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Physical Activity and Multidimensional Quality of Life Among Community-Dwelling Older Adults in Indonesia: A Cross-Sectional Study

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A R T I C L E I N F O

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A B S T R A C T

Background: Population ageing has increased the importance of maintaining functional ability and quality of life among older adults. Physical activity is a modifiable behaviour that may support physical, psychological, social, and environmental well-being. However, evidence from older adults receiving community-based primary healthcare services in Indonesia remains limited. Objective: This study aimed to examine the association between physical activity level and quality of life among community-dwelling older adults in the working area of Sisir Primary Health Center, Batu City, Indonesia. Methods: An analytical cross-sectional study was conducted from June to July 2026. Participants were recruited using purposive sampling from community-based health services for older adults. Physical activity was assessed using the International Physical Activity Questionnaire-Short Form and classified as low, moderate, or high. Quality of life was measured using the WHOQOL-BREF, which assesses the physical health, psychological, social relationships, and environmental domains. A composite quality-of-life score was calculated as the arithmetic mean of the four transformed domain scores. Spearman's rank-order correlation was used to examine the associations between physical activity level and quality-of-life outcomes. Results: A total of 108 participants aged 60 years or older were included in the final analysis. Their mean age was 66.58 years (SD 5.69), and 56.5% were women. Moderate physical activity was the most common category, reported by 45.4% of participants, followed by high physical activity at 27.8% and low physical activity at 26.9%. The mean composite quality-of-life score was 63.54 (SD 9.49). Among the WHOQOL-BREF domains, the social relationships domain had the highest mean score at 66.94 (SD 10.55), while the physical health domain had the lowest at 57.61 (SD 11.30). Physical activity level was positively associated with the composite quality-of-life score (Spearman's $\rho = 0.318$, $p < 0.001$)

INTRODUCTION

Population ageing is one of the most consequential demographic transformations of the twenty-first century and presents substantial challenges for health systems worldwide. Longer life expectancy has increased the importance of ensuring that additional years of life are lived with preserved function, independence, and well-being. In response, the World Health Organization established the Decade of Healthy Ageing 2021–2030 and defined healthy ageing as the process of developing and maintaining the functional ability that enables well-being in older age (World Health Organization [WHO], 2021). This framework has encouraged health systems to move beyond disease-centred care toward approaches that preserve intrinsic capacity, support participation in daily life, and improve quality of life among older adults (WHO, 2021; Tang et al., 2025).

Quality of life is a central outcome of healthy ageing because it reflects how individuals perceive their position in life in relation to their physical health, psychological condition, social relationships, and environment. Unlike clinical indicators that focus primarily on morbidity or mortality, quality of life captures the broader effects of health and social circumstances on everyday functioning and well-being (WHOQOL Group, 1998; Skevington et al., 2004). Age-related physiological changes, reduced mobility, declining functional capacity, and limited opportunities for social participation may negatively affect these dimensions. Consequently, maintaining quality of life has become an important objective of geriatric care, health promotion, and community-based services for older adults.

Despite this growing body of evidence, several gaps remain. Much of the available research has been conducted in high-income countries, institutional settings, or structured exercise programmes. These contexts may differ from routine community settings in low- and middle-income countries in terms of healthcare access, built environment, cultural practices, socioeconomic conditions, and opportunities for physical activity. In addition, some studies have emphasized a single overall measure of quality of life rather than examining its physical, psychological, social, and environmental dimensions separately. Evidence from community-dwelling older adults who receive routine services through primary healthcare facilities in Indonesia remains limited. Context-specific research is therefore needed because the relationship between habitual physical activity and quality of life may be influenced by local social support, family structures, neighbourhood conditions, and the availability of community health programmes.

Indonesia is experiencing rapid population ageing, increasing the need for sustainable strategies that preserve functional ability and support independent living. Primary healthcare centres, locally known as Community Health Center, and community-based services such as Senior Citizens' Health Monitoring Post have an important role in delivering preventive, promotive, and rehabilitative care for older adults (Kementerian Kesehatan Republik Indonesia, 2023). However, local evidence on the association between habitual physical activity and multidimensional quality of life among older adults attending these services remains insufficient. Studying this

relationship in the working area of Sisir Primary Health Center may provide relevant evidence for strengthening physical activity promotion within community-based healthy-ageing programmes.

Therefore, this study aimed to examine the association between physical activity level and quality of life among community-dwelling adults aged 60 years or older in the working area of Sisir Primary Health Center, Batu City, Indonesia. Quality of life was assessed across the physical health, psychological, social relationships, and environmental domains using the WHOQOL-BREF, while physical activity was assessed using the International Physical Activity Questionnaire-Short Form. By examining domain-specific outcomes in a routine community healthcare setting, this study provides context-specific evidence that may inform the development of appropriate physical activity promotion strategies for older adults in Indonesian primary healthcare.

LITERATURE REVIEW

Physical activity is among the most important modifiable behaviours associated with healthy ageing. Current international guidelines recommend that older adults undertake 150–300 minutes of moderate-intensity aerobic physical activity or 75–150 minutes of vigorous-intensity activity per week, together with muscle-strengthening activities and multicomponent exercises that emphasize balance and functional capacity (Bull et al., 2020; WHO, 2020). Regular physical activity is associated with better cardiorespiratory fitness, muscle strength, mobility, balance, metabolic health, and psychological well-being. It may also reduce the risks of frailty, disability, falls, depressive symptoms, and functional decline (Bull et al., 2020; Di Lorito et al., 2021). Recent reviews further suggest that home- and community-based physical activity programmes can improve several dimensions of quality of life among older adults, although the magnitude of benefit may differ across domains and intervention types (Tang et al., 2025).

METHODOLOGY

Study Design and Setting

This study used an analytical cross-sectional design to examine the association between physical activity level and quality of life among community-dwelling older adults. The study was conducted in the working area of Sisir Primary Health Center, Batu City, East Java, Indonesia, during June–July 2026. Participants were recruited through community-based health services for older adults, including Posyandu Lansia located within the primary health centre's service area.

Study Population and Participants

The target population consisted of older adults residing in the working area of Sisir Primary Health Center. Eligible participants were adults aged 60 years or older who lived in the study area, were able to communicate in Indonesian, and were willing to participate by providing informed consent. Participants were excluded if they had severe cognitive or communication impairments that prevented them from understanding or completing the questionnaire, were

acutely ill at the time of data collection, or had incomplete data for the main study variables. A total of 110 individuals were initially recruited. During data verification, two participants were found to be younger than 60 years, with recorded ages of 53 and 58 years. Because they did not meet the predefined age criterion, they were excluded from the final analysis. Therefore, the final analytical sample consisted of 108 participants.

Sample Size and Sampling Technique

Participants were selected using purposive sampling from several community health posts within the working area of Sisir Primary Health Center. Recruitment from multiple community health posts was intended to increase geographical coverage across the study area. Nevertheless, because a non-probability sampling method was used, the possibility of selection bias could not be completely eliminated. The required sample size was determined using Slovin method, based on a significance level of 10%, a statistical power of 90%, and an expected correlation coefficient of +1. After accounting for potential non-response or incomplete data, the target sample size was 95.

Study Variables

The independent variable was physical activity level, categorized as low, moderate, or high. The dependent variables were the four WHOQOL-BREF domain scores physical health, psychological, social relationships, and environmental and a composite quality-of-life score calculated as the arithmetic mean of the four transformed domain scores. Age, sex, residence, and occupation were included as descriptive participant characteristics. Educational level, marital status, and history of chronic disease were not included because these variables were not consistently available in the final dataset.

Measurement of Physical Activity

Physical activity was assessed using the International Physical Activity Questionnaire-Short Form (IPAQ-SF). The questionnaire assesses physical activity undertaken during the previous seven days, including walking, moderate-intensity activity, vigorous-intensity activity, and time spent sitting. Physical activity was classified into three ordinal categories according to the IPAQ scoring protocol:

1. Low physical activity;
2. Moderate physical activity; and
3. High physical activity.

For statistical analysis, the categories were coded as 1 for low, 2 for moderate, and 3 for high physical activity. Higher codes therefore represented higher levels of physical activity.

Measurement of Quality of Life

Quality of life was assessed using the World Health Organization Quality of Life–BREF questionnaire. The WHOQOL-BREF consists of 26 items, including two general items and 24 items grouped into four domains:

- Physical health;
- Psychological well-being;
- Social relationships; and
- Environmental conditions.

Items were scored using a five-point Likert scale. Negatively worded items were reverse-coded according to the WHOQOL-BREF scoring instructions. Raw domain scores were calculated and transformed to a 0–100 scale, with higher scores indicating better perceived quality of life. In addition to the four domain scores, a composite quality-of-life score was calculated as the arithmetic mean of the four transformed domain scores. This composite score was used as a summary measure for the overall analysis. It should not be interpreted as an official WHOQOL-BREF global score, because the instrument does not provide a universally standardized total score across all 26 items.

Data Collection Procedure

Data were collected through structured interviews conducted by trained data collectors. Before data collection, the research team explained the purpose, procedures, potential risks, and benefits of the study to eligible participants. Written informed consent was obtained before the interview began. The questionnaire included sections on participant characteristics, physical activity, and quality of life. Interviewers reviewed each questionnaire immediately after completion to identify missing or unclear responses. Data were then entered into a spreadsheet and cross-checked before statistical analysis.

Data Management

The dataset was reviewed for duplicate records, implausible values, inconsistent category labels, and eligibility criteria. Variations in category spelling and capitalization were standardized before analysis. Two records belonging to participants younger than 60 years were excluded. Only records with complete data for physical activity and WHOQOL-BREF domain scores were included in the final analysis. No statistical imputation was performed. The final dataset consisted of 108 complete observations.

Statistical Analysis

Data were analysed using IBM SPSS Statistics version [insert version]. Descriptive statistics were used to summarize participant characteristics, physical activity levels, and quality-of-life scores. Categorical variables were presented as frequencies and percentages. Continuous variables were summarized using mean, standard deviation, median, minimum, and maximum values, as appropriate. Spearman's rank-order correlation was used to examine the association between physical activity level and each WHOQOL-BREF domain score. Spearman's correlation was selected because physical activity was measured as an ordinal variable with three ordered categories. It was also used to assess the association between physical activity level and the composite quality-of-life score. Correlation coefficients were interpreted according to their absolute magnitude, with values closer to zero indicating weaker associations and values closer to one indicating stronger associations. All statistical tests were two-tailed, and statistical significance was defined as a p-value below 0.05. Because correlations were examined across several quality-of-life outcomes, domain-specific analyses were interpreted as secondary or exploratory analyses. The composite quality-of-life score was treated as the principal summary outcome.

Ethical Considerations

The study was conducted in accordance with the ethical principles of the Declaration of Helsinki. Ethical approval was obtained from Faculty of Medicine and Health Sciences, Maulana Malik Ibrahim State Islamic University, Malang. All participants received information about the study and provided written informed consent before participation. Participation was voluntary, and participants were informed that they could withdraw at any time without consequences. Personal identifiers were removed from the analytical dataset, and all data were stored confidentially and used solely for research purposes.

RESULTS

Participant Characteristics

A total of 110 respondents were initially recruited. After data verification, two respondents aged 53 and 58 years were excluded because they did not meet the predefined inclusion criterion of being at least 60 years old. The final analysis therefore included 108 participants. Flow detailed participant characteristics are presented in Figure 1.

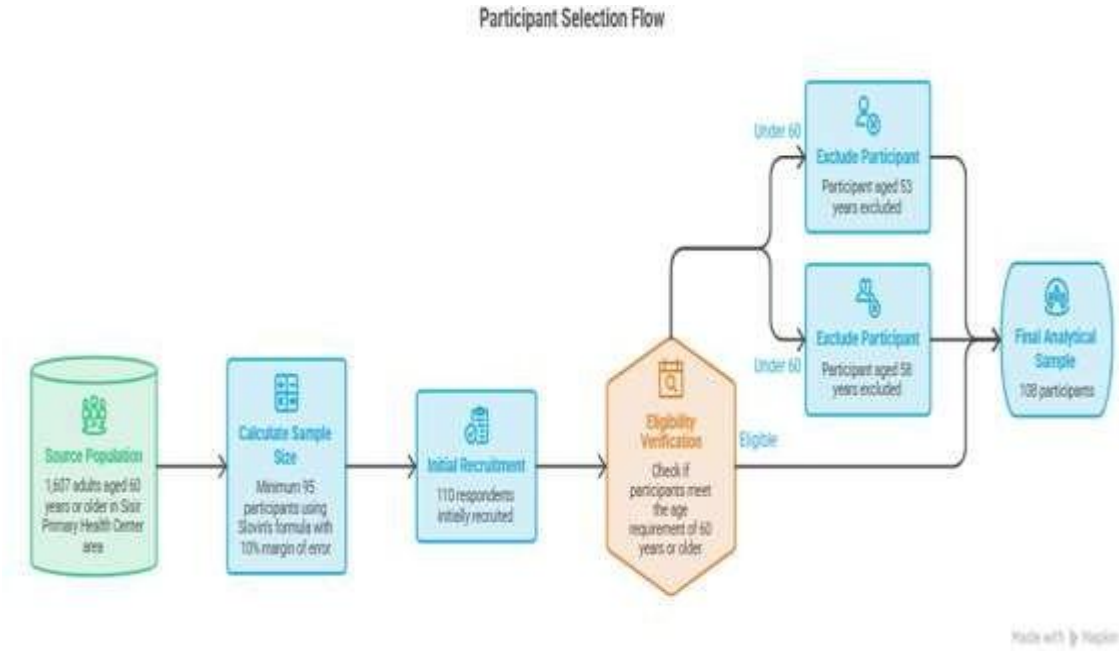

Figure 1. Participant Selection Flow of the 110 Respondents Initially Recruited, Two Were Excluded Because They Did Not Meet the Minimum Age Criterion, Resulting in a Final Analytical Sample of 108 Participant

The mean age of the participants was 66.58 years (SD 5.69). Most participants were aged 60–69 years (74.1%), followed by those aged 70–79 years (24.1%) and 80 years or older (1.9%). Women comprised 56.5% of the sample, while men accounted for 43.5%. Most participants resided in Sisir (59.3%), followed by Sidomulyo (24.1%) and Temas (16.7%). Regarding occupation, the majority were not working or retired (73.1%). The remaining participants were

housewives, farmers, self-employed workers, or labourers. Detailed participant characteristics are presented in Table 1.

Table 1. Sociodemographic Characteristics of Study Participants

Characteristic	n	%
Age group, years		
60–69	**80**	**74.1**
70–79	**26**	**24.1**
≥80	**2**	**1.9**
Sex		
Male	**47**	**43.5**
Female	**61**	**56.5**
Residential area		
Temas	**18**	**16.7**
Sisir	**64**	**59.3**
Sidomulyo	**26**	**24.1**
Occupation		
Housewife	**12**	**11.1**
Farmer	**9**	**8.3**
Labourer	**3**	**2.8**
Self-employed	**5**	**4.6**
Not working or retired	**79**	**73.1**

Note. Mean participant age was 66.58 years (SD 5.69)

Distribution of Physical Activity Levels

Moderate physical activity was the most common category, reported by 49 participants (45.4%). High physical activity was reported by 30 participants (27.8%), while 29 participants (26.9%) were classified as having low physical activity. The distribution of physical activity levels is shown in Table 2 and Figure 2.

Table 2. Distribution of Physical Activity Levels Among Study Participants

Physical activity level	n	%
Low	29	26.9
Moderate	49	45.4
High	30	27.8
Total	108	100.0

Note. Physical activity was assessed using the International Physical Activity Questionnaire–Short Form and classified according to the IPAQ scoring protocol. Percentages may not total exactly 100 because of rounding.

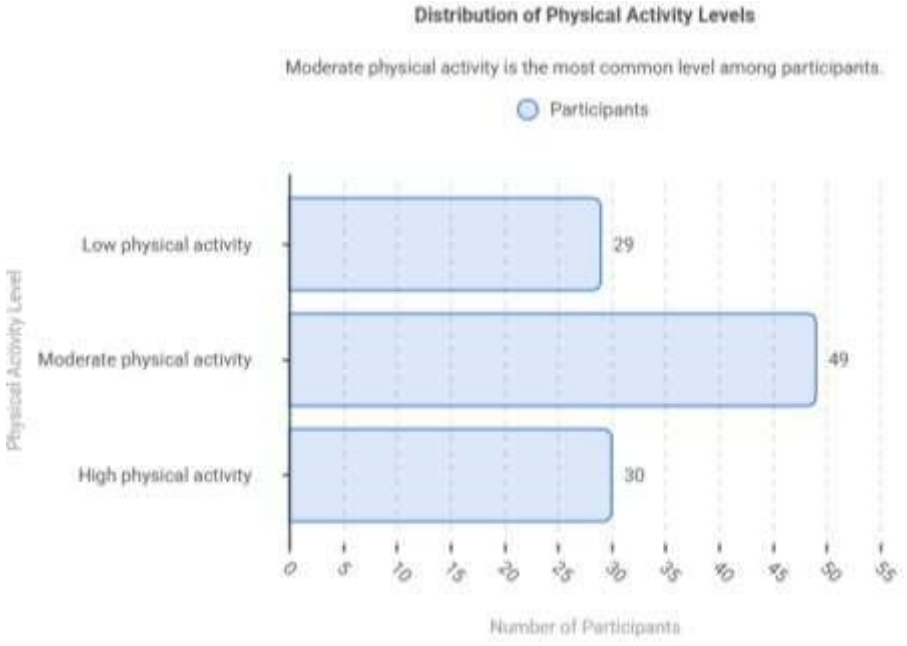

Figure 2. Distribution of Physical Activity Levels Among Study Participants. Moderate Physical Activity was the Most Common Category, Reported by 45.4% of Participants

Quality-of-Life Scores

Among the four WHOQOL-BREF domains, the social relationships domain had the highest mean score at 66.94 (SD 10.55). This was followed by the environmental domain at 64.92 (SD 9.42), the psychological domain at 64.70 (SD 12.90), and the physical health domain at 57.61 (SD 11.30). The mean composite quality-of-life score, calculated as the arithmetic mean of the four transformed WHOQOL-BREF domain scores, was 63.54 (SD 9.49). The distribution of domain-specific and composite quality-of-life scores is presented in Table 3 and Figure 3.

Table 3. WHOQOL-BREF Domain and Composite Quality-of-Life Scores

Quality-of-life measure	Mean	SD
Physical health domain	57.61	11.30
Psychological domain	64.70	12.90
Social relationships domain	66.94	10.55
Environmental domain	64.92	9.42
Composite quality-of-life score	63.54	9.49

Note. WHOQOL-BREF Domain Scores were Transformed to A 0–100 Scale, With Higher Scores Indicating Better Perceived Quality of Life. the Composite Score Was Calculated as the Arithmetic Mean of the Four Transformed Domain Scores and is Not An Official WHOQOL-BREF Total Score.

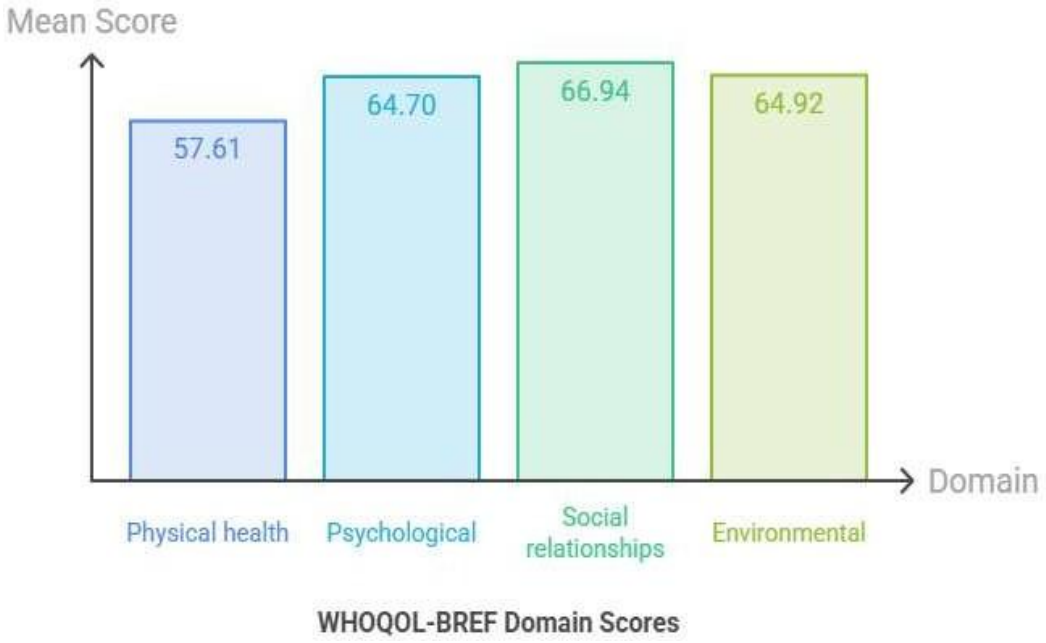

Figure 3. Mean WHOQOL-BREF Domain Scores Among Study Participants. The Social Relationships Domain had the Highest Mean Score, Whereas the Physical Health Domain had the Lowest.

Association Between Physical Activity and Quality of Life

Physical activity level was positively associated with the composite quality-of-life score (Spearman's $\rho = 0.318$, $p < 0.001$). This finding indicates that participants with higher physical activity categories tended to report better overall quality of life, although the magnitude of the association was weak to moderate. Flow correlation results are presented in Figure 4.

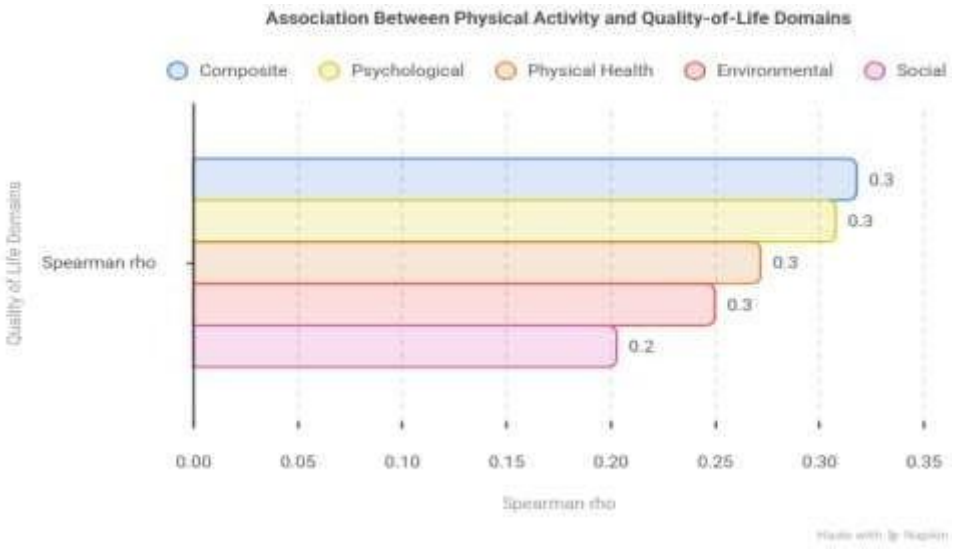

Figure 4. Spearman correlations between physical activity level and quality-of-life outcomes. All correlations were positive and statistically significant, with the strongest association observed for the composite quality-of-life score

Positive statistically significant correlations were also observed between physical activity level and the physical health domain ($\rho = 0.272$, $p = 0.004$), psychological domain ($\rho = 0.308$, $p = 0.001$), social relationships domain ($\rho = 0.203$, $p = 0.036$), and environmental domain ($\rho = 0.250$, $p = 0.009$). Among the domain-specific outcomes, the strongest association was observed for the psychological domain, whereas the weakest statistically significant association was found for the social relationships domain. Complete correlation results are presented in Table 4.

Table 4. Correlations Between Physical Activity Level and Quality-of-Life Outcomes

Quality-of-life outcome	Spearman's ρ	p-value
Composite quality-of-life score	0.318	<0.001
Physical health domain	0.272	0.004
Psychological domain	0.308	0.001
Social relationships domain	0.203	0.036
Environmental domain	0.250	0.009

Note. Physical activity was treated as an ordinal variable: low, moderate, and high. All tests were two-tailed. Statistical significance was defined as $p < 0.05$.

Because the study used a cross-sectional design, these findings indicate statistical associations and should not be interpreted as evidence that higher physical activity caused improvements in quality of life.

DISCUSSION

Principal Findings

This study examined the association between physical activity level and quality of life among community-dwelling older adults in the working area of Sisir Primary Health Center, Batu City, Indonesia. The findings showed that physical activity level was positively associated with the composite quality-of-life score. Higher physical activity categories were also associated with better scores in the physical health, psychological, social relationships, and environmental domains of the WHOQOL-BREF. The association with the composite quality-of-life score was weak to moderate in magnitude. Among the domain-specific outcomes, the strongest association was observed in the psychological domain, followed by the physical health, environmental, and social relationships domains. These findings suggest that physical activity may be linked not only to physical functioning but also to broader aspects of well-being among older adults.

Moderate physical activity was the most common category in the study population, while approximately one-quarter of participants were classified as having low physical activity. The social relationships domain had the highest mean quality-of-life score, whereas the physical health domain had the lowest. This pattern indicates that social connectedness may remain relatively well preserved in this community, while physical limitations may represent a more prominent challenge in later life.

Comparison With Previous Studies

The positive association observed between physical activity and quality of life is consistent with previous research showing that physically active older adults tend to report better health-related and general quality of life. International physical activity guidelines recognize regular activity as an important component of healthy ageing because of its contribution to functional ability, mobility, psychological well-being, and social participation (Bull et al., 2020; WHO, 2020). Previous studies and reviews have also reported that regular physical activity may benefit multiple dimensions of quality of life in older populations. Di Lorito et al. (2021) found that physical activity and exercise interventions may contribute to improved physical function and psychological outcomes in older adults. More recent evidence suggests that community- and home-based activity programmes may improve quality of life, although the magnitude of effect differs according to programme characteristics, participant health status, and the quality-of-life domain examined (Tang et al., 2025).

The strongest domain-specific association in the present study was found for psychological quality of life. This finding may reflect the potential relationship between physical activity and emotional well-being, self-confidence, perceived independence, and reduced psychological distress. Participation in physical activity may provide older adults with a sense of accomplishment, routine, and continued capability, which may contribute to more positive perceptions of ageing. The association with the physical health domain was also statistically significant. This is plausible because physical activity is directly

related to mobility, energy, sleep, functional capacity, and the ability to perform daily activities. However, the observed association was not strong, suggesting that physical quality of life is also influenced by other factors, including chronic disease, pain, disability, nutritional status, and access to healthcare. These variables were not comprehensively measured in the present study.

The positive association with the environmental domain may indicate that older adults who are more physically active have greater interaction with their surroundings and better access to community spaces, transportation, health services, or recreational opportunities. The relationship may also operate in the opposite direction: supportive and accessible environments may make it easier for older adults to remain active. Because this study was cross-sectional, the direction of this relationship cannot be determined. The social relationships domain showed the weakest association with physical activity, although the relationship remained statistically significant. Social quality of life may depend more strongly on family support, companionship, living arrangements, community participation, and the quality of interpersonal relationships than on physical activity alone. In this setting, community health services and local social networks may have helped maintain social interaction even among participants with lower levels of physical activity.

Possible Explanations

Several mechanisms may explain the observed associations. From a physical perspective, regular activity may help preserve muscle strength, balance, endurance, and mobility. These benefits can support independence in daily activities and reduce the functional limitations that commonly affect quality of life in older age. From a psychological perspective, physical activity may be associated with improved mood, reduced stress, better sleep, and greater confidence in performing daily tasks. Activity conducted in groups or community settings may also create opportunities for social interaction and mutual support.

Physical activity may further strengthen an older adult's sense of autonomy. Maintaining the ability to travel independently, participate in family activities, attend community services, and perform household tasks may positively influence perceived well-being. These pathways are consistent with the healthy-ageing framework, which emphasizes functional ability and the interaction between individual capacity and the surrounding environment (WHO, 2021). However, the relationship is likely bidirectional. Older adults with better health and higher quality of life may be more capable and motivated to remain physically active. Conversely, individuals with pain, disability, psychological distress, or limited environmental support may have both lower activity levels and poorer quality of life. The present findings therefore demonstrate association rather than causation.

Public Health and Clinical Implications

The findings have practical implications for primary healthcare and community-based services for older adults. Physical activity promotion may be incorporated into routine Integrated Senior Citizen Service Center and Primary Health Center Programmes as part of a broader healthy-ageing strategy.

Appropriate activities may include walking groups, older-adult exercise sessions, balance training, flexibility exercises, and functional movement activities adapted to participants' abilities and health conditions. Programmes should not focus exclusively on exercise intensity. They should also consider safety, accessibility, motivation, social participation, and environmental barriers. Older adults with low physical activity may benefit from gradual, individually tailored interventions rather than uniform exercise prescriptions.

Primary healthcare workers can play an important role in identifying older adults with low activity levels, providing brief counselling, and referring participants to safe community-based activities. Family members and community cadres may also support participation by encouraging regular activity and helping older adults overcome mobility or transportation barriers. Because the physical health domain had the lowest mean score, interventions that preserve mobility, strength, and independence may be particularly relevant in this population. Nevertheless, the relatively strong association with psychological quality of life indicates that activity programmes should also be designed to support enjoyment, confidence, social engagement, and emotional well-being.

Strengths

This study has several strengths. First, it assessed quality of life across four distinct WHOQOL-BREF domains rather than relying only on a single summary measure. This approach provided a more detailed understanding of how physical activity relates to different aspects of older adults' well-being. Second, the study was conducted in a routine community and primary healthcare setting. The findings therefore provide locally relevant evidence for older adults who participate in community-based health services in Indonesia. Third, the final analytical sample exceeded the calculated minimum sample size. Data verification was also performed to ensure that only participants who met the predefined age criterion were included in the analysis.

Limitations

Several limitations should be considered when interpreting the findings. First, the cross-sectional design does not allow temporal or causal relationships to be established. It cannot be concluded that higher physical activity improves quality of life, because better quality of life may also enable greater participation in physical activity. Second, purposive sampling was used, which may limit the representativeness of the sample. Older adults who attended community health services and agreed to participate may differ from those who were less engaged with health services, socially isolated, frailer, or unable to attend Posyandu Lansia. Third, physical activity was measured using a self-reported questionnaire. Recall error and social desirability bias may have affected participants' responses. Objective measures such as accelerometers or pedometers could provide more precise estimates of activity volume and intensity. Fourth, the physical activity variable was analysed as an ordinal category. This approach is useful for examining ordered activity levels but does not capture detailed differences in duration, frequency, or metabolic equivalent minutes.

Fifth, the composite quality-of-life score used in this study was calculated as the arithmetic mean of the four transformed WHOQOL-BREF domain scores. Although useful as a summary measure, it is not an official standardized total score provided by the WHOQOL-BREF scoring protocol and should be interpreted cautiously. Sixth, potentially important confounding variables including chronic disease, disability, pain, cognitive status, depressive symptoms, education, income, marital status, and social support were not comprehensively available in the dataset. The observed correlations may therefore partly reflect the influence of unmeasured factors. Finally, several domain-specific correlations were examined without formal adjustment for multiple comparisons. These analyses should therefore be considered exploratory, particularly for associations with smaller effect sizes.

Recommendations for Future Research

Future studies should use longitudinal or intervention designs to clarify the temporal relationship between physical activity and quality of life. Probability-based sampling across multiple primary healthcare areas would improve generalizability. Subsequent research should also include objective physical activity measurements and collect more detailed information on chronic disease, frailty, disability, mental health, socioeconomic status, social support, and environmental accessibility. Multivariable analysis would help determine whether physical activity remains independently associated with quality of life after adjustment for these potential confounders. Intervention studies are also needed to evaluate whether culturally appropriate, community-based physical activity programmes can improve specific WHOQOL-BREF domains among Indonesian older adults. Such studies should assess not only effectiveness but also feasibility, adherence, safety, and sustainability within routine primary healthcare services.

CONCLUSIONS AND RECOMMENDATIONS

Higher physical activity levels were associated with better quality of life among community-dwelling older adults in the working area of Sisir Primary Health Center, Batu City. Positive associations were observed for the composite quality-of-life score and for all four WHOQOL-BREF domains, with the strongest domain-specific association found for psychological quality of life. These findings support the relevance of physical activity promotion within community-based healthy-ageing programmes. Primary healthcare services may consider integrating safe, accessible, and age-appropriate physical activity into routine services for older adults. However, because this study used a cross-sectional design and purposive sampling, the findings should not be interpreted as evidence of causality and may not be generalizable to all older adults.

FURTHER STUDY

This study still has some limitations, so more research on the topic 'Physical Activity and Multidimensional Quality of Life Among Community-Dwelling Older Adults in Indonesia: A Cross-Sectional Study' is needed to improve this research and give more insights to the authors and readers

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