Sedentary Behaviour In Childbearing Women

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Abstract. Sedentary behaviour or a lifestyle that lacks physical activity is increasingly becoming a global health concern, especially among women of childbearing age. This study was conducted to determine the relationship of age, parity, occupation, income and knowledge to sedentary factors in women of childbearing age. The research method used was correlational analysis with a cross-sectional approach. The sample in this study was taken using simple random sampling with a total of 43 respondents. Correlational relationship analysis was performed with the Spearman Rho Test. The results showed that age, parity, occupation, income, and knowledge were significantly associated with sedentary levels. The majority of respondents aged <20 years had high sedentary (75%); with a p-value <0.001 and r=0.536. In the parity variable, the primiparous majority were highly sedentary (71.4%); with p-value <0.001 and r=0.525. In the light occupation, the majority were highly sedentary (66.7%); with p<0.001 and r=0.567. Income <UMR majority of high sedentary (46.2%); with p=0.039 and r=0.319. Insufficient knowledge majority of high sedentary (61.9%); with p=0.008 and r=0.406. Sedentary time reduction that is easy to do by women of childbearing age themselves is by doing light physical activities such as walking, joining gymnastics, or reducing sitting time by moving every 30 minutes, besides that they can increase awareness about the importance of physical activity through reliable sources of information. This study implies that women of childbearing age can implement small changes in their daily routine to reduce sedentary behaviour and improve overall health.

Keywords: Behavior, Sedentary, Women, Age, Fertile

INTRODUCTION

Sedentary behaviour or a lifestyle that lacks physical activity is increasingly becoming a global health concern, especially among women of childbearing age. This problem arises with increasing urbanization, technological advances, and lifestyle changes that are more inclined towards activities that do not require significant physical movement. This phenomenon has the potential to have serious negative impacts on women's health, including an increased risk of cardiovascular disease, obesity, type 2 diabetes, and mental disorders such as depression and anxiety (Park *et al*., 2020).

Globally, the prevalence of sedentary behaviour among women of childbearing age is high. According to a World Health Organization (WHO) report, more than 23% of adults worldwide are not physically active enough, with women showing higher rates than men. In some countries, this figure even reaches more than 30%. This data reflects an alarming situation, given the importance of physical activity for the reproductive health and general well-being of women of childbearing age (WHO, 2020).

Several factors lead to increased sedentary behaviour in women of childbearing age. Social and economic factors play an important role, where women who work in offices tend to sit for long periods. In addition, household and childcare responsibilities often leave little time for physical activity. The development of technology also encourages people to spend more time in front of screens, both for work and entertainment, which indirectly reduces the opportunity to move actively (Shiho *et al*., 2020).

The consequences of sedentary behaviour are detrimental to health. Women of childbearing age who lead a sedentary lifestyle are at a higher risk of obesity, which can affect fertility and increase the risk of complications during pregnancy. In addition, lack of physical activity can lead to decreased muscle strength and bone density, potentially increasing the risk of osteoporosis later in life. Mentally, a sedentary lifestyle is associated with increased levels of stress, anxiety and depression (Kosteli *et al*., 2016).

The first step to reducing sedentary time is to set a schedule for light to moderate physical activity, which can be an effective first step. For example, taking a 30-minute walk every day, either in the morning before starting a regular activity or in the afternoon after work, can help increase physical activity levels without the need for special equipment. Also, women of childbearing age can try incorporating more movement into their daily routine. Doing light stretches or exercises for 5-10 minutes every working hour, using the stairs instead of the elevator, and choosing walking or cycling for short-distance trips are some simple ways to reduce excessive sitting time. Household activities such

as cleaning, gardening, or active play with children can also be a source of beneficial physical activity (WHO, 2020).

Based on this background, the authors are interested in knowing the factors associated with sedentary behaviour in women of childbearing age in Kembangan Village, Gresik. The emergence of sedentary lifestyles in women of childbearing age is the result of a combination of various factors, including economic changes, and the rapid development of technology. The availability of data on the incidence of a sedentary lifestyle in women of childbearing age can be the basis for developing health programs to prevent the ongoing impact of this behaviour.

METHODS

This is a correlational study to know the relationship between age, parity, occupation, income and knowledge with sedentary women of childbearing age, using a cross-sectional approach. The population in this study were all women of childbearing age in Kembangan Village, Gresik. Sampling was done by simple random sampling and the sample size was 43 respondents. The instruments used were a Knowledge Questionnaire with 10 questions that have been tested for validity (0.640) and reliability (0.778), and a Past-day Adults' Sedentary Time (PAST) Questionnaire that has been standardized. Data analysis was performed using non-parametric analysis with the Spearman Rho Test.

RESULTS AND DISCUSSION

The data of each variable and the analysis between the independent and dependent variables are shown in Table 1.

Table 1. Research results and data analysis

Variables	Sedentary						*Sig.*	r
	Low		Medium		High			
	f	%	f	%	f	%		
Age								
<20 years	1	12,5	1	12,5	6	75,0		
20-35 years	8	27,6	12	41,4	9	31,0	<0,001	0,536
>35 years old	6	100	0	0	0	0		
Parity								
Primiparous	3	21,4	1	7,1	10	71,4		
Multiparous	6	27,3	11	50,0	5	22,7	<0,001	0,525
Grandemultipara	6	85,7	1	14,3	0	0		
Jobs								
Lightweight	3	20,0	2	13,3	10	66,7		
Medium	1	7,7	8	61,5	4	30,8	<0,001	0,567
Weight	11	73,3	3	20,0	1	6,7		
Revenue								
<UMR	4	30,8	3	23,1	6	46,2		
UMR	2	12,5	7	43,8	7	43,8	0,039	0,319
>UMR	9	64,3	3	21,4	2	14,3		
Knowledge								
Less	6	28,6	2	9,5	13	61,9		
Simply	3	27,3	7	63,6	1	9,1	0,008	0,406
Good	6	54,4	4	36,4	1	9,1		
n=43								

The data in Table 1. shows that almost all respondents aged <20 years have high sedentary, namely a total of 6 people (75.0%), in the age group 20-35 years the number of moderate sedentary has the highest number of 12 people (41.4%), while at the age of >35 years all respondents have low sedentary, namely a total of 6 people (100%). The results of the analysis of the relationship between age and sedentary showed a p-value = <0.001 so it can be concluded that there is a relationship between age and sedentary in women of childbearing age. The r value in the correlation of these two variables shows 0.536, indicating that the relationship between age and sedentary variables is strong.

The parity variable shows that almost all primipara respondents have high sedentary, namely a total of 10 people (71.4%), in the multipara group the number of moderate sedentary has the most 11 people (50.0%), while in grand multipara almost all respondents have low sedentary, namely 6 people (85.7%). The results of the analysis of the relationship between parity and sedentary showed a p-value = < 0.001 so it can be concluded that there is a relationship between parity and sedentary in women of childbearing age. The r value in the correlation of these two variables shows the number 0.525, indicating that the relationship between parity and sedentary variables is strong.

In the work variable, more than half of the respondents with light work had high sedentary, namely a total of 10 people (66.7%), in the medium workgroup the moderate sedentary rate had the largest number of 8 people (61.5%), while in the heavy workgroup more than half of the respondents had low sedentary, namely a total of 11 people (73.3%). The results of the analysis of the relationship between work and sedentary showed a p-value = <0.001 so it can be concluded that there is a relationship between work and sedentary in women of childbearing age. The value of r in the correlation of these two variables shows 0.567, indicating that the relationship between work and sedentary variables is strong.

In the income variable, almost half of the respondents with income < UMR had high sedentary, namely a total of 6 people (46.2%), while in the income group equal to UMR between moderate and high sedentary had the same number of 7 people (43.8%), while in the income group > UMR, more than half of the respondents had low sedentary, namely a total of 9 people (64.3%). The results of the analysis of the relationship between income and sedentary showed a p-value = 0.039 so it can be concluded that there is a relationship between work and sedentary in women of childbearing age. The value of r in the correlation of these two variables shows 0.319, indicating that the relationship between income and sedentary variables is quite strong.

In the knowledge variable, more than half of the respondents with poor knowledge had high sedentary, namely, 13 people (61.9%), while in the moderate knowledge group, the moderate sedentary rate showed the greatest value, namely 7 people (63.6%), while in the good knowledge group, more than half of the respondents had low sedentary, namely 6 people (54.4%). The results of the analysis of the relationship between knowledge and sedentary showed a p-value = 0.008 so it can be concluded that there is a relationship between knowledge and sedentary in women of childbearing age. The value of r in the correlation of these two variables shows 0.406, indicating that the relationship between knowledge and sedentary variables is quite strong.

Relationship between age and sedentary

This study shows that there is a strong significant relationship between age and sedentary behavior in women of childbearing age. Human development theory states that age has an important role in a person's physical activity and lifestyle (Kosteli *et al*., 2016). The results of research by Kunstler *et al*. (2020) showed that respondents aged 18-29 years had more sedentary time compared to respondents older than 29 years (Kunstler *et al*., 2020). In addition, a study by Matthews *et al*. (2012) also supports these findings, the results of his research show that young women are more likely to have highly sedentary behaviour than older women (Matthews *et al*., 2012). This could be because while technological advances have provided many benefits to society, new technologies have also led to a large decrease in the amount of unintentional physical activity. Physical activity, previously performed as part of a "standard" workday (active transportation, work, etc.) or as part of household tasks around the home (cleaning and cooking), has been reduced or replaced by machines. The relatively recent development of the internet and its accessibility on mobile devices (cell phones, tablets and others) has also negatively impacted our physical activity (Woessner *et al*., 2021).

The results of this study indicate that age is an important factor influencing sedentary behaviour in women of childbearing age. It is important to provide information and education to younger women to reduce this behaviour and increase physical activity, and programs that support the continuation of physical activity for older women should be developed to help them stay active.

Relationship between parity and sedentary

This study shows that there is a strong significant relationship between parity and sedentary behavior in women of childbearing age. The theory underlying the relationship between parity and sedentary behaviour is the theory of social roles and the burden of responsibility that increases with the number of children (Newman & Philip R., 2020). Adeoye's (2022) study showed that mothers who have

more children tend to be more physically active due to the demands of child care and household chores. This study shows that multiparous and grandemultiparous mothers have higher physical activity compared to primiparous because the need to take care of more children reduces the time for sedentary behaviour (Adeoye, 2022).

The results of this study indicate that parity is one of the important factors affecting sedentary behaviour in women of childbearing age. Higher sedentary behaviour in primiparous women may occur because they are still adapting to their new role as mothers, so they reduce physical activity and focus on caring for the baby. In contrast, multiparous or grandemultiparous women, who are used to motherhood and have more children to take care of, automatically have higher physical activity and thus lower sedentary behaviour. Both primiparous and multiparous mothers may need help to make the most of their time, to maximize physical activity that can help maintain optimal health.

Relationship between work and sedentary

The results of this study indicate a significant and strong relationship between the type of employment and sedentary behaviour in women of childbearing age. The basic theory that supports this finding is the physical activity theory which states that the type of work has a major effect on individual physical activity. In light work which more often involves sitting activities for long periods such as office work, it tends to increase sedentary behaviour. Meanwhile, heavy jobs that involve intense physical activity such as farmers or labourers in factories, naturally reduce sedentary behaviour due to the high need for physical activity (WHO, 2020).

Research by Church *et al.* (2011) showed that an increase in office jobs and a reduction in jobs that require strenuous physical activity have a major role in increasing sedentary behaviour in the adult population (Church *et al*., 2011). Another study by Van Der Ploeg *et al.* (2012) showed that jobs that require low physical activity are associated with the risk of sedentary behaviour, which can harm health, including increasing the risk of heart disease and obesity (Ploeg *et al*., 2012).

The type of work is one of the factors that can affect the level of sedentary in women of childbearing age. Women who have light jobs can be encouraged to increase physical activity or exercise to reduce their sedentary time. In addition, workplace policies can also play a role in increasing physical activity for employees who have more sedentary jobs by encouraging short physical activities such as stretching or walking during working hours can help reduce sedentary behaviour in employees.

Income and sedentary relationship

This study shows that there is a significant relationship between income and sedentary behaviour in women of childbearing age. Health economics theory explains that income influences access to resources that support active lifestyles, such as exercise facilities and free time to exercise. Individuals with higher incomes tend to have better access to these facilities and are more cognizant of the importance of physical activity for health (Diwyarthi *et al.*, 2022).

Research results from Beenackers *et al.* (2012) showed that individuals with higher incomes have higher levels of physical activity than those with lower incomes, as they have more resources and time to participate in physical activity (Beenackers *et al*., 2012). This is supported by a study from Gordon-Larsen *et al.* (2006) which found that physical activity levels tend to be lower in groups with low economic status (Gordon-Larsen *et al*., 2006). In addition, a study by Kamphuis *et al.* (2008) revealed that health facilities are more easily found in neighbourhoods with people who have high incomes (Kamphuis *et al*., 2008). Meanwhile, a study by Pampel *et al.* (2010) confirms that health awareness and the ability to lead a healthy lifestyle are higher in groups with high income which contributes to lower sedentary levels (Pampel *et al.,* 2010).

Income is a factor that has a considerable influence on sedentary behaviour. Women with lower incomes have limited access to exercise time and facilities. In contrast, women with higher incomes have more resources and awareness of the importance of physical activity, which contributes to lower sedentary levels.

Relationship between knowledge and sedentary

The results of this study indicate a significant and fairly strong relationship between knowledge and sedentary behaviour in women of childbearing age. The theory that supports this finding is the theory of knowledge and health behaviour, which states that a person's level of health knowledge is

closely related to their health behaviour. Good knowledge of the health risks of sedentary behaviour and the benefits of physical activity can motivate individuals to reduce the time spent in a sedentary state (Ryan, 2009).

Research conducted by Klazine (2007) showed that knowledge of the benefits of physical activity was positively associated with higher levels of physical activity and lower sedentary behaviour. This study supports the finding that increased health knowledge can encourage behaviour change towards a healthier direction (Klazine *et al*., 2007). Meanwhile, research by Plotnikoff *et al*. (2011) confirmed that educational programs that increase knowledge about the importance of physical activity can significantly reduce sedentary time (Plotnikoff *et al*., 2011). Another study by Bauman *et al*. (2012) also found that knowledge about the health risks of sedentary behaviour plays an important role in encouraging individuals to be more physically active (Bauman *et al*., 2012). Similarly, a study by Sallis *et al*. (2000) emphasized the importance of health education in promoting active lifestyles, finding that people who were more aware of the health risks of inactivity tended to spend less time in sedentary behaviour (Sallis *et al*., 2000).

Women with poor knowledge tend to have high sedentary behaviour due to a lack of awareness of the health risks associated with this behaviour, whereas women with good knowledge tend to have lower sedentary levels because they are more aware of the importance of physical activity for health.

CONCLUSION

This study showed a significant relationship between age, parity, occupation, income, and knowledge with sedentary levels in women of childbearing age. Age < 20 years and primipara tend to be high sedentary, while age > 35 years and grandemultipara are low sedentary. Light work is associated with high sedentary, and heavy work with low sedentary. Income < UMR is associated with high sedentary, income > UMR with low sedentary. Poor knowledge is associated with high sedentary, and good knowledge with low sedentary. The correlation value of each variable shows a fairly strong to strong relationship.

The implications of this study indicate the importance of age, parity, occupation, income, and knowledge in influencing sedentary levels so that health interventions developed should be tailored to demographic characteristics to be effective in reducing sedentary behaviour in women of childbearing age.

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