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Key Predictors of Quality of Life Among the Elderly in Kampar regency: A Multidimensional Approach

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Abstract: This research investigates many factors that affect the quality of life of the elderly in Kampar Regency, Riau. This research, with 402 people aged 60 and above, indicated that the elderly's perception of their own health is the most significant predictor of their overall health-related quality of life. Social support—assistance from family, friends, and the community has been shown to be very impactful, highlighting the significance of social connections for well-being in later life. Leisure activities —spanning from morning walks to engaging in religious practices or gardening— substantially enhance well-being. Interestingly, the elderly's perception of justice in healthcare services also affects their quality of life. Elderly individuals who feel that access to healthcare services is distributed fairly tend to have a better quality of life. Meanwhile, aging does show negative effects, but this emphasizes the importance of programs that specifically target the needs of the elderly across various age groups, especially the very elderly. The utilization of community-based care services also plays an important role in improving the quality of life, demonstrating the value of a local support system that is easily accessible to the elderly. These findings provide a comprehensive picture of what is truly important for the elderly in Kampar Regency, and can serve as a foundation for the development of more effective programs to enhance well-being in old age.

Keywords: Elderly; Key predictors; Quality of life.

Introduction

The increasing elderly population is one inescapable global event of recent decades. Population ageing, according to the World Health Organization (WHO, 2024), is a subject drawing special attention in several countries including Indonesia. Rising life expectancy and declining birth rates are reflected in the growing proportion of elderly people in Kampar Regency, Riau, which poses new challenges and needs in social services and health systems. The quality of life for the elderly is a comprehensive concept including many aspects of life, not just physical health but also mental health, social relationships, and overall well-being. The World Health Organization defines quality of life as people's understanding of their position in life given the value systems and culture in which they live and in relation to their ambitions, expectations, standards, and concerns (WHO, 2024).

Earlier research shown some variables affecting senior quality of life. Dai et al. (2015) claim that major factors influencing senior quality of life in Jinzhou, China include health status, education level, and income. At the same time, Sun et al. (2015) emphasis the significance of urban environments and socioeconomic factors on elderly quality of life in Chinese metropolitan areas. Onunkwor et al. (2016)shown in Malaysia how vital social support and living conditions were for the quality of life of elderly persons in nursing homes. Among the elderly in many countries, subjective health

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perception has shown to be a major predictor of health-related quality of life (HRQoL). Bowling (2011) research of the elderly population in England found that subjective health perception connects more with quality of life than objective health markers.

Among the elderly, Netuveli & Blane (2008) also discovered that subjective evaluation of health status is a major mediator in the relationship between objective health issues and life satisfaction. Social support—assistance from family, friends, and community—has been found to significantly affect senior quality of life, hence underlining the importance of social ties for well-being in old age. According to Khan & Tahir (2014), strong social support, particularly in the mental health field, helps to offset stress and significantly improves health-related quality of life. Consistent with this, Litwin & Shiovitz-Ezra (2011) discovered that social isolation and loneliness are excellent indicators of declining quality of life in the older population. Recreational activities are very important for enhancing senior quality of life.

Adams et al. (2011) study in the United States found that involvement in various leisure activities, from morning walks to religious activities or gardening, greatly improves well-being in the elderly. Other longitudinal studies found that older persons who often engage in social and recreational activities have a lower risk of developing cognitive decline and depression, which therefore helps to enhance quality of life (Hertzog et al., 2008; Sala et al., 2019; Silverstein & Parker, 2002). Healthcare inequalities are another important factor affecting senior quality of life. Wang et al. (2012) highlighted the issue of uneven utilization of medical services among the elderly, which also has an impact on Kampar Regency.

Interestingly, elder opinions on fairness in healthcare services affect their quality of life as well. Usually, older people who think that access to healthcare services is fairly distributed have a better quality of life. Data from international health surveys showed that regional and socioeconomic inequalities in access to healthcare services cause variations in health-related quality of life among the aged (Allin et al., 2011; Lee et al., 2020; Siqeca et al., 2022; Watkinson et al., 2021; Woo et al., 2010). Although ageing has adverse effects, this emphasis the need of projects mostly targeting the needs of the elderly throughout all age groups, especially the very old. Older senior citizens (over 75 years) also have unique challenges that need for tailored therapies, particularly in relation to social support and healthcare access (Liljas et al., 2017; Nygren et al., 2005; Rony et al., 2024). Cohort studies by Makai et al. (2014) and Zaninotto et al. (2009) showing that factors affecting quality of life differ significantly across different older age groups complement these findings and underline the need of age-appropriate approaches in health and social policy planning. The usage of community-based care services also helps to improve elderly quality of life by highlighting the value of local support networks easily accessible to the elders.

Community-based care projects have shown to be rather effective by boosting functional independence and reducing social isolation among the elderly; this consequently helps to improve their quality of life (Cochrane et al., 2016; Friedman et al., 2005; Hwang et al., 2019). Intervention studies on comprehensive community-based care programs might significantly improve physical and mental health status as well as life satisfaction in community-dwelling older adults (Friedman et al., 2017; Marek et al., 2005; Noh et al., 2021; Song & Li, 2023). Although many countries have conducted considerable research on old quality of life, comprehensive studies on aged quality of life in Indonesia, particularly in Kampar Regency, Riau, remain limited.

Differences in social, cultural, economic, and healthcare systems between Indonesia and other countries create a need for specific study appropriate for the local environment. The elderly in Indonesia have not been extensively studied in connection to issues like subjective health perception, social support, leisure activities, healthcare inequality, and usage of community-based services. Many countries' institution-based elderly care has evolved significantly (Hung, 2023; Ma & Liang, 2019; Zhan et al., 2006), and equivalent transformations have also occurred in Indonesia, particularly Kampar Regency. The quality of life in Kampar Regency is shaped by its rare combination of urban and rural areas and many cultural roots. Life satisfaction among the elderly remains especially in rural areas a significant concern (Liu & Guo, 2008; Rey-Beiro & Martínez-Roget, 2024; Xia et al., 2024). Wang et al. (2012) also highlighted the issue of inequality in the utilization of medical services among the elderly, which is yet another challenge in Kampar Regency.

Data from the Kampar Regency Central Statistics Agency (BPS, 2024) shows that around 7.5% of the overall population in this regency is elderly, increasing at an annual rate of approximately 2.3%. Kampar's considerable geographical variety comprising several far-flung locations makes it challenging to provide equitable healthcare services. Preliminary studies in Kampar reveal significant disparities in access to medical care between urban and rural areas, which impacts senior quality of life. Kampar Regency's robust traditional family structure also has a major impact on the support system for the elderly. Therefore, this research aims to investigate the main signs of quality of

life among the elderly in the Kampar Regency using a multidimensional approach. By means of identification of components affecting elderly quality of life, this research is intended to provide a scientific foundation for the development of more efficient programs and policies to improve senior welfare in Kampar Regency. This reflects the global commitment to ensure dignified and healthy ageing emphasis in the World Health Organization report (WHO, 2024) on ageing and health.

Method

Predictors of quality of life among the elderly in Kampar Regency were examined using a cross-sectional design and a quantitative method in this research. This approach was chosen for its efficacy in epidemiological studies on senior populations (Bowling, 2014) and for its capacity to highlight correlations between many determinants and quality of life at a single moment. Research meant to find elements affecting quality of life in certain groups fits very well with the cross-sectional design (Wang & Cheng, 2020).

The target population for this research was all Kampar Regency, Riau, citizens aged sixty years and older. To guarantee they included a decent mix of various age, economic, and social backgrounds, the researchers utilized stratified random sampling depending on where participants lived—urban and rural. This approach fits advice from earlier research stressing the need of spatial stratification in studies on older quality of life (Hwang et al., 2019; Song & Li, 2023). Using Slovin's technique, we calculated the sample size to guarantee a 95% confidence level and a 5% margin of error. This computation produced a minimum sample of 384 participants. The sample size was raised to 420 people to expect possible non-response. 402 valid questionnaires were examined after the data collecting procedure, hence producing a response rate of 95.7%, which above the 70% minimum criterion for survey research (Fincham, 2008).

Several verified tools including: used to guide data collecting. WHOQOL-BRE to assess quality of life connected to health. Comprising 26 questions across four areas—physical health, psychological, social interactions, and environment—this tool with Cronbach's alpha scores of 0.86-0.91, WHOQOL-BREF has been well verified in several nations, including Indonesia (Schmidt et al., 2006; Skevington et al., 2004). To assess perceived social support from family, friends, and significant others, use the Multidimensional Scale of Perceived Social Support (MSPSS). Comprising 12 questions on a 7-point Likert scale, this tool has shown great consistency (Cronbach's alpha = 0.85-0.91) in prior research on senior populations (Dambi et al., 2018; Zimet et al., 1988). Leisure Activities Scale for the Elderly (LASE) to measure involvement in certain leisure activities. LASE tracks the frequency, length, and kind of leisure activities seniors (Iwasaki & Mannell, 2000; Silverstein & Parker, 2002) engage in. Developed from tools used by Allin et al. (2011) and Watkinson et al. (2021), the Health Care Access views Questionnaire gauges views of equity in access to healthcare services. Adapted from tools used by Friedman et al. (2017) and Noh et al. (2021), the Community-Based Services Utilization Scale assesses frequency and satisfaction with the use of community-based services.

Every instrument went through a cross-cultural adaptation procedure including translation into Indonesian, back-translation into the original language, and validity and reliability assessment on a small sample of older Indonesians. All tools in this investigation have Cronbach's alpha scores between 0.78 and 0.92, showing outstanding internal consistency (Tavakol & Dennick, 2011). A study team of qualified enumerators with nursing and public health backgrounds carried out data collecting. All enumerators went through standardization training before data gathering to guarantee uniformity in questionnaire delivery and research ethics. Based on their choices, we conducted in-person interviews in respondents' homes or community health centers (Puskesmas, Elderly Integrated Health Post). Enumerators read questions for those with literacy restrictions. Interviews typically lasted 45 to 60 minutes, with pauses given as required to lower respondent weariness. This approach fits advice for data gathering in older populations (Liljas et al., 2017; Zon et al., 2016).

SPSS version 26.0 was used to analyze data. Respondents' demographic traits and key study variables were subject to descriptive analysis including frequency, percentage, mean, and standard deviation. Bivariate and multivariate studies were conducted to find determinants of quality of life. Bivariate analysis examined correlations between independent factors and quality of life using one-way ANOVA, independent t-tests, and Pearson correlation. The multivariate model contained variables with p-values < 0.25 in bivariate analysis (Hosmer et al., 2013). Hierarchical multiple regression was utilized in multivariate analysis to evaluate the relative impact of many predictor groups on quality of life. The model was run with four blocks of variables entered:

Demographic traits; subjective health status; social support and leisure activities; and healthcare service access and use of community-based services were all included into the model in four blocks: After adjusting for other factors, this method lets one systematically evaluate the incremental contribution of every predictor group (Cepeda-Carrión et al., 2022). Before the study,

assumptions for regression analysis—including normality, linearity, homoscedasticity, and multicollinearity—were examined. Statistically significant were p-values less than 0.05. Adjusted R^2 and Cohen's f^2 effect size were used to evaluate model strength (Cohen, 1988).

Result and Discussion

Respondent Demographic Profile

Four hundred two old Kampar Regency, Riau respondents took part in this study. Table 1 shows the demographic characteristics of respondents. Most of the respondents were female (53.5%), in the 60-69 age range (58.2%), and lived with family (83.1%). Nearly half (48.8%) had below-average income, and most had poor education levels (65.4% just finished elementary school or had no formal education). These demographic traits fit the ageing profile in rural and semi-urban locations (Liu & Guo, 2008) Onunkwor et al., 2016).

Table 1. Demographic Characteristics of Respondents (N=402)

Characteristic	n (%)
Age Group	
60-69 years	234 (58.2)
70-79 years	117 (29.1)
≥ 80 years	51 (12.7)
Gender	
Male	187 (46.5)
Female	215 (53.5)
Marital Status	
Married	238 (59.2)
Widowed	158 (39.3)
Never married	6 (1.5)
Education Level	
No formal education	93 (23.1)
Elementary school	170 (42.3)
Junior high school	75 (18.7)
Senior high school	48 (11.9)
College/university	16 (4.0)
Living Arrangement	
Living alone	68 (16.9)
Living with family	334 (83.1)
Income Level	
Below average	196 (48.8)
Average	156 (38.8)
Above average	50 (12.4)
Residential Area	
Urban	154 (38.3)
Rural	248 (61.7)

Among the Elderly, Quality of Life and Influencing Factors

Based on WHOQOL-BREF, Table 2 shows the average quality of life ratings of respondents for each domain. While the social interactions component scored highest (68.7 ± 15.8), the physical domain scored lowest (58.4 ± 14.2). This trend suggests that Kampar Regency's seniors have rather decent social support but struggle with physical health issues. This result agrees with Sun et al. (2015) urban China studies, which also revealed that among the four quality of life categories, social ties had the highest score.

Table 2. Quality of Life Scores (WHOQOL-BREF) and Domains (N=402)

Quality of Life Domain	Mean ± SD	Median	Min-Max
Physical	58.4 ± 14.2	59.0	21-89
Psychological	63.5 ± 13.9	63.0	25-94
Social Relationships	68.7 ± 15.8	69.0	25-100
Environment	61.2 ± 12.6	63.0	19-100
Total Score	62.9 ± 11.5	63.5	27-91

Age, education level, marital status, living arrangement, income level, subjective health perception, social support, leisure activities, opinions of fairness in healthcare services, and use of community-based services ($p < 0.05$) were among the variables found by the bivariate analysis results to be significantly related to quality of life among the elderly in Kampar Regency. Table 3 shows the findings of the correlation study between quality of life and independent factors.

Table 3. Correlation Analysis Between Independent Variables and Quality of Life

Variable	Correlation Coefficient (r)	p-value
Age	-0.289	< 0.001*
Education Level	0.315	< 0.001*
Income Level	0.342	< 0.001*
Subjective health perception	0.572	< 0.001*
Social support	0.483	< 0.001*
Leisure activities	0.421	< 0.001*
Perceptions of fairness in healthcare services	0.376	< 0.001*
Utilization of community-based services	0.298	< 0.001*

Hierarchical multiple regression analysis revealed the main factors influencing quality of life among the elderly. The results of the study indicated that the whole model explained 64.7% of the variance in quality of life (adjusted $R^2 = 0.647$, $F(15, 386) = 49.72$, $p < 0.001$). Subjective health perception predicted quality of life most significantly ($\beta = 0.382$, $p < 0.001$), followed by social support ($\beta = 0.246$, $p < 0.001$) and leisure activities ($\beta = 0.187$, $p < 0.001$). The results of the hierarchical multiple regression study are shown in Table 4.

Table 4. Hierarchical Multiple Regression Analysis Results for Factors Affecting Elderly Quality of Life

Variable	Model 1 β	Model 2 β	Model 3 β	Model 4 β
Block 1: Demographic Characteristics				
Age	-0.246***	-0.121**	-0.098*	-0.085*
Gender (ref: male)	-0.043	-0.034	-0.028	-0.025
Education	0.241***	0.163**	0.112*	0.094*
Marital status (ref: married)	-0.132**	-0.087*	-0.054	-0.051
Living arrangement (ref: with family)	-0.124**	-0.092*	-0.034	-0.026
Income level	0.286***	0.184***	0.128**	0.106*
Residential area (ref: urban)	-0.108*	-0.082*	-0.061	-0.032
Block 2: Subjective Health Status				
Subjective health perception		0.468***	0.421***	0.382***
Block 3: Social Support and Leisure Activities				
Social support			0.294***	0.246***
Leisure activities			0.218***	0.187***
Block 4: Healthcare Access and Community-Based Services Utilization				
Health inequality				0.147**
Utilization of community-based services				0.124**
R^2	0.324	0.513	0.602	0.659
Adjusted R^2	0.312	0.502	0.591	0.647
ΔR^2		0.189***	0.089***	0.057***
F Change		120.41***	33.42***	22.85***

Among Kampar Regency seniors, subjective health perception most predicted quality of life ($\beta = 0.382$, $p < 0.001$). The finding backs research highlighting the importance of people's perceptions of their own health status in influencing their quality of life (Bowling, 2014; Netuveli & Blane, 2008). Older persons who have good opinions about their own health likely to have better quality of life regardless of their actual health condition. This implies that initiatives intended to promote subjective health perception—such as health education and chronic disease management—can significantly raise quality of life for the elderly.

This result corresponds with previous Dai et al. (2015) studies indicating that among the elderly in Jinzhou, China, subjective health perception was more strongly linked to quality of life than real health indicators. Likewise, Woo et al. (2010) found in their Hong Kong study that even among older people with objectively worse health problems, good health perception was consistently linked with higher quality of life. Longitudinal studies by Zaninotto et al. (2009) support this idea by showing that among the elderly, subjective health assessment is a powerful long-term predictor for qualities of life trajectories.

Subjective Health Status

Subjective health status was the greatest predictor of quality of life among the elderly in Kampar Regency ($\beta = 0.382$, $p < 0.001$). The finding backs research underlining the importance of people's perceptions of their own health status in determining their quality of life (Bowling, 2014; Netuveli & Blane, 2008). Older persons who have favourable opinions about their own health likely to have better quality of life regardless of their real health state. This implies that initiatives intended to improve subjective health perception—such as health education and chronic disease management—can significantly assist to increase elderly quality of life.

This finding is consistent with prior studies by Dai et al. (2015), which indicated that among the elderly in Jinzhou, China, subjective health perception was more closely linked to quality of life than actual health indices. Similarly, Woo et al. (2010) discovered in their Hong Kong research that excellent health perception was consistently connected with greater quality of life even among older adults with objectively worse health issues. Zaninotto et al. (2009) longitudinal studies back up this notion by revealing that among the elderly, subjective health evaluation is a strong long-term predictor for qualities of life trajectories.

Social Support

Social support was the second most important predictor of senior quality of life ($\beta = 0.246$, $p < 0.001$). This result confirms the significance of social connections and support systems in maintaining a decent quality of life for the older adults (Khan & Tahir, 2014; Litwin & Shiovitz-Ezra, 2011). Strong social support from family, friends, and community in Kampar Regency helps to buffer stress and enhance the psychological well-being of the elderly.

The local cultural backdrop emphasis values of togetherness and mutual assistance served to clarify the considerable importance of social support as a predictor of Kampar Regency quality of life. Onunkwor et al. (2016) studies on the elderly in Malaysia—a country

bearing cultural parallels with Indonesia—showed that notable social support was connected to higher quality of life across all WHOQOL-BREF categories. Ibrahim et al. (2013) also discovered comparable results, demonstrating that social support was a major predictor of health-related quality of life among the elderly in Malaysia.

The results of this study also match those of Hertzog et al. (2008), which emphasis the importance of social involvement in maintaining cognitive performance in the elderly. They argue that social support not only benefits mentally but also helps to maintain cognitive function by way of mental stimulation resulting from social involvement. In Kampar Regency, traditional extended family-based social support systems are still robust, which helps to explain why majority of individuals surveyed (83.1%) reside with family. Such assistance really helps to maintain a good quality of life among the seniors.

Leisure Activities

The third key predictor of senior quality of life was leisure activities ($\beta = 0.187$, $p < 0.001$). Elderly persons who actively engaged in a range of leisure activities, from morning walks to religious rituals and gardening, reported more quality of life than those who were less active. This finding corroborates prior research suggesting that participation in leisure activities enhances the physical, psychological, and social well-being of older individuals (Adams et al., 2011; Silverstein & Parker, 2002).

Leisure activities, Sala et al. (2019) claim, improve the cognitive, physical, and mental health of seniors. They classified leisure activities into many types: physical activities, cognitive activities, social activities, and productive activities. Every activity category has its own benefits, but combining many kinds of activities produces the greatest results. Usually light physical activities (like walking), religious activities, and socio-cultural activities make up elderly leisure activities in Kampar Regency, which collectively improve their quality of life.

Longitudinal studies by Silverstein & Parker (2002) have shown that especially for elderly adults experiencing significant life changes like loss of a spouse or health decline, increased participation in leisure activities is connected to improved quality of life. Especially for those in danger of deterioration, this finding underlines the importance of recreational activity development projects as therapies to improve elderly quality of life.

Health Inequality

Health inequality in healthcare services also shown to be a significant predictor of senior quality of life ($\beta = 0.147$, $p < 0.01$). Older folks who thought access to medical services was fairly spread said better quality of life. As other studies have shown, this finding underlines the significance of fairness in the provision of healthcare services for the elderly (Allin et al., 2011; Watkinson et al., 2021). Kampar Regency, with its vast and diverse topography, finds it difficult to equitably provide medical services. Changes in access between urban and rural areas, this study found, might significantly alter the quality of life for seniors. Unequal access to medical services helps to explain differences in health-related quality of life among the elders (Lee et al., 2020; Siqeca et al., 2022). Watkinson et al. (2021) emphasis even further that views of justice in healthcare services are related not just to physical accessibility but also to service quality, costs, and treatment provided to the elderly.

Attitudes of injustice in the healthcare system partly mitigated racial differences in health-related quality of life, according to their findings. Although the National Health Insurance program (JKN) has improved financial access to healthcare services, inequality in the distribution of healthcare facilities and healthcare staff between urban and rural areas remains a concern in Kampar Regency that needs to be addressed.

Community-based home care

Community-based services' utilization was the final significant predictor of older quality of life ($\beta = 0.124$, $p < 0.01$). People who actively utilize community-based services including home health care programs and Elderly Integrated Health Posts (Posyandu Lansia) reported better quality of life. This finding corroborates prior research suggesting that community-based care programs enhance quality of life for seniors, reduce social isolation, and promote functional independence (Friedman et al., 2017; Noh et al., 2021; Song & Li, 2023). Community-based services such as Elderly Integrated Health Posts in Kampar Regency not only offer healthcare but also social activities venues for the elderly. This emphasis the significance of an integrated approach in service delivery for the elderly, encompassing health, social, and recreational components. Cochrane et al. (2016) discovered in their methodical study that home-based reablement initiatives for the elderly improved functional independence and quality of life. Similarly, Marek et al. (2005) found that community-based aged care programs outperformed institutional care in clinical outcomes. Intervention studies by Hwang et al. (2019) showed that community-based initiatives combining physical exercise components, health education, and social support might reduce loneliness and social isolation among the elderly as well as improve their quality of life. These findings underline the need of developing and

strengthening comprehensive and integrated community-based services as a means to improve senior quality of life in Kampar Regency.

Demographic Factors

Among demographic one age (β = -0.085, p < 0.05), education level (β = 0.094, p < 0.05), and income level (β = 0.106, p < 0.05) remained significant predictors of senior quality of life after accounting for other variables. Older adults with lower education and income levels tended to report worse quality of life. This finding corroborates prior research showing that sociodemographic factors significantly influence elderly quality of life (Dai et al., 2015; Sun et al., 2015). The negative effect of age on quality of life in this study (u03b2 = -0.085, p 0.05) is consistent with previous studies showing that older elderly people, especially those over 75 years, experience specific challenges requiring tailored treatments (Liljas et al., 2017; Nygren et al., 2005; Zaninotto et al., 2009). This emphasis the importance of projects especially targeting the need of older individuals across all age categories, especially the very elderly. The findings of Dai et al. (2015), which showed that socioeconomic status is a major predictor of elderly quality of life in Jinzhou, China, correspond with the positive impact on elderly quality of life in this study of education level (β = 0.094, p < 0.05) and income level (β = 0.106, p < 0.05). Most elderly citizens (65.4%) in Kampar Regency are uneducated, and more than half (48.8%) have below-average income, which might assist to explain why these factors still significantly influence quality of life even when other factors are included.

Conclusion

Subjective health perception, social support, leisure activities, views of justice in healthcare services, and use of community-based services were found by this study to be the key determinants of quality of life among the elderly in Kampar Regency, Riau. Subjective health perception became the most powerful predictor, stressing the need of programs meant to enhance older people's views of their own health. The results of this study have numerous significant consequences. Programs to enhance older quality of life should first emphasis subjective elements of health rather than just objective health. Health education, chronic illness treatment, and healthy lifestyle promotion are examples of interventions that may assist the elderly enhance their subjective health perception. Maintaining the quality of life among the elderly depends on second, improving social support structures, both official and informal. Programs that encourage social connection and isolation prevention may greatly help seniors' well-being. Third, senior policies should provide first priority chances to engage in different leisure activities, especially those that are culturally and socially meaningful. Fourth, we have to increase our work to close gaps in access to healthcare services, particularly between urban and rural communities. Finally, building and strengthening thorough and integrated community-based services—such as older Integrated Health Posts—is a good way to raise older quality of life in Kampar Regency. Among the drawbacks of this study are the cross-sectional design that precludes causal inferences and the use of assessment tools largely modified from earlier research. Longitudinal studies will help future researchers to better understand the causal links between different variables and senior quality of life as well as to create and assess treatments meant to raise Kampar Regency's aged quality of life.

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