Analysis of Quality of Life Among Covid-19 Survivors in Medan

Cindi Ansari[*], **Zata Ismah**
Faculty of Public Health, Universitas Islam Negeri Sumatera Utara, Medan, Indonesia

ARTICLE INFO

ABSTRACT

The Covid-19 pandemic is a global challenge with significant impacts in various countries, including Indonesia. This study investigates the quality of life of Covid-19 survivors in the Medan Sunggal Sub-district, considering age, gender, education, employment status, and disease duration. Descriptive research was conducted from March to June 2023, involving 146 respondents aged 16-55 who had survived for one year. The snowball sampling method was applied, and data were collected using the SF-36 questionnaire. Results showed that early adulthood and female age groups tended to have better quality of life. Higher education was also positively correlated with quality of life. The implications of these findings support the development of specific recovery and support programs for Covid-19 survivors, especially those experiencing prolonged symptoms. With a better understanding of the factors that influence the quality of life of Covid-19 survivors, recommendations include developing rehabilitation and support programs tailored to individual characteristics. These efforts are expected to support optimal recovery and contribution to the response to the pandemic in Medan Sunggal Sub-district.

Corresponding author:

Cindi Ansari
Faculty of Public Health, Universitas Islam Negeri Sumatera Utara, Medan, Indonesia
Email: ansaricindi0128@gamil.com

INTRODUCTION

The COVID-19 pandemic has emerged as a significant global challenge, with widespread effects in various countries, including Indonesia. One crucial aspect of understanding the impact of this pandemic is examining the quality of life among COVID-19 survivors. Quality of life has become a pertinent research subject, particularly when considering various factors influencing an individual's well-being. Some COVID-19 survivors can resume normal activities and work. Others experience sequelae, changes in pulmonary circulation, and radiographic abnormalities that persist for up to 12 months, especially in patients who were critical during their exposure to COVID-19 (Huang et al., 2021).

According to research conducted by Arab-Zozani et al. (2020), findings revealed that among 420 individuals who had recovered from COVID-19, the Qualityof Life Assessment Questionnaire produced relatively low average scores. Several factors, such as gender, age, educational background, employment status, history of diabetes mellitus, heart conditions, and intensive care experiences, impacted the questionnaire scores (Arab-Zozani et al., 2020).

According to data from the Medan City Health Office, Kecamatan Medan Sunggal, located in Medan City, North Sumatra, has witnessed one of the highest COVID-19 case rates (Dinas Kesehatan Kota Medan, 2021). In this context, this research aims to investigate the quality of life among COVID-19 survivors in Kecamatan Medan Sunggal. This study will consider various factors that may influence survivors' quality of life, including age, gender, education, and employment status. Additionally, this research will explore the impact of long-term COVID-19, which encompasses persistent symptoms following COVID-19 infection, on their quality of life. Globally, the COVID-19 pandemic has reshaped our way of life, affecting communities worldwide (Huang et al., 2021). At the local level, Kecamatan Medan Sunggal faces unique challenges related to COVID-19. Hence, this research is relevant to understanding the pandemic's impact on this community.

The primary objective of this research is to comprehend how age, gender, education, employment status, and long-term COVID-19 can affect the quality of life of COVID-19 survivors in Kecamatan Medan Sunggal. This information is expected to serve as a foundation for improving the care and support provided to COVID-19 survivors in this region. Medan sunggal sub-district has a dominant population of productive age of 90,236 people (BPS Medan Sunggal Sub-district, 2021). In 2022 COVID-19 sufferers in Medan Sunggal sub-district were 5025 cases. The high cure rate occurred in Medan Sunggal sub-district as many as 1500 cases of COVID -19 recovery.

Additionally, this research has the potential to contribute to better policies and interventions aimed at mitigating the effects of the COVID-19 pandemic in Kecamatan Medan Sunggal.

METHOD

This type of research is quantitative research with a cross-sectional study design. The research was conducted in Kecamatan Medan Sunggal in May-June 2023. The population consisted of 1500 COVID-19 survivors. Based on sample calculation using the Formula for Descriptive Categorical Sampling, the sample size obtained was 146 respondents. Sampling was carried out using the Snowball sampling technique. The variables studied include age, gender, employment status, respondents' education, and long COVID symptoms. The instrument used in this research is the Short Form Health Survey (SF-36) questionnaire. Data analysis was performed using univariate analysis.

This research has received ethical approval from the Medan Ministry of Health Health Polytechnic Health Research Ethics Commission with Number 01.25.21B/KEPK/Poltekkes Ministry of Health Medan 2023.

RESULTS

Table 1 illustrates that most COVID-19 survivors in the Medan Sunggal district fall into the early adulthood age category, with 63.7% being women. They primarily have a college-level education. About 57.2% are in the workforce, and 38.4% report experiencing long COVID-19.

Table 1. Respondent Characteristics

Variable	n	%
Age		
Late Adolescents (17 - 25)	43	29.5
Early Adults (26 - 35)	47	32.2
Late Adults (36 - 45)	31	21.2
Late Elderly (46 - 55)	25	17.1
Gender		
Male	53	36.3
Female	93	63.7
Highest Education		
Not Schooled	3	2.1
Elementary School (SD)	1	0.7
Junior High School (SMP)	0	0.0
High School (SMA)	60	41.1
Higher Education (Perguruan Tinggi)	82	56.2
Employment Status		
Employed	84	57.5
Unemployed	62	42.5
Long COVID – 19		
Yes	56	38.4
No	90	61.6

Table 2 shows that the average and middle scores for the quality of life in COVID-19 survivors are 69.26 and 72.27, respectively. These scores imply that the quality of life for COVID-19 survivors is deemed satisfactory.

Table 2. Distribution of quality of life scores among COVID-19 Survivors

Quality of Life Score for COVID-19 Survivors.					
n	$\bar{x}$	Me	SD	Min	Max
146	69.26	72.27	13.559	29	90

Table 3 indicates that the prevalence of the quality of life among COVID-19 survivors in Medan Sunggal District is 89.7%, signifying good quality of life.

Tabel 3. Prevalence of quality of life among COVID-19 Survivors

Quality of Life COVID-19 Survivors	n	%	95 % CI	
			Lower	Upper
Bad	15	10.3	6.2	15.1
Good	131	89.7	84.9	93.8

Table 4 indicates that COVID-19 survivors in the early adulthood age group (26-35), female, survivors with a college-level education background, and employed tend to have a good quality of life. Table 4 also shows that COVID-19 survivors who do not experience Long COVID-19 tend to have a good quality of life.

Table 4. Distribution of quality of life among COVID-19 survivors

Variable	Quality of Life			
	Bad		Good	
	n	%	n	%
Age				
Late Adolescents (17-25)	4	9.3	39	90.7
Early Adults (26-35)	0	0.0	47	100
Late Adults (36-45)	7	22.6	24	77.4
Late Elderly (46-55)	4	16.0	21	84.4
Gender				
Male	7	13.2	46	86.8
Female	8	8.6	85	91.4
Education				
Not Schooled	1	33.3	2	66.7
Elementary School (SD)	0	0.0	1	100
Junior High School (SMP)	0	0.0	0	0.0
High School (SMA)	1	1.7	59	98.3
Higher Education (PT)	13	15.9	69	84.1
Employment status				
Employed	10	11.9	74	88.1
Unemployed	5	33.3	57	91.9
Long COVID-19				
Yes	2	3.6	54	96.4
No	13	14.4	77	85.6

DISCUSSION

Based on the research findings, COVID-19 survivors in Medan Sunggal are predominantly in the early adulthood, late adulthood, and early senior age groups. Among these survivors, those in the early adulthood age group (26 - 35 years) tend to have a good quality of life. Similarly, the late adolescence age group (17 - 25 years) also shows a majority of COVID-19 survivors with a good quality of life, with a relatively small percentage experiencing a poor quality of life. These findings align with research conducted by Laili & Nurhayati (2022) where COVID-19 survivors aged 26 - 35 had a good quality of life. This is also consistent with research by Aulia (2022) which showed that COVID-19 survivors with good quality of life in the Lubuk Pakam primary healthcare area were mainly aged 17-45 years (Aulia, 2022). Another relevant study by Ridhayanti & Nurhayati (2021) found that a significant portion (54.6%) of those in the early adulthood age group in Solo Raya had a good quality of life. Early adulthood individuals typically possess physical strength, energy, and a robust immune response, allowing faster recovery. COVID-19 tends to have lower severity in this age group, leading to quicker recuperation. Mayora et al. reported that COVID-19 patients with mild or asymptomatic cases were dominated by individuals aged 21-30 years (Mayora et al., 2022). Conversely, Teresia Jamini's research indicated that most COVID-19-related deaths occurred among the elderly due to their weakened immune systems (Jamini, 2021).

Regarding gender, most COVID-19 survivors in Medan Sunggal are female, and many of these female survivors have a good quality of life. This aligns with the findings of Khatami, which suggested that many women have a good quality of life (Khatami, 2021). Another relevant study by Dwi Yuliana (2021) found that many Indonesian women have a good quality of life, as they are actively involved in domestic and external activities, contributing to their overall well-being. Additionally, studies have shown that women report a higher quality of life.

Regarding education, most COVID-19 survivors in Medan Sunggal have a college-level or high-school education. Those with a college-level education tend to have a good quality of life, which is consistent with research by Arab-Zozani, indicating an improvement in Health-Related Quality of Life (HRQoL) for survivors with higher education levels (Arab-Zozani et al., 2020). Higher education equips individuals with broader knowledge and problem-solving skills, which helps them face challenges more effectively in daily life. Individuals with higher education also tend to have better job opportunities and higher incomes, contributing to financial stability and improving their access to healthcare and overall quality of life (Meilianna et al., 2022). This is in line with Haris's research, which showed that individuals with higher education levels have a good quality of life (Haris, 2018).

Employment status among COVID-19 survivors in Medan Sunggal reveals that many are employed, with the majority working as civil servants, private employees, or self-employed. Employed COVID-19 survivors tend to have a good quality of life, consistent with findings by Nguyen et al. where employed individuals tend to have a good quality of life (Nguyen et al., 2020). Arab-Zozani's research also supports this, suggesting that individuals with jobs have a better quality of life due to their income and improved access to healthcare (Arab-Zozani et al., 2020). Astuti's research found that COVID-19 survivors who work have a three-fold higher chance of having a good quality of life than those who do not (Astuti et al., 2022). Working from home has positively impacted employees' productivity, allowing them to engage more with their families and work in a familiar environment, ultimately contributing to their well-being (Dwi Yuliana, 2021).

Regarding the experience of Long COVID-19, while many COVID-19 survivors do not experience it some do. The most commonly

reported Long COVID-19 symptoms are coughing, body pain, disrupted sense of smell, and sore throat. COVID-19 survivors who do not experience Long COVID-19 tend to have a good quality of life. Research conducted in Brazil found that patients with Long COVID-19 had a lower quality of life than those without Long COVID-19 (de Oliveira et al., 2022).

CONCLUSION

Most COVID-19 survivors in Medan Sunggal District include individuals in early adulthood, late adulthood, and early senior age groups. Good quality of life is most prevalent among early adults (26-35 years) and late adolescents (17-25 years), aligning with research showing their better physical resilience to COVID-19. Gender also influences survivors' quality of life, with many females reporting higher quality of life, likely due to active engagement in various activities. Education significantly impacts survivors' quality of life, as higher education correlates with a better quality of life, stemming from broader knowledge, better problem-solving skills, and better job opportunities. Working survivors, especially in civil service, private sector, or entrepreneurial roles, enjoy a good quality of life due to better income access to healthcare and recovery facilities. However, some survivors experience long-term COVID-19 symptoms, notably a persistent cough, which can adversely affect their quality of life when symptoms linger.

Overall, this research provides valuable insights into the factors influencing the quality of life of COVID-19 survivors in Medan Sunggal District. These findings can serve as a foundation for developing improved recovery and support programs for COVID-19 survivors, particularly those experiencing long-term COVID-19.

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