elderly and found a significant difference between the possibility of depression and quality of life in the elderly ($p < 0.044$).

Table III: Average of Quality of Life in Elderly

Dimension	Mean	Standard Deviation
Overall quality of life	2.67	0.66
Healthy	2.58	0.84
Social Relationship	1.86	0.64
Independence, control over life and freedom	2.25	0.66
Home and neighborhood	1.83	0.54
Psychology and emotional well-being	2.00	0.54
Financial condition	2.60	0.82
Free time activities	2.18	0.84
Spirituality over life	2.10	0.70

DISCUSSION

The study results indicate that for most of the elderly, the general quality of life is good (54%) this was found from the total percentage that included sufficient category, while it is poor for the remainder (46%). This is in contrast to the research conducted by Wahyuni et al (15) who found the quality of life for the elderly in Medan, Indonesia was sufficient. In this study, quality of life was measured based on: life in general, health, social relationships, independence, control over life and freedom, home and neighbours, psychological and emotional well-being, financial condition, leisure activities, and spirituality dimensions.

In the general dimension of life, the respondents' quality of life was poor, with an average of 2.67±0.66. The

Table II: Distribution of The Possibility of Depression and Quality of Life

Variables		Quality of Life											
		Very Bad		Bad		Sufficient		Good		Very Good		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Possibility of Depression	Normal	13	7.51%	68	39.30%	57	32.95%	33	19.08%	2	1.16%	173	100%
	Mild Depression	0	0.0%	12	44.44%	12	44.44%	3	11.11%	0	0	27	100%
	Moderate Depression	0	0.0%	0	0.0%	1	100%	0	0.0%	0	0.0%	1	100%
	Severe Depression	0	0.0%	0	0.0%	1	100%	0	0.0%	0	0.0%	1	100%
	Total	13	6.44%	80	39.60%	71	35.15%	36	17.82%	2	0.99%	202	100%

majority of respondents answered the question related to "enjoying life" by disagreeing, and that to "disappointed with life" by agreeing. At the elderly stage of human development, people can achieve an integrated ego, accepting that everything that has occurred in their lives had to happen (16). The respondents in this study did not enjoy and were disappointed with their lives, so they did not fully accept everything that had taken place. This affected their quality of life.

Regarding the health dimension, to the question on "good physical health" most respondents answered "disagree." The elderly have poor physical health, which affects their daily activities. According to research conducted by Chiquita (14), daily activities impact the level of independence of the elderly. This study also found that the level of independence of the elderly who were disturbed was affected by the decline in their physical condition, so they needed help from others to perform their daily activities (14). One of the physical conditions experienced by the elderly is a decrease in the elasticity of blood vessels and endothelial dysfunction, which causes an increase in peripheral resistance, thereby increasing the elevation of systolic blood pressure. These conditions will disrupt blood flow and lead to the risk of strokes. Stroke sufferers experience weakness and decreased muscle endurance, a decreased range of motion, impaired sensation, and problems with walking patterns, which reduce their ability to perform daily activities (17). Independence in daily activities also has a significant relationship with disease status (18). In Lestari's research, it was found that 11 from 84 elderly respondents had experienced moderate dependence due to their decreased physical condition, with shaking legs when walking, also due to diseases suffered by the elderly such as cataracts, asthma, and hypertension (19).

Another factor that affects the decline in daily activities is mental status (20). There is a relationship between anxiety and the level of independence in activity daily living (ADL) in the elderly. The more anxious they are, the more they depend on others (19). Daily activities affect the quality of life of the elderly. This is in line with Chiquita's research, which showed a significant positive relationship between daily activities and quality of life, meaning that the more independent the elderly are, the better their quality of life (14).

Concerning the dimension of social relations, to the question related to "have someone who gives love and affection," most respondents answered "disagree." This shows that they felt that they did not have anyone who gave them love and affection. To the question item on "the presence of children around has an important meaning," most respondents disagreed. This shows that the existence of a child around them was meaningless. Contrary to the research of Nafa (5), amongst the findings of the interviews with the elderly at the Tresna Werdha Budi Mulia 4 Margaguna nursing home said he missed his children and grandchildren and wanted to return to his family. Social relationships and family support affect the psyche of the elderly, which in turn influences their quality of life.

On average, in the home and neighbourhood domains, the respondents disagreed with the questions about "feel happy at home" and "have friendly neighbors." This shows that they did not feel happy at home and that they did not have friendly neighbours, which affected their social interaction. According to research by Andesty et al (16) conducted at the Griya Wredha Integrated Service Unit, Surabaya City, the elderly with a poor social interaction status mostly had a poor quality of life. In addition, it was found that the place of residence also affected this. Those elderly living at home are influenced by family and community support, so they experience positive changes in their lives, and vice versa (20).

In the domain of spirituality regarding to health, the average spirituality of the respondents was 2.1±0.70. Most respondents answered the question item related to "want to die in peace" by disagreeing. A study conducted by Nuraeni. et al (21) found that spiritual needs were perceived as important by most respondents (cancer patients), impacting their health positively and used as a source of healing. In a study conducted by Mulia et al, it was found that religious coping was very influential on improving the quality of life of cancer patients. Positive coping is shown by patients' efforts to improve relationships, seek love, strength, forgiveness, and help and surrender to God's destiny, so not feeling anxious as they focus on religion (22). Research conducted by Munawarah et. al. found a relationship between spirituality and the quality of life of the elderly in a positive direction, which means that the higher the spirituality, the better the quality of life (23).

For muslims, one way to become closer to God is by praying. Through their perspective and thinking, the elderly are mature enough to face death. The research results Anafiati showed that the higher the intensity of performing fardhu prayers by the elderly, the higher their level of readiness to face death. In addition, prayer that is performed regularly will bring peace to the soul and relieve stress and anxiety (24).

Poor quality of life has an impact on the psychology of the elderly, one example being depression. Amongst the respondents of this study, the percentage of the elderly who experienced mild depression was 12.9%, moderate depression 0.5%, and severe depression 0.5%. There was a significant difference between the quality of life and depression (p-value = 0.044). This is in line with research conducted by Azzahro (9), who found a relationship between the level of depression and the quality of life of the elderly at the Darma Bhakti Pajang Werdha Home, Surakarta (9).

Several factors influence the incidence of depression in the elderly, physical health being one of these. Physical illness can lead to decreased functional abilities, preventing people from being able to take part in enjoyable activities, a limitation which can result in depression (25). Quality of life of the elderly with chronic pain was worse in all the domains assessed: physical, mental, emotional, social, vitality, and pain. Research conducted by Morete M et al at the Geriatric Clinic showed that 19 from 54 elderly patients, presented more depression among the elderly with pain, while the remainder no depression was identified in any participant without pain. Beside of that, the research conducted by Morete M et al also found that lower resilience was associated with depression (26). The relationship between low resilience and mood disorders has already been pointed out in some studies (26). Individuals with lower resilience present with greater vulnerability for developing depression and somatization (27). In a population of a Chinese community aged over 60 years, lower levels of resilience were significantly associated with higher levels of depressive symptoms (28). In addition, social relationships affect the incidence of depression in the elderly. Research conducted by Saputri et al (29) at the Wening Wardoyo nursing home showed that the incidence of depression, 23.7%, was determined by social support. The remaining 76.3% was influenced by other factors such as life experience, level of religiosity, personality factors, and self-esteem. The support provided by family, friends, and the surrounding environment has an essential meaning for some elderly; the availability of social support will make them feel loved, appreciated, and cared for, thus reducing the incidence of depression (28).

In addition, the level of religiosity in the elderly affects their level of depression. In line with Nafa's(5) research, those elderly who were diligent in praying, prayed in congregations, attended religious lectures, and participated in the Qur'an study circles are more peaceful in carrying out daily activities. A strong relationship between the level of religiosity and depression has been proven, as through religion, individuals can achieve inner peace by repenting through religious guidance (5).

In this study, the researchers examined the quality of life of the elderly using modified versions of the OPQOL-35 and SNQ. In Indonesia, research using the OPQOL-35 questionnaire is limited. This study could be used as a reference for a spirituality-based procedure to improve the quality of life of the elderly using a biopsychosocial-spiritual approach. The research was not conducted on a multicentre basis, and the random sampling method was not employed for the data collection.

CONCLUSION

The quality-of-life level in the elderly in general is good. The study shows that most respondents do not experience depression but are dominated by those with a poor and moderate quality of life. There is a significant relationship between the likelihood of depression and quality of life in the elderly. For further study, research could be conducted in multiple centres using random sampling, and other factors could be explored, such as culture and demographics.

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REFERENCES

1. McMurdo MET. A healthy old age: realistic or futile goal? BMJ. 2000 Nov 4;321(7269):1149–51.
2. Badan Penelitian dan Pengembangan Kesehatan. Riset Kesehatan Dasar 2013. Riset Kesehatan Dasar 2013. 2013;
3. RI K. Infodatin Lansia. Drug Ther Bull. 2016;10(16).
4. Suejono C, Prabususeno, Kemala S Ni. Buku Ajar Ilmu Penyakit Dalam Edisi VI Jilid II. Interna Publishing. 2009;
5. Nafa A. Hubungan Tingkat Religiusitas dengan Tingkat Depresi Lansia Beragama Islam di Panti Tresna Werdha Budi Mulia 4 Margaguna Jakarta Selatan. Jakarta; 2015.
6. Hawari D. Dimensi Religi dalam Praktek Psikiatri dan Psikologi. Jakarta: Balai Penerbit Fakultas Kedokteran Universitas Indonesia; 2005.
7. Departemen Kesehatan RI. Undang-Undang Republik Indonesia Nomor 36 Tahun 2009 Tentang Kesehatan. Jakarta ; 2009.
8. Lopez SJ, Snyder CR. Positive psychological assessment: A handbook of models and measures. Positive psychological assessment: A handbook of models and measures. Washington, DC, US: American Psychological Association; 2003. 495, xvii, 495–xvii p.
9. Azzahro FD. Hubungan Antara Tingkat Depresi Dengan Kualitas Hidup Lanjut Usia Di Panti Wredha Darma Bhakti Pajang Surakarta. J Chem Inf Model. 2013;53(9).
10. Bowling A, Hankins M, Windle G, Bilotta C, Grant R. A short measure of quality of life in older age: The performance of the brief Older People's Quality of Life questionnaire (OPQOL-brief). Arch Gerontol Geriatr. 2013 Jan;56(1):181–7.
11. Bьssing A, Balzat HJ, Heusser P. Spiritual needs of patients with chronic pain diseases and cancer - Validation of the spiritual needs questionnaire. Eur J Med Res. 2010;15(6).
12. Yesavage J dkk. Development and Validation of Geriatric Depression Screening scale: a preliminary report. 1983;17(1):37–49.
13. Nur Hidayanti L, Mustikasari, Susanti Eka Putri Y.

Terapi individu Reminiscene Menurunkan Tingkat Depresi Pada Lansia Di Panti Sosial (Individual Reminiscence Therapy can Decrease Depression Level on Elderly at Social Homes). Universitas Indonesia. 2015;10(2).
14. Chiquita DD, Krisnatuti D. Aktivitas Fisik, Status Kesehatan, Dukungan Sosial dan Kualitas Hidup Lansia Laki-laki dan Perempuan. Library of IPB University. 2017;
15. Amelia R, Wahyuni AS, Harahap J. Hubungan Status Depresi Dengan Kualitas Hidup Lansia Di Kota Medan. Talenta Conference Series: Tropical Medicine (TM). 2018;1(2).
16. Andesty D, Syahrul F. Hubungan Interaksi Sosial Dengan Kualitas Hidup Lansia Di Unit Pelayanan Terpadu (UPTD) Griya Werdha Kota Surabaya Tahun 2017. The Indonesian Journal of Public Health. 2019;13(2).
17. Nilsson PM. Reducing the Risk of Stroke in Elderly Patients with Hypertension. Drugs Aging. 2005;22(6):517–24.
18. Fadlulloh SF, Setyo Upoyo A, Hartanto YD. Hubungan Tingkat Ketergantungan dalam Pemenuhan Aktivitas Kehidupan Sehari-Hari (AKS) dengan Harga Diri Penderita Stroke di Poliklinik Syaraf RSUD Prof. Dr. Margono Soekarjo Purwokerto. The Soedirman Journal of Nursing). 2014;9(2).
19. Lestari R, Wihastuti TA, Rahayu BF. Hubungan Tingkat Kecemasan Dengan Tingkat Kemandirian Activities of Daily Living (Adl) Pada Lanjut Usia Di Panti Werdha. Vol. 1, Jurnal Ilmu Keperawatan. 2013.
20. Ratnasari P, Kristiyawai SP, Solechan A. Hubungan Antara Tingkat Ketergantungan Activity Daily Living Dengan Depresi Pada Pasien Stroke Di RSUD Tugurejo Semarang. Hubungan antara tingkat ketergantungan Activity Daily Living dengan depresi pada pasien stroke di RSUD TUGOREJO SEMARANG. 2012;1(1).
21. Nuraeni A, Nurhidayah I, Hidayati N, Windani Mambang Sari C, Mirwanti R. Kebutuhan Spiritual pada Pasien Kanker. Jurnal Keperawatan Padjadjaran. 2015;v3(n2).
22. Mulia VD, Gunawan I, Suryawati S. Perawatan Pasien Kemoterapi: Strategi Koping Religius Untuk Meningkatkan Kualitas Hidup. Idea Nursing Journal. 2018;9(3).
23. Munawarah R dan S. Spiritualitas dengan kualitas hidup lansia. core.ac.uk. 2018;1(1).
24. Asih Sri Mumpuni; Hasanah Nunung PY. Hubungan Kesehatan Spiritual Lansia Dengan Persiapan Menghadapi Kematian. Proceeding Seminar Nasional Keperawatan. 2020;
25. Sari K. Gambaran Tingkat Depresi pada Lanjut Usia di Panti Sosial Tresna Wredha Budi Mulia 01 dan 03 Jakarta Timur. 2012;
26. Morete MC, Solano JPC, Boff MS, Filho WJ, Ashmawi HA. Resilience, depression, and quality of life in elderly individuals with chronic pain followed up in an outpatient clinic in the city of Sro Paulo, Brazil. J Pain Res. 2018;11.
27. Aroian KJ SMNNS. Psychometric evaluation of the Russian Language version of the Resilience Scale. 1997;2(5):151–64.
28. Heilemann MV LK. Psychometric properties of the Spanish Version of The Resilience Scale . J Nurs Meas. 2003;11(1):61–72.
29. Saputri MAW, Indrawati ES. Hubungan antara Dukungan Sosial dengan Depresi pada Lanjut Usia yang Tinggal di Panti Wreda Wening Wardoyo Jawa Tengah. Jurnal Psikologi Undip. 2011;9(1).