



BEHIND QUALITY OF LIFE: THE ASSOCIATION BETWEEN DEPRESSIVE SYMPTOMS AND QUALITY OF LIFE AMONG ADULTS IN MALANG

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ABSTRACT

Depressive symptoms represent a significant mental health concern and are linked to various aspects of individual well-being, including quality of life. However, community-based evidence on the association between depressive symptoms and quality of life among adults in the local context is limited. This study examined the relationship between depressive symptoms and quality of life among adults in Malang. We performed a cross-sectional study involving 500 adults, recruited through convenience sampling from primary healthcare service areas in Malang, East Java. We measured depressive symptoms using the Patient Health Questionnaire-9 (PHQ-9) and assessed quality of life with the World Health Organization Quality of Life-BREF (WHOQOL-BREF). Because the numerical data were not normally distributed, we used the Spearman rank correlation test to analyze the relationship between depressive symptoms and quality of life. Most respondents exhibited minimal depressive symptoms (72.2%), while 27.8% experienced mild to severe depressive symptoms. Most respondents reported moderate quality of life (61.4%), with 19.4% reporting poor and 19.2% reporting good quality of life. A significant negative correlation was identified between depressive symptoms and quality of life ($\rho = -0.373$; $p < 0.001$), indicating that higher depressive symptom levels are associated with lower quality of life. Depressive symptoms are significantly associated with quality of life among adults in Malang.

Keywords: adults; depression; mental health; quality of life

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INTRODUCTION

Depression represents one of the most prevalent mental health disorders globally and constitutes a major contributor to the overall burden of disease (Liu et al., 2024). Current estimates indicate that approximately 280 million individuals are affected worldwide, with a prevalence rate of 5.7% among adults (WHO, 2025). Depressive symptoms can manifest at various stages of adulthood and are associated with substantial personal, social, and economic consequences (López-López et al., 2024; Sinkewicz et al., 2022). Adults with depressive symptoms commonly experience persistent sadness, loss of interest, fatigue, impaired concentration, sleep disturbances, and challenges in performing daily activities (Jin & Jing, 2024; Van Loo et al., 2022). Depression is further associated with reduced functional capacity, restricted social participation, and decreased engagement in occupational and community activities (Jetha et al., 2021; Meshkat et al., 2025). Despite its significance as a mental health concern, a considerable proportion of individuals with depressive symptoms remain undiagnosed and untreated due to factors such as limited mental health literacy,

stigma, and inadequate access to mental health services, particularly at the community level (Garcia et al., 2021; Li et al., 2022). Early identification of depressive symptoms through validated screening instruments is therefore essential to facilitate timely intervention and prevent further deterioration of health status (Kim et al., 2026).

Depressive symptoms consistently reduce quality of life (Kołtuniuk et al., 2023; Lai et al., 2025; Liegert et al., 2023). Quality of life encompasses an individual's perceptions of physical health, psychological well-being, social relationships, and environmental conditions (Martini et al., 2022; Matos et al., 2025). Depression influences multiple dimensions of quality of life through distinct mechanisms (Teh et al., 2021; Wang et al., 2022b). Psychologically, depressive symptoms are linked to diminished positive emotions, lower self-esteem, and decreased motivation to participate in activities (Majauskiene et al., 2026; Schürmann-Vengels et al., 2025). Physically, depression is associated with increased fatigue, sleep disturbances, and limitations in daily functioning (Aparicio-Castro et al., 2025; Schürmann-Vengels et al., 2025). Socially, individuals with depression often experience social withdrawal (Phadsri et al., 2021). Depression is also associated with declines in environmental quality of life, including financial difficulties and reduced participation in recreational activities (Purohit et al., 2025; Rosa et al., 2025). Therefore, examining the relationship between depressive symptoms and quality of life is essential, as quality of life represents a comprehensive indicator of health and well-being that extends beyond the presence or absence of disease.

Assessing depressive symptoms and quality of life requires valid and reliable measurement instruments to capture individual experiences accurately (Kalfoss et al., 2021; Sun et al., 2022). The Patient Health Questionnaire-9 (PHQ-9) is a brief screening tool widely used to assess depressive symptoms in both clinical and community populations (Sun et al., 2022). The World Health Organization Quality of Life-BREF (WHOQOL-BREF) provides a multidimensional assessment of quality of life, encompassing physical, psychological, social relationship, and environmental domains (Kalfoss et al., 2021). Utilizing both instruments enables researchers not only to identify the severity of depressive symptoms but also to evaluate their associations with various aspects of individual functioning and well-being. This approach is particularly relevant in community-based research, as a comprehensive understanding of the relationship between mental health symptoms and quality of life can support the development of more holistic mental health prevention and promotion strategies.

Although numerous studies have established the adverse effects of depression on individual health and well-being, the relationship between depressive symptoms and quality of life among adults in diverse community settings remains underexplored. Most existing research has focused on clinical populations or individuals already diagnosed with mental disorders, leaving limited evidence for adult populations in community contexts terbatas (Fernandes et al., 2023; Liao et al., 2021; Vieira De Andrade et al., 2023). Factors such as cultural background, healthcare access, socioeconomic status, and environmental conditions may influence the association between depressive symptoms and quality of life terbatas (Fernandes et al., 2023; Liao et al., 2021; Vieira De Andrade et al., 2023). In low- and middle-income countries, including Indonesia, community-based evidence on the connection between depressive symptoms and multidimensional quality of life remains limited terbatas (Fernandes et al., 2023; Liao et al., 2021; Vieira De Andrade et al., 2023). Consequently, research on adult populations in Indonesian communities is needed to broaden the evidence base on how depressive symptoms relate to various quality-of-life domains within specific social, cultural, and environmental contexts. This understanding can help identify vulnerable groups and support the development of targeted mental health promotion programs and early interventions.

This study analyzes the relationship between depressive symptoms and quality of life in an adult population using a cross-sectional design. It is hypothesized that higher levels of depressive

symptoms are associated with lower quality of life across physical, psychological, social relationship, and environmental domains. In the conceptual framework, depressive symptoms are identified as the primary independent variable, while quality of life is the dependent variable. Sociodemographic characteristics, including age, gender, education level, and employment status, as well as other relevant factors, are considered potential confounders that may influence both depressive symptoms and quality of life. Evaluating this relationship is expected to provide empirical evidence regarding the association between depressive symptoms and various dimensions of quality of life, and to inform the development of integrated mental health screening and intervention strategies for adults.

METHOD

A cross-sectional study was conducted from August to September 2025 in three Community Health Center (Puskesmas) service areas in Malang City and Malang Regency, East Java: Tlogomas, Wajak, and Poncokusumo. These sites were purposively selected to capture geographic and socioeconomic diversity. Data were collected both online using Google Forms and offline with printed questionnaires. Eligible participants were adults aged 20 years or older residing in the study areas who could understand Indonesian, complete the questionnaire independently, and provide informed consent. Individuals receiving intensive treatment for severe psychiatric conditions were excluded. We recruited 500 respondents using convenience sampling through Community Health Centers, community WhatsApp groups, and direct outreach.

Depressive symptoms were assessed using the Patient Health Questionnaire-9 (PHQ-9) score range 0–27), where higher scores indicate greater symptom severity. The Indonesian version of the PHQ-9 demonstrated good validity, with corrected item–total correlations ranging from 0.787 to 0.863, and good internal consistency (Cronbach's $\alpha = 0.885$) (Dian et al., 2022). Quality of life was measured with the World Health Organization Quality of Life-BREF (WHOQOL-BREF), which consists of 26 items covering physical, psychological, social relationship, and environmental domains. Total scores (26–130) were categorized as poor (26–60), moderate (61–95), or good (96–130) quality of life (Prasartpornsirichoke et al., 2025). The Indonesian version of the WHOQOL-BREF demonstrated moderate to good test-retest reliability across its four domains, with intraclass correlation coefficients (ICCs) ranging from 0.70 to 0.79 (Purba et al., 2018).

Completion of the questionnaire required approximately 10 to 20 minutes and followed standardized procedures. We ensured data confidentiality through identification codes and restricted access to the data. We reviewed data for completeness and checked for outliers. The Shapiro–Wilk test demonstrated that the primary data were not normally distributed ($p < 0.001$). Numerical data are reported as median and interquartile range (IQR). We analyzed the association between depressive symptoms and quality of life using Spearman correlation at $\alpha = 0.05$. The Research Ethics Committee of Universitas Brawijaya (No. 2) approved the study 20/UN10.F17.10.4/TU/2025). All respondents provided informed consent, participated voluntarily, and were assured of confidentiality. Respondents identified as experiencing psychological distress or exhibiting signs of suicidal ideation were referred to mental health services at the Community Health Center (Puskesmas).

RESULT

Sociodemographic and Clinical Data

This study included 500 adult respondents from the Malang region of East Java who met the inclusion criteria. Respondent characteristics, including age, gender, family harmony, socioeconomic status, place of residence, history of depression, severity of depressive symptoms, and quality of life, are summarized in table 1.

Tabel 1.
Sociodemographic Characteristics of Respondents (n=500)

Respondent Characteristics	f	%
Age		
Young adult (20-39 years)	288	57.6
Middle-aged adult (40-59 years)	156	31.2
Older adult (≥ 60 years)	56	11.2
Gender		
Male	145	29
Female	355	71
Family Harmony		
Harmonious	429	98.4
Disharmonious	8	1.6
Economic Level		
Low (<1.000.000)	123	24.6
Adequate (> 1.000.000-2.500.000)	268	53.6
Moderate (>2.500.000 – Minimum Wage (3.500.000)	64	12.8
High (>3.500.000 (Minimum Wage)	45	9.0
Depression Symptom Severity		
Minimal Depression	361	72.2
Mild Depression	42	8.4
Moderate depression	31	6.2
Moderate-to-severe depression	64	12.8
Severe Depression	2	0.4
Quality of Life		
Poor quality of life	97	19.4
Moderate quality of life	307	61.4
Good quality of life	96	19.2

A total of 500 respondents participated in this study. The majority were young adults aged 20–39 (57.6%), female (71.0%), and residents of rural areas (63.6%). More than half fell into the moderate economic category (53.6%), while only 9.0% were in the high economic category. Most respondents had no history of depression (87.0%). Regarding the severity of depressive symptoms, the majority of respondents fell into the minimal category (72.2%). Among those with symptoms above the minimal level, the moderate-to-severe category constituted the largest group (12.8%), followed by mild (8.4%), moderate (6.2%), and severe (0.4%). Meanwhile, the majority of respondents reported a moderate quality of life (61.4%), while the proportions of those with poor (19.4%) and good (19.2%) quality of life were relatively balanced. Overall, the sample characteristics reflect a predominance of young adults, females, and rural residents, with most exhibiting minimal depressive symptoms and a moderate quality of life.

Tabel 2.
Spearman Rank Correlation Test Results between Depression and Quality of Life

Variable	n	Spearman's	p-value	Interpretation
Depression related to quality of life	500	-0,373	<0,001	Significant negative correlation

Based on table 2, Spearman correlation analysis indicates a significant negative relationship between depressive symptoms and quality of life ($\rho = -0.373$; $p < 0.001$; $n = 500$). These findings suggest that an increase in depressive symptom scores is associated with a decrease in quality of life scores among the respondents.

DISCUSSION

A significant negative association was identified between depressive symptoms and quality of life among adults in the Malang region (Spearman's $\rho = -0.373$; $p < 0.001$). This negative correlation demonstrates that higher depressive symptom scores are associated with lower quality of life. The correlation coefficient indicates a weak yet statistically significant relationship. These results suggest that depressive symptoms are linked to quality of life, with more severe symptoms generally associated with lower quality of life (Seo et al., 2023). Nevertheless, quality of life is a multidimensional construct influenced by social and contextual factors, such as socioeconomic

status, education, social relationships, and environmental conditions (West et al., 2023). These findings are consistent with previous research demonstrating that increased depressive symptoms are associated with lower quality of life. For example, a national survey of 10,516 psychiatric clinicians in China found that clinicians meeting the PHQ-9 screening criteria for depression had significantly lower quality of life compared to those who did not meet the criteria (Zhang et al., 2021). Similarly, (Zhao et al., 2022) reported that specific depressive symptoms, such as loss of energy and feelings of guilt, were associated with lower quality of life.

The relationship between depressive symptoms and quality of life can be elucidated by examining the impact of depressive symptoms on daily functioning. Symptoms such as fatigue, sleep disturbances, and difficulty concentrating are associated with impaired daily functioning and reduced quality of life (Shahar et al., 2023). These symptoms are linked to poorer self-assessments of physical health, psychological well-being, social relationships, and environmental satisfaction. Additionally, the association between depression and quality of life should be considered within a socioeconomic context, as stress from economic disadvantage and low social support correlates with increased depressive symptoms and diminished quality of life (Qin et al., 2022). Consequently, this study's relationship is best interpreted as an association rather than a causal link. This study's findings provide contextual evidence on depressive symptoms and quality of life among adults in the Malang region. While most respondents exhibited minimal depressive symptoms (72.2%), 27.8% reported symptoms ranging from mild to severe. In contrast, only 13.0% of respondents indicated a prior history of depression. This discrepancy should not be immediately interpreted as undiagnosed depression, as the PHQ-9 is a screening tool that identifies symptoms and the likelihood of depression, whereas a formal diagnosis requires further clinical evaluation (Costantini et al., 2021). Nonetheless, these results suggest that depressive symptoms may be present in individuals without a reported history of depression. This study therefore extends existing evidence by offering a community-based perspective on the association between depressive symptoms and quality of life among adults in Malang.

Interpret the study results in light of the sample characteristics. Most respondents were female (71.0%) and young adults (57.6%), with 63.6% living in rural areas. Socioeconomic conditions, social support, and individual characteristics are associated with both depressive symptoms and quality of life. Previous community-based research has demonstrated links between depressive symptoms, social support, and health-related quality of life (Wang et al., 2022a). (Qin et al., 2022) found that relative deprivation is associated with lower quality of life through increased depressive symptoms, while social support can mitigate this effect. Consequently, the observed association between depressive symptoms and quality of life in this study should be interpreted within the context of respondents' characteristics and social circumstances. Further multivariate analyses are required to determine whether this relationship persists after adjusting for potential confounding factors. These findings underscore the importance of early detection of depressive symptoms in primary healthcare and community settings. Assessing depressive symptoms in conjunction with quality of life offers additional insights into mental health status and overall well-being. This study did not account for other factors potentially associated with depressive symptoms and quality of life, including physical health, social support, stress, and socioeconomic conditions. Future research should investigate these variables using multivariate analysis.

CONCLUSION

The results indicate that higher levels of depressive symptoms are significantly associated with lower quality of life among adults in the Malang region. These findings strengthen existing evidence on the relationship between mental health and quality of life in community settings and underscore the importance of addressing depressive symptoms as a public health priority. Nevertheless, these results should be interpreted in light of the study population's specific characteristics and do not establish causality.

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