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**Research Article**

# Quality of Life Analysis of Mental Disorder Patients Based on Knowledge Level and Medication Adherence

**Wiwin Alfianna[1], Nina Sabrina[1], Nurlaily Rahmah[1], Rima Muliani[2]**
[1]Bachelor of Pharmacy Study Program, Sekolah Tinggi Ilmu Kesehatan Prima Indonesia, Bekasi, Indonesia
[2]Bachelor of Midwifery Study Program, Sekolah Tinggi Ilmu Kesehatan Prima Indonesia, Bekasi, Indonesia

**Abstract**
Evaluating the quality of life (QoL) is essential in assessing therapeutic outcomes for individuals with mental health disorders. Medication adherence plays a pivotal role in treatment success but is frequently suboptimal due to insufficient patient knowledge regarding their illness and prescribed therapies, which can lead to misunderstandings and noncompliance. This research investigates the association between patients' knowledge levels, adherence to medication regimens, and their quality of life within a population diagnosed with mental disorders. Employing a cross-sectional design, data were collected from 200 outpatients at the psychiatric hospital, using standardized instruments, including a knowledge assessment questionnaire, the Morisky Medication Adherence Scale-8 (MMAS-8), and the WHO Quality of Life-BREF (WHOQOL-BREF). Statistical analyses, conducted via SPSS version 25.0, utilized Pearson's correlation and multiple correlation tests to explore relationships among the variables. Findings indicated that 58% of participants possessed adequate knowledge about their condition and treatment, while 52% demonstrated low medication adherence. Additionally, 61.5% reported a good quality of life. A multiple correlation analysis was conducted to assess the multivariate relationships, revealing significant positive correlations between quality of life and both knowledge and medication adherence ($P = 0.000$). However, no significant direct relationship was found between knowledge and adherence levels. The study underscores that medication adherence is significantly linked to enhanced quality of life in patients with mental disorders. Although knowledge alone does not directly predict adherence, it, in conjunction with adherence, contributes to improved quality of life outcomes. These results emphasize the need for integrated strategies focusing on patient education and adherence promotion to optimize therapeutic benefits.

**Keywords:** knowledge level, medication adherence, mental disorder, MMAS-8, quality of life, WHOQOL-BREF

# Analisis Kualitas Hidup Pasien Gangguan Jiwa Berdasarkan Tingkat Pengetahuan dan Kepatuhan Minum Obat

**Abstrak**
Evaluasi kualitas hidup (QoL) merupakan aspek penting dalam menilai keberhasilan terapi pada individu dengan gangguan jiwa. Kepatuhan minum obat memainkan peran krusial dalam kesuksesan pengobatan, namun seringkali tidak optimal akibat kurangnya pengetahuan pasien tentang penyakit dan terapi yang dijalani, yang dapat memicu kesalahpahaman dan ketidakpatuhan. Penelitian ini menginvestigasi hubungan antara tingkat pengetahuan pasien, kepatuhan terhadap regimen pengobatan, dan kualitas hidup pada populasi yang didiagnosis gangguan jiwa. Dengan menggunakan desain *cross-sectional*, data dikumpulkan dari 200 pasien rawat jalan di rumah sakit jiwa, menggunakan instrumen terstandar, termasuk kuesioner penilaian pengetahuan, Morisky Medication Adherence Scale-8 (MMAS-8), dan WHO Quality of Life-BREF (WHOQOL-BREF). Analisis statistik menggunakan korelasi Pearson dan uji korelasi berganda dilakukan melalui SPSS versi 25.0. Hasil penelitian menunjukkan bahwa 58% partisipan memiliki pengetahuan yang memadai tentang kondisi dan pengobatannya, sedangkan 52% menunjukkan kepatuhan minum obat yang rendah. Selain itu, 61,5% melaporkan kualitas hidup yang baik. Analisis korelasi berganda dilakukan untuk mengevaluasi hubungan secara multivariat, yang menunjukkan adanya korelasi positif yang signifikan antara kualitas hidup dengan pengetahuan serta kepatuhan terhadap pengobatan ($P = 0{,}000$). Namun, tidak ditemukan hubungan langsung yang signifikan antara tingkat pengetahuan dan kepatuhan. Studi ini menegaskan bahwa kepatuhan minum obat berhubungan signifikan dengan peningkatan kualitas hidup pasien gangguan jiwa. Meskipun pengetahuan tidak secara langsung memprediksi kepatuhan, kombinasi keduanya berkontribusi terhadap perbaikan hasil kualitas hidup. Temuan ini menekankan pentingnya strategi terintegrasi yang berfokus pada edukasi pasien dan promosi kepatuhan untuk mengoptimalkan manfaat terapi.

**Kata kunci:** tingkat pengetahuan, kepatuhan minum obat, gangguan jiwa, MMAS-8, kualitas hidup, WHOQOL-BREF

**Correspondence:** Wiwin Alfianna, Sekolah Tinggi Ilmu Kesehatan Prima Indonesia, Bekasi, Indonesia, email: apt.walfianna@gmail.com

## Introduction

Health is recognized as a fundamental right guaranteed to all citizens by governmental authorities. Achieving national health objectives necessitates the provision of comprehensive health services designed to preserve and enhance public well-being. These services encompass promotive, preventive, curative, rehabilitative, and palliative care.[1] As the predominant health challenges transition from acute infectious diseases to chronic conditions, the concept of health has evolved to emphasize not only increased life expectancy but also the improvement of quality of life (QoL).[2]

In psychiatric research, QoL has emerged as a vital outcome measure for evaluating medical treatments and interventions aimed at enhancing patient autonomy.[3] Psychiatrists increasingly consider QoL when assessing therapeutic efficacy and patient needs throughout treatment progression. QoL is defined as an individual's subjective evaluation of their position in life in the context of cultural, social, and personal goals, expectations, standards, and concerns.[4] Measuring QoL is valuable as it reflects not only the direct effects of illness but also its impact on daily functioning and overall life satisfaction. Moreover, it serves as a critical indicator for assessing the effectiveness of mental health interventions. Patients suffering from various mental disorders, including schizophrenia and depressive disorders, often experience significantly diminished QoL.[5]

According to the 2018 Basic Health Research in Indonesia, schizophrenia and depression are among the most prevalent mental disorders.[6] These conditions represent major global mental health challenges. Untreated mental illnesses can lead to progressive neurobiological changes, relapse, functional impairment, and impose substantial economic and social burdens on individuals, families, and communities.[7]

Nonadherence to treatment is a significant concern in managing chronic illnesses such as mental disorders.[8] The efficacy of psychiatric medications, including antidepressants, is frequently compromised by poor adherence, which hinders sustained remission and functional recovery. Patients who fail to comply with prescribed regimens tend to have worse clinical outcomes, including increased disease severity, higher rates of emergency visits and hospitalizations, greater relapse risk, diminished treatment response, lower remission rates, and reduced QoL.[9]

Multiple factors contribute to poor adherence in psychiatric care, including patient-related and environmental influences associated with healthcare providers and services. Among patient-related factors, inadequate knowledge about mental illness and its treatment can diminish motivation and foster hopelessness, adversely affecting beliefs and behaviors related to medication adherence. Lack of understanding about mental health conditions and pharmacotherapy is a significant barrier to effective treatment and adherence, particularly in depression.[10,11]

This study aims to evaluate the quality of life of patients with mental disorders in relation to their knowledge about the illness and adherence to medication. Assessing patients' knowledge is essential to gauge their comprehension of the disease and treatment, which influences adherence levels and subsequently impacts QoL. Evaluating QoL is crucial for monitoring therapeutic outcomes and enhancing treatment effectiveness. The findings will inform strategies to improve the quality of life among individuals with mental disorders.

The Morisky Medication Adherence Scale-8 (MMAS-8) was employed in this study as a validated and reliable instrument commonly used to measure medication adherence, particularly among individuals

with chronic conditions, including mental health disorders. Its concise and structured format enables the consistent assessment of patients' adherence behaviors, which is essential for evaluating treatment outcomes. The WHOQoL-BREF, developed by the World Health Organization (WHO), was selected to assess quality of life due to its multidimensional approach, capturing key domains such as physical health, psychological well-being, social interactions, and environmental factors. This makes it particularly relevant for exploring the quality of life among patients experiencing complex mental health issues. Utilizing both tools allows for a more integrated analysis of how knowledge and adherence influence the overall quality of life in individuals with mental disorders.

## Methods

This research utilizes a quantitative associative analysis design, employing a survey method with a cross-sectional approach. The study took place at Rumah Sakit Jiwa Islam Klender, Indonesia, between May and July 2024, and received approval from the Health Research Ethics Committee of STIKes Prima Indonesia No. 335/EC/KEPK/STIKES-PI/IV/2024 and No. 366/EC/KEPK/STIKES-PI/VI/2024. A quota sampling technique was implemented, selecting 200 participants to optimize time and cost while ensuring that specific subgroups within the population were proportionally represented. Participants included in the study were individuals aged 18–65 years diagnosed with either depression or schizophrenia who were capable of independently completing the questionnaire. The study's objectives were clearly explained to all participants, and informed consent was obtained prior to questionnaire completion.

Data collection was conducted using a semi-structured form that gathered sociodemographic information such as gender, age, education, marital status, employment, and income. The following instruments were used:

### *Validated knowledge questionnaires*

Two self-constructed knowledge questionnaires were developed for patients with depression and schizophrenia. Each comprised 12 items covering four domains: therapeutic purpose, treatment adherence, side effects and risks, and response variability. Both instruments demonstrated high internal consistency, with Cronbach's alpha values of 0.931 (depression) and 0.952 (schizophrenia). Data from both instruments were combined and analyzed under the broader category of mental illness. Full questionnaires are available in the supplementary material. Participants' understanding of their ongoing treatment was assessed using a Likert-scale questionnaire, with response options ranging from 1 (strongly disagree) to 5 (strongly agree). The resulting scores were categorized into three levels of knowledge: scores above 75% were interpreted as indicative of good knowledge, scores between 50% and 75% as moderate knowledge, and scores below 50% as poor knowledge.

### *Morisky Medication Adherence Scale-8 (MMAS-8)*

Designed to reduce acquiescence bias, the MMAS-8 includes seven yes/no questions and one five-point Likert item. Scoring assigns 1 point for each "no" response (except item 5, which is reversed), and the Likert item is standardized. Total scores range from 0 to 8, with 8 indicating high adherence, 6–7 moderate adherence, and below 6 low adherence. Permission to use this instrument was secured from its

copyright holder.[12,13]

***World Health Organization QoL-BREF (WHOQOL-BREF)***

This instrument, developed by the WHO QOL group in 2004, assesses quality of life. Scores are interpreted as follows: 76–100 (excellent), 51–75 (good), 26–50 (average), and 0–25 (poor).[14]

Potential biases in this study may arise if participants do not answer truthfully due to recall issues, misunderstanding questions, or providing socially desirable responses, particularly regarding knowledge or adherence. Additionally, quota sampling may not fully capture the proportional distribution of the population's characteristics.

Data were analyzed using Microsoft Excel and SPSS version 25.0 (IBM, Chicago, USA). Relationships between variables were examined using the Pearson product-moment correlation, and multiple correlation tests were conducted to assess simultaneous relationships.

## Results

***Sociodemographic characteristics***

The study sample consisted of 200 individuals diagnosed with mental disorders, comprising 100 patients with depression and 100 patients with schizophrenia. As detailed in Table 1, the majority of participants were female, accounting for 126 individuals (63.0%). Most participants fell within the adult age group of 26 to 45 years (76.0%), were unmarried (65.5%), unemployed

**Table 1. Sociodemographic characteristics of participants**

| Characteristic | Category | Frequency n=200 (%) |
|---|---|---|
| Sex | Female | 126 (63.0) |
| | Male | 74 (37.0) |
| Age group | 12–25 years | 48 (24.0) |
| | 26–45 years | 152 (76.0) |
| Education level | Elementary school | 12 (6.0) |
| | Junior high school | 26 (13.0) |
| | Senior high school | 97 (48.5) |
| | Bachelor's degree | 42 (21.0) |
| | Others | 23 (11.5) |
| Marital Status | Single | 131 (65.5) |
| | Married | 59 (29.5) |
| | Divorced | 10 (5.0) |
| Occupation | Student | 14 (7.0) |
| | College student | 8 (4.0) |
| | Employee | 53 (26.5) |
| | Entrepreneur | 21 (10.5) |
| | Freelancer | 7 (3.5) |
| | Housewife | 32 (16.0) |
| | Not Working | 64 (32.0) |
| | Civil Servant | 1 (0.5) |
| Income (IDR) | <5.000.000 | 168 (84.0) |
| | 5.000.000–10.000.000 | 27 (13.5) |
| | >10.000.000 | 5 (2.5) |

**Table 2. Knowledge level, medication adherence and quality of life of the participants**

| Variable | Category | Frequency n=200 (%) |
|---|---|---|
| Knowledge | Good | 116 (58.0) |
| | Fair | 83 (41.5) |
| | Poor | 1 (0.5) |
| Medication adherence | High | 0 (0.0) |
| | Medium | 96 (48.0) |
| | Low | 104 (40.5) |
| Quality of life | Excellent | 5 (2.5) |
| | Good | 123 (61.5) |
| | Average | 71 (35.5) |
| | Poor | 1 (0.5) |

(32.0%), and reported a monthly income below IDR 5,000,000.00 (84.0%).

***Knowledge level, medication adherence and quality of life***

Table 2 presents data on patients' knowledge, medication adherence, and quality of life (QoL). Among the 200 patients assessed, 116 (58.0%) demonstrated a strong understanding of their condition, reflecting a good knowledge level. An additional 83 patients (41.5%) possessed a moderate level of knowledge, indicating satisfactory but improvable comprehension. Only one patient (0.5%) exhibited a poor knowledge level, suggesting that nearly all participants had at least an adequate grasp of their mental health condition. Regarding medication adherence, 96 patients (48.0%) were classified as having moderate adherence, meaning that while they generally followed their prescribed regimens, their consistency may vary. The remaining 104 patients (52.0%) showed low adherence, indicating that almost half of the sample did not consistently comply with their treatment recommendations. Notably, none of the patients achieved a high level of medication adherence, emphasizing the need for targeted interventions to improve compliance. In terms of quality of life, only 5 patients (2.5%) rated their QoL as excellent, indicating that very few perceived their well-being at the highest level. The majority, 123 patients (61.5%), reported a good QoL, suggesting a positive outlook despite mental health challenges. Meanwhile, 71 patients (35.5%) described their QoL as average, and only one patient (0.5%) considered their QoL to be poor, illustrating that extremely low perceptions of well-being were rare in this group.

***Bivariate analysis***

A bivariate analysis was performed utilizing Pearson's correlation to explore associations between pairs of variables, as shown in Table

**Table 3. Bivariate Analysis between Variables**

| Variable | | P | R | Statistical Method |
|---|---|---|---|---|
| X1 | X2 | | | |
| Knowledge level | Medication adherence | 0.797 | 0.012 | Pearson's correlation |
| Knowledge level | Quality of life | 0.249 | -0.082 | |
| Medication adherence | Quality of life | 0.000* | 0.281 | |

**Table 4. Bivariate Analysis between Sociodemographic Characteristics and Variables**

| Variable | | p | Statistical Method |
|---|---|---|---|
| X1 | X2 | | |
| Age group | Medication adherence | 0.045* | *Chi*-square |
| Occupation | Quality of life | 0.000* | |

3. The findings reveal that only medication adherence was significantly associated with quality of life. No significant correlations were observed between knowledge level and medication adherence, nor between knowledge level and quality of life.

The results indicate no significant association between knowledge level and medication adherence (P = 0.797; R = 0.012), suggesting the absence of a meaningful correlation between the two variables (α = 0.05). Similarly, no statistically significant relationship was observed between knowledge level and quality of life (P = 0.249; R = -0.082), indicating that knowledge level does not appear to influence quality of life in a meaningful way. In contrast, a significant relationship was observed between medication adherence and quality of life (P = 0.000, P < 0.05). The correlation coefficient (R = 0.281) indicates a moderate positive association, implying that greater adherence to medication is linked to improved quality of life. Additionally, bivariate analysis was conducted to explore the relationships between sociodemographic factors and the variables of knowledge level, medication adherence, and quality of life. The findings revealed that age was the only sociodemographic factor significantly associated with medication adherence (P = 0.0045, P < 0.05), while occupational status was significantly related to quality of life (P = 0.000, P < 0.05). These results are detailed in Table 4.

There is a significant correlation between age group and medication adherence, as the p-value is less than 0.05. This suggests that the likelihood of adhering to medication varies significantly across different age groups. The correlation could indicate that age is a factor influencing medication adherence, with specific age groups either more or less likely to follow prescribed regimens. The analysis also reveals a significant correlation between occupation and QoL, with a p-value of 0.000, which is well below the 0.05 threshold. This indicates that a person's occupation is significantly related to their quality of life, suggesting that employment status or type of job might play an important role in influencing an individual's perceived QoL.

### *Correlation between knowledge, medication adherence, and quality of life*

A multivariate correlation analysis was performed to examine interrelationships among quality of life (QoL), knowledge level, and medication adherence. As presented in Table 5, the results demonstrate a statistically

**Table 5. Multiple Correlation between Variables**

| Variable | | P | R | R square | R table |
|---|---|---|---|---|---|
| X | Y | | | | |
| X1: Knowledge level | Quality of life | 0.000* | 0.294 | 0.086 | 0.137 |
| X2: Medication adherence | | | | | |

significant multivariate association between these variables ($P < 0.05$), with a moderate positive correlation observed ($R = 0.293$). The coefficient of determination ($R^2 = 0.086$) indicates that 8.6% of QoL variance can be explained by the combined influence of knowledge level and medication adherence in this model. While this effect size suggests other unmeasured factors likely contribute to QoL outcomes, the correlation remains statistically significant as the computed R value exceeds the critical threshold of 0.137 for the study's sample size ($N = 200$).

## Discussion

Across the lifespan, women are about 50% more likely than men to experience depressive and anxiety disorders, while men have a higher risk of developing substance use disorders. Since depressive and anxiety disorders make up the majority of mental health cases, a slightly higher proportion of women (13.5%, or 508 million) than men (12.5%, or 462 million) are affected by mental health conditions overall.[16] Mental disorders are particularly prevalent among pregnant women and new mothers, frequently resulting in significant consequences for both maternal and child health. Globally, over 10% of these women experience depression, with rates being considerably higher in LMICs. Exposure to intimate partner violence or sexual violence greatly increases women's risk for mental health conditions such as depression, anxiety, post-traumatic stress disorder (PTSD), and suicidal thoughts, underscoring the severe psychological impact of victimization.[18,19] Although certain mental disorders are less common in men than in women, some conditions, such as attention-deficit/hyperactivity disorder (ADHD), are diagnosed at equal or higher rates in men. Men may also display different symptom patterns, and the course of mental illness can differ by sex. Recent research is beginning to investigate the biological and psychosocial factors underlying these gender differences in mental health. Consistent with previous studies, our findings indicate that women are more likely than men to experience mental health disorders. However, men are less likely to have received mental health treatment in the past year, suggesting a gap in access to care and support.[20] Furthermore, men face a higher risk of suicide compared to women.[21]

It is estimated that each year, between one in four and one in five young people (aged 12–24) will experience a mental health disorder, though prevalence rates vary considerably by region. Globally, a large proportion of mental disorders in youth remain undiagnosed and untreated.[15] Approximately 8% of children aged 5–9 and 14% of adolescents aged 10–19 are affected by mental disorders. A major national study in the United States found that half of all adult mental disorders begin by age 14, and three-quarters emerge by age 24. Systematic reviews of school-based mental health interventions indicate that the most effective programs typically employ a universal, whole-school approach. These initiatives often include changes to school culture, increased parental involvement, specialized teacher training, parent education, community engagement, and collaboration with external organizations. Among adults aged 70 and older, about 13% were living with a mental disorder in 2019, with depressive and anxiety disorders being most prevalent. Gender differences in mental disorder prevalence become more pronounced in this age group, with 14.2% of women and 11.7% of men over 70 affected. The prevalence of schizophrenia in individuals over 70 is lower (0.2%) compared to those under 70 (0.3%), which may be partly attributed to premature mortality.[16]

The current study indicates that 24% of mental disorder cases occurred among individuals aged 12–25, whereas 76% were found in the 26–45 age group, demonstrating a notable concentration of diagnoses in the latter. Although prior meta-analytic research has established that the onset of several mental disorders, such as schizophrenia and depression, commonly arises during adolescence or early adulthood[22], with median onset ages reported at approximately 25 and 30 years respectively. These findings imply that many individuals are not diagnosed or do not seek professional help until a later stage. Consequently, while the emergence of symptoms may begin earlier, the majority of confirmed diagnoses tend to cluster within the 26–45 age range, emphasizing the necessity for ongoing mental health monitoring and intervention strategies extending into adulthood. The lower proportion observed in the 12–25 age group may reflect underdiagnosis or underreporting, even though this period is critical for the onset of many psychiatric disorders, including mood disorders and early-onset schizophrenia. Adolescents and young adults remain vulnerable to mental health challenges, particularly during significant life transitions, but may be less frequently diagnosed.[22]

Regarding the relationship between education and psychological distress, international research has consistently demonstrated that higher educational attainment is associated with lower distress levels. In this study, better mental health, characterized by greater psychological well-being and reduced distress, was linked to higher levels of education. Conversely, higher distress was observed among older adults with lower educational attainment, with illiteracy identified as a contributing factor.[23] Numerous studies have established that limited education is associated with a higher risk of various mental disorders. Lower educational attainment is often linked to adverse living conditions, such as inadequate housing or difficult work environments, which can increase stress and negatively impact mental health. Chronic stress may disrupt the hypothalamic-pituitary-adrenal (HPA) axis, leading to neuroendocrine changes that contribute to symptoms of psychosis, mood disorders, anxiety, and depression.[24]

The predominance of senior high school graduates (48.5%) in our study may be attributed to stressors associated with transitional life phases, such as entering the workforce or pursuing higher education. Individuals with this education level might have limited coping mechanisms compared to those with higher educational attainment, and they may also face socioeconomic challenges, as high school graduates often encounter obstacles to further education or stable employment. A notable proportion (21.0%) was observed among those holding a bachelor's degree. While advanced education can provide greater socioeconomic opportunities, it can also introduce significant stressors, including academic demands, performance expectations, and societal pressures. The lowest prevalence (6.0%) was seen among those with the least education, which could be due to underreporting, limited access to healthcare and diagnostic services, or possibly differing perceptions of stress compared to those with higher education.

A majority of mental health disorders in our sample were found among single individuals (65.5%), aligning with existing literature that links higher rates of loneliness, lack of emotional support, and social isolation in single people to increased risk for depression and anxiety. Single individuals may also face stressors related to financial independence or societal expectations to marry, which can further exacerbate mental health problems. In contrast, married individuals accounted for a lower proportion (29.5%) of mental

health disorders, consistent with research indicating that stable marital relationships often provide emotional and social support, which can buffer against stress and promote psychological well-being. However, the quality of the marital relationship plays a crucial role in these outcomes. Divorced individuals represented only 5.0% of cases, which may seem unexpected given the association between divorce and mental health challenges. This could reflect underrepresentation in the sample or that those who have sought help post-divorce may have already adapted to their circumstances.

Research indicates that, for men at age 32, marriage is associated with greater mental well-being compared to other relationship statuses, as alternatives are generally linked to higher depressive symptoms and lower self-esteem. The positive impact of marriage on men's mental health is not as evident among women at this age, possibly because women often receive social support from sources outside marriage, whereas men tend to rely more heavily on their spouses.[25] Marriage may also benefit mental health by providing financial stability and greater access to social support networks. However, when factors such as income, financial stress, and emotional support are accounted for, the association between marriage and mental health becomes less pronounced. To fully understand the mediating effects of these variables, it is important to assess them prior to marriage or independently.[26]

The largest proportion of mental health disorders in this study was observed among individuals who were unemployed (32.0%). Numerous studies have established a strong association between unemployment and mental health problems such as depression and anxiety. Contributing factors include financial insecurity, a diminished sense of purpose, and reduced opportunities for social interaction. Students (7.0%) and university students (4.0%) exhibited comparatively lower rates of mental health issues; however, challenges such as academic pressure and the drive to succeed may be underreported among these groups, potentially due to cultural stigma. Freelancers accounted for 3.5% of cases, possibly reflecting the benefits of flexible work arrangements, though the unpredictability of income and lack of routine may also present risks.

Interestingly, employed individuals demonstrated a higher tendency to engage in high-risk behaviors related to mental health compared to their unemployed counterparts. Additionally, research indicates that those who are employed may exhibit greater workplace aggression.[27] While employment confers several benefits, including financial security, social status, a sense of purpose, supportive networks, and collegial relationships, it can also adversely affect mental health. Persistent or excessive work-related stress is a significant risk factor, contributing to 13% of depression cases among employed men and 17% among employed women. Furthermore, workplace stressors have been linked to an increased risk of suicide. Studies consistently show that unemployment, particularly among young people who have recently completed their education, can have especially detrimental effects on well-being and mental health. Factors such as the length of unemployment, personal perceptions of joblessness, and the intensity of job-seeking efforts are likely to influence mental health outcomes during periods of unemployment.[28]

The relationship between income and mental health has been extensively documented. A comprehensive systematic review and meta-analysis found that increases in income are associated with improvements in mental health and overall well-being.[29] Notably, the negative impact of income loss on mental health is greater than the positive effect of income gain. This is particularly

significant for individuals living near the poverty line, as even minor reductions in income can seriously threaten both financial security and mental health.[30]

In this study, the majority of mental health cases (84.0%) occurred among individuals earning less than 5,000,000 IDR per month, underscoring the strong link between low income and mental health disorders. These findings are consistent with previous research indicating that people with lower incomes are at greater risk for mental health problems, often due to increased financial stress, limited access to healthcare, and fewer social support resources.[31] Conversely, higher income levels may serve as a protective factor, as financial stability can improve access to healthcare, reduce daily stressors, and enhance living conditions and educational opportunities.

***Bivariate analysis***

Bivariate analysis revealed a significant association between medication adherence and QoL in patients, with a P value of 0.000 ($P < 0.05$). However, there was no significant relationship between knowledge level and medication adherence, nor between knowledge level and QoL ($P > 0.05$). These findings suggest that while patients may be knowledgeable about their condition, this awareness does not necessarily translate into better adherence to medication regimens.

The correlation between patients' medication knowledge and adherence is complex and not always direct. Several factors contribute to this disconnect. Psychosocial and motivational barriers, such as stress, depression, or lack of social support, can impede adherence even when patients understand the importance of following their medication regimen. This underscores that knowledge alone is insufficient for ensuring compliance. Practical obstacles, including medication costs, limited access to pharmacies, or complicated dosing schedules, can also hinder adherence, regardless of a patient's level of understanding.[32,33] Additionally, patients' beliefs and perceptions, such as concerns about side effects or doubts regarding efficacy may negatively influence adherence.[34] Research suggests that trust in healthcare providers often has a greater impact on adherence than medication knowledge itself. Lastly, there is often a gap between knowledge and action; understanding a disease or its treatment does not always result in consistent behavioral change unless supportive mechanisms, such as reminders or digital tools, are in place. Studies have shown that interventions like mobile applications or regular follow-ups are more effective in improving adherence than education alone.[35,36]

The absence of a significant correlation between patients' knowledge levels and their QoL can be explained by the complex and multidimensional nature of QoL, which extends beyond mere cognitive understanding. Research indicates that while health-related knowledge may facilitate better symptom management and treatment adherence, it does not directly address the emotional, social, and economic dimensions that play a substantial role in determining QoL. For instance, factors such as social support networks, financial security, and healthcare accessibility can greatly influence QoL, and individuals lacking these resources may experience diminished QoL regardless of their health literacy. Thus, possessing knowledge alone does not necessarily lead to improved outcomes or effective action. A meta-analysis found only a moderate association between health literacy and QoL, highlighting the importance of practical application and self-management behaviors as key mediators.[37] Research consistently shows that the ability to cope with the psychological effects of mental disorders impacts quality of life more than factual knowledge about the

illness. Adaptive, problem-focused coping is linked to better quality of life in conditions like depression and bipolar disorder, while maladaptive coping, such as avoidance, relates to poorer outcomes. This highlights the importance of clinical interventions that develop active coping skills for improving patient well-being and function.[38–40]

Conversely, the positive relationship between medication adherence and QoL in individuals with mental health disorders is well established in the literature. Adhering to prescribed medication regimens significantly enhances overall QoL for several reasons. First, consistent medication use helps control symptoms of mental health conditions such as anxiety, depression, and psychosis, enabling patients to maintain daily functioning and minimizing disruptions in both personal and professional spheres. Regular adherence also reduces the risk of relapse or hospitalization, both of which can severely affect QoL. By achieving greater stability in their mental health, patients are better positioned to pursue long-term goals and improve their emotional and social well-being. Moreover, effective treatment often leads to improvements in cognitive and emotional domains, including memory, decision-making, and emotional regulation, all of which contribute to enhanced QoL. Medication adherence also promotes a sense of agency and self-efficacy, helping patients feel more in control of their health and reducing feelings of helplessness, thereby further supporting a higher QoL.[41,42]

***Multivariate analysis***

A statistically significant simultaneous association was identified between the QoL of patients with mental health disorders, their knowledge levels, and treatment adherence. This relationship is shaped by several interrelated factors. Patient knowledge often serves as a critical foundation, enabling individuals to better understand their mental health conditions and the importance of adhering to prescribed treatments. Well-informed patients are more likely to appreciate the benefits of consistent medication use and to adopt additional positive behaviors, such as participating in therapy or maintaining a healthy lifestyle, all of which contribute to improved QoL. Medication adherence, acting as a mediator, plays a pivotal role in ensuring the effectiveness of pharmacological and therapeutic interventions. Consistent adherence often leads to symptom stabilization, thereby lessening the impact of mental health symptoms on daily life. This improvement in both mental and physical health is essential for enhancing QoL. For example, research on chronic illnesses like multiple sclerosis has demonstrated that adherence is linked to better performance in daily activities and improved relationships with healthcare providers, ultimately resulting in higher QoL. When considered together, knowledge and adherence may exert a synergistic effect on QoL. Knowledge alone may not be sufficient to improve outcomes, but it can enhance adherence, which directly influences QoL. Findings from path analysis and regression studies in related fields have shown that psychological preparedness and adherence are positively correlated with mental health outcomes, illustrating the dynamic interplay among these factors.[41,43]

This study has several limitations that should be acknowledged. As a cross-sectional design, it cannot establish causal relationships between variables such as treatment adherence and quality of life (QoL). The use of self-reported data may introduce recall bias, item misinterpretation, and socially desirable responses, particularly in assessing knowledge, adherence, and QoL. Furthermore, the quota sampling approach may reduce the representativeness

of the sample, limiting the generalizability of findings. Other influential factors, such as socioeconomic status, illness severity, and access to care were not controlled and may have affected the results. Additionally, QoL and adherence are dynamic and may fluctuate over time, which cannot be captured through a single-point assessment. Future research should consider probability-based sampling and incorporate objective measures, such as clinician assessments or medical records, to enhance data validity. Despite these limitations, the study offers meaningful insights into patient knowledge in psychiatric care and underscores the need for targeted educational strategies in mental health services.

## Conclusions

A significant correlation was observed between medication adherence and quality of life (QoL), while no direct relationships were identified between knowledge level and either adherence or QoL. Nonetheless, when examined collectively, these variables demonstrated an interrelated pattern, suggesting a more complex and integrated dynamic. Although knowledge alone did not independently predict adherence or QoL, its role within a broader network of influencing factors warrants further investigation. Future studies should explore the potential mediating or moderating effects of knowledge, along with psychological and social determinants such as stigma, support systems, and access to care. Longitudinal designs are essential to capture temporal changes, while intervention studies should focus on multifaceted approaches that integrate tailored education, adherence support, and QoL enhancement strategies. Additionally, evaluating the impact of digital health technologies and broader social determinants, including socioeconomic status and employment, may yield deeper insights into mental health outcomes and inform the development of more effective, patient-centered interventions.

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## Conflict of Interest

There are no conflicts of interest.

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