



## Impact of COVID-19 Outbreak on Women Quality of Life in Indonesia

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### Abstract

The COVID-19 outbreak and its designated policy conveyed unprecedented impacts on the life of women. This study aims to assess women's quality of life (QOL) during the pandemic. This cross-sectional study was conducted in Java and Sulawesi, as both sites implemented the large-scale social restriction policy. The Indonesian version of the WHO Quality of Life Instrument, Short Form (WHOQOL-BREF) was used to collect the QOL data. The whole questionnaire was self-administered online by 191 women using Google Form. Descriptive analysis and Mann-Whitney test were carried out to analyze the data in statistical software. Overall, women who were involved in this study conveyed a relatively moderate quality of life and overall health (4.08 + 0.76 SD and 4.07 + 0.78, respectively). The highest and lowest mean scores of QOL were observed in the social relationship (78.3 + 17.05 SD) and physical health domain (60.8 + 10.76SD). Family monthly income and type of family were significantly associated with environmental health ( $p < 0.05$ ). Astoundingly, during the outbreak women described high satisfaction in social relationships. These results may advocate policy in regards to women's welfare.

### Introduction

Since the start of the COVID-19 outbreak, World Health Organization (WHO) has reported 110.7 million cumulative cases and more than 2.4 million deaths globally as of early 2021 (World Health Organization, 2020). Indonesia has noted more than 1.3 million confirmed cases and 35 thousand deaths nationwide. The data distribution shows that the cases are slightly higher among women than men (50.7% and 49.3%, respectively). Among Indonesia's government efforts to control the transmission of the virus is the implementation of a large-scale social restriction policy by limiting any form of social activity (Tosepu et al., 2020). However, the application of the policy gives inevitable impacts, especially on the lives of women. The 2020 national online survey undertaken by National Commission on Violence Against Women revealed the

effects of the outbreak on women's life. Among them is the increase in domestic burden, stress, and domestic violence (Qibtiyah et al., 2020). SMERU Research Institute reported that COVID-19 has lowered women's labor force involvement since it hits informal sector jobs that mainly engage female workers (Rahman et al., 2020). Subsequently, there is a decrease in family income. Those effects encountered by women may affect their quality of life, and may lead to more serious consequences like low self-esteem, child neglect, and even suicide (Park et al., 2002; Savolainen et al., 2014).

WHO defines the individual quality of life through four domains measure, namely physical, psychological, environmental, and social relationships. The composite of the four domains will present the overall quality of life. The tool widely used for assessing the quality of life is the WHO Quality of Life, Short Form

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(WHOQOL-Bref) questionnaire, available in the Indonesian language version (World Health Organization, 2004). Quality of life assessment has been extensively investigated, however, most studies focus on physically or physiologically impaired persons only, like patients with cataracts, HIV infection, and diabetes mellitus (Gholami et al., 2016; Lin et al., 2017; Meemon et al., 2016). Because of the paucity of the studies investigating the women's quality of life and the relevance of nowadays circumstances of the COVID-19, the current study is undertaken. This study aims to measure the quality of life of women during COVID-19 outbreak using WHOQOL-Bref Instrument, the Indonesian version. The result of the current study may provide a holistic consideration of the problem faced by the women and advocate policies regarding women's welfare.

## Method

This cross-sectional study conducted data collection between July and August 2020 in Java and Sulawesi. The sites were purposively selected since both islands applied large-scale social restriction policies. The study received Ethical Approval from the Health Ethics Research Committee of Universitas Pembangunan Nasional Veteran Jakarta Number 2617/VI/2020/KEPK. The participants were married women aged 19-49 years old who owned a smartphone with an internet connection. Women who were originally from outside Java and Sulawesi were excluded. The data collection was conducted online by broadcasting a link to the Google Form questionnaire via Whatsapp, Instagram, and Facebook. A total of 191 women filled out the questionnaire and written informed consent was obtained before the data collection.

The questionnaire consisted of two sections. They were demographic characteristics (age, place of residence, type of family, working status, educational attainment, and monthly family income) and the WHOQOL-Bref questionnaire. Demographic characteristics were considered as an independent variable, while the WHOQOL-Bref questionnaire was considered as the dependent variable. The participants'

age was represented by two categories: younger than and equal to 30 years old and older than 30 years old. Place of residence classified as urban and rural, based on Indonesia Statistics categorization. Type of family categorized as nuclear and extended family. Family monthly income was grouped as more than or equal to 5 million IDR and less than 5 million IDR. Educational attainment was classified as less than senior high school and higher education graduates. Working status was grouped as working and not working. The WHOQOL-Bref Questionnaire consisted of 26 questions in Indonesia Language, with the details as follows: two separate questions asking about the overall quality of life and general health, seven items on physical health (domain 1), six items on psychological health (domain 2), three items on the social relationship (domain 3), and eight items on environmental health (domain 4) (World Health Organization, 2004).

The data were analyzed using a statistical software. The descriptive analysis presented the frequencies and the percentages of the participants characteristics, the QOL mean score, and standard deviations (SD) of each WHOQOL domain. Mean scores from each domain were derived from the transformed score within the 0 to 100 range. The reliability of the WHOQOL-BREF questionnaire was examined using Cronbach's alpha,  $\alpha$  score of 0.7 and over was deemed adequate internal consistency. For checking data normality, Kolmogorov-Smirnov test was performed. The Mann-Whitney test was used to examine the association between women's quality of life and their characteristics ( $p < 0.05$ ).

## Result and Discussion

A total of 191 women self-administered the online questionnaire in this study. The characteristics of the study participants are shown in Table 1. The age of the participants differed slightly, with more women younger than 30 years old. Most of the women lived in the urban areas with the nuclear family and earned a family income of more than 5 million IDR per month. Most of the women were higher education graduates and currently working.

**TABLE 1. Characteristics of Study Participants**

Characteristics	n	%
Age (years)		
≤ 30	98	51.3
> 30	93	48.7
Place of residence		
Urban	161	84.3
Rural	30	15.7
Type of family		
Nuclear	126	66.0
Extended	65	34.0
Income (IDR/month)		
> 5 million	105	55.0
< 5 million	86	45.0
Education attainment		
Higher education	163	85.3
Less than high school	28	14.7
Working status		
Working	140	26.7
Not working	51	73.3

Source: Primary Data, 2020

Cronbach's alpha coefficient of the WHOQOL-BREF was 0.898. It indicates an adequate internal consistency. Table 2 presents the mean score and standard deviation (SD) for each domain. The overall quality of life and health were moderately high (4.08 and 4.07, respectively). The highest and lowest mean score was noticed in the social relationship domain

(78.31) and physical health domain (60.84), respectively. The three domains (psychological health, social relationship, and environmental health) were observed to have a mean score above 70. It denotes a good quality of life in the related facet, while the physical health domain indicated a fair quality of life.

**TABLE 2. Mean Scores of Each QOL Domain**

Items	Mean	SD
Overall QOL	4.08	0.76
Overall health	4.07	0.78
Physical health (DOM 1)	60.84	10.76
Psychological health (DOM 2)	75.54	12.33
Social relationship (DOM 3)	78.31	17.05
Environmental health (DOM 4)	77.19	14.45

Source: Primary Data, 2020

Table 3 shows the mean rank score of the four domains WHOQOL-BREF according to the independent variable (age, place of residence, type of family, income, educational attainment, and working status) using the Mann-Whitney test. Since the data were not normally distributed based on the normality test using Kolmogorov-Smirnov ( $p < 0.05$ ). The mean rank indicating satisfaction in all domains was higher among women aged younger than 30 years. Higher satisfaction in all domains, was also observed in women who lived in a nuclear family, work, and earned more than 5

million IDR per month than those who lived in an extended family, not work, and earned less than 5 million IDR per month. A significant difference in perceiving environmental health (domain 4) was noticed between the place of residence, type of family, and family income ( $p < 0.05$ ). Women whose families earned more than 5 million IDR per month reported higher satisfaction with social relationships ( $p < 0.05$ ), while those who achieved lower education described higher satisfaction with physical health ( $p < 0.05$ ).

**TABLE 3.** Comparison of the Mean Rank Scores in Four Domains According to Independent Variables

	DOM 1	DOM 2	DOM 3	DOM 4
Age (years)				
≤ 30	100.30	98.44	100.40	101.61
> 30	91.47	93.42	91.36	90.09
p-value	0.26	0.52	0.24	0.14
Place of residence				
Urban	94.41	97.38	99.20	99.61
Rural	104.55	88.58	78.83	76.63
p-value	0.35	0.41	0.05	0.03
Type of family				
Nuclear	98.89	98.52	99.01	104.52
Extended	90.27	91.00	90.03	79.09
p-value	0.30	0.37	0.27	0.00
Income (IDR/month)				
≥ 5 million	99.71	100.18	104.37	109.41
< 5 million	91.47	90.90	85.78	79.63
p-value	0.30	0.24	0.01	<0.001
Education attainment				
Higher education	92.35	93.85	97.28	98.02
Less than high school	117.25	108.52	88.54	84.21
p-value	0.02	0.19	0.42	0.22
Occupation				
Working	96.24	98.83	99.22	99.56
Not working	95.34	88.25	87.16	86.24
p-value	0.92	0.23	0.17	0.13

Source: Primary Data, 2020

This study aimed to investigate the quality of life of women during the COVID-19 outbreak. WHO defines the quality of life as “an individual’s perception of their position in life in the context of the culture and value systems in which they live and to their goals, expectations, standards and concerns” (World Health Organization, 2012). The study was conducted after three months of social restriction policy was implemented in Java and Sulawesi. Furthermore, the outbreak still occurs and even gets its peak in July-August 2021 on Java. Many studies have investigated the psychological measure during the COVID-19 outbreak, however, to the best of our knowledge, only this study specifically examined the QOL among women in Indonesia. This study investigated the association between the outbreak and large-scale social restriction on the various facets of women QOL. The Indonesian government implemented social restrictions in March-July 2020 to control coronavirus infections. However, the application of this policy gave uncertainty and changed female daily lives

(Rahman et al., 2020). Therefore, it is pivotal to identify the female quality of life during the COVID-19 incident. In our research, the quality of life measurement generated good internal consistency (Cronbach’s alpha = 0.898). Nearly the same in the QOL study from the Kingdom of Saudi Arabia which also showed good internal consistency (Cronbach’s alpha = 0.81) (Algahtani et al., 2021) as well as in several different settings (Al-Shannaq et al., 2021; Dule et al., 2021). It shows how closely related a set of facets incorporated within domains constructed whole QOL instruments.

The findings of this study suggested that the social relationship domain has the highest mean score (78.31+17.05). Other studies conducted in the Indonesian, Italian and Chinese general population revealed inverse results with lower mean scores in the social relationship domain (63.13; 13.57 and 69) (Epifanio et al., 2021; Purba et al., 2018; Wang et al., 2020). The facets incorporated within the social relationship domain are personal relationships, social support, and

sexual activity, which may be impaired during the pandemic. However, it may also reveal that the home activity results personal relationship between the family members and give each other support like never before. However, the pandemic may change couples' sexual relationships: confinement, sexual activity difficulties, loss of work, economic problems, and future uncertainty can trigger the break of many couples (Ibarra et al., 2020). In contrast, the physical health domain has the lowest mean score (60.84 + 10.76). The facets within this domain are daily living activities, medical aids dependency, fatigue, mobility, discomfort, resting and work capacity. The possible explanation for this finding is that during the pandemic, the dependence on medical aids was high, moreover, the working culture shifted which may cause fatigue and discomfort. In addition, a systematic review reported that social isolation harms physical health (Leigh-Hunt et al., 2017). In line with this study, physical health domains also have the lowest score in studies conducted in China (Wang et al., 2020). However, it was different from the research conducted in Italy, where physical health has the highest average score, although the score in this study was much higher (Epifanio et al., 2021).

The result also showed the environmental health domain has good quality. We found the average score in this domain was higher than in other studies, even before the outbreak (Epifanio et al., 2021; Purba et al., 2018; Wang et al., 2020; Wong et al., 2018). It was possible because most of the respondents lived in urban areas when the research was conducted, and most of them were in locations of social restrictions. It may affect low levels of pollution and noise. Moreover, respondents in rural areas are supported by green environments and open spaces. Which condition may lead to quality of life in the environmental health domain (Lercher, 2003; Wong et al., 2018). A study conducted by Saha and Khan (2020), found that the majority of the respondents stated that staying at home is one of the best prevention techniques to avoid COVID-19. Most of the respondents were come from the urban area, had a university background, and had more information about COVID-19. Therefore they

preferred to stay at home during the COVID-19 lockdown (Saha & Khan, 2020). Urban people with higher education levels have a higher chance getting updated information about COVID-19. It helps them gather information and prepare for prevention strategies at home during the lockdown. Women are aged <30 years had better QoL and vice versa. According to Correa-Velez et al. (2019), women with older age have a negative correlation with the physical and psychological domains, although other studies stated that after the age of 59, there is no decrease in the psychological domain (Correa-Velez et al., 2020; Gudkov et al., 2019). Women who live with families and have a good economy (work and earn more) have more QoL than the opposite category. As previously explained, this variable was closed to the good quality of the social relationship domain, and as we know, those domain has a positive relationship with other domains (Epifanio et al., 2021; Wong et al., 2018).

Among quality of life influencing factors suggested by Hilari et al. in 2015 are health, participation, independence, personal factors, environmental factors, and communication (Hilari et al., 2015). While European statistics explained nine dimensions of quality of life, encompassing living conditions, productivity, health, education, leisure, economic, basic rights, living environment, and life experience (Eurostat Statistics Explained, 2019). From the two theories mentioned earlier, three determinants are relevant in the era of the COVID-19 pandemic. They are health, social interaction, and economics. Health is a pivotal determinant of individual quality of life and is also considered human capital. WHO mentioned that it is built by three different spectrums such as physical, social, and mental well-being. During the pandemic, the three spectrums may be impaired by various factors and cause women to compromise their quality of life. Social interaction is a form of communication that plays a vital role on human lives as it directly influences life satisfaction. However, there are constraints on conducting social interaction during the pandemic that causes its quantity and quality to be decreased and shift to online interaction. Economic factors determine the women's quality of life. During the pandemic,

the family income decreased caused of limited activities to earn money or, worse, losing a job. However, life must go with short of resources. It also affects women's quality of life.

There are several limitations to this study. First, the online self-administer for data collection may lead to under or over-estimation of quality of life. Second is the possibility of uncontrollable confounders by characteristics or other factors. This study may imply the information regarding QOL in women during the pandemic and advocate the policy related to women's empowerment. The study showed that the pandemic period did not significantly affect women's QOL, where the mean score was moderate. However, in formulating policies, it can take into account the area of residence, income level, and type of family. In addition, this study can be used as a reference in developing an online method to measure women's QOL.

## Conclusion

The reliability analysis in this study showed an adequate degree of internal consistency of WHOQOL-BREF to measure QOL among women of reproductive age. Astonishingly, during quarantine, women reported high satisfaction with social relationships. Overall, women who participated in this study reported a relatively moderate quality of life. In contrast, low satisfaction with physical health was reported by the women. Higher quality of life was observed among younger women who live in a nuclear family. A prompt intervention was expected to intervene in women's quality of life by considering their characteristics. Since women carry high responsibilities toward their children, families, households, and even themselves, it is pivotal to ensure that they live their life to the best.

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