



The Impact of the Covid-19 Pandemic on the Physical Activity Level of the Elderly at the Health Center

Elman Boy¹, Risfa Indrisesfani², Rahmi Fadhillah³, Rizky Adityas Wara⁴, Jelita Fortuna⁵, Arman Maulana⁶, Sigit Kurniawan⁷, Danty Mandasari Pangaribuan⁸, Rika Rianingsih⁹, Anggi Prasetyo¹⁰, Indah Putri Harahap¹¹

¹⁾ Department of Public Health Medical Sciences, University of Muhammadiyah North Sumatra, Medan

²⁻¹¹⁾ Muhammadiyah University of North Sumatra, Medan

Article Info	Abstract
<p>Article history: Received 01 February 2022 Revised 27 February 2022 Accepted 03 March 2022 Available online 01 August 2022</p> <p>Keywords: Physical activity; pandemic; covid 19; elderly</p> <p>Correspondence: dokterelman@gmail.com</p>	<p>Backgrounds: Due to the COVID-19 cases that emerged in Indonesia, the government issued a regulation on community activity restrictions called the Enforcement of Community Activity Restrictions (PPKM). This PPKM rule causes the temporary cessation of services for the Chronic Disease Management Program (Prolanis) at the puskesmas, such as prolanis gymnastics activities. As a result, it harms the elderly, namely a decrease in physical activity behavior.</p> <p>Objectives: To assess the level of physical activity of the elderly based on age and gender during the COVID-19 pandemic</p> <p>Methods: This study uses a non-experimental descriptive research design with a cross-sectional approach. Data collection has been obtained through the International Physical Activity Questionnaire-Short Form (IPAQ-SF). The analytical test that has been carried out uses the chi-square test.</p> <p>Results: The study results reported that around 59.6% of the elderly experienced light physical activity during Covid-19. This shows that the elderly experienced decreased physical activity during the Covid-19 period.</p> <p>Conclusion: The Covid-19 pandemic causes the elderly to behave sedentarily, and there is no difference in the level of physical activity in the age group and gender of Prolanis participants at the puskesmas. This study found decreased physical activity during the Covid-19 pandemic compared to physical activity before the Covid-19 pandemic.</p>
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INTRODUCTION

The emergence of COVID-19 with a swift spread made the incident an emergency and became a health problem throughout the world, including Indonesia. On 02 March 2020, the first case of COVID-19 was reported in Indonesia. Then on 11 March 2020, WHO declared COVID-19 a pandemic¹.

Due to the COVID-19 cases that emerged in Indonesia, the government issued a regulation on community activity restrictions called the Enforcement of Community Activity Restrictions (PPKM). This PPKM rule causes some community activities to be temporarily suspended, one of which is the Chronic Disease Management Program (Prolanis) service at the puskesmas, such as prolanis gymnastics.^{2,3,4}

COVID-19 can affect anyone, including the elderly. The government's existence of restrictions on activity will harm the elderly, namely on physical activity behavior. Where the elderly spend more time sitting, watching, leaning, or lying down, reducing physical fitness and the subsequent impact on physical health, well-being, sleep patterns, and quality of life.^{5,6} Inactivity in the elderly is the fourth highest risk factor for death worldwide and a major contributor to disability.^{7,8} Among people who do not engage in regular physical activity, the risk of functional decline is higher on average. Therefore, inadequate physical activity during a pandemic can have deleterious effects on the physical, mental, and emotional health of the elderly.^{9,10,11}

Based on this background, there has been no research on the impact of the COVID-19 pandemic on the level of physical activity in the

elderly at the puskesmas; therefore, researchers are interested in researching the impact of the COVID-19 pandemic on the level of physical activity in the elderly at the puskesmas.

METHOD

This study used a non-experimental descriptive survey research design with a cross-sectional approach. The population in this study were all elderly Prolanis participants at the Kampung Baru Health Center, Medan Maimun District, and also Matsum City Health Center, Medan Area District, Medan City, North Sumatra Province. They were carried out using a consecutive sampling technique, namely Prolanis participants who were present and had registered at the Puskesmas. Prolanis participants who met the inclusion criteria then signed an informed consent form after receiving an explanation from the researcher. The inclusion criteria included: respondents who were registered with Prolanis at the Puskesmas, male or female respondents in the middle age (45-59 years) and elderly age (60-74 years) categories, and the elderly who could still carry out their daily activities independently. While the exclusion criteria include: elderly who cannot perform activities independently, cannot communicate effectively, and elderly who have dementia. Data collection was obtained through the International Physical Activity Questionnaire-Short Form (IPAQ-SF), which consisted of seven questions regarding the type, frequency, and duration of physical activity in the last seven days. Then the data obtained were categorized into light, moderate, and heavy physical activity. Filling out the questionnaire was done through interviews, and the researcher wrote the answers to the questionnaire. Data collection

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The data analysis technique in this study used IBM SPSS version 28.0 software, where the

test was carried out using the chi-square test to see the frequency distribution of each respondent's characteristics consisting of physical activity level, age, and gender, then see the correlation between physical activity and age and physical activity and gender with a significance of $p < 0.05$.

RESULTS

Table 1 shows that the old age group accounts for 92.3 percent of the population, and females account for 37.1 percent of the population. Table 2 shows that the frequency distribution based on physical activity level is highest in the mild category, with 57.7%.

According to table 3, the Chi-square analysis test yielded a p-value of 0.139 (> 0.05), indicating that there is no relationship between age and physical activity. Table 4 shows that the p-value for the Chi-square analysis was 0.158 (> 0.05), indicating that there is no link between gender and physical activity.

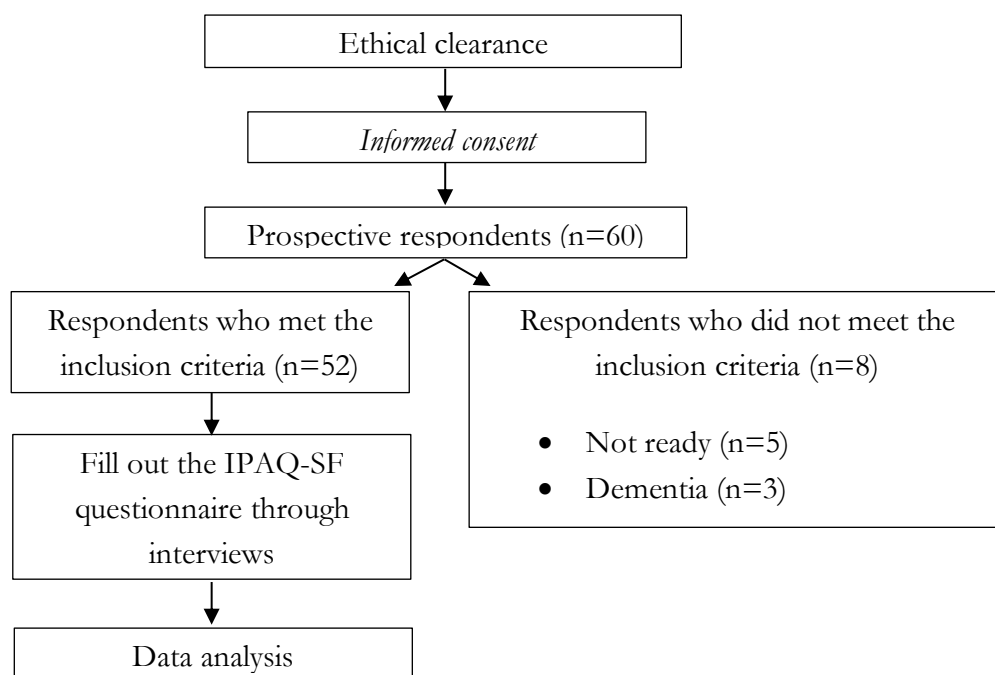


Figure 1. Flowcart of Research Respondent Selection

Table 1. Frequency Distribution of Respondent Characteristics

Variable	Frequency (n)	Percentage (%)
Age		
Middle age	4	7.7
Elderly age	48	92.3
Total	52	100%
Gender		
Man	14	26.9
Woman	38	37.1
Total	52	100

Table 2. Frequency Distribution of Respondents Based on Level of Physical Activity

Physical Activity	Frequency (n)	Percentage (%)
Mild	30	57.7
Moderate	19	36.5
High	3	5.8
Total	52	100%

Table 3. Age Group with Physical Activity

		Physical Activity			Total	p-value
		Mild	Moderate	High		
Age	Middle age	1 25.0%	2 50.0%	1 25.0%	4 100.0%	0.139
	Elderly age	30 62.5%	16 33.3%	2 4.2%	48 100.0%	
Total		31 59.6%	18 34.6%	3 5.8%	52 100.0%	

Table 4. Gender Group with Physical Activity

		Physical Activity			Total	p-value
		Mild	Moderate	High		
Gender	Man	6 42.9%	6 42.9%	2 14.3%	14 100.0%	0.158
	Woman	25 65.8%	12 31.6%	1 2.6%	38 100.0%	
Total		31 59.6%	18 34.6%	3 5.8%	52 100.0%	

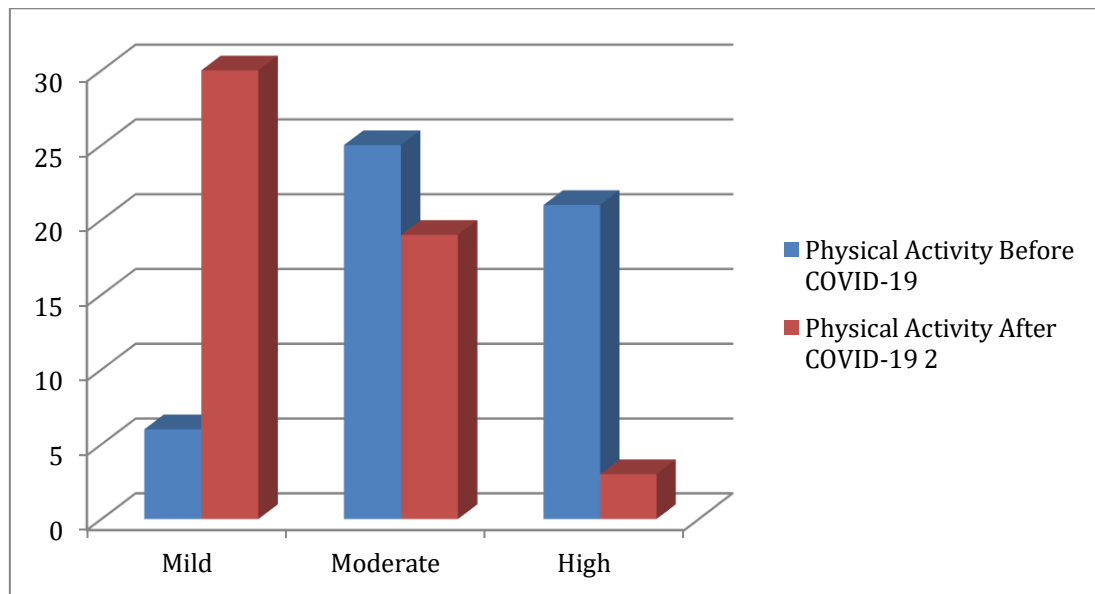


Figure 2. The Physical Activity Level of the Elderly Before Covid-19 and During the Covid-19 Pandemic

Based on Figure 2, there was a decrease in the physical activity of the elderly during the Covid-19 pandemic.

DISCUSSION

According to the findings, the Elderly Age group accounted for 92.3 percent of the population. During the present Covid-19 pandemic, the elderly (60-74 years) are more susceptible to health problems. Thus, they visit the puskesmas more frequently to have their health checked and treated for their concerns.^{13,14}

Based on the study results in table 2, the most gender is 37.1% female. This condition is because demographically, gender in the puskesmas area is more female. This study is in line with Nadya Ristamida et al. (2021) research, which stated that there were 40 female respondents (57%).¹⁵

The results showed that the physical activity carried out by the elderly during the Covid-19 pandemic mainly was at the level of mild physical activity, namely (59.6%). This is related to PPKM during the Covid-19 pandemic.^{16,17} Mild

intensity physical activity in the elderly influences physical and psychological fitness.¹⁸ Mild intensity physical activity in the elderly can be associated with mind-body medicine, such as performing Duha prayer and yoga. Mind-body medicine for the elderly, such as praying Duha, has improved hemodynamics.¹⁹

According to the findings, there was no link between physical activity and age or physical activity and gender. This is owing to PPKM's broad scope, which includes all genders and ages. This is supported by Nadya Ristamida's research (2021). Physical activity decreased during the Covid-19 epidemic, according to this study, when compared to physical activity prior to the pandemic. This is consistent with Jihan Zata's findings (2020).²⁰

This study is the first research conducted to look at the impact of the Covid-19 pandemic on physical activity in Prolanis program participants at the Medan City Health Center. However, this study has a limited number of samples that rely on the respondent's memory, and the research locus is still limited.

Based on the research carried out, several suggestions can be put forward. In further research, it is recommended to take a larger sample and a more comprehensive locus. It aims for better data accuracy in the research.

CONCLUSION

The Covid-19 pandemic causes the elderly to behave sedentarily, and there is no difference in the level of physical activity in the age group and gender of Prolanis participants at the puskesmas. This study found decreased physical activity during the Covid-19 pandemic compared to physical activity before the Covid-19 pandemic.

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