



Quality of Life During COVID-19 Global Pandemic as the Implementation of Physical Distancing in Medan City - Indonesia



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Received: 10-08-2022

Revised: 11-15-2022

Accepted: 12-05-2022

Citation: M. F. Rahmadana, P. Loo, and R. Aditia, "Quality of Life during COVID-19 global pandemic as the implementation of physical distancing in Medan City - Indonesia," *J. Urban Dev. Manag.*, vol. 1, no. 2, pp. 115-122, 2022. <https://doi.org/10.56578/judm010204>.



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Abstract: Quality of Life is important but often neglected, especially during the COVID-19 pandemic. Health and economic aspects are currently getting more attention. Therefore, this study tries to measure the Quality of Life of the community during a pandemic, especially when physical distancing is implemented. To measure Quality of Life, the data was collected using a survey conducted electronically using the Google form application. The instrument used in data collection was adapted from WHOQOL instruments. Data collection began after one year of the adoption of a physical distancing policy by the Indonesian government and carried out for one month and collected 370 respondents after filtering. This study shows that the Quality of Life of the community in general is not different from the aspect of the characteristics of the respondents. Family income, age and length of time for physical distancing are domains that affect several Quality of Life domains. Strengthening of religious values, subsidy schemes to maintain family income levels and length of physical distancing can be used as policies taken by the government related to the Quality of Life due to global pandemic disasters.

Keywords: Quality of Life; Demography; Physical distancing; COVID-19 global pandemic

1. Introduction

Since the onset of the COVID-19 pandemic, Indonesia has faced difficulties in various matters such as the health system, the threat of an economic crisis, and social unrest due to the pressure of this Global Pandemic. These things happened because of the slow response in anticipation, limited capacity of public health services, cessation of business industry operations, limited economic activities, transportation, and other social activities [1].

The global COVID-19 pandemic is different from natural disasters such as earthquakes, floods, tornadoes, or tsunamis. A global pandemic like this does not cause physical infrastructure damage. However, the implementation of Physical Distancing has no less high risk of psychological, economic, and other social pressures. As a result, in general, the affected community will have a disturbed Quality of Life, it can even lead to long-term effects on people's lives that disrupt social, economic, psychological and social environmental conditions, and pressure on emergency services and resources [2-4]. The impact of mental health disorders is not a simple thing. Because disturbed mental health can lead to excessive stress which has implications for the tendency to do acts of self-harm to suicide [5, 6].

When the virus spreads during a pandemic, the psychological reaction of the population plays an important role, not only the spread of the virus itself, but the occurrence of emotional stress and social disruption during and after the outbreak [7]. China, as the country of origin of the COVID-19 virus outbreak, has proven this. One study conducted on 1,210 respondents spread across 194 cities and conducted from January to February 2020 found that 54% of respondents rated the psychological impact of the COVID-19 outbreak as moderate or severe; 29% reported moderate to severe anxiety symptoms; and 17% reported moderate to severe depressive symptoms [8].

Other studies that discuss the effect of the spread of the pandemic on health also strengthen this point. During the H1N1 (swine flu) pandemic that occurred in 2009, patients who did experience neurotic and somatoform

disorders experienced more severe symptoms than people who did not have the disorder [9]. This pandemic is also not without an impact on people who do not have mental disorders. Lockdowns that have occurred in various countries have also led to an increase in cases of domestic violence, and the biggest victims are children and women. This is exacerbated by the enactment of the lockdown; they cannot escape from the internal household situation that threatens them [10].

People suffering from obsessive-compulsive disorders (OCD) are also increasing. With the massive emphasis and call for regular hand washing, people are confused and worried about whether their 20 second hand washing has killed the virus or not. Have they done this often enough to ensure that their household is free from the COVID-19 virus? This makes people have an excessive obsession to wash their hands which has an impact on increasing stress [11]. In addition to OCD, the wider community also faces a lot of fear, panic, fear of death (thanatophobia), isolation, anxiety about not getting food sources, and so on [10].

Economically, this pandemic also has a direct impact on people's livelihoods. Millions of people have lost their jobs. The parties most affected are people who work in the informal sector. With limited space for movement, they struggle to meet their basic needs, such as: housing, food, and money to pay the monthly bills that still have to be paid despite the ongoing pandemic. Based on experience from time to time, the resources devoted to safeguarding the psychological reactions of the population during a pandemic are not always available or well managed [7]. While this is understandable, because in the early phase of the pandemic, the main focus of health resources is fully devoted to testing vaccines, reducing transmission and caring for critical patients. This causes psychological needs to be slightly neglected. If this happens continuously, the Quality of Life of the community will decrease. Whereas the Quality of Life has a direct relationship to people's life expectancy [12]. That is why it is important to detect as early as possible the psychological impact of the COVID-19 pandemic, with a view to developing an intervention strategy for the psychological harm it causes [13].

2. Method

Data was collected in Medan City, North Sumatra Province, Indonesia which is the third largest city in Indonesia and affected by the COVID-19 pandemic. As a consequence of the pandemic, the Indonesian government imposed Physical Distancing including in Medan City starting April 10, 2020. Physical Distancing certainly impacts all aspects of life including Quality of Life.

The data collected is data related to people's perceptions about Quality of Life and its domains, namely psychological, level of independence, social relationships, environment and spiritual / religion / personal beliefs. The instrument used was adapted from WHOQOL which was adjusted to the needs of the study and local content which consisted of 25 indicators with a total of 98 questions [14]. It was also asked about work from home behavior and the intensity of leaving the house on average per week during the implementation of physical distancing. The questionnaire uses a Likert scale with 5 answer choice [15]. The questionnaire was prepared to adapt Favourable (70 questions) and Unfavourable (28 questions) type of statement [16].

Data was collected for one month voluntarily using various social media on a massive scale starting from June, 11 - 2021 to July, 11 - 2021 using the Google form application with a total of 370 respondents. The number of respondents after filtering and leaving only respondents who live in the city of Medan. Data collected were analyzed using descriptive statistics, t-test, ANOVA and Pearson correlation [17, 18].

3. Result and Discussions

Descriptive statistics are used to describe the characteristics of the samples collected. Characteristics of respondents who volunteered to fill out the distributed questionnaire were well distributed. The number of respondents is based on gender, although women are more dominant than men, they are not too conspicuous and can be said to represent the population. Similarly, the age of respondents who were dominated by the age of 21-30 years, bachelor dominated their educational background and senior high school graduates. Married communities dominate respondents who were gathered with the most dominant family members of 3-4 people for each family. Source of the Family's Main Income is dominated by workers who get monthly income be it civil servants, military, police, pensioners, or private employees where the most dominant income is around IDR 1,500,000 - 3,000,000 / month (1 \$ = IDR 15,000). Regarding the consequences of physical distancing, respondents who work from home are more dominant than those who do not, but even so it does not mean that the community does not leave the house at all. It can be seen that most people still leave the house 1-2 days / week (Table 1).

In recent years, attention has been paid to measuring health conditions beyond traditional indicators such as mortality and morbidity [14]. The level of danger of a disease is not only seen from the level of threat, but also how it ultimately affects a person's Quality of Life [19]. There are different definitions of Quality of Life. When referring to [14] Quality of Life is defined as a person's perception of his life situation, according to the context of values and culture in which he lives, in relation to the goals, expectations and standards of the place. The concept of Quality of Life offered by WHO itself also covers a broad domain, such as physical conditions, psychological

conditions, level of independence, social relationships, environment, and spiritual/religious beliefs.

Using descriptive statistics can also explain the tendency of respondents' answers to domains and indicators of Quality of Life. During the one year's undergoing physical distancing behaviour, Spirituality/Religion/Personal Beliefs domains were the domains that had the highest scores with relatively low variations. Religious observance in Indonesia, especially in Medan City is an appropriate justification for why this domain has the highest score compared to other domains. While Physical Health is the domain with the lowest score, although the variation is also low [20-24] (Table 2).

Table 1. Descriptive statistics of characteristics respondent

		f (N = 370)	%
Gender	Male	176	47.6
	Female	194	52.4
Age	< 21	42	11.4
	21 - 30	168	45.4
	31 - 40	82	22.2
	41 - 50	55	14.9
	51 - 60	19	5.1
	> 60	4	1.1
Education	Primary School	6	1.6
	Junior High School	11	3
	Senior High School	130	35.1
	Bachelor	181	48.9
	Magister/Doctoral	42	11.4
Maritas status	Married	258	69.7
	Single	106	28.6
	Widow	4	1.1
	Widower	2	0.5
Family income (\$1 = IDR 15,000)	< IDR 1,500,000	79	21.4
	IDR 1,500,000 - 3,000,000	151	40.8
	IDR 3,000,000 - 4,500,000	65	17.6
	IDR 4,500,000 - 6,000,000	36	9.7
	>IDR 6,000,000	39	10.5
Source of the family's main income	Workers with project income based	22	5.9
	Workers with daily/uncertain income (informal workers)	100	27
	Workers with weekly income	35	9.5
	Monthly salary as a civil servant, military, police, pensioner, or private employee	213	57.6
Number of family members	1 - 2	84	22.7
	3 - 4	180	48.6
	5 - 6	88	23.8
	> 6	18	4.9
Do you currently do your work from home?	Yes	210	56.8
	No	160	43.2
How many days on average do you leave the house during work from home and social / physical distances, both for work and for other primary needs?	Everyday	96	25.9
	5-6 days a week	50	13.5
	3-4 days a week	70	18.9
	1-2 days a week	127	34.3
	Never	27	7.3

Table 2. Descriptive statistics of research variables

No.	Variables	Mean	SD	No	Indicators	Mean	SD
1	Physical Health	2.98	0.47	F.1	Energy and Fatigue	2.69	0.74
				F.2	Pain and Discomfort	3.27	0.52
				F.3	Sleep and Rest	2.98	0.55
2	Psychological	3.97	0.51	F.4	Bodily Image and Appearance	3.69	0.53
				F.5	Negative Feelings	3.96	0.72
				F.6	Positive Feelings	4.27	0.66
				F.7	Self-Esteem	4.14	0.71
				F.8	Thinking, Learning, Memory and Concentration	3.74	0.93
3	Level of Independence	4.02	0.56	F.9	Mobility	3.45	0.93
				F.10	Activities of Daily Living	3.87	0.77
				F.11	Dependence on Medicinal Substances and Medical Aids	4.37	0.84
				F.12	Work Capacity	4.38	0.63
4	Social Relationship	3.61	0.91	F.13	Personal Relationships	4.18	0.73
				F.14	Social Support	3.86	0.7
				F.15	Sexual Activity	2.85	2.03
5	Environment	3.81	0.57	F.16	Financial Resources	3.98	0.78
				F.17	Freedom, Physical Safety and Security	4.22	0.74
				F.18	Health and Social Care: Accessibility and Quality	3.42	0.92
				F.19	Home Environment	3.65	0.78
				F.20	Opportunities for Acquiring New Information and Skills	3.93	0.82
				F.21	Participation and Opportunities for Recreation/Leisure	3.83	0.84
				F.22	Physical Environment (pollution/Noise/Traffic/Climate)	3.79	0.74
				F.23	Transport	3.69	0.92
6	Spirituality/Religion/Personal Beliefs	4.68	0.56	F.24	Spirituality/Religion/Personal Beliefs	4.68	0.56
7	Quality of Life	4.23	0.73	G	Quality of Life	4.23	0.73

Table 3. Correlations between variables related Quality of Life and its domains

	Physical Health	Psychological	Level of Independence	Social Relationship	Environment	Spirituality / Religion/ Personal Beliefs
Psychological	0.001**					
Level of Independence	0.000**	0.000**				
Social Relationship	0.409	0.000**	0.000**			
Environment	0.898	0.000**	0.000**	0.000**		
Spirituality/Religion/Personal Beliefs	0.636	0.000**	0.000**	0.000**	0.000**	
Quality of Life	0.285	0.000**	0.000**	0.000**	0.000**	0.000**

** Correlation is significant at the 0.01 level (2-tailed)

Furthermore, in Table 3 and Table 4 the respondents' responses to the domains examined are based on the respondent's characteristics. Interestingly, the Quality of Life domain does not differ based on the characteristics of the respondents. This finding further strengthens that during the COVID-19 pandemic, society as a whole had the same Quality of Life regardless of its characteristics, in other words COVID-19 had an impact on all levels of society without exception from the perspective of Quality of Life. However, if we look further from the side of the domain that forms the Quality of Life itself, the results can be more detailed.

The Spirituality / Religion / Personal domain only differs based on the education background of respondent. The Physical Health domain only differs based on age and intensity of going out during a pandemic while the

Psychological domain only gives a difference based on age and family income. The Domain of Level of Independence differs based on age, family income and intensity of going out during a pandemic. The different Domain Environment differs based on education, marital status, family income and Source of the Family's Main Income while the Social Relationship domain is a domain that only does not differ significantly based on education and whether respondents work from home or not. Another interesting thing is that there is no difference for all domains related to whether respondents carry out work from home activities or not.

Physical Health, Independence and Social Relationship are three domains that are affected by the intensity of going out during a pandemic. This is in line with several previous studies [25, 26] which showed that the longer the quarantine duration is applied, the more severe mental health problems will occur. Although how long the quarantine duration can be said to be long, one study conducted by Hawryluck et al. [26] revealed that quarantines carried out for more than 10 days showed significantly more severe post-traumatic symptoms than people who were quarantined for less than 10 days.

Restricted movement space, loss of usual routines, and reduced social and physical contact with other people have been shown to cause boredom, frustration, and a sense of isolation from the outside world, which makes people feel depressed [26-31]. This frustration is exacerbated by the inability of a person to do things that are actually simple when compared to daily routines, such as shopping for daily necessities [26] or boredom with communicating only via telephone and internet [32].

Another finding shows that Psychological, Level of Independence, Social Relationship and Environment domains are influenced by family income. Having insufficient basic needs (food, drinking water, and clothing) during quarantine is a source of frustration [33, 34], even this will continue with symptoms of anxiety and anger that often appear until 4 up to 6 months after the completion of the quarantine period [32]. This will be exacerbated by the non-availability of prescription drugs for the symptoms they experience [33]. Several studies have shown that the supply provided by the authorities is not sufficient. Often respondents were late in receiving masks and thermometers, as well as for basic necessities which were sometimes not received at all [28, 35]. Losses from the financial aspect during the quarantine period due to not being able to work and disrupting economic activities are known to have a long impact [4]. Several previous studies have also shown that financial losses create tremendous socioeconomic pressure, and cause symptoms of psychiatric disorders that cannot be underestimated [32, 35, 36].

Table 4. Comparative result Quality of Life and its domains based on demography

Domain	Gender		Age		Education		Marital Status	
	t-test	Sig.	F-value	Sig.	F-value	Sig.	F-value	Sig.
Physical Health	-1.876	0.061	2.479	0.032*	0.036	0.998	1.032	0.378
Psychological	1.372	0.171	3.054	0.01**	0.61	0.656	2.687	0.046
Level of Independence	1.448	0.149	3.322	0.006**	1.685	0.153	0.892	0.445
Social Relationship	2.392	0.017*	17.764	0.000**	2.330	0.056	170.474	0.000**
Environment	-0.296	0.767	2.111	0.063	3.512	0.008**	3.067	0.028*
Spirituality/ Religion/ Personal Beliefs	-0.944	0.346	0.471	0.798	3.769	0.005**	0.276	0.843
Quality of Life	-1.081	0.280	1.306	0.261	1.517	0.197	0.755	0.520
Domain	Family Income (\$1 = IDR 15,000)		Source of the Family's Main Income		Do you currently do your work from home?		How many days on average do you leave the house during work from home and social / physical distances, both for work and for other primary needs?	
	F-value	Sig.	F-value	Sig.	t-test	Sig.	F-value	Sig.
Physical Health	1.987	0.096	2.37	0.070	1.724	0.086	2.69	0.031*
Psychological	2.423	0.048*	1.59	0.191	0.585	0.559	1.207	0.307
Level of Independence	3.787	0.005**	1.816	0.144	-0.292	0.770	3.296	0.011*
Social Relationship	3.991	0.004**	3.196	0.024*	-1.363	0.174	2.901	0.022*
Environment	11.076	0.000**	4.876	0.002**	1.465	0.144	0.715	0.582
Spirituality/ Religion/ Personal Beliefs	1.007	0.404	1.369	0.252	1.955	0.051	1.956	0.101
Quality of Life	1.927	0.105	0.862	0.461	1.387	0.166	1.251	0.289

* Significant at the 0.05 level

** Significant at the 0.01 level

4. Conclusions

Measuring the Quality of Life is important because it is important not to let the anxiety over the epidemic that occurs actually have a more severe impact than the epidemic itself. Restrictive measures, including self-isolation and physical distancing, have a strong impact on people's daily lives, and have a negative impact on psychological well-being [37]. Although restrictions require that various types of work must be carried out from home, this does not trigger a decline in Quality of Life. Aspects that reduce the Quality of Life through at least 3 of the 6 existing domains are age, family income and physical distancing. Although proximity to religion is a bulwark against depression and a good level of religiosity is also often associated with better mental health when dealing with stressful life events [38]. Although restrictions require that various types of work must be carried out from home, this does not trigger a decline in Quality of Life. Aspects that reduce the Quality of Life through at least 3 of the 6 existing domains are age, family income and physical distancing. Although proximity to religion is a bulwark against depression and a good level of religiosity is also often associated with better mental health when dealing with stressful life events.

Data Availability

The data used to support the research findings are available from the corresponding author upon request.

Conflicts of Interest

The authors declare no conflict of interest.

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