Analysis Factors Affecting the Implementation of Pregnancy Exercise Program: Cross-Sectional Study at Margorejo Health Center, Metro City, Lampung

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Abstract

Physical activity during pregnancy, such as pregnancy exercise, has significant benefits for maternal and fetal health. However, participation among pregnant women in exercise programs remains low. This study aims to identify factors influencing this participation in Metro City, Lampung Province. This research employs a quantitative design with a cross-sectional approach. A total of 70 respondents were selected through accidental sampling. Data were collected using a validated and reliable questionnaire. Data analysis was conducted using logistic regression to identify the relationship between independent variables and participation in pregnancy exercise. The findings indicate that knowledge, attitude, family support, accessibility of infrastructure, and interaction with health workers significantly influence pregnant women's participation in pregnancy exercise. Conversely, age, education, occupation, parity, and distance travelled did not show significant effects. This study emphasizes the importance of enhancing knowledge and social support to encourage pregnant women's participation in physical activities. The implications of these findings suggest the need for intervention programs involving health workers and improved infrastructure to support maternal and child health.

Keyword: Family Support, Health Infrastructure, Maternal Health, Physical Activity Barriers, Pregnancy Exercise, Participation Factors

INTRODUCTION

The health of pregnant women is one of the important indicators in the public health system, which directly affects fetal health and maternal mortality. Data from the Ministry of Health shows that the maternal mortality rate (MMR) is still high, reaching 305 per 100,000 live births in 2021 in Indonesia[1] This figure is slightly better but still reflects significant challenges. In Lampung Province, the MMR reached 200 per 100,000 live births [2]. Efforts to reduce maternal mortality require a comprehensive approach, including improved access to prenatal health services and education about the importance of care during pregnancy[3]. One beneficial intervention is pregnancy exercises, which can assist expectant mothers in preparing their bodies for labour and improve overall health[4]. In addition, pregnancy exercises also serve to reduce stress and tension as well as improve blood circulation, all of which contribute to a healthier pregnancy experience[5]. Lampung was chosen as the location for this study for several important reasons. First and foremost, the maternal mortality rate (MMR) in Lampung is recorded at 200 per 100,000 live births [2]. This indicates that there are serious maternal health challenges in the area that require further attention and intervention. The high MMR reflects various risk factors that may include limited access to quality health services, lack of education on reproductive health, as well as low levels of participation in maternal health programs [6]. Given these conditions, Lampung serves as a relevant place to further explore factors affecting maternal and child health while seeking solutions to improve healthcare quality within the region [7].

According to Jumhati and Kurniawan (2019), pregnancy exercises are an important technique to maintain the physical balance of pregnant women and encourage safe and simple labor[8]. It has been proven that prenatal exercises help pregnant women sleep better in the second and third trimesters of their pregnancy[9]. However, the participation rate of pregnant women in pregnancy exercise classes is still low. Participation in these classes by pregnant women is influenced by several factors, such as the attitude, knowledge, level of understanding of pregnant women about the benefits of pregnancy exercises and the correct techniques, the views of pregnant women towards pregnancy exercises and motivation to participate, the role and support of husbands and other family members in encouraging pregnant women to participate in exercises, the availability and quality of guidance from health workers in the implementation of pregnancy exercises[10,11]. In addition, participation rates were also affected by class scheduling and pregnancy trimester. Health professionals should provide regular assistance, teach pregnant women and their partners about the benefits of prenatal exercises, and offer sessions at appropriate times to increase participation[12,13]. Non-implementation of pregnancy exercises can hurt maternal and fetal health, such as increased risk of complications during pregnancy, more difficult labour, decreased physical fitness, potentially leading to faster fatigue and discomfort during pregnancy, and compromised mental health. Therefore, it is important to find effective solutions to increase the number of pregnant women who participate in pregnancy exercises[14].

Some solutions that can be implemented include, increasing the knowledge of pregnant women through educational programs involving health workers and families, ensuring that pregnancy exercises are available in accessible locations and at flexible times, and encouraging family involvement in pregnancy exercise programs to increase the motivation of pregnant women[15]. One approach that can be implemented is to educate pregnant women about the benefits of pregnancy exercises through information campaigns and health counselling, so that they better understand the importance of physical activity during pregnancy. Prenatal exercise programs can improve the quality of care for pregnant women by addressing these variables[12].

Despite efforts to improve health services, the participation of pregnant women in the pregnancy exercise program in Metro City is still low, with only 30% of the total pregnant women participating in the program. There are many studies on pregnant women's health, but few specifically analyze the factors that influence the implementation of pregnancy exercises at the local level, especially in Metro City, Lampung. This study aims to analyze the factors that support the implementation of the pregnancy exercise program among pregnant women in the working area of Margorejo Health Center, Metro City, Lampung.

METHOD

Quantitative research with the analytic method and cross-sectional approach. The population of all pregnant women in the working area of the Margorejo Health Center, South Metro, Metro City, Lampung was 264 people. The sample size was calculated using the formula from Lemeshow[16] $n = \frac{Z^2(1-\alpha/2)\rho(1-\rho)N}{d^2(N-1)+Z^2(1-\alpha/2)\rho(1-\rho)}$. The results of the calculation of the sample formula were obtained, and the sample results were 70 respondents; the sampling technique used was accidental sampling. Data collection using a questionnaire. The instrument

reliability test for valid questions was tested with the Cronbach alpha formula with the help of an SPSS version 22 computer. The measurement is said to be reliable if r count> 0.6, which is obtained from the r product moment with an α value of 0.05. Based on the reliability test of the research questionnaire for all variables, the alpha-Cronbach value is> 0.6; it can be stated that the instrument is reliable, so it can be used as a research instrument. Univariate data analysis produces frequency data for each variable. Bivariate analysis uses correlation coefficient analysis, and multivariate analysis uses logistic regression analysis.

Ethical considerations

This study was approved by the Research Ethics Committee of the Poltekkes Kemenkes Tanjungkarang (Approval Number: 525/KEPK-TJK/VIII/2024. Approval Date 2024-08-07). All participants signed informed consent, and the study adhered to the principles of informed consent, anonymity, and participant confidentiality. Additionally, the accuracy and safety of the texts were ensured. In addition, the authorities granted the necessary permission for sampling.

RESULTS

Univariate Analysis

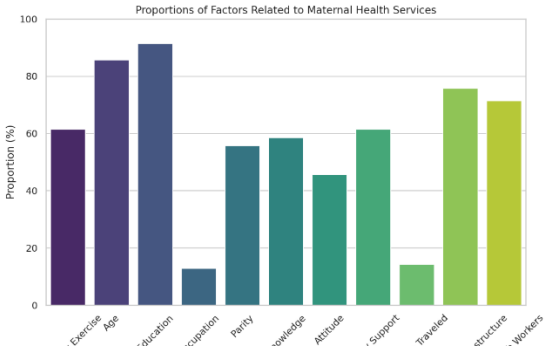

Figure 1. Proportion of Factors Associated with Pregnancy Exercise.

Figure 1 shows the proportion of factors related to pregnancy exercises, with 61.43% of pregnant women doing pregnancy exercises regularly. 85.71% of them were within the age range considered ideal for pregnancy (20-35 years). 91.43% of the respondents had a good level of education. A total of 12.86% of pregnant women worked, 44.29% of respondents were mothers with one child. The level of knowledge was good as many as 58.57% of respondents. Only 45.71% of mothers had a supportive attitude, but support from family and community was 61.43% of respondents reported good support. Only 14.29% of pregnant women had easy travel distance to reach the location of the mother's class to do pregnancy exercises. The graph shows that 75.71% of respondents felt that the existing health infrastructure was adequate, and 71.43% received support from health workers.

Bivariate Analysis

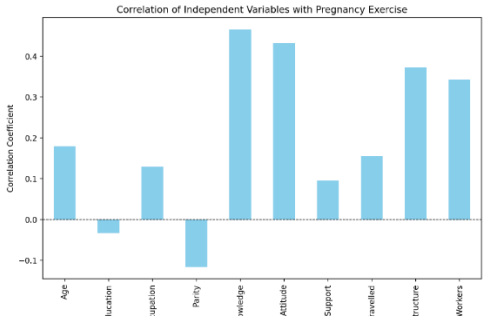

Figure 2. Correlation of Independent Variables with Pregnancy Exercise

Multivariate Analysis

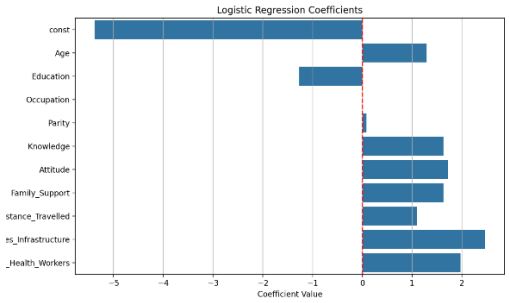

Figure 3. The visualization of the logistic regression coefficients

Figure 3 logistic regression analysis results on age were found to be 1.2950, indicating that every one-year increase in age was associated with an increase in the log-odds of exercising. However, the p-value (0.174) indicates that this relationship is not statistically significant. Education: -1.2711, indicating that an increase in education level is associated with a decrease in log-odds to exercise. The p-value (0.364) indicates that this relationship is also not significant. Occupation: -0.0045, indicating that occupation has no significant influence on exercise habits (p-value: 0.997). Parity (0.0827), indicating that the more children one has, the higher the log-odds of exercising. However, the p-value (0.921) indicates that this association is not significant. Knowledge (1.6279) indicates that better knowledge about maternal health is associated with increased log-odds of exercising. The p-value (0.040) indicates that this association is statistically significant. Attitude (1.7238), indicating that a positive attitude towards exercise was associated with increased log-odds of exercise. The p-value (0.048) indicates that this

relationship is significant. Family Support (1.6272) showed that support from family was associated with increased log-odds to exercise. P-value (0.085) indicates that this relationship is close to significant. Travel Distance (1.0960), indicating that travel experience is associated with increased log-odds to exercise. P-value (0.328) indicates that this relationship is not significant. Facilities Infrastructure (2.4652) indicates that accessibility to sports infrastructure is associated with increased log-odds to exercise. The p-value (0.011) indicates that this relationship is significant. Role Health Workers (1.9704), indicating that interaction with health workers is associated with increased log-odds of exercise. P-value (0.032) indicates that this association is significant.

DISCUSSION

Pregnancy Exercise

As many as 61.43% of pregnant women do pregnancy exercises regularly. This reflects a high awareness of the importance of physical activity during pregnancy, which is known to have many benefits for maternal and fetal health. Regular physical activity can help reduce the risk of pregnancy complications, improve mental health, and prepare the body for labor[17,18]. Research by Morales et al. (2018) supports these findings, showing that physically active pregnant women have a lower risk of developing complications such as gestational diabetes and hypertension [19]. In contrast, other studies have found that while many pregnant women are aware of the benefits of pregnancy exercises, only a small percentage do them regularly, often due to a lack of time or support[20]. Rosenstock's (1974) Health Belief Model theory can be used to explain this phenomenon. This model states that individuals will be more likely to engage in healthy behaviours if they believe that they are at risk of health problems and that certain actions can reduce that risk. In this context, awareness of the benefits of pregnancy exercises may encourage mothers to participate, but other factors such as social support and accessibility also play an important role[21].

Awareness of the benefits of pregnancy exercises alone is not enough to encourage participation. Other factors such as support from family, accessibility of the gymnastics location, quality of infrastructure, and approach from health workers also play a crucial role. Therefore, it is important for health service providers to not only provide information, but also create a supportive environment. These findings point to the importance of improving the quality and coverage of education on pregnancy exercises, especially with a holistic approach. Educational materials should be designed to foster positive attitudes, and implementation should involve families, especially husbands, as supportive agents. The program should also be supported by the provision of adequate and accessible sports facilities, as well as training for health workers to be able to foster supportive relationships and motivate pregnant women.

The limitation of this study is that although it shows a high participation rate, these results are from the working area of one Health Center and with a limited sample size. Thus, caution is needed in generalizing the results to a wider population of pregnant women. The possibility of social bias cannot be ignored, as respondents may give answers that are considered desirable by the researcher.

The pregnancy exercise program should be implemented more flexibly, for example, with a varied schedule or online class options. Support from local government policies is also needed to expand access and sustainability of this program. For future research, it is recommended to use a mixed approach (quantitative and qualitative) in order to explore more deeply the experiences, perceptions, and motivations of pregnant women regarding physical activity.

Ideal Age for Pregnancy

The analysis showed that 85.71% of the respondents were within the age range of 20-35 years, which is considered ideal for pregnancy. This age is often associated with better physical and mental readiness, which can facilitate participation in physical activities such as pregnancy exercises. Previous studies have also shown that pregnant women in this age range tend to be more physically active, which may contribute to maternal and fetal health[22]. The positive coefficient, indicating that the older the mothers, the more likely they are to exercise during pregnancy, reflects an increased awareness of the importance of health at a more mature age. This is in line with Rosenstock's (1974) Health Belief Model theory, which states that older individuals may have a better understanding of the health risks and benefits of physical activity, and thus be more motivated to participate in pregnancy exercises[21]. However, the p-value (0.174) indicates that this relationship is not statistically significant. This means that although there is a trend that older mothers are more likely to exercise, this result is not strong enough to be considered significant. Research by Moreno-Agostino et al. (2020) also found that although there was a positive trend between age and physical activity, other factors such as social support and knowledge about maternal health were more influential[23].

In a study conducted by Sun et al., (2023), it was found that older pregnant women tend to be more active, but are also faced with challenges such as fatigue

and greater family responsibilities[24]. This suggests that while age may contribute to readiness to exercise, other factors should also be considered. In contrast, research by Garcia et al. (2021) showed that younger pregnant women (<20 years old) had higher rates of participation in pregnancy exercises, possibly due to fewer family responsibilities and more free time[12]. This suggests that age is not the only factor affecting exercise habits during pregnancy.

These results imply that age is not the only factor determining exercise behaviour during pregnancy. Therefore, pregnancy exercise programs need to be designed with maternal age characteristics in mind. For example, older pregnant women may be given additional support in the form of more flexible schedules, adjustments to exercise intensity, and more personalized guidance. In addition, an age group-based approach can be applied in the education and promotion of pregnancy exercises.

A limitation of this study is the non-significant statistical association between age and participation, which may be influenced by the limited sample size and uneven age distribution. Further research with a larger sample size and a more varied age distribution is needed to obtain a clearer picture. A qualitative approach is also recommended to explore the perceptions of mothers from different age groups towards pregnancy exercises, as well as the barriers they face.

Education

The analysis showed that 91.43% of respondents had a good level of education. Higher education is often associated with a better understanding of the benefits of pregnancy exercises, which should encourage active participation in physical activity during pregnancy. However, the negative coefficient indicating that higher education levels are associated with a lower likelihood of exercise raises questions regarding this dynamic. Research by Kim et al. (2022) found that more educated mothers tend to focus more on professional and family responsibilities, which may reduce the time and energy available for exercise [25]. This is in line with Role Strain theory, which states that individuals who have multiple roles (such as mother and worker) may experience stress that reduces their ability to participate in physical activity[26]. On the other hand, a study showed that mothers with higher education are often more health-conscious and more likely to seek information on appropriate physical activity during pregnancy. This suggests that, despite the challenges, higher education can also serve as an incentive to seek out more efficient ways of exercising[27].

This finding suggests that a one-size-fits-all approach is not always effective. Pregnancy exercise programs need to be designed to be more flexible in terms of time and location, for example, through online classes or self-paced modules that can be accessed by working mothers. Educational materials also need to be tailored to be relevant to a higher-educated group of mothers who may have expectations of more comprehensive and evidence-based information.

A limitation of these findings is that the type of work or professional field undertaken by mothers with higher education was not explored, which may affect their time availability. Therefore, further research is recommended to investigate the relationship between education, employment type, and exercise behaviour during pregnancy in more depth, for example by using a qualitative approach. Research could also examine the effectiveness of technology-based interventions in increasing the participation of highly educated mothers in pregnancy exercises.

Occupation

The results of the analysis showed that only 12.86% of pregnant women were working, which may reflect that non-working mothers have more time and flexibility to participate in pregnancy exercises. This is in line with the findings of Majewska & Szablewska (2025), who showed that non-working pregnant women tend to be more physically active because they are not bound by work demands that may limit their time and energy for exercise[28.] The weak positive correlation indicates that employment has little association with exercise habits during pregnancy, indicating that employment status does not significantly influence mothers' decisions to exercise. The very high p-value (0.997) indicates that this result is not statistically significant. This means that although there is a trend that non-working mothers are more likely to exercise, this relationship is not strong enough to be considered significant. Research by González-Cazorla et al. (2024) also supports these findings, where they found that working pregnant women often face challenges such as fatigue and lack of time, which can reduce their motivation to participate in physical activity. In contrast, non-working mothers have more time to plan and attend pregnancy exercise classes[29]. However, it is important to note that some working mothers may remain highly motivated to exercise but are hampered by inflexible schedules or lack of access to appropriate facilities. This indicates the need for an adaptive and inclusive approach in designing pregnancy exercise programs.

These findings signal that interventions in the form of pregnancy exercise programs need to consider the needs of working pregnant women. Community or health facility-based programs can provide exercise sessions with flexible schedules, including evenings or weekends. In addition, the use of technology such as video tutorials or pregnancy exercise apps can be an efficient alternative for working mothers to stay physically active.

One limitation of this analysis is that it did not further explore the type of work, working hours, and workload of working mothers. These factors are likely to influence their exercise behaviour. Further research using a qualitative or mixed-method approach is recommended to explore how working mothers interpret physical activity during pregnancy and what strategies can support their participation. On the other hand, it is also important to evaluate time- and technology-based interventions tailored to the needs of this segment.

Parity

The analysis showed that 44.29% of respondents were mothers of one child. Previous pregnancy experience may influence the decision to participate in pregnancy exercises, although it is not directly visible in this data. The positive coefficient indicates that the higher the parity (number of previous children), the lower the likelihood of mothers to exercise, which reflects the challenges faced by mothers in managing their time and energy. This is in line with research by Heinonen et al. (2016), who found that mothers with more children tend to experience greater fatigue, which may reduce motivation and opportunities to exercise[30].

Fatigue and greater responsibility in caring for existing children can be a deterrent for mothers to participate in physical activity [31]. Research by Kanning et al. (2020) also shows that mothers with more than one child often feel pressured by daily demands, which can reduce the time and energy available for exercise. This suggests that parity may serve as a barrier for mothers to engage in maternity exercises, even though they may realize the benefits[32].

However, the p-value (0.921) indicates that this relationship is not statistically significant. This means that although there is a trend that mothers with more children are less active, this result is not strong enough to be considered significant. Research by Garcia et al. (2021) showed that although parity may influence exercise habits, other factors such as social support and accessibility to sports facilities also play an important role[28]. Social support theory can be used to explain this phenomenon. According to this theory, support from family and friends can influence an individual's decision to participate in physical activity. Mothers who have strong social support may be better able to cope with the challenges associated with parity and are more likely to exercise. Conversely, a lack of support may exacerbate feelings of fatigue and responsibility, which in turn may reduce participation in maternity exercises[22].

These results provide important insights that mothers with high parity may need more specific support strategies. Pregnancy exercise programs need to provide time flexibility and childcare facilities during exercise sessions, so that mothers with more than one child can still participate. In addition, counselling that involves family members is also important so that mothers do not feel alone in facing the burden of caregiving.

A limitation of this analysis is that there is no detailed data on the age of the child, care assistance at home, or domestic workload that could affect the level of maternal participation. Therefore, further research using a qualitative approach is recommended to further explore how parity influences mothers' decision to participate in pregnancy exercises. Further studies could also examine the effectiveness of family support-based interventions in increasing multiparous mothers' participation.

Knowledge and Attitude

While 58.57% of respondents had a good level of knowledge, only 45.71% had a favourable attitude towards pregnancy exercises. This suggests that while knowledge is present, positive attitudes are not fully formed, which could be a focus area for further education. The strong positive coefficient indicates that knowledge about maternal health has a significant relationship with exercise habits. More knowledgeable mothers tend to be more active in maintaining their health during pregnancy, with a p-value of 0.040, indicating that this relationship is statistically significant. This suggests that more knowledgeable mothers tend to be more active in maintaining their health during pregnancy. The strong positive coefficient on the attitude variable indicates that a positive attitude towards exercise is strongly associated with exercise habits during pregnancy. Mothers who have a favourable attitude towards physical activity are more likely to exercise, with a p-value of 0.048, indicating that this relationship is significant. This suggests that a favourable attitude towards physical activity may encourage mothers to exercise. A study found that good knowledge about maternal health was not always associated with positive attitudes towards physical activity. They noted that factors such as personal experience, social support, and cultural norms may influence pregnant women's attitudes[28].

In contrast, research by Negash & Alelgn (2023) showed that pregnant women with good knowledge tended to be more physically active, but only if they also had support from family and community[33].

The Health Belief Model theory can be used to explain this phenomenon. This model states that individuals will be more likely to engage in healthy behaviours if they believe that they are at risk of health problems, believe that certain actions can reduce these risks, and feel that the benefits of these actions outweigh the barriers[21]. In this context, even if pregnant women know the benefits of pregnancy exercises, they may not feel sufficiently motivated or supported to participate.

This finding suggests that education about pregnancy exercises is not enough to emphasize factual information. Educational approaches need to be designed to build positive attitudes through participatory methods, such as group discussions, testimonials from women who have participated in pregnancy exercises, and empathic approaches from health workers. On the other hand, a supportive social environment also needs to be built so that mothers feel safe and motivated to participate in physical activity during pregnancy.

One of the limitations of this study is that it has not explored in depth the factors that influence the formation of maternal attitudes, such as previous experience, risk perception, and social influence. Therefore, further research using a qualitative approach is recommended to understand the psychosocial dynamics behind mothers' decisions to participate in pregnancy exercises. It is also recommended that intervention programs incorporate educational components and social support simultaneously to increase the effectiveness of behaviour change.

Family Support

The results of the analysis showed that 61.43% of respondents reported family support, which is an important factor in motivating pregnant women to stay active and engage in pregnancy exercises. Family support can include emotional encouragement, practical help, and provision of time to exercise, all of which contribute to increased participation in physical activity during pregnancy. The positive coefficient shows that support from family has a moderate relationship with exercise habits, indicating that the greater the support received, the higher the likelihood of pregnant women participating in pregnancy exercises. Research by Omidvar et al. (2018) supports these findings, suggesting that social support, especially from family members, plays an important role in increasing pregnant women's motivation and participation in physical activity[34]. In contrast, other studies have found that while family support can be motivating, there are also other factors, such as social pressure and expectations, that can influence a mother's decision to exercise. This suggests that family support is not always positive and can vary depending on family dynamics and social context[35].

Social Support Theory explains that social support can improve an individual's health and well-being by providing emotional and practical resources. In this context, support from family can help pregnant women feel more confident and motivated to participate in prenatal exercise, which in turn can improve maternal and fetal health[36].

This finding has direct implications for the design of effective pregnancy exercise programs. Programs that only target pregnant women without involving their families are at risk of not achieving optimal results. Therefore, pregnancy exercise programs should involve family members, especially husbands, in education and promotion sessions. Counselling materials also need to include information on the importance of the family's role in supporting the mother during pregnancy, as well as building a collaborative atmosphere at home.

One of the limitations of this study is that it did not further explain the type of support provided by the family and who provided the most dominant support (for example, husband, mother, or mother-in-law). Therefore, further research is recommended to explore the form and quality of family support in more detail, as well as its impact on the behaviour of pregnant women in various socio-cultural contexts. Family-based interventions could also be tested for their effectiveness in increasing pregnant women's participation in gymnastics, especially in areas with low participation rates.

Distance Travelled

The results of the analysis showed that only 14.29% of pregnant women reported easy access to the location of pregnancy exercises. This finding indicates that low accessibility can significantly hinder pregnant women's participation in physical activity. Limited access may include factors such as long distances, lack of transportation, or inadequate facilities, all of which may reduce mothers' motivation to exercise[37]. The positive coefficient indicates that travel experience has a moderate relationship with exercise habits, emphasizing the importance of accessibility. Research by Mollel et al. (2024) showed that pregnant women who have better access to sports facilities tend to be more physically active[38]. In contrast, research by Dahab and Sakellariou (2020) found that pregnant women living in areas with limited access to health and sports facilities were more likely not to participate in physical activity, which could negatively affect their health and the fetus[39]. The Social Ecological Model theory explains that environmental factors, including accessibility, play an important role in influencing individual health behaviours. In this context, if pregnant women do not have adequate access to a pregnancy exercise location, then even if they have knowledge and positive attitudes, they may not be able to participate in the activity[17,40].

These findings have important implications for pregnant exercise program providers and policymakers. Strategies are needed to improve physical access to pregnancy exercise services, especially for women living in remote or densely populated areas. Possible solutions include the use of Posyandu as an alternative venue for the exercises, or the development of an online-based pregnancy exercise platform. Local governments

can also facilitate transportation for pregnant women or provide incentives for cadres and health workers who actively organize these activities in the community.

One of the limitations of this study is that it does not explain in detail the types of access barriers experienced by respondents (for example, no vehicle, poor road conditions, or time constraints). Further research is recommended to qualitatively explore mothers' experiences regarding access to the location of pregnancy exercises, as well as analyze the effectiveness of various interventions aimed at improving accessibility. Further research could also examine the impact of using digital technology in expanding the reach of pregnancy classes to groups of women who are physically difficult to reach.

Facilities and Infrastructure, and Role of Health Workers

A total of 75.71% of respondents felt that health facilities and infrastructure were adequate, and 71.43% received support from health workers. Good infrastructure and professional support can increase the confidence of pregnant women to participate in pregnancy exercises. The strong positive coefficient indicates that facilities and infrastructure are strongly associated with pregnancy exercise habits. Mothers who have access to sports facilities are more likely to participate in pregnancy exercises. The p-value (0.011) indicates that mothers who have access to sports facilities are more likely to participate in physical activity. The strong positive coefficient on the role of health workers suggests that working mothers are more likely to exercise during pregnancy. This may be due to a more structured routine or support from health workers. The p-value (0.032) indicates that this relationship is significant. This suggests that professional support may influence the exercise habits of pregnant women. This is in line with the Social Ecological Model theory, which emphasizes the importance of the social and physical environment in influencing individual behaviour [41]. In this context, support from health workers and adequate facilities can increase the motivation of pregnant women to participate in pregnancy exercises[24].

Research by Mohammed Nawi (2022) found that pregnant women who had access to good health facilities and support from health workers were more likely to engage in physical activity[42]. In contrast, research by Sarikhani et al. (2024) suggests that a lack of professional support and inadequate infrastructure can be a barrier for pregnant women to exercise, which is in line with the findings in this analysis[43].

These results have direct implications for the planning and development of pregnancy exercise programs in health care facilities. Improving the quality and quantity of exercise facilities within the Health Center or Posyandu is a strategic step that needs to be prioritized. In addition, health workers such as midwives and health promotion officers need to be equipped with empathic communication skills and given a more active role in initiating and facilitating routine pregnancy exercise classes. Local governments and health offices also need to provide policy and budget support to strengthen facilities and human resources in implementing this program.

The limitation of this study is that it has not explored the type or quality of facilities referred to by respondents, as well as the concrete forms of support provided by health workers. Therefore, further research using a qualitative approach or observational study is recommended to evaluate the effectiveness of facilities and health worker interactions in increasing the participation of pregnant women. In addition, piloting facility-based interventions and active engagement of health workers could be a promising research strategy for designing more evidence-based policies.

CONCLUSION

Regression tests showed that knowledge, attitude, family support, infrastructure accessibility, and interaction with health workers had a significant influence on exercise habits during pregnancy. Meanwhile, age, education, occupation, parity, and distance traveled did not show a significant effect. These logistic regression results provide valuable insights into the factors that influence exercise activity during pregnancy. Understanding these relationships is important for designing effective intervention programs that support maternal and child health. Further research can be conducted to explore more deeply the factors that influence the decision to exercise during pregnancy.

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