

The Relationship Between Physical Activity and Life Satisfaction in the Elderly at the Griya Lansia Ciparay Social Service Center

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Abstract

Aging is a natural process accompanied by declines in physical, psychological, and social functions, which can affect life satisfaction among the elderly. Physical activity is known to support physical health, emotional well-being, and social interaction, potentially increasing life satisfaction in old age. This study aimed to examine the relationship between physical activity and life satisfaction among the elderly at the Griya Lansia Ciparay Social Service Center, West Java. This study used a quantitative correlational design with a cross-sectional approach. A total of 74 elderly were selected using purposive sampling based on predetermined inclusion and exclusion criteria. Physical activity was assessed using the Physical Activity Scale for the Elderly (PASE), while life satisfaction was measured using the Life Satisfaction Index-A (LSI-A). Data were collected through structured interviews to ensure that participants were able to understand the questions and recall their physical activity over the previous seven days. Data were analyzed using the Spearman correlation test. The results showed a significant positive relationship between physical activity and life satisfaction ($p < 0.001$; $r = 0.441$), indicating a moderate correlation. Elderly with higher levels of physical activity tended to report higher life satisfaction. This study suggests strengthening and diversifying physical activity programs to improve the well-being and life satisfaction of older adults in social care institutions.

Keywords: Elderly; life satisfaction; physical activity; social institutions.

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Introduction

Aging is a natural process experienced by every human being, characterized by a progressive decline in physical, psychological, and social functions. Elderly, as defined in Regulation of the Minister of Social Affairs of the Republic of Indonesia Number 5 of 2018 concerning National Standards for Social Rehabilitation of the Elderly, are individuals aged 60 years and above who can be distinguished into potential and non-potential elderly based on their functional abilities. According to United Nations (2020) The classification of the elderly is divided into elderly (60-74 years), old (75-90 years), and very old (over 90 years), which describes the complexity of the challenges faced in the final stages of life.

Population aging has become a major global demographic challenge. United Nations (2020) it is stated that the number of elderly people in the world reached 727 million people in 2020 (9.3% of the population) and is predicted to increase to 1.5 billion in 2050. In Indonesia, Central Statistics Agency (2021) stated that the number of elderly people reached 29.3 million people, or approximately 10.82% of the total population, marking Indonesia's entry into an aging population structure. In West Java Province, Central Statistics Agency of West Java Province (2021) the number of elderly people has reached 4.98 million (10.05% of the total population). This surge in the elderly population brings health, social, and economic challenges, necessitating intervention strategies that can maintain their quality of life, including their life satisfaction.

Life satisfaction is an important indicator of the well-being of the elderly, which includes physical, psychological, social and environmental aspects (Novianti et al., 2020). Various international studies show that physical activity plays a big role in increasing life satisfaction (Parra-Rizo & Sanchis-Soler, 2020). Research has found that older adults who regularly engage in physical activity have higher levels of life satisfaction. According to (Mutz et al., 2021) emphasizes that leisure-time physical activity is positively correlated with overall life satisfaction. Physical activity in older adults not only impacts physical aspects but also supports mental health, social interactions, and the meaning of life (Sánchez et al., 2021).

The theory of successful aging emphasizes the importance of active engagement and low disease risk to achieve quality aging (Rodrigues et al., 2023). The activity theory of aging emphasizes that older adults who maintain activity and social engagement will age better. Recent research also suggests that participation in activities plays a crucial role in maintaining successful aging in older adults (Shen et al., 2024). The problem-solving plan in this research is to examine the relationship between physical activity levels and life satisfaction levels among elderly people at the Ciparay Elderly Social Services Center in West Java. This location was chosen because most residents are still able to engage in light to moderate physical activity, making it relevant for research.

Life satisfaction in older adults is influenced by physical health, social relationships, and involvement in meaningful activities (Istichomah et al., 2024). Physical activity, both moderate and high intensity, has been shown to improve physical function, reduce the risk of depression, improve mood, and strengthen social bonds (Novianti et al., 2020; Parra-Rizo & Sanchis-Soler, 2020). Research by (Tanuwijaya et al., 2024) research in Indonesia shows

that low physical activity contributes to decreased adaptive function and an increased risk of depression in the elderly. Physical activity plays a crucial role in maintaining physical fitness and also impacts psychological and social aspects.

Research shows that educating families about the importance of physical activity can increase family knowledge and awareness in supporting the elderly to remain active (Pertwi & Sastrini, 2025). In addition, physical activity has been shown to have a positive relationship with cognitive function in the elderly, where the higher the level of physical activity, the better the cognitive function (Marpaung, 2023). These findings suggest that physical activity not only impacts physical health but also contributes to mental well-being and overall life satisfaction in older adults. Physical activity plays a crucial role in supporting life satisfaction, particularly in the context of social institutions with limited mobility.

This approach aligns with the goals of the elderly social service program, which emphasizes maintaining health and psychosocial well-being. This study aims to determine the relationship between physical activity scores and life satisfaction scores in the elderly in Ciparay Elderly Social Service Center. The results of this study are expected to provide theoretical benefits in enriching the literature on the relationship between physical activity and life satisfaction in the elderly, particularly in the context of Indonesian social institutions. Practically, these findings can serve as a basis for orphanage managers, local governments, and health workers in designing structured physical activity programs. From a policy perspective, this study can serve as a reference in the formulation of evidence-based health policies for the elderly, which support the quality of life and psychosocial well-being of the elderly in a sustainable manner.

Method

This study used a correlational quantitative design with a cross-sectional approach to analyze the relationship between physical activity levels and life satisfaction of the elderly at a single measurement time at the Ciparay Social Elderly Social Service Center. Data were collected through filling out the Physical Activity Scale for the Elderly (PASE) and Life Satisfaction Index-A (LSI-A) questionnaires directly by respondents and assisted by researchers during the study period. The study population was all elderly living at the Ciparay Social Elderly Service Center with a total of 159 people, consisting of 112 independent elderly, elderly with assistance (crutches and walkers), and 47 bedridden elderly.

The determination of independent, assisted, and bedridden categories did not use a specific measurement scale, but was based on the researcher's physical observations and data obtained from the orphanage. Inclusion criteria included elderly aged ≥ 60 years, cooperative, not experiencing severe cognitive impairment, not having severe physical disabilities, not having severe visual or hearing impairments, and willing to be respondents. Exclusion criteria included acute medical conditions and refusal to participate. Based on these criteria, 74 elderly were obtained as samples. The sampling technique used was purposive sampling, including all elderly who met the inclusion and exclusion criteria during the study period.

The instrument used to measure physical activity levels is the Physical Activity Scale for the Elderly (PASE), a questionnaire that assesses the physical activity of the elderly over the past seven days, including recreational activities, household chores, and work or

volunteer activities. The Indonesian version (PASE-INA) has been tested for validity with an item correlation coefficient of 0.310-0.533 and good reliability with Cronbach's $\alpha = 0.844$ in the Indonesian elderly population (Hasanah, 2022). The total PASE score ranges from 0 to 400. In this study, physical activity levels were determined using the mean and standard deviation. Physical activity levels were categorized as low (< 57.79), moderate (57.79 - 128.59), and high (≥ 128.59).

The instrument used is the Life Satisfaction Index-A (LSI-A) which has been adapted into Indonesian by Aidiina Munir (Sjamsuoddin, 2007). The use of this Indonesian version refers to research conducted by (Indriani, 2012) who used it in a thesis entitled "Differences in Life Satisfaction of Early Elderly Living with Children, Independently, and in a Nursing Home." The same instrument was also used in this study (Monika, 2019) This study, entitled "Social Support and Life Satisfaction Among Elderly Residents," demonstrates that this adapted version of the LSI-A can be applied to the elderly population in Indonesia and has good reliability ($\alpha = 0.90$). The LSI-A consists of 20 items with a score range of 0 to 20.

In this study, life satisfaction was categorized into three levels using the class interval formula. Low life satisfaction was defined by a score ranging from 0 to 6, moderate life satisfaction by a score between 7 to 13, and high life satisfaction by a score between 14 to 20. This study has obtained ethical approval from the health research ethics commission, Faculty of Health Sciences and Technology, Universitas Jendral Achmad Yani with Number: 059/KEPK/FITKes-Unjani/VII/2025. This approval ensures that all research procedures have met the ethical principles of health research.

Data analysis began with a descriptive (univariate) test to describe the characteristics of the respondents. Next, bivariate analysis was used to test the normality of the data using the SPSS program with the Kolmogorov-Smirnov test because the number of samples was more than 50. If the data was normally distributed, the Pearson parametric test was used, whereas if the data was not normally distributed, a non-parametric test was used with the Spearman correlation method (Ghasemi & Zahediasl, 2012; Mishra et al., 2019).

Results

1. Univariate Analysis

Table 1. Respondent characteristics (n=74)

Category	Frequency (f)	Percentage (%)
1. Age		
a. 60 – 74 years	51	68.9
b. 75 – 90 years	19	25.7
c. > 90 Years	4	5.4
2. Gender		
a. Men	31	41.9
b. Women	43	58.1
3. Road/Help		
a. Road	59	79.7
b. Assistance	15	20.3

Based on table 1, the characteristics of the respondents, the data shows that the majority of respondents were elderly women, amounting to 43 people with a percentage of 58.1%. Based on age, the most dominant were elderly people aged 60-74 years (The largest elderly group is those aged > 90 years with a percentage of 68.9%, and the smallest is 4 people with a percentage of 5.4%. Based on the independence of the elderly, the majority are elderly who are independent and able to walk without assistance, namely 59 people with a percentage of 79.7%.

Table 2. Distribution of physical activity frequency

Category	Frequency (f)	Percentage (%)
Low	9	12.2
Currently	35	47.3
Tall	30	40.5
Total	74	100

Based on the frequency distribution above, it can be seen that the activities carried out by the elderly are mostly in the middle category, namely 35 respondents with a percentage of 47.3%.

Table 3. Frequency distribution of life satisfaction of the elderly

Category	Frequency (f)	Percentage (%)
Low	4	5.4
Currently	49	66.2
Tall	21	28.4
Total	74	100

Based on the results of the frequency distribution, there is life satisfaction in the dominant elderly group which is included in the moderate life satisfaction category of 49 people with a percentage of 66.2%.

Table 4. Descriptive statistics of total scores

Category	N	Means	Standard Deviation
Life Satisfaction	74	11.53	3,324
Physical Activity	74	93.19	35.40

Descriptive analysis showed that the mean life satisfaction score among the elderly was 11.53 (SD = 3.32), while the mean physical activity score was 93.19 (SD = 35.40), indicating wide variation in physical activity levels among respondents.

2. Bivariate Analysis

Table 5. Results of bivariate analysis (Spearman test)

			Life Satisfaction			Total	P mark	R
			Low	Currently	Tall			
Physique Activity	Low	F	2	5	2	9	<0.001	0.441
		%	2.7	6.8	2.7	12.2		
	Currently	F	2	32	1	35		
		%	2.7	43.2	1.4	47.3		
	Tall	F	0	12	18	30		
		%	0	16.2	24.3	40.5		
Total	F	4	49	21	74			
	%	5.4	66.2	28.4	100			

Based on the results of the study above, there is a relationship between physical activity and life satisfaction in the elderly. It can be seen that based on the results of the data analysis that has been carried out using statistical tests (Spearman test), the obtained ap value < 0.001 (< 0.05) which indicates a statistically significant relationship between the two variables and a correlation density (r) of 0.441. According to (Evans, 1996), the interpretation of the correlation coefficient is classified as very weak for values between 0.00-0.19, weak for 0.20-0.39, moderate for 0.40-0.59, strong for 0.60-0.79, and very strong for 0.80-1.00. Because the r value in this study is 0.441, it can be categorized as a moderate correlation. Therefore, it can be concluded that this study shows a relationship between physical activity and life satisfaction of the elderly at the Ciparay Elderly Social Service Center.

Discussion

This study found a significant positive relationship between physical activity and life satisfaction among older adults at the Ciparay Senior Citizens' Social Service Center. This finding is consistent with successful aging theory and activity theory, which highlight the importance of maintaining engagement in physical and social activities in later life. However, this relationship may also reflect reverse causality, where older adults with higher life satisfaction are more motivated to remain physically active. These results align with findings reported by (Sánchez et al., 2021) this study found that physical activity was positively associated with life satisfaction in the elderly, regardless of age, gender, and residence status in a nursing home or care home.

Physical activity has been linked to stronger social interactions, which are associated with higher life satisfaction. Previous studies have shown that physical activity is associated with better social interactions and psychological well-being, which may be associated with higher life satisfaction in older adults. Thus, physical activity can be seen as an important protective factor in reducing the risk of social isolation and depression, which are often experienced by older adults. These findings are further supported by research in Indonesia. According to (Tanuwijaya et al., 2024) through analysis of the Indonesian Family Life Survey-5, it was found that low physical activity was associated with decreased adaptive function and an increased risk of depression in low-educated elderly.

This condition shows that physical activity not only impacts physical health but also psychological well-being, contributing to life satisfaction. In other words, physically active

older adults are better able to maintain their independence and manage their mental health. (Mudjiyanto, 2024) confirmed that participation in various forms of sport by older adults, as a manifestation of regular physical activity, is associated with increased life satisfaction. Her research showed significant differences in life satisfaction levels based on the type of sport participated in, with older adults participating in golf having the highest life satisfaction scores compared to tennis, aerobics, fitness, and gateball.

These results further strengthen the evidence that regular physical activity, whether through competitive or recreational sports, positively contributes to the quality and satisfaction of life in older adults. Physical activity has been widely reported to have a positive relationship with life satisfaction and well-being in older adults, consistent with successful aging theory and activity theory, which emphasize that active engagement in physical and social activities supports healthy aging. (Marquez et al., 2020) showed that in the elderly group aged ≥ 65 years, physical activity significantly improved quality of life and well-being compared to the control group.

This is reinforced by (Szychowska & Drygas, 2022) this confirms that regular physical activity not only reduces the risk of chronic diseases and cognitive decline, but also improves social engagement and subjective well-being in older adults, with the results of the Polish Multidisciplinary Study of the Elderly (POLSENIOR) showing significant improvements in physical function and quality of life scores after 6 months of physical activity. The relationship between physical activity and life satisfaction in older adults can be explained through physiological and psychological pathways. From a physiological perspective, previous studies have reported that physical activity is associated with improved cognitive function through increased expression of brain-derived neurotrophic factor and improved cerebral circulation, which support neurological health in older adults (Babaei & Azari, 2022; Guo et al., 2023).

From a psychological perspective, physically active older adults tend to report higher self-efficacy and greater social engagement, both of which are consistently associated with higher life satisfaction in later life (Gu et al., 2024; Toros et al., 2023). According to (Ministry of Health, 2018) physical activity in the elderly can be divided into three categories based on the intensity and amount of energy used. Strenuous activity is characterized by excessive sweating, increased heart rate and respiratory rate to the point of gasping for breath, with energy expenditure exceeding 7 kcal/minute; examples include mountain climbing, running, jogging at a speed of 8 km/h, cycling at a speed of more than 15 km/h, and sports such as basketball, soccer, martial arts, and volleyball.

Moderate activity uses approximately 3.5-7 kcal/minute of energy, characterized by light sweating and increased heart rate and respiratory rate. Examples include brisk walking, washing the car, gardening, mowing the lawn, or playing recreational badminton. Light activity, on the other hand, requires little effort without significant changes in breathing, with energy expenditures of less than 3.5 kcal/minute, such as a leisurely walk around the house, watching television, cooking, sewing, writing, sweeping, or playing electronic games (Kusumo, 2020:8-10). Physical activity not only impacts the physical condition of the elderly, but also on psychological and social aspects, so it can increase life satisfaction.

These results are in line with international studies which show that elderly people who engage in regular physical activity tend to have higher levels of life satisfaction compared to those who are less active (Parra-Rizo & Sanchis-Soler, 2020). Emphasizing that physical activity is associated with improved functional skills, independence, and subjective well-being, thus directly impacting life satisfaction, this demonstrates that physical activity is not only about maintaining physical health but also contributes significantly to the psychological well-being of older adults. Overall, the findings indicate a significant relationship between physical activity and life satisfaction among older adults.

This relationship supports the importance of considering physical activity as part of a broader strategy to support well-being in older age, although it is important to acknowledge that causality cannot be determined from this study. Physical activity not only benefits physical health but also contributes to psychological well-being, independence, and meaningful social interactions. These findings align with numerous national and international studies showing that physically active older adults tend to have a higher quality of life and life satisfaction (Mutz et al., 2021). Thus, physical activity can be seen as a simple yet effective intervention that needs to be continuously promoted through health and social programs, both at the community and institutional levels, to support a healthy and meaningful aging process for older adults.

Conclusion

This study found a positive relationship between physical activity and life satisfaction among older adults at the Ciparay Elderly Social Service Center. Older adults with higher levels of physical activity tended to report higher life satisfaction. This finding highlights the important role of physical activity in supporting older adults' well-being. Therefore, strengthening and diversifying physical activity programs is recommended, such as incorporating more engaging music or songs and providing a variety of exercise activities to increase motivation and participation among older adults. Furthermore, regular program evaluation is needed to assess participation levels, the suitability of activities to older adults' abilities, and their impact on life satisfaction. These efforts are expected to increase older adults' engagement in physical activity and promote higher life satisfaction in social service institutions.

Author's Statement

We declare that the article entitled "The relationship between physical activity and life satisfaction at the Griya Lansia Ciparay Social Service Center" is an original scientific work that we have compiled ourselves and has never been published in other journals, either in print or electronic form.

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