

Quality of Life among Drug Users in Jakarta, Indonesia

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Abstract

Methadone maintenance therapy can improve the quality of life of drug users. In this study, we aimed to determine the correlation between individual-level factors and quality of life among drug users in Jakarta, Indonesia. Using a cross-sectional methodology, we assessed the quality of life of 100 respondents undergoing methadone maintenance therapy (retrospectively registered) at the Drug Dependence Hospital, Jakarta, (34 respondents) and the TanjungPriok Public Health Center (66 respondents) in June 2017. The instruments used to measure quality of life were the World Health Organization Quality of Life (WHOQOL-BREF) questionnaire, Epworth Sleepiness Scale, Arizona Sexual Experiences Scale, and General Self-Efficacy Scale. Multivariate logistic regression analyses were performed to determine risk factors for poor quality of life. The mean age of the respondents was 35.8 years, and 94% of the respondents were male. The mean quality of life score was 65.8. The lowest mean score (59.4) was in the social relationship domain, and the highest mean score (74.2) was in the psychological domain. Multivariate logistic regression analysis results revealed quality of life to be significantly associated with age, monthly income, physical activity, sleepiness, and self-efficacy. Drug users aged ≥ 34 years [odds ratio (OR) =4.3], with higher incomes (OR= 3.4), who participated in moderate/high physical activity (OR= 9.5), who were normal sleepers (OR= 4.4), and who had good self-efficacy (OR= 2.9) had a higher quality of life than their counterparts. We recommend that drug users undergoing maintenance therapy should be physically active and address any sleep problems to maintain a good quality of life.

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Introduction

One in every 20 adults aged between 15 and 64 years have been estimated to have used illegal drugs in 2014. It is estimated that almost 12% people who use drugs (i.e., >29 million people) suffer from drug use disorders. Of these, 12 million are people who inject drugs (PWID). Of the PWID population, 14% (1.6 million) are living with HIV, 52% (6 million) are infected with hepatitis C, and 9% (1.1 million) are infected with hepatitis B. The PWID population represents a key at-risk group for HIV and hepatitis infections.

The health consequences of drug use are often devastating. In 2014, 207,400 drug-

related deaths occurred worldwide, which amounts to 43.5 deaths per million people aged 15-64 years.¹ In Indonesia, 2.18% of the population (4 million persons) uses drugs, and 1.7% of these people (67,800) are PWID. The province found to have the most prevalent drug use was DKI Jakarta (4.73%), followed by Kalimantan Timur (3.07%) and Kepulauan Riau (2.94%).²

The World Health Organization (WHO) began an initiative in 1991 to develop a quality of life assessment that would measure health indicators beyond the traditional measures of mortality and morbidity. Quality of life is defined as an individual's perceptions of his or her position in life in the context of his or her culture and value system and also in relation to his or her goals, expectations, standards, and concerns. Quality of life assessments in healthcare focus on different aspects of a patient's well-being and generally take a holistic approach to health and healthcare. The World Health Organization Quality of Life

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(WHOQOL-BREF), a short quality of life assessment tool, was developed in this context.³

One study found that users of psychoactive substances had lower overall and domain scores in the physical, psychological, and social domains of well-being on the WHOQOL-BREF questionnaire in comparison with non-drug users.⁴ Methadone maintenance therapy (MMT) is one effective way to reduce heroin use, injecting practices, and associated crime in populations of drug users.⁵ Patients undergoing MMT reported better quality of life in all domains⁵⁻⁹ following treatment, although the extent of increases in quality of life vary from one MMT clinic to another. Quality of life scores among patients undergoing MMT ranged from 10.0 to 28.0 at the University of Malaya Medical Centre (UMMC),⁵ ranged from 60.4 to 65.7 at the Tampin Clinics [6], ranged from 53.3 to 59.5 at the Gambir and Johar Baru Public Health Centers,¹⁰ and ranged from 56.0–72.0 at the Bogor Timur Public Health Center.¹¹ However, the previous studies did not concern to individual factors which is essential for program evaluation.

Individual, family, and environmental factors influence drug users' behavior¹² and their quality of life, which serves as a subjective measure of the health status¹³ that is invariably affected by numerous factors. However, reasons for differences in the quality of life scores among clinics as well as the correlation of quality of life with individual factors remain unclear. The objectives of this study were, thus, to assess the quality of life of drug users and to identify individual risk factors for lower quality of life.

Materials and methods

A cross-sectional study was conducted in June 2017 at the Drug Dependence Hospital Jakarta and the Tanjung Priok Public Health Center. The study population at both institutions included patients undergoing MMT. Subjects needed to be at least 18 years old to be eligible. Participants received a clear explanation of the study purpose and protocol and gave written informed consent. A total of 100 participants were recruited in the study using a quota sampling method.

First, a sociodemographic questionnaire was administered to the participants to collect

demographic data (i.e., on gender, age, education level, marital status, employment status, and monthly income). Information on comorbidities and level of physical activity was additionally obtained. Daytime sleepiness was assessed using the Epworth Sleepiness Scale,¹⁴ coping skills were assessed using the questionnaire developed by Rochmayanti,¹⁵ sexual function was assessed using the Arizona Sexual Experiences Scale,¹⁶ spirituality was assessed using the questionnaire developed by Jaji,¹⁷ and self-efficacy was assessed using the General Self-Efficacy Scale.¹⁸ A 26-item quality of life questionnaire (WHOQOL-BREF) was also employed to assess quality of life. The items of this questionnaire were grouped into four domains (physical health, psychological health, social relationships, and environmental factors). Financial resources, physical safety, healthcare and social care, home environment, opportunities for acquiring new information, recreation/leisure activities, physical environment, and transportation are included in the environmental domain. Multivariate logistic regressions were performed to determine the relationship between individual factors and quality of life.

Results

The characteristics of the 100 participants enrolled in the study are shown in Table 1. In total, 94% participants were male and 53% were married. The mean \pm SD age was 35.8 ± 6.4 years, and 58% were >33 years. Majority had high school, vocational, or university education (71%). In addition, 68% were employed, and 72.1% had a low income (<232.8 USD per month). With respect to physical health, 62% had a disease associated with drug use (HIV/AIDS/hepatitis B/hepatitis C), 89% had moderate/high activity levels, 65% were normal sleepers, and 70% had sexual dysfunction. Finally, 65% had supported spiritual needs, 91% had effective coping, and 60% had high self-efficacy.

Quality of life scores by domain are shown in Table 2. The mean \pm SD quality of life score was 65.8 ± 13.4 . The highest and lowest quality of life scores were in the psychological (74.2 ± 18.5) and social relationship (59.4 ± 17.4) domains, respectively.

Characteristic	%
Gender	
Male	94
Female	6
Age (mean ± SD = 35,80 ± 6,420)	
≤33 years	42
>33 years	58
Marital status	
Single/divorced/widower	47
Married	53
Education level	
Primary/junior secondary	29
Senior secondary/tertiary	71
Employment status	
Unemployed	32
Employed	68
Income (n = 68)	
<Rp3,100,000 (<232.8 USD)	72.1
≥Rp3,100,000 (≥232.8 USD)	27.9
Comorbidities	
HIV/AIDS/HepB/HepC	
Yes	62
No	38
Physical activity	
Low	11
Moderate/high	89
Sleepiness	
Disturbed sleepers	35
Normal sleepers	65
Coping	
Poor coping	9
Good coping	91
Sexual function	
Sexual dysfunction	70
No sexual dysfunction	30
Spiritual (the presence or absence of faith/religion)	
Unsupported	35
Supported	65
Self-efficacy	
Low	40
High	60
Quality of life	
Low (0-69)	57
High (70-100)	43

Table 1. Individual Characteristics of Participants (n = 100)

According to the multivariable logistic regressions, higher quality of life scores (≥70) were influenced by age {odds ratio (OR), 4.3 [95% confidence interval (CI) 1.2–15.5]}, income [OR, 3.4 (95% CI 0.8–14.5)], physical activity [OR, 9.5 (95% CI 0.8–111.6)], sleepiness [OR, 4.4 (95% CI 1.1–16.6)], self-efficacy [OR, 2.9 (95% CI 0.7–11.1)], and

spiritual support [OR, 2.2 (95% CI 0.6–8.6)]. Factors associated with higher quality of life scores are detailed in Table 3.

Domain	Min–max	Mean	Median	SD	95% CI
Physical health	13–94	62.1	63.0	14.8	59.2–65.0
Psychological health	6–100	74.2	81.0	18.5	70.5–77.9
Social relationships	19–100	59.4	56.0	17.4	55.9–62.8
Environmental factors	19–100	67.5	69.0	16.4	64.2–70.7
Overall quality of life	15.8–92.3	65.8	67.3	13.4	63.1–68.4

Table 2. Quality of Life Scores by Domain

Variable	B	SE	Wald	df	p value	exp (B)	95% CI
Age (>33 years)	1.5	0.7	4.9	1	0.026	4.3	1.2–15.5
Income (≥Rp3,100,000)	1.2	0.7	2.6	1	0.104	3.4	0.8–14.5
Physical activity (moderate/high)	2.3	1.3	3.2	1	0.073	9.5	0.8–111.6
Sleepiness (normal sleepers)	1.5	0.7	4.7	1	0.031	4.4	1.1–16.6
Spiritual (supported)	0.8	0.7	1.2	1	0.264	2.2	0.6–8.6
Self-efficacy (high)	1.1	0.7	2.3	1	0.126	2.9	0.7–11.1

Table 3. Factors in the Multivariate Logistic Regression Models Associated with Good Quality of Life.

Discussion

In this study, a 26-item questionnaire was utilized to investigate quality of life among drug users in an MMT program as well as the relationship between quality of life and individual factors. The mean ± SD quality of life score was 65.8±13.4, which was similar to that reported in the study by Baharom (score 64.1).⁶ The scores of the four components ranged from 59.4-74.2, similar to the range of 56-72 reported in the study by Adzani,¹¹ yet higher than those reported by other studies.^{5,6,10}

A previous study found that participants undergoing MMT had a better quality of life,⁶ as evidenced by higher quality of life scores, than those in this study. In the present study, the highest score was obtained in the psychological domain, which is also consistent with the findings of a previous study.⁶ The lowest score was in the social relationships domain, which is also similar to the results of

previous studies.⁵⁻⁶ Opioid users are often socially marginalized, and it is difficult for them to improve their social relationships during the course of an MMT program⁶ as more time is probably needed for them to reintegrate into society.⁵

Contrary to the results of previous studies, we did not find that gender affected the quality of life.¹⁹⁻²¹ Other studies have found that gender affects quality of life,²²⁻²⁴ in particular, one study found that scores in all quality of life domains were lower in women.²² Female drug users were found to experience worse physical consequences and poorer social relationships than males.²³ Another study also reported that women had poorer social relationships and environmental surroundings than men.²⁴

Age was also found to be related to quality of life. Older participants were 4.3 times more likely to have a higher quality of life than younger participants. Others have also found that younger participants were more likely to have lower quality of life,²⁵ one explanation may be that younger participants could still be raising children and working full-time jobs or be dating or recently married compared with their older counterparts and that these factors may cause them to experience greater social pressures. However, Gawlik et al²⁶ reported that elderly participants had the highest risk of lower quality of life, which may be due to diminished organ functioning. Conversely, other studies found that age was not related to quality of life^{19-21,24,27}

Marital status was not found to be related to quality of life. In this respect, the present study was consistent with the results of studies by Banon²⁰ and Septiwi.²¹ Conversely, other studies reported that marital status was positively correlated with quality of life^{22,24-26} For example, Shamshirgaran et al²² reported that marital status was a criterion of social support, wherein social and economic status were positively predictive of quality of life. Participants who live alone (single or widowed) were found to be at higher risk of decreased quality of life.²⁶ Another study reported that single participants experienced worse psychological health and overall quality of life than married participants.²³ Conversely, a previous study found that married participants had poorer quality of life in the physical and environmental domains as well as in overall

quality of life.²⁴

The level of education was not found to be related to the quality of life. This result was similar to that of previous studies.^{20,21,23} However, other studies have shown that the level of education is associated with quality of life.^{22,24,26} Level of education can be related to the social and environmental domains.²² Participants with secondary education, vocational training, or no education were at the highest risk of decreased quality of life.²⁶ The study by Vaish and Shekhawat²⁴ determined that participants with more education had a better quality of life in the environmental domain.

Employment was not reflective of the quality of life, and this result was similar to that of a previous study.²⁴ However, another study reported that employment was related to quality of life.²⁰ Üstündag and Zencirci²³ also reported that housewives had worse quality of life scores in the physical and social domains than laborers and clerks. In this study, the types of employment widely varied and included those in the trading sector, private employees, drivers (car or motorcycle), freelancers, chefs, laborers/port laborers, officers of non-governmental organizations, sailors, musicians, social workers, and marketing officers.

Monthly income was associated with quality of life. Higher-income participants were 3.4 times more likely to have a higher quality of life than lower-income participants. Another study found monthly income to be correlated with environmental domain scores.²² However, two other studies reported that monthly income was not correlated with quality of life.²¹⁻²⁴

Comorbidities were not found to be correlated with quality of life. The results of the present study were consistent with those of another previous study in this respect.²¹ However, other studies did find comorbidities to be associated with quality of life.^{22,24-26} Comorbidities in one case were negatively predictive of quality of life, particularly in the psychological domain.²² Drug users with breast cancer²⁵ and primary chronic daily headaches²⁴ were also found to have lower quality of life.

Physical activity was found to be associated with quality of life. Participants with moderate or high physical activity levels were 9.5 times more likely to have a higher quality of life than those with low physical activity levels.

Our study results in this area were consistent with those of a previous study.²⁸ One possible explanation is that moderate/high physical activity could reduce stress²⁹ and thereby increase the quality of life.

Sleepiness was also correlated with quality of life. Normal sleepers were 4.4 times more likely to have a higher quality of life than disturbed sleepers. This result was consistent with that of a previous study that found insomnia to be related to decreased quality of life.³⁰ Disturbed sleepers reported lower quality of life in the physical domain.¹¹

Coping was not associated with quality of life. However, previous studies¹⁵⁻³¹ found that participants who developed effective coping strategies had a better quality of life.

In our study, sexual function was not found to be correlated with quality of life. Conversely, Avci and Dogan³² reported that participants with sexual dysfunction had a lower quality of life. Sexual dysfunction has been found to affect the social domain.¹¹ In the present study, majority participants (70%) had sexual dysfunction. It has also been found that stress can lead to sexual dysfunction.²⁹

Spirituality was not found to be related to quality of life. This result was also consistent with that of previous studies.²³⁻²⁴ Blessings/prayers, vows and sacrifices, consulting religious figures, amulet use, and drinking holy water were not found to affect quality of life in a previous study; however, religious beliefs and behaviors were found to affect the ability of participants to address anxiety.²³

Self-efficacy was found to be associated with quality of life. Persons with higher self-efficacy were 2.9 times more likely to have a higher quality of life than those with lower self-efficacy. The finding on this in this study was consistent with that of a previous study³³ in which self-efficacy was found to increase quality of life. Another study found that high self-efficacy led to higher quality of life.³⁴ Representative patient who can help those undergoing MMT are placed within each methadone treatment community in the Drug Dependence Hospital Jakarta and in the Tanjung Priok Public Health Center. These leaders persuade, guide, and motivate those undergoing treatment to engage in positive behaviors. Such interventions can help participants in developing self-efficacy.

Conclusions

The quality of life among drug users in the Drug Dependence Hospital Jakarta and the TanjungPriok Public Health Center was found to be moderate. The psychological quality of life domain yielded the highest score, whereas the social relationship domain yielded the lowest. Factors that affected quality of life were age, monthly income, physical activity, sleepiness, and self-efficacy. Based on the findings of this study, we recommend that, to maintain a good quality of life, participants undergoing MMT should increase their physical activity level and discuss any sleep problems with their healthcare providers.

Declaration of Interest

The authors report no conflict of interest.

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