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Quality of Life among Indonesian during the COVID-19 Pandemic

Deborah Siregar*, Peggy Sara Tahulending, Yenni Ferawati Sitanggang, Evanny Indah Manurung

Department of Nursing, Faculty of Nursing, Universitas Pelita Harapan, Tangerang, Indonesia

Abstract

BACKGROUND: The COVID-19 pandemic created major shifts around daily life across the globe. The rapid increase in cases throughout the world resulted in lockdown policies that resulted in the closure of schools and businesses, restrictions on movement or population mobilization, and restrictions on international travel. These changes affect the welfare of many communities, including the quality of life among community members.

AIM: This cross-sectional study aims to determine the risk factors associated with poor quality of life during the COVID-19 pandemic.

METHODS: Data were collected using an online questionnaire which collected information on demography, psychological responses, and quality of life. A total of 324 participants were recruited. Descriptive and statistical analyses were performed using Chi-square.

RESULTS: The findings showed that anxiety is associated with quality of life (p = 0.03) and individuals who experience anxiety are at 2.0 times higher risk of experiencing poor quality of life compared to those who do not experience anxiety.

CONCLUSION: Nurses can play a role in managing anxiety by providing education which helps people reframe their perspectives and direct people to information from trusted sources, exercising, or other activities which support well-being.

Introduction

The coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus. Most people infected with the virus will develop mild-to-moderate respiratory symptoms and recover without requiring special treatment. However, some will become seriously ill and require medical attention. COVID-19 can cause serious illness and death in people of any age [1]. The number of COVID-19 cases in Indonesia has increased exponentially since the first case was reported on March 2, 2020 [2], similar to the rest of the world. COVID-19 remains a serious threat to health as cases continue to spike in several countries. As of January 13, 2022, the WHO reported a cumulative of 503,131,834 confirmed cases with 6,200,571 deaths worldwide since its first appearance at the end of 2019. Meanwhile, the Ministry of Health of the Republic of Indonesia reported 6.04 million confirmed cases of COVID-19 with 144,150 deaths on April 19, 2022. The regions in Indonesia with the highest cases are Jakarta with 1.246.002 cases and its neighboring province Banten with 291.906 cases on April 19, 2022 [3].

The Ministry of Health prepared for an increase in COVID-19 cases through the Government Regulation of the Republic of Indonesia Number 21 of 2020 concerning the large-scale social restrictions regulated by the Minister of Health number 9 of 2020 to expedite the management of COVID-19. These protocols include the closure of schools and businesses, movement or population mobilization, and international travel restrictions. Compliance with health protocols such as mandatory masks, hand washing, stay-at-home orders, social distancing, and other restrictions resulted in a rippling effect on various sectors [4], [5].

COVID-19 restrictions have been detrimental to the education system, affecting nearly 1.6 billion students in over 200 countries. Over 94% of the world's student population has been impacted by the closure of schools and other study spaces. Several schools and colleges and universities have even discontinued in-person instruction altogether [6]. Stay-at-home policies have also let do further concerns on maintaining a stable income and increases in social isolation, resulting in a sense of desperation among those in quarantine [7]. As time goes on and as schools and workplace reopen, anxiety also begins to arise around the new normal and the reorganizing of daily living.

Across the globe, mental health and quality of life in the community setting became major concerns during the COVID-19 pandemic and consequently studied. Findings show the negative impact on the physical, social, mental, and psychological functioning in society [8]. Studies from China and New York

showed that long-term and short-term psychological stress can impair quality of life [4], [9]. Findings from Israel [10], [11] and Iran [12] demonstrated that mental health problems such as depression and anxiety increased worldwide following the outbreak of the COVID-19 pandemic. Worldwide, approximately 21% of the population experience depression, and 6%–51% reported symptoms of anxiety during the COVID-19 pandemic, more prevalent than what was reported before the pandemic [13], [14]. Furthermore, age and gender also affect the quality of life of community members, especially women [15].

Individuals in quarantine are more likely to experience negative emotions such as fear, anger, guilt, and a sense of loss of control. Quality of life assessments can assist in identifying the issues that affect daily living and different coping approaches which may affect the resulting quality of life. Therefore, this study aims to ascertain the risk factors for decreased quality of life during the COVID-19 pandemic, which may contribute to the development of useful public health and social policies for promoting mental health during the pandemic.

Methods

Design and sampling

The method employed for this study is a cross-sectional approach. An online survey was administered in June 2021 in identifying how independent variables such as age, gender, work, depression, anxiety, and stress are related with quality of life during pandemic COVID-19. The target population in this study were residents of Jakarta and Banten province during the pandemic. According to the Central Agency for Statistics in 2020, Jakarta province has a population of 9.607.787 people while Banten has a population of 3.477.495 people. The minimum sample size calculated using the Lemeshow formula with 95% confidence level ($Z\alpha = 1.96$) and 80% research power ($Z = 0.842$) is 324 people.

Only participants aged 18 and older were recruited as this is the age of consent in Indonesia. A convenience sampling technique was used whereby anyone encountered by the researcher can be potentially included in the sample.

The study was approved by The Mochtar Riady Institute for Nanotechnology Ethics Committee (No: 016/MRIN-EC/ECL/IV/2021). Before participation in the study, participants were informed of the study objectives, risks, and benefits and required to provide an informed consent electronically. All personal information provided by respondents were kept strictly confidential.

Data collection

Data were collected over 2 months. To recruit participants from Jakarta and Banten province, a web-based survey was designed and initially disseminated through a professional network of research members in the research area. This was thought to be the best way to access the target population considering the social distancing restrictions that were in place. Participants were asked to complete a three-part questionnaire consisting of (1) sociodemographic data on age, gender, and employment status, (2) psychological response questionnaire adapted from the Depression Anxiety Stress Scales (DASS-21), and (3) quality of life during the COVID-19 pandemic using the WHOQOL-BREF questionnaire. The VR test was performed on the WHOQOL-BREF questionnaire questions, and all questions are valid (r count > 0.344) and reliable (Cronbach alpha = 0.647).

The DASS-21 is composed of 21 statements, each of which consists of seven components, divided in three segments to assess depression, anxiety, and stress symptoms. Each question is answered using a Likert scale ranging from 0 (does not apply to me) to 3 (extremely applies to me). Scoring categories for the depression segment are 0–9 for normal and >9 for depression. For anxiety, the score categories are 0–6 for normal and >6 for anxiety. For stress, scoring 0–10 is normal and >10 indicates stress. This questionnaire is not to be used as a diagnostic instrument, but rather to assess the severity of a stressful condition. The WHOQOL-BREF questionnaire consists of 12 questions [8] to assess the impact of the COVID-19 pandemic on quality of life. The lowest possible score is 12, and the maximum score is 60. A low score indicates a lower quality of life, and a high score indicates a higher quality of life.

Data analysis

A Chi-square test was used to ascertain the presence and strength of relationship between the independent variables (age, gender, work, anxiety, stress, and depression) and the dependent variable (quality of life). The study used a 95% confidence interval and set the threshold for significance at alpha 0.05.

Results

A total of 324 participants were recruited, most of whom were women (72.92%), adults (64.61%), and currently employed (81.23%) (Table 1).

Chi-square analysis showed no relationship between age (p = 0.67), gender (p = 0.67), employment status, and depression (p = 0.18) with quality of life during the COVID-19 pandemic (Table 2).

Table 1: Participant characteristics (n = 324)

Characteristics	n (%)
Gender	
Women	237 (73.14)
Man	87 (26.85)
Age	
Elderly	23 (7.09)
Adults (26–45 years old)	210 (64.81)
Adolescent (17–25 years old)	91 (28.08)
Working	
Working	264 (81.48)
Not working (student/jobless)	61 (18.82)

Table 3 shows a statistically significant association between anxieties with quality of life during the COVID-19 pandemic. Individuals who experience anxiety are at 2.0 times more likely to experience poor quality of life than those who do not experience anxiety.

Table 2: Correlation of demographic factors with quality of life during COVID-19 pandemic (n = 324)

Variable	QoL		Quantity	p
	Poor	Good		
Age				
Elderly	13 (56.5)	10 (43.5)	23 (7.09)	0.67
Adult	107 (51)	103 (49)	210 (64.81)	
Adolescent	51 (56)	40 (44)	142 (28.08)	
Gender				
Women	121 (51.1)	116 (48.9)	237 (73.14)	0.31
Man	50 (57.5)	37 (42.5)	87 (26.85)	
Working status				
Not working	34 (55.7)	27 (44.3)	61 (18.82)	0.67
Working	137 (52.1)	127 (47.9)	264 (81.48)	

QoL: Quality of life.

Discussion

Relationship between age, gender, and employment status with quality of life

Health is measured not only based on the presence of disease but also on the ability to improve one's quality of life [16], which is influenced by their perception of their circumstances in relation to the culture and values system in which they live as well as their goals, expectation, standards, and concerns. Understanding how the pandemic affects quality of life will provide critical insights into the roles of physical health, mental health, and social relationships in determining the perceived quality of life and stress [7], [17].

Table 3: Correlation of depression, anxiety, and stress with quality of life during the COVID-19 pandemic (n = 324)

Variable	QoL		Quantity	OR (95% CI)	p
	Poor	Good			
Depression					
Yes	7 (77.8)	2 (22.2)	9 (2.77)	-	0.18
No	164 (52.1)	151 (47.9)	315 (97.22)		
Anxiety					
Yes	33 (67.3)	16 (32.7)	49 (15.12)	2.04 (1.07–3.89)	0.03
No	138 (50.2)	137 (49.8)	275 (84.37)		
Stress					
Yes	3 (60)	2 (40)	6 (1.85)	-	1.00
No	168 (52.7)	151 (47.3)	319 (98.45)		

QoL: Quality of life, OR: Odds ratio, CI: Confidence interval.

Findings from this study did not indicate a correlation between age and pandemic-related quality of life, contrary to literature which indicates an association between age and decline in quality of life, particularly among the elderly over the age of 75 [18]. This is attributed to the limitations and disabilities which develop with aging, lowering their quality of life [19]. Similarly, a study from the United Kingdom found that those over the age of 50 will experience a 4-year decline in their quality of life. However, the literature also shows differing evidence on how quality of life is perceived among adults. Improvements in family relationships, environment, and perceived financial position among the elderly are also found to compensate for the decline in other aspects of daily living [20]. There were 107 adult participants in this study who reported having a quality of life. Conversely, young adults rated their quality of life lower than middle-aged and older adults during the pandemic, and they reported higher levels of anxiety and difficulty relaxing [21].

There were 121 women who reported having low quality of life in this study. However, no correlation was found between sex and quality of life. This finding is contrary to studies which show that women are more likely to experience severe psychological impacts during the COVID-19 pandemic [22] and lower quality of life than men [23], [24]. Variations in reported quality of life among women can also be influenced by sociodemographic and socioeconomic factors such as income level or marital status [25].

Regardless of the findings from this study, it is crucial to consider the mounting evidence on the impact of COVID-19 on women. Women are disproportionately affected by COVID-19 in the areas of health, economy, security, and social protection, as they typically earn less, save less, work in unsafe jobs, or live in poverty. Economic and social pressures associated with the COVID-19 pandemic, combined with movement restrictions and social isolation measures, have also resulted in an exponential increase in gender-based violence. Furthermore, given that, nearly 70% of the health-care workforce are female, putting them at an increased risk of infection. Women also bear a disproportionate share of household responsibilities, schools, and child care facilities are closed, and long-standing gender inequalities exist in unpaid work. In addition, women face a significant risk of losing their jobs and income, as well as an increased risk of violence, exploitation, harassment, and abuse during crisis and quarantine [26].

The COVID-19 pandemic has resulted in the loss of millions of jobs and livelihoods [27] but our study did not find correlation between employment status with quality of life despite widespread lockdowns and social restrictions. Indonesia as well as many other countries experienced disruptions in economic and social activities, which, in turn, affected income. Businesses had to either terminate operations or significantly reduce operational costs by terminating employees. Throughout this period, the Indonesian government attempted to provide income tax incentives, expand social assistance programs for formal and informal workers, expand labor-intensive industry programs, protect Indonesian migrant workers, reform job creation

laws to facilitate investment entry, and invest in human capital development [28].

Depression, anxiety, and stress

The pandemic has caused psychological distress due to imposed quarantine measures, indirect connection to affected areas, and even through repeated exposure to media coverage of the pandemic [22], [29], [30]. Lockdowns and prolonged periods of social isolation can result in depression and anxiety [11]. Depression is defined as persistent sadness and a loss of interest in previously rewarding or pleasurable activities, as well as sleep and appetite disturbances, fatigue, and poor concentration [31]. Findings from our study indicated that depression was not correlated with quality of life during the COVID-19 pandemic. This finding is consistent with a study from Indonesia which indicates that 57% of media contain education about mental health. These online media cover mental health cases and also provide tips on how to deal with depression and other mental health issues in an effort to reduce depression in the Indonesian community [32]. Anxiety is associated with lower quality of life during the quarantine period among students above the age of 18 [7], consistent with our findings whereby individuals who experience anxiety are 2.0 times more likely to report a low quality of life than those who are not anxious. Furthermore, anxiety disorders, defined by frequent, intense, and persistent anxiety, are the most prevalent mental health problems among women, impairing their ability to work study and manage daily tasks [33]. These findings necessitate attention to the mental well-being of women and young adults to better provide support services during the pandemic.

Stress is defined as a state in which homeostasis is threatened by the possibility of emotional or physical harm. When the central nervous system (CNS) and various peripheral organs and tissues are stressed, changes occur. In addition, stress-related changes result in increased brain, heart, and skeletal muscle oxygenation and nutrition. Stress is a factor in the development of psychosocial and physical pathologies in humans [34]. Since the outbreak of COVID-19, uncertainty and prolonged stress have resulted in a sense of helplessness [17], being worried, and horrified [35]. Main sources of stress come originate from work, finances, and even from home, according to a study in Middle East and North Africa [35]. These findings support our study which found that individuals who report being stressed have a 1.3 times higher risk of experiencing poor quality of life compared to individuals who are not stressed.

This study sampled only residents of Jakarta and Tangerang, which are part of the sprawling metropolitan of the Greater Jakarta area. Given the demographic and geographic diversity of Indonesia, findings from this study may not necessarily apply for the entire Indonesian population. A study with a more representative sample is needed for Indonesian pluralism.

Conclusion

Evident impact of the COVID-19 pandemic on mental well-being necessitates increased awareness on how to best manage this at the community level. Nurses play a role in improving the quality of community mental health and providing community-based mental health services so that people can manage anxiety in daily life, be able to work productively, and contribute to their community.

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