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Penulis : Raden Khairiyatul Afiyah, Erika Martining Wardani, Nurul Kamariyah, Lono Wijayanti, Nur Zuwariah, Desita Intan Tri Permata Putri, Juliatik Ragil Yhusnain

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# Exercises and recreation are important to improve the health of pregnant women in the Covid-19 pandemic

*by Erika Martining Wardani*

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# Exercises and Recreation are Important to Improve the Health of Pregnant Women in the Covid-19 Pandemic

Raden Khairiyatul Afiyah<sup>1,a</sup>, Erika Martining Wardani<sup>1,b</sup>, Nurul Kamariyah<sup>1,c</sup>, Lono Wijayanti<sup>1,d</sup>, Nur Zuwariah<sup>2,e</sup>, Desita Intan Tri Permata Putri<sup>3,f</sup>, Juliatik Ragil Yhusnain<sup>3,g</sup>

<sup>1</sup>Department of Nursing, Nursing and Midwifery Faculty, Universitas Nahdlatul Ulama Surabaya, 60237, East Java, Indonesia

<sup>2</sup>Department of Midwifery, Nursing and Midwifery Faculty, Universitas Nahdlatul Ulama Surabaya, 60237, East Java, Indonesia

<sup>3</sup>Student of Nursing, Nursing and Midwifery Faculty, Universitas Nahdlatul Ulama Surabaya, 60237, East Java, Indonesia

- a) Corresponding Author: [eer@unusa.ac.id](mailto:eer@unusa.ac.id)
- b) [erika@unusa.ac.id](mailto:erika@unusa.ac.id)
- c) [nurulkamariyah@unusa.ac.id](mailto:nurulkamariyah@unusa.ac.id)
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- g) [juliatikragil043.ns17@student.unusa.ac.id](mailto:juliatikragil043.ns17@student.unusa.ac.id)

**Abstract.** The basic needs that must be met by pregnant women are recreation and exercise. The Covid-19 pandemic situation has resulted in restrictions on almost all public services and entertainment, including exercise and recreation, resulting in the fulfillment of recreational and exercise needs for pregnant women not being met this will affect physical and mental health. This study aims to analyze the correlation exercises and recreation on the health of pregnant women during the Covid-19 pandemic. The data measured are for exercises and recreation as well as the health status of pregnant women obtained from pregnant women through questionnaires. The statistical analysis used is Chi Square to analyze the correlation exercises and recreation on the health of pregnant women during the Covid-19 pandemic. This study found the importance of exercises and recreation for the health of pregnant women during the Covid-19 pandemic. Exercises and recreation can release happy hormones so that they can increase immunity during pregnancy. In general, this study proves that exercises and recreation is related to the health of pregnant women during the Covid-19 pandemic

## INTRODUCTION

The world has been proclaiming war against the coronavirus since its first appearance in Wuhan of China's Hubei Province in late 2019. Covid-19 has become an outbreak and hit various countries in the world without exception in Indonesia. Thousands or even tens of thousands of people have died to date. The World Health Organization (WHO) has declared Covid-19 a pandemic [1] Pregnant women in the era of the Covid-19 pandemic are noted as one of the

vulnerable groups at risk of being infected with Covid-19 because during pregnancy, there are changes in gestational physiology and immunological changes in their systems [2]

Pregnant women show a higher risk of depression compared to the general public during the Covid 19 pandemic. Exercise and recreation are the easiest ways to reduce feelings of depression during pregnancy during the Covid-19 pandemic. Exercise and recreational routines in pregnant women are plagued by pandemics, especially in metropolitan areas (for example, because gyms and parks are closed or fear of exposure to the virus while exercising outside densely populated areas) [3]. Conversely, women in less densely populated areas may feel safe going out to do sports and recreation [4]. Recreational activities aimed at strengthening the bond of the mother and fetus before birth, and holidays during pregnancy also help dispel stress that is prone to attack [5]. The most appropriate time when doing a vacation or recreation is when the gestational age enters the second trimester, or when the gestational age is between 20-30 weeks and it is recommended that pregnant women at the time of travel at least 2 hours once stopped to reduce pressure [2].

According to research from [6] reported that of the 129 pregnant women who were quarantined, 31% experienced stress and post-quarantine depression symptoms. The Covid-19 pandemic has negatively impacted physical and mental health around the world [4]. A survey conducted by the Active Pregnancy Foundation in 2020 of 445 pregnant women and postpartum women showed that 50% less exercise during lockdown than before because it was affected unconstitutionally by lockdown measures [7][8].

During the ongoing pandemic, fear and anxiety of being infected with Covid-19 or transmitting the infection to other family members result in increased stress on pregnant women [9]. During a pandemic like this, pregnant women are advised to do activities at home only to avoid exposure to the Covid-19 virus. However, it does not demand the possibility that pregnant women also need to do activities outside the home, namely sports and recreation while maintaining the health and health protocol of the Covid-19 pandemic strictly and always consult a doctor [10][11]. The purpose of this study was to analyze the correlation between exercises and recreation to the health of pregnant women during the Covid-19 pandemic.

## METHOD

The population of this study is pregnant women with trimesters 2 and 3 who routinely conduct pregnancy examinations in the last 3 months at Jagir Surabaya Health Center which numbered 113. Respondents data were obtained through questionnaires that have been designed by themselves based on health theories in pregnant women and questionnaires containing about exercise and recreation and health status in pregnant women. The analysis of the data was conducted with a chi-square statistical test with a significant  $p < 0.05$ . The results of the analysis can be concluded if  $p$  value  $< 0.05$  then  $H_0$  rejected means that there is a correlation between exercises and recreation with the health status of pregnant women during the Covid-19 pandemic and if  $p$  value  $> 0.05$  then  $H_0$  accepted means there is no relationship between exercises and recreation with the health status of pregnant women during the Covid-19 pandemic. This research has been through an ethical test from the Health Research Ethics Commission of Nahdlatul Ulama University Surabaya (No. 117/EC/KEPK/UNUSA.2021 and No. 114/EC/KEPK/UNUSA.2021).

## RESULT

TABLE 1 Frequency distribution of respondents based on the age of pregnant woman at health center Jagir Surabaya

Age (years)	N	%
17 – 25	25	22.1
26 – 35	68	60.2
36 – 45	20	17.7
<b>Total</b>	<b>113</b>	<b>100.0</b>

Based on table 1 shows that of 113 respondent's vast majority were 26 – 35 years old

**TABLE 2** Frequency distribution of respondents based on the education of pregnant woman at health center Jagir Surabaya

Education	N	%
Basic	40	35.4
Intermediate	60	53.1
High	13	11.5
<b>Total</b>	<b>113</b>	<b>100.0</b>

Based on table 2 shows that of 113 respondent's most were intermediate education

**TABLE 3** Frequency distribution of respondents based on the work of pregnant woman at health center Jagir Surabaya

Work	N	%
Entrepreneur	15	13.3
Housewife	80	70.8
Civi;	7	6.2
Private	11	9.7
<b>Total</b>	<b>113</b>	<b>100.0</b>

Based on table 3 shows that of 113 respondent's most were work as housewife

**TABLE 4** Frequency distribution of respondents based on the Trimesters of pregnant woman at health center Jagir Surabaya

Trimesters	N	%
1	0	0.0
2	38	33.7
3	75	66.3
<b>Total</b>	<b>113</b>	<b>100.0</b>

Based on table 4 shows that of 113 respondent's most were trimesters 3.

**TABLE 5** Frequency distribution of respondents based on the exercise type of pregnant woman at health center Jagir Surabaya

Exercise Type	N	%
Yoga	25	22.1
Walk	53	48.7
Gymnastics	33	29.2
<b>Total</b>	<b>113</b>	<b>100.0</b>

Based on table 5 shows that of 113 respondents' nearly half were types of exercise is walking

**TABLE 6** Frequency distribution of respondents based on the sport and recreation with health status of pregnant woman during the covid-19 pandemic at health center Jagir Surabaya

Characteristics	N	%
<b>Exercise</b>		
Low	20	17.7
Intermediate	67	59.3
High	26	23.0
<b>Recreation</b>		
Low	27	23.9
Intermediate	60	53.1
High	26	23.0
<b>Health</b>		

Characteristics	N	%
Lack	31	27.4
Intermediate	53	47.0
High	29	25.6
<b>Total</b>	<b>113</b>	<b>100.0</b>

Based on table 6 shows that of the 113 respondents' most (59.3%) have sufficient exercise needs. The vast majority (53.1%) has adequate recreational needs and nearly half (47%) have an adequate health status

**TABLE 7** The correlation between Exercises and recreation and the health status of pregnant women during the Covid-19 pandemic

Variable	Health								
	Lack		Intermediate		High		Total		
	N	%	N	%	N	%	N	%	
<b>Recreation</b>									
Low	5	25.0	9	45.0	6	30.0	20	17.7	
Intermediate	18	26.7	35	52.2	14	20.7	67	59.3	
High	8	30.8	9	34.6	9	34.6	26	23.0	
<b>Exercise</b>									
Low	9	33.3	12	44.4	6	22.2	27	23.9	
Intermediate	15	25.0	32	53.3	13	27.1	60	53.1	
High	7	27.0	9	34.6	10	38.4	26	23.0	
<i>P value</i>								0.000	

This Table shows that of the 67 respondents who with recreation most (52.2%) of the health is intermediate. Meanwhile, of the 60 respondents with exercises most (53.3%) the health is intermediate. The results of cross-tabulation were analyzed using the Chi Square test, the result was  $\chi^2 = 0.000$  which means that there is a correlation between exercises and recreation with the health of pregnant women during the Covid-19 pandemic.

## DISCUSSION

Based on the result of the study, it is showed that the majority (53.1%) of the fulfillment of the recreational needs of pregnant women is sufficient. This is because during the current pandemic, pregnant women must be at home only to anticipate and avoid exposure to the coronavirus [3]. Pregnant women at home alone can anticipate or reduce the risk of exposure to the corona virus and many tourist attractions or public places that limit even do not allow pregnant women to visit [12]. Not only recreational activities or traveling far, activities that can be done by pregnant women in the house during this pandemic are doing sports virtually, doing games and also doing hobbies [4]. Although there are many recreational benefits for pregnant women, pregnant women are advised to stay at home only and if required to leave the house still pay attention and adhere to the Covid-19 health protocol strictly [4].

Social distancing or lockdown policies have been shown to be effective in reducing the risk of Covid-19 transmission, including applying also to pregnant women to limit themselves to not do too many activities outside the home let alone traveling far [10]. Pregnant women will experience physiological changes in themselves so that pregnant women are more susceptible to the coronavirus [5].

Virginia Henderson argues that recreation is one of the basic human needs (BHN). In theory, Virginia Henderson mentions that the environment has a role to play in meeting basic human needs [13]. Meeting basic needs during pregnancy has an important role in the health of the mother and her baby, including health during the Covid 9 pandemic [12].

Based on the results of research it can be known that the fulfillment of the needs of the sports of pregnant women during the Covid-19 pandemic shows that of 113 respondents most (59.3%) has sufficient exercise needs and almost half of the types of exercise chosen are walking. The Covid-19 pandemic caused concerns that pregnant women are vulnerable to contracting it while doing sports and must reduce mobility outside the home [14]. Because the current pandemic

imposes restrictions on outdoor physical activity, pregnant women have little choice about how to access exercise classes [15]. Exercise during pregnancy can make it easier and shorten the delivery time. By exercising the pelvic muscles and birth canal pregnant women become stronger and the circulatory system becomes smoother [4] [16].

Regular exercise can make pregnant women feel fit and the body feels comfortable. Exercise can also maintain posture and reduce symptoms commonly experienced by pregnant women such as back pain, fatigue, preventing pregnancy, diabetes, reducing stress, especially during the Covid-19 pandemic [17] and increasing the energy needed during labor. Pregnant women should do moderate intensity exercise for at least 150 minutes every week and can be done virtually [10]. The challenge is to start a strategy to improve and maintain overall exercise in pregnant women. In health promotion, it is important to emphasize that moderate amounts of exercise can be achieved in a variety of ways, and it is important to choose a sport that is fun and easy [9].

The importance of exercise and recreation in pregnant women in the pandemic period because during pregnancy changes in estrogen and progesterone hormones in pregnant women will increase [18]. These changes are a natural thing for pregnant women, one of which is if pregnant women are stressed or anxious [2]. Recreation for pregnant women has several benefits, including releasing stress and fatigue, making memories for the baby, providing positive energy from the mother to fetus in the womb, pregnant women can pamper themselves, and can strengthen the relationship between father and mother[11]. While exercise during pregnancy can facilitate and shorten the delivery time. By exercising the pelvic muscles and birth canal pregnant women become stronger and the circulatory system becomes smoother[19].

## CONCLUSION

The purpose of this study was to analyze the correlation of exercises and recreation with the health of pregnant women during the Covid-19 pandemic. This study proves that exercise and recreation are important for the health of pregnant women during the Covid-19 pandemic. As one of the health workers who care for pregnant women, nurses should be able to provide education about the importance of meeting exercises and recreation needs in the Covid 19 pandemic and provide alternatives during the application of physical distancing. Suggestions for further research are the use of research design, the addition of respondents as well as research places.

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