

Perception of pregnant women about the practice of physical exercise

Percepção das gestantes sobre a prática de exercício físico

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ABSTRACT

The present research aims to analyze pregnant women's perception regarding physical exercise during pregnancy and the potential barriers to its practice. A descriptive qualitative study was conducted using semi-structured interviews as the data collection instrument to achieve this. Seventeen pregnant women participated in the study, comprising four in the first, five in the second, and eight in the third trimester of pregnancy. Data analysis was conducted following the principles of content analysis, focusing on the following categories: pregnancy classification, difficulties in practicing physical exercise, fears, and benefits. The results indicate that pregnant women perceive physical exercise during pregnancy as beneficial for the bodily changes during this period, providing both physical and psychological benefits. However, the majority of participants do not engage in this practice due to discomfort caused by pregnancy, lack of adequate medical guidance, and concerns about potential risks associated with physical exercise during this period.

Descriptors: motor activity, exercise, pregnancy

RESUMO

A presente pesquisa tem por objetivo analisar a percepção de gestantes sobre a prática do exercício físico durante a gestação e os possíveis empecilhos para a mesma. Para tanto, foi realizada uma pesquisa qualitativa do tipo descritiva, utilizando como instrumento de coleta a entrevista semiestruturada. Participaram da pesquisa 17 gestantes, sendo quatro no primeiro trimestre, cinco no segundo trimestre e oito do terceiro trimestre de gestação. A análise de dados foi realizada utilizando os princípios da análise de conteúdo, com foco nas seguintes categorias: classificação da gravidez, dificuldades na prática de exercício físico, receios e benefícios. Os resultados indicam que gestantes percebem a prática de exercício físico durante a gestação como benéfica para as mudanças corporais decorrentes desse período, proporcionando tanto benefícios físicos quanto psicológicos. No entanto, a maioria das entrevistadas não adota essa prática devido a desconfortos causados pela gravidez, falta de orientação médica adequada e preocupações com os potenciais riscos associados ao exercício físico nesse período.

Descritores: atividade motora, exercício, gestação

INTRODUCTION

Physical exercise positively contributes to a healthy lifestyle, with physical benefits and psychological and social advantages.^{1–4} Physical exercise is defined as a subclass of

physical activity characterized as a systematic, supervised practice carried out to maintain or improve physical fitness and/or health.⁴⁵

According to Menezes et al.¹, physical exercise, when practiced regularly and under the guidance of a trained and qualified professional, is essential for maintaining health, improving quality of life, and enhancing the prevention of diseases associated with physical inactivity and sedentary behavior. Additionally, physical exercise is associated with reduced levels of anxiety, depression, and stress, as well as improvements in self-perception and self-control mechanisms. This leads to better emotional regulation, increased effectiveness in performing daily tasks, a positive body image, improved mood, and enhanced social interaction.²

Most individuals, including those categorized as special populations, can practice physical exercise, provided there are no contraindications. The term "special populations" refers to specific groups of people who may present, among other characteristics, diseases (psychiatric, neurological, metabolic, cardiovascular, pulmonary, urinary, musculoskeletal disorders, cancer, or chemical dependency after discharge from healthcare services), conditions (post-surgery, injuries, disabilities), or are in life stages and developmental phases with distinct physical, physiological, and behavioral characteristics (childhood, pregnancy, postpartum, menopause, older age).⁶

In the case of pregnant women, the focus of this research is that numerous benefits can be achieved through regular physical exercise. The Ministry of Health has recommended its practice through the Pregnancy Handbook⁷ as it is considered safe and promotes health for both the mother and fetus. It also improves the quality of life of women during pregnancy, enhances metabolic control, maintains glucose levels, reduces plasma fats, decreases the risk of gestational diabetes, helps manage weight, shortens hospitalization time, reduces the risk of preterm birth and obstetric complications, lowers the incidence of cesarean deliveries, improves physical conditioning, and facilitates better postpartum recovery.³⁴⁸⁹

The gestational period has an average duration of 40 weeks, divided into three trimesters: 13 weeks correspond to the first trimester, 14 and 26 weeks to the second trimester, and above 27 weeks to the third trimester.¹⁰ Different care and guidance must be provided to pregnant women throughout this period, including recommendations regarding physical exercise. Methods and strategies should be defined to ensure that pregnant women receive all recommended guidelines and have the opportunity to follow them through shared prenatal care and educational initiatives. These measures aim to clarify doubts and insecurities, contributing to a low-risk pregnancy for both the woman and the child.⁴

Currently, pregnant women are increasingly aware of the need to engage in regular physical exercise during pregnancy due to its numerous benefits.¹¹ However, for a long time, exercise

was perceived as a negative factor for both the mother and fetal development and pregnant women were advised to reduce or cease activities, especially during the later stages of pregnancy, as it was believed to increase the risk of preterm birth.¹²

This idea is still supported in various contexts, traditions, and medical recommendations. Older studies, such as the one by Pigatto et al.¹³, suggested that exercise could cause harmful hemodynamic changes in the fetus. Consequently, some obstetricians, as a precaution, do not recommend exercise for pregnant women, particularly for those who were sedentary before pregnancy, advising them to avoid starting an exercise program after conception.¹⁴ This has led many pregnant women to fear continuing their exercise routines or beginning a program during pregnancy.

It is crucial to emphasize that before starting any physical exercise, pregnant women should undergo a medical evaluation to obtain clearance and seek guidance from a qualified physical education professional who can design a program tailored to their needs. Necessary adaptations should be made to avoid overexertion, which could lead to complications.¹⁵ Pregnant women are recommended to perform at least 150 minutes of physical exercise per week, at least three sessions, combining aerobic, resistance, and flexibility exercises. They can start or maintain regular exercise at light or moderate intensity.⁹¹⁶

Considering that physical exercise during pregnancy is beneficial when practiced according to appropriate guidelines and that few studies on this topic exist, especially regarding pregnant women's perceptions of exercise^{17–19}, this research is significant. It provides physical education professionals with greater scientific support to prescribe training programs for this population with autonomy and safety.

In light of the above, this study aims to analyze pregnant women's perceptions of physical exercise during pregnancy and the possible barriers to its practice.

METHODS

This research adopted a qualitative descriptive method. According to Guerra,²⁰ qualitative research is characterized by its empirical approach to the object of study, starting from a pre-established theoretical-methodological framework. Data collection instruments are then prepared, and when well-designed and applied, they provide valuable information to the researcher. In a qualitative approach, the researcher aims to deepen the understanding of the phenomena studied, including the actions of individuals, groups, or organizations within their social environment or context. This interpretation is based on the subjects' perspective, without concern for numerical representativeness, statistical generalizations, or linear cause-

and-effect relationships.²⁰ The descriptive aspect, on the other hand, seeks to describe the characteristics of a given population or phenomenon or establish relationships between variables. This type of research studies group characteristics and gathers population opinions, attitudes, and beliefs.²¹

The population consisted of pregnant women attending the *Centro de Atendimento Maternati* in Maringá, Paraná, Brazil. The *Maternati* center comprises professionals who believe that pregnancy, childbirth, and the first months of a baby's life are crucial for the mother, couple, and entire family. It is a space for interaction and awareness for pregnant women and their partners, offering courses with varying costs (*Maternati*, n.d.). This center was selected because it has a significant number of pregnant women with diverse ages and gestational stages.

Initially, a data collection day was scheduled with the professional responsible, and a Saturday in February 2023 was chosen, during which a discussion group with the pregnant women was held. All pregnant women aged 18 to 40 present at the proposed activity were invited to form the sample, regardless of whether it was their first pregnancy. All who agreed to participate were included in the research after signing the Free and Informed Consent Form.

Thus, the sample consisted of 17 pregnant women (identified as G1 to G17 to maintain confidentiality). Among them, four were in the first trimester (G1: 28 years old; G2: 32 years old; G3: 26 years old; G4: 38 years old), five in the second trimester (G5: 33 years old; G6: 36 years old; G7: 33 years old; G8: 40 years old; G9: 29 years old), and eight in the third trimester (G10: 18 years old; G11: 36 years old; G12: 28 years old; G13: 32 years old; G14: 24 years old; G15: 27 years old; G16: 30 years old; G17: 35 years old). Data were collected through semi-structured interviews, defined as meetings to converse and exchange information between the interviewer and interviewee. Semi-structured interviews have a script of topics or questions, and the interviewer can ask additional questions to gather more detailed information on the topics of interest if needed.²²

The author formulated the questions based on the research objectives, following specific categories: pre-pregnancy physical exercise, physical exercise during pregnancy, physical concerns, barriers, facilitators, medical guidance and support, body image, and pregnancy. The questions underwent a content validation process involving ten professors with master's and doctoral degrees and specialists in the field, who evaluated each question regarding clarity, pertinence, and relevance.

The data were analyzed using thematic categorical content analysis.²³ This method investigates the core meanings within communication, where their presence or frequency

signifies something relevant to the analytical objective. It adopts an interpretive approach rather than statistical inferences. The process involves breaking the text into units and categories for subsequent analytical regrouping. It includes two stages: inventory or isolation of elements and classification or organization of messages based on them. In the current research, all interviews were audio-recorded and transcribed for individual and collective analysis. Responses were categorized based on similarities to identify the most frequently reported themes, thus addressing the research objectives.

Finally, this study was submitted to the Permanent Ethics Committee (CEP) of the State University of Maringá under CAAE 65050122.4.0000.0104 and was approved under opinion number 5.835.016.

RESULTS AND DISCUSSION

The results will be presented at this stage, allowing for an analysis of pregnant women's perceptions of physical exercise during pregnancy and the possible barriers to its practice.

When participants were asked about the main changes they noticed in their bodies during pregnancy, the most commonly reported were an increase in abdominal size ($f = 10$) and breast size ($f = 5$). Pregnant women in their second and third trimesters additionally reported back pain ($f = 6$), hip pain ($f = 5$), and swelling ($f = 3$). These reported changes are common during pregnancy, as noted by Alves and Bezerra.²⁴ During pregnancy, women undergo hormonal, physical, and psychological transformations that can profoundly affect their daily lives. These changes are associated with increased weight and breast and abdominal size. In the third trimester, more significant changes occur as the body prepares for childbirth.

Simões' study²⁵ highlights that low back pain affects 50% of pregnant women, especially in the third trimester, impairing mobility and the ability to perform daily activities. The study emphasizes the importance of muscle-strengthening and relaxation exercises at least thrice weekly to improve pain significantly. Physical exercise induces biomechanical adaptations, such as maintaining spinal posture and controlling and preventing stress and pain in the lumbar and pelvic regions, thereby improving physical and mental balance, promoting well-being, and enhancing quality of life.³

The shift in the center of gravity due to factors such as the position of the uterus in the abdominal cavity, weight gain, and increased breast size accentuates lumbar lordosis, causing imbalances and postural changes. These disparities can lead to discomforts such as pelvic pain, which results from musculoskeletal disorders affecting the pelvis. Pelvic pain is more frequent in the last trimester of pregnancy and tends to intensify as gestational weeks

progress. About 20% of pregnant women experience these types of pelvic and lumbar complications during pregnancy.²⁶

When identifying whether any of the interview participants were considered to have a high-risk pregnancy, it was found that four out of the 17 participants were in this category: one in the first trimester, one in the second trimester, and two in the third trimester. Among the causes, three participants had hypertension, and one had previously experienced a miscarriage due to an unidentified gestational problem during her first pregnancy. Only two of these high-risk participants received medical guidance regarding physical activity: one who had experienced a prior miscarriage was advised to maintain absolute rest, and another with hypertension was advised to seek physical activity. None of the high-risk participants practiced physical exercise, aligning with findings by Miranda²⁷, whose study showed that high-risk pregnant women are more likely to adopt sedentary lifestyles during pregnancy, with energy expenditure limited to domestic activities.

This is a noteworthy finding, as indicated by the study of Rosa et al.²⁸, which suggests that exercise can contribute to blood pressure control and prevent the progression to more severe conditions such as preeclampsia and eclampsia. The authors propose that aquatic physical exercise can be particularly beneficial, as it helps reduce baseline physiological values such as blood pressure and heart rate while also serving as a preventive measure against gestational diabetes.

Coser and Fonseca²⁹ further emphasize that low-risk pregnant women should engage in physical exercise during pregnancy, and healthcare professionals, especially obstetricians, should encourage their patients to continue or initiate exercise during this period. However, this recommendation is not consistently practiced. It is common for medical advice to suggest discontinuing physical exercise, even for women who were participating in professionally supervised training before their pregnancy.

This gap in medical recommendations for physical exercise was confirmed in the interviews, where 10 participants reported receiving no medical guidance regarding exercise. At the same time, only four were encouraged to engage in physical activity. Meanwhile, three participants were advised against exercising despite not being considered high-risk pregnancies.

This scenario reflects a certain hesitation among medical professionals regarding unsupervised physical exercise, highlighting the need for greater investment in the training and qualification of physical education professionals. These professionals must acquire specific competencies and skills related to pregnancy, regardless of their age or length of professional experience, yet the topic remains underexplored in undergraduate programs.³⁰

Increasing the number of qualified professionals to work with this population is crucial to demonstrating the benefits of physical activity during pregnancy.

Despite the lack of frequent medical encouragement, most pregnant women reported believing that exercise could positively influence body changes resulting from pregnancy (f = 10). This belief aligns with a paradigm shift over the past three decades, moving from previous recommendations of rest and cessation of activities to emphasizing exercise during pregnancy, as promoted by media outlets.³¹

Seven participants identified barriers to engaging in physical exercise, including physiological issues such as pregnancy-related pain and abdominal size (f = 3), difficulty breathing (f = 1), and psychological factors like lack of motivation, fear, and fatigue (f = 1). These barriers are common symptoms resulting from pregnancy, as a woman's body undergoes various physiological, biochemical, and anatomical changes to adapt to fetal development.³

Pregnant women in their first trimester reported a more significant number of barriers to physical exercise, an average of four. Those in the second trimester reported fewer barriers, averaging two, and most women in the third trimester did not report any barriers. This suggests that pregnant women become more confident in their bodies and the pregnancy process as the trimester progresses.

When asked about engaging in physical exercise before pregnancy, seven participants reported previous activity, citing modalities such as weight training, functional training, jump, Pilates, and volleyball. However, only one of these women continued exercising during pregnancy, while three previously inactive women began exercising. Among these four, all practiced Pilates, and one also engaged in water aerobics; none were classified as having a high-risk pregnancy. Of those who discontinued exercise, two did so following medical advice, while four made this decision due to discomforts related to pregnancy.

Regarding concerns about physical exercise, 12 participants expressed no fears, while five indicated concerns about potential risks to the baby, such as miscarriage or preterm birth. Despite media messages promoting the safety and benefits of physical exercise during pregnancy, there is a lack of knowledge among pregnant women about the subject. Healthcare professionals, especially physicians and physical education specialists, should provide this knowledge. Physicians must evaluate whether a pregnant woman has any contraindications or if she should seek guidance from a professional. Physical education professionals, in turn, must tailor exercise recommendations to each woman's individual needs and the unique demands of the gestational period. This guidance is crucial for both active and sedentary women.³¹

When asked about their motivations for practicing or not practicing physical exercise during pregnancy, reasons for not practicing included medical prohibition (f = 3), fatigue or tiredness caused by weight gain or abdominal size (f = 3), fear of miscarriage (f = 1), dislike of exercise (f = 1), anemia (f = 1), and lack of time (f = 1). These findings align with previous data. Motivations for exercising included aiding in childbirth (f = 2), reducing leg swelling (f = 1), and alleviating sciatic nerve pain (f = 1). Exercise is known to help with weight management, improve cardiovascular function, alleviate pain by strengthening muscles, and assist in childbirth preparation.³

All participants acknowledged the psychological benefits associated with exercise during pregnancy. The majority believed that physical exercise could provide psychological advantages (f = 15), such as stress relief (f = 6), anxiety reduction (f = 2), and psychological well-being (f = 7). The literature confirms that exercise helps address psychological challenges related to pregnancy, alleviating tension, stress, and potential depression.¹¹

In conclusion, based on the participants' responses, it is evident that most believe in the physical and psychological benefits of physical exercise during pregnancy. However, the lack of guidance, pregnancy-related discomforts, and fears contribute to low adherence to exercise practices.

CONCLUSION

This study aimed to understand pregnant women's perspectives on physical exercise and provide insights to help physical education professionals gain greater scientific support in prescribing training programs for this population.

The findings revealed that pregnant women perceive physical exercise during pregnancy as contributing positively to the bodily changes associated with pregnancy, providing both physical and psychological benefits. However, most do not engage in physical activity due to pregnancy-related discomforts, lack of medical guidance, and fears regarding exercise during this period.

Regarding the challenges reported by pregnant women in practicing physical exercise, it was found that these challenges do not differ based on pregnancy classification. Both women classified as having high-risk pregnancies, and those with healthy pregnancies reported similar difficulties, which were associated with pregnancy symptoms and concerns. It was noted that the gestational period influences their perception of barriers to exercise. In the first trimester, women reported more obstacles as their bodies adapted to the new condition. In the second trimester, they had become more accustomed to their physical state and reported

fewer barriers. In the third trimester, their focus shifted to childbirth, with fewer concerns about engaging in physical activity.

Given these findings, it is essential to improve the training of physical education professionals so they can better motivate this population to engage in physical exercise. Further studies on this topic are necessary to provide the medical community with greater support in guiding pregnant women toward suitable exercise practices that align with their needs. Research should also focus on providing technical and practical knowledge to enable physical education professionals to work with this population with greater safety and effectiveness.

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