QUALITY OF LIFE AMONG INDEPENDENT ELDERLY RESIDENTS IN A NURSING HOME IN BANTEN PROVINCE, INDONESIA

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ABSTRACT

The elderly group, particularly those in nursing homes, is at a higher risk of experiencing a lower quality of life compared to elderly individuals who live at home or within the community. Therefore, monitoring the quality of life in nursing homes is essential to assess the wellbeing of the elderly and provide input for more targeted efforts to meet their needs. Objective: This study aims to provide information on the quality of life of the elderly, focusing specifically on the independent elderly group at nursing home X, located in Pamulang, Banten Province. Method: The study employed a quantitative approach with a cross-sectional design. A total of 45 out of 51 independent elderly individuals residing at nursing home X during the study period were involved. The WHOQoL-BREF instrument was used to measure the quality of life. Results: The findings revealed that the overall average quality of life score was categorized as good (60.2 ± 8.65). However, the average scores for each domain were as follows: physical domain 53.8 ± 10.6, psychological domain 59.2 ± 9.77, social relationship domain 61.7 ± 16.45, and environmental domain 66.1 ± 11.37. These scores indicate that the quality of life in the physical and psychological domain was predominantly unsatisfactory. Furthermore, the quality of life in the social domain also demands improvement. In addition, this study found a significant relationship between the quality of life and both the educational background (pvalue=0.009) and economic status (pvalue=0.025) of the elderly. Conclusions: Efforts to improve physical well-being require serious attention at nursing home X. Additionally, psychological, and social support initiatives are necessary. Further research exploring the challenges within each domain in greater depth and developing integrated interventions in collaboration with various stakeholders, including partners of the nursing home, is essential to enhance the well-being of the elderly.

Keywords: banten; elderly; nursing home; older adult; quality of life

INTRODUCTION

Globally, including in Indonesia, the elderly population is steadily increasing. The World Health Organization (2024) estimates that one in six people will be elderly by 2030. In Indonesia, alongside rising life expectancy, the proportion of the elderly population has also increased from 7.59% in 2010 to 11.75% in 2022 (Indonesia Central Bureau of Statistics, 2023). This demographic shift underscores the need to prioritize the quality of life for Indonesia's elderly population.

Research indicates that many Indonesian elderly individuals have a low quality of life (Hidayati et al., 2018). A significant health burden for Indonesian older adults often stems from multimorbidity and polypharmacy, with common conditions including hypertension, stroke, diabetes mellitus, chronic kidney disease, heart disease, and cancer (Kementerian Kesehatan Republik Indonesia, 2019). Furthermore, studies highlight the vulnerability of Indonesian elderly to various mental health issues (Shalafina et al., 2023). Contemporary social challenges, such as living alone or having a small family size, also contribute to high rates of loneliness among the elderly (Susanty et al., 2022; Widhowati et al., 2020).

Research from Indonesia suggests that elderly individuals residing in nursing homes face a higher risk of adverse outcomes compared to those living in the community (Kiik & Nuwa, 2020). This trend is observed in other countries as well. For instance, a study by Ramocha et al. (2017) revealed a similar pattern in South Africa, where elderly individuals in institutions or nursing homes experienced a lower quality of life. In France, placement in a nursing home was also associated with a decline in quality of life (Villeneuve et al., 2022). Various factors can influence these outcomes, including age, gender, education, marital status, ethnicity, depression status, the presence of multiple chronic diseases, forced institutionalization, low social support, limited activities, and medication adherence (Gunawan et al., 2020; Juniarni & Wulandari, 2020; Pramesona & Taneepanichskul, 2018; Uchmanowicz et al., 2018). Nursing home X is a nursing home located in Pamulang District, Banten Province. This nursing home may accommodate hundreds of older adults and offers comprehensive facilities to support their safety and health. Despite these facilities, routine monitoring of the quality of life has not been implemented, at least, until early 2024. Given the importance of maintaining quality of life of the older adults and the higher risk of having low quality of life particularly for vulnerable elderly individuals in the setting of nursing homes, this study aimed to assess the quality of life at nursing home X in the South Tangerang area.

METHOD
This study was a quantitative, cross-sectional study designed to assess the quality of life of independent elderly residents at nursing home X, located in Pamulang District, South Tangerang City, Banten Province, Indonesia. The study population in this study was the independent elderly residing in nursing home X, who met the following inclusion criteria, namely individuals aged ≥60 years. Elderly who were at impared level of consciousness, have received a diagnosis of severe cognitive impairment or dementia from health workers, reside or occupy in a treatment room or the ward part of nursing home, and refuse to participate were excluded from the study. To determine the appropriate sample size, the absolute precision proportion estimation formula for a finite population was employed. At the time the study was conducted, there were 51 independent elderly individuals at nursing home X who met the inclusion criteria. With a confidence interval of 95% (Z) and a precision of 0.05 (d), and a proportion of 57.5% (Nugraha & Yuna Aprilia, 2019), a sample size of 45 indenpendent elderly was determined. The non-probability sampling technique, namely convenience sampling, was utilized to obtain respondents. Data collection was conducted from late April to early May 2024 which was held at nursing home X using a structured questionnaire. The questionnaire consisted of questions related to social demographic and economic status, as well as quality of life related measurement. The validated Indonesian version of WHOQoL-BREF questionnaire was used to measure the quality of life of the elderly (World Health Organization, 2004).

This instrument had been previously validated and tested for reliability in measuring the quality of life of Indonesian older adults residing in South Jakarta. The findings indicated that the WHOQoL-BREF is a valid and reliable tool (Cronbach's $\alpha > 0.7$ for most domains) (Salim et al., 2007). Additionally, the score distribution across its domains was symmetrical, with no floor or ceiling effects, making it suitable for assessing the quality of life in elderly populations (Salim et al., 2007). This assessment consists of 26 questions, of which 24 questions represent the quality of life in the physical, psychological, social, and environmental domains (Table 1), one question regarding the individual's perception of their overall quality of life and one question related to the individual's satisfaction with their general health (World Health Organization, 1996, 2004). The score calculation was carried out referring to the WHOQoL-BREF guidelines which can be seen in Table 1 (World Health Organization, 1996). A cut-off point of ≥60 was used as an indicator of good or satisfactory quality of life in

older adults (Silva et al., 2014). To facilitate data collection for the elderly, the filling of questionnaire was assisted by nursing students who had been previously trained by the researcher. In order to improve the accuracy of answer, the data collection was utilized a helper panel with emoticons that was presented during the questionnaire filling process. Data management commenced with the editing process, followed by coding, processing, and cleaning. Univariate and bivariate analyses were performed using SPSS version 25 software. Data presentation in textual and tabular forms was carried out to provide a visual depiction of the variables studied. This study had received ethical approval from the Krida Wacana Christian University Faculty of Medicine and Health Sciences Ethics Commission (Number 1713/SLKE-IM/UKKW/FKIK/KE/X/2023).

Table 1.
WHOQoL-BREF domains (World Health Organization, 1996)

Domains	Aspects involved in the domain	Questions
Physical health	Activities of daily living Dependence of medicinal substances and medical aids Energy and fatigue Mobility Pain and discomfort Sleep and rest Work capacity	Q3,Q4,Q10, Q15,Q16,Q17,Q18
Psychology	Bodily image and appearance Negative feelings Positive feelings Self-esteem Spirituality / Religion / Personal beliefs Thinking, learning, memory, and concentration	Q5,Q6,Q7,Q11, Q19,Q26
Social relationship	Personal relationship Social support Sexual activity	Q20,Q21,Q22
Environment	Financial resources Freedom, physical safety, and quality Health and social care: accessibility and quality Home environment Opportunities for acquiring new information and skills Participation in and opportunities for recreation/leisure activities Physical environment (pollution/noise/traffic/climate) Transport	Q8,Q9,Q12,Q13, Q14,Q23,Q24,Q25

RESULT

This study involved 45 respondents from 51 independent elderly who were resided at nursing home X in the data collection. The characteristics of the respondents are presented in Table 2. The majority of respondents were women (71.1%) and aged between 75-90 years, categorized as old elderly (62.2%). More than half of the respondents had completed elementary school, while nearly a quarter had no formal education. Approximately 64.5% of the respondents had been employed, though almost half of them had retired prematurely. Regarding financial status, 71.1% of the respondents felt that their financial status was sufficient to meet their needs.

In relation to quality of life, table 3 shows the average score in each domains, starting from physical health, psychological, social relationships, and environment. The score in the physical domain was 53.8±10.6; 59.2±9.77 in the psychological domain; 61.7±16.45 in the social relationship domain; and 66.1±11.37 in the environmental domain. Overall, the average score of respondents' quality of life was 60.2±8.65.

Table 2.
Respondent characteristics

Characteristics	f	%
Gender		
Female	32	71.1
Male	13	28.9
Age		
Early elderly (60-74 years)	16	35.6
Old elderly (75-90 years)	28	62.2
Very old elderly (>90 years)	1	2.2
Education		
Did not graduate/did not attend school	11	24.4
Primary school	23	51.1
Junior high school	6	13.3
Senior high school	1	2.2
College	4	8.9
Work history		
Never worked	16	35.6
Ever worked and retired before time	13	28.9
Ever worked and retired at time	16	35.6
Financial condition		
Not enough to meet needs	3	6.7
Enough to meet needs	32	71.1
More than enough to meet needs or can be saved	10	22.2

Table 3.
Respondents' scores, mean, and median quality of life in each domain

Quality of life domains	Transformation Score	
	$\bar{X}\pm SD$	$\tilde{X}$
Physical health	53.8±10.6	56
Psychology	59.2±9.77	63
Social relationship	61.7±16.45	59
Environment	66.1±11.37	63
Final score	60.2±8.65	61.5

The results indicated that most respondents perceived their quality of life in the environmental dimension as good or satisfactory (n=32, 71.7%). In contrast, assessments of psychological and social relationship dimensions were more varied, with some respondents perceiving them as good or satisfactory, while others did not. Notably, most respondents (n=30, 66.7%) assessed their physical health as bad or unsatisfactory (Figure 1).
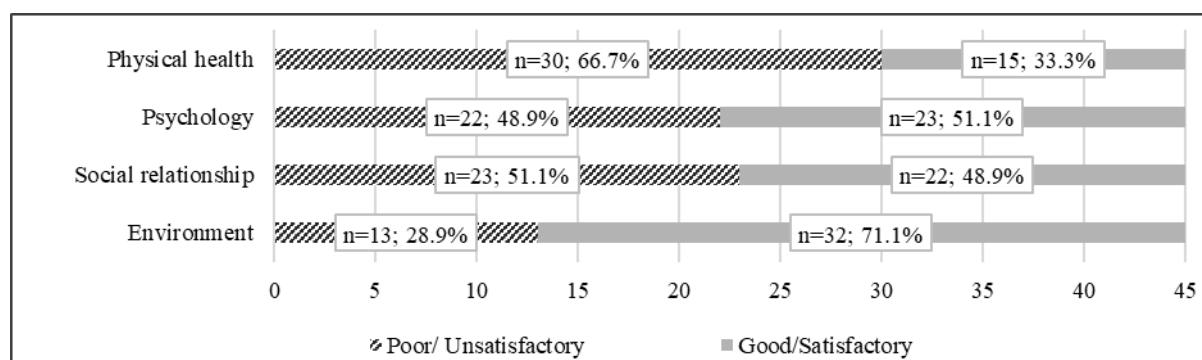

Figure 1. Overview of respondents' quality of life in each domain

The average and median scores for all facets were 3.38 and 4, respectively. This suggests a general positive perception of various aspects within each domain. However, a closer examination reveals several areas of concern. In the physical domain, issues such as pain and discomfort, dependence on medication, energy and fatigue, and limitations in daily activities

require attention. In the psychological domain, negative emotions like loneliness, hopelessness, anxiety, and depression, as well as difficulties in enjoying life, are significant concerns. Regarding social relationships, satisfaction in sexual relationships is an area that needs improvement. Finally, in the environmental domain, access to transportation are aspects that require attention (Table 4).

Table 4.
Score of each facet in the domain

Domain	Questions	Score		
		$\bar{X}$	$\tilde{X}$	Mo
Physical health	Q3. To what extent do you feel that (physical) pain prevents you from doing what you need to do?	1.78	1	1
	Q4. How much do you need any medical treatment to function in your daily life?	2.20	2	1
	Q10. Do you have enough energy for everyday life?	3.62	3	3
	Q15. How well are you able to get around?	3.84	4	4
	Q16. How satisfied are you with your sleep?	3.53	4	4
	Q17 How satisfied are you with your ability to perform your daily living activities?	3.51	3	3
	Q18. How satisfied are you with your capacity for work?	3.33	3	3
Psychology	Q5. How much do you enjoy life?	3.42	3	3
	Q6. To what extent do you feel your life to be meaningful?	3.64	4	4
	Q7. How well are you able to concentrate?	3.40	4	4
	Q11. Are you able to accept your bodily appearance?	4.07	4	5
	Q19. How satisfied are you with yourself?	3.71	4	4
	Q26. How often do you have negative feelings such as blue mood, despair, anxiety, depression?	1.87	2	1
Social relationship	Q20. How satisfied are you with your personal relationships?	3.64	4	4
	Q21. How satisfied are you with your sex life?	3.20	3	3
	Q22. How satisfied are you with the support you get from your friends?	3.58	4	4
Environment	Q8. How safe do you feel in your daily life?	3.64	4	4
	Q9. How healthy is your physical environment?	3.73	4	4
	Q12. Have you enough money to meet your needs?	3.78	4	3
	Q13. How available to you is the information that you need in your day-to-day life?	3.76	4	4
	Q14. To what extent do you have the opportunity for leisure activities?	3.36	3	4
	Q23. How satisfied are you with the conditions of your living place?	3.71	4	4
	Q24. How satisfied are you with your access to health services?	3.69	4	4
	Q25. How satisfied are you with your transport?	3.20	3	3

When associated with the sociodemographic characteristics of the respondents (Table 5), the respondents' quality of life appears to be significantly related to their financial condition and level of education. In contrast, age and work history were not found to have a significant relationship with the respondents' quality of life.

Table 5.
Relationship between respondents' sociodemographic characteristics and quality of life

Characteristics	DF-DP-DS-DL score (*pvalue*)
Age	0.143
Last education	0.009*
Work history	0.729
Financial condition	0.025*

DISCUSSION
The results of this study showed that overall, the average quality of life score of independent elderly residents at nursing home X was within the good category. The study found a significant relationship between quality of life and both educational attainment and financial condition, suggesting that socioeconomic factors may influence the quality of life of elderly

residents in nursing homes. While this study cannot definitively conclude that socioeconomics directly impacts quality of life, it suggests that individuals with better socioeconomic status may have greater access to nursing homes with superior facilities. Nursing home X, for instance, offers comprehensive facilities, including security, health services, and environmental cleanliness, along with various room types at different price points. Additionally, over 70% of the elderly residents gave a positive assessment of the environmental domain for this nursing home.

Although the overall average quality of life score was good and the environmental domain was perceived positively, the physical health domain of the independent elderly residents remains a significant concern. Over 60% of respondents rated their physical health as low or unsatisfactory, and the average and median scores in this domain were below 60, indicating widespread physical health issues among the residents. A closer examination of specific aspects within the physical domain revealed that pain and discomfort, dependence on medication or medical devices, energy and fatigue, and limitations in daily activities were common challenges faced by the residents. Several previous studies have also shown problems related to pain in the elderly population, including in nursing homes, that impacted quality of life (Dogan & Goris, 2018; Ferretti et al., 2018; Ordu Gokkaya et al., 2012; Rahmawati & Yanti, 2023; Zanocchi et al., 2008). Therefore, effective pain assessment and management, involving a multidisciplinary healthcare team, is crucial to address these issues (Ferretti et al., 2018; Zanocchi et al., 2008). Additionally, studies have shown that the level of quality of life in the elderly is influenced by dependence on drugs and medical devices, particularly in those who consume a large number of medications (more than five types) (Tegegn et al., 2019). While medication adherence can actually positively impact quality of life (Hamedi-Shahraki et al., 2019), dissatisfaction to due to social and behavioral factors related to drug dependence, such as trust in medications, cost, and side effects, may contribute to discomfort and negatively affect the perception of medications among elderly residents at nursing home (Park et al., 2018). Further research is needed to explore this issue in more detail. Furthermore, fatigue and limitations in daily activities are other significant concerns in the physical domain. Fatigue can significantly reduce functional ability and social participation, exacerbating existing health problems in the elderly (Yu et al., 2010). To mitigate these issues, implementing strategies to identify risk factors and manage fatigue, particularly among high-risk elderly individuals, could be considered at nursing home X.

The social aspect of quality of life also requires attention, as over 50% of respondents reported dissatisfaction in this domain. The median score for aspects related to social relationships, particularly sexual satisfaction, indicates a significant issue. A previous Indonesian study found that elderly individuals are susceptible to sexual dissatisfaction (Maharani et al., 2021). Moreover, sexual dissatisfaction has been linked to a lower quality of life among the elderly (Santosa et al., 2011). While this study did not explicitly examine the marital status of the residents, research suggests that the absence of a partner can increase the risk of sexual dissatisfaction (Santosa et al., 2011). However, regardless of partnership status, sexual expression can still be challenging for the elderly, especially those residing in nursing homes (Katz, 2013; Schubert, 2015). Various factors, including societal stigma surrounding sexuality in older adults, the attitudes and policies of care home staff, and ethical considerations related to sexual expression in institutional settings, may contribute to this issue to be overlooked. (Ho & Goh, 2022; Le et al., 2024; Schubert, 2015).

The psychological dimension is another area that requires attention. The WHOQoL-BREF score reveals that 48.9% of respondents had a poor or unsatisfactory quality of life in this domain. The median score indicates that negative feelings such as loneliness, hopelessness,

anxiety, and depression were prevalent among the respondents at nursing X. Previous studies have confirmed that stress, anxiety, and depression are more common among nursing home residents compared to those living at home (Putri et al., 2015; Roya et al., 2020; Selo et al., 2017). Therefore, nursing home X should prioritize further assessments of stress levels and implement programs to improve the psychological well-being of its elderly residents. Special attention should be given to at-risk groups, including elderly women, those with limited social support, and those with multiple chronic diseases (Pramesona & Taneepanichskul, 2018).

From an environmental perspective, the assessment of the transportation facet indicates that this seems to be one of issues also affecting the well-being of the elderly residents. Several studies indeed have highlighted the importance of transportation in maintaining the quality of life of the elderly, as it facilitates active mobility, independence, and social participation, which are crucial for physical and psychological resilience (Pantelaki et al., 2021; Zhang & Yang, 2024). This study did not dig deeper into specific transportation challenges faced by the residents at nursing home X. Further research could be conducted to explore the strategies in addressing this issue. This study had limitation. Data collection was conducted within a relatively short timeframe and involved assisted interviews while some questions may have been perceived as sensitive or personal. This may have still introduced inaccuracies or biases into the responses provided by the elderly participants, although the panel of emoticons have been introduced to minimize this. Future research should consider allocating sufficient time to build trust and rapport with elderly participants before initiating data collection.

CONCLUSION
Overall, the quality of life of independent elderly residents at nursing home X was found to be generally good. However, some areas related to physical, social, psychological, and environmental well-being require further attention. The study also highlighted a significant association between socioeconomic status and quality of life among the elderly residents. To improve the quality of life in biopsychosocial and environmental domains, integrated interventions are necessary. This involves conducting further assessments, identifying risk factors and their determinants, and implementing targeted programs with the involvement of various stakeholders within the institution, including partners.

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