

Perception of Antenatal Physical Therapy Care among Elite-Class Pregnant Women of Lahore: A Socioeconomic Perspective

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ABSTRACT

Background: Perception shapes how individuals form ideas and beliefs. Physical therapy, a vital multidisciplinary approach, significantly enhances quality of life by addressing various health aspects. In antenatal care, physiotherapists are essential in assisting women through the physical and emotional challenges of pregnancy and labor. **Objective:** To evaluate the perception of antenatal physical therapy care among elite-class pregnant women and to explore how socioeconomic factors influence their access to them. **Methods:** Using non-probability convenient sampling, a cross-sectional descriptive study was carried out on 100 adult women (ages 19-44) in normal singleton pregnancies. Participants were required to understand English and were excluded if they had high-risk pregnancies. A standardized questionnaire with an interclass coefficient of 0.945 assessed their perceptions. **Results:** Out of 100 participants, 79% were aware of physiotherapy, but only 47% knew about antenatal exercises. While 52% had good knowledge of physiotherapy's role in antenatal care, 60% showed a positive attitude. Despite 85% having access to private healthcare, only 40% had visited a physiotherapist. Additionally, 65% stated that income influences their decision to seek care, and 50% would recommend physiotherapy, though 25% were unsure. **Conclusion:** The study reveals 52% of elite-class pregnant women in Lahore have good knowledge and 60% hold a positive attitude toward antenatal physical therapy, gaps in practice persist. Despite 85% having access to private healthcare, many have not sought physiotherapy care. Socioeconomic factors, particularly income, strongly influence access, emphasizing the need for better education and promotion of antenatal physiotherapy.

Keywords: : Perception, Prenatal care, Physical therapy, Pregnant women, Socioeconomic factors

INTRODUCTION

An essential component of maternal health is antenatal care (ANC), designed to provide comprehensive support throughout pregnancy, it encompasses medical, educational, and emotional support intended to promote a healthy pregnancy and favorable outcomes for both mother and baby¹. ANC is essential for monitoring the health of pregnant women, screening for potential risks, and managing any complications that may arise. Additionally, it is essential to empower women by educating them about health issues and equipping them with the knowledge and tools needed to navigate their pregnancy journey successfully. Global guidelines emphasize the importance of

regular ANC visits to reduce the risks of maternal and perinatal mortality. One often underutilized but critical component of ANC is physical therapy, which can significantly improve the quality of life during pregnancy by addressing common physical challenges and promoting maternal well-being^{2,3}.

In addition to traditional medical care, physical therapy has emerged as a significant but often underutilized component of ANC. Physical therapy in obstetrics and gynecology offers a range of benefits for pregnant women during the prenatal, antenatal, and postnatal periods. Physiotherapists specializing in maternal care focus on preventing complications during and after childbirth by improving the mother's physical fitness and educating her about the physiological

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changes that occur during pregnancy⁴. They provide interventions such as prenatal, antenatal, and postnatal exercises, posture training, and pelvic floor muscle exercises. Structured antenatal exercise programs have been shown to enhance cardiovascular endurance, reduce musculoskeletal discomfort, and promote mental well-being, contributing to a more positive pregnancy experience. These interventions also help reduce pregnancy-related complications like lower back pain, urinary incontinence, and gestational diabetes, while preparing women for the physical and emotional challenges of pregnancy, labor, and postpartum recovery^{5,6}.

Structured antenatal exercise programs are particularly beneficial, as they enhance cardiovascular endurance, reduce musculoskeletal discomfort, and promote mental well-being. These benefits contribute to a more positive pregnancy experience and help women manage the physical and emotional stresses of pregnancy. For instance, incontinence is a frequent problem during and after pregnancy that is often prevented and treated with pelvic floor muscle training (PFMT). By strengthening the pelvic floor muscles, PFMT helps prevent incontinence and other related disorders while also supporting the pelvic organs⁷.

Furthermore, interventions such as aquatic exercises and antenatal breathing techniques have shown promising results in improving glucose tolerance, reducing gestational depression, and lowering the likelihood of cesarean deliveries. These practices not only address specific physical issues but also enhance overall maternal health, underscoring the multifaceted benefits of incorporating physical therapy into ANC. Additionally, exercise lowers the risk of pregnancy-related hypertension diseases and gestational diabetes mellitus. Stabilizing and stretching exercises further alleviate lower back pain during pregnancy. Particularly, aquatic exercises support healthy habits, avoid excessive weight gain, enhance body image, and lower medical leave from back pain⁸.

Despite the clear benefits, many pregnant women face significant barriers when it comes to engaging in exercise during pregnancy⁹. Common obstacles include pregnancy symptoms, limited time availability, concerns about safety, and lack of motivation. Additionally, some women perceive themselves as already being active, reducing their interest in formal exercise programs. At the

interpersonal level, lack of guidance, information, and social support further hampers participation, while environmental factors like adverse weather and limited resources present additional challenges at the organizational and policy levels^{10,11}.

Antenatal physical therapy plays a crucial role in managing pregnancy-related discomforts and improving maternal health outcomes. Despite the availability of advanced healthcare services in private facilities, there is a lack of awareness and utilization of antenatal physical therapy in elite-class pregnant women of Lahore. Understanding the perceptions and socioeconomic factors influencing their access to and knowledge of such care can help bridge the gap between available resources and their optimal use. The purpose of this study was to evaluate the awareness, knowledge, and attitudes of this demographic, identifying barriers that may prevent them from benefiting fully from antenatal physical therapy care.

METHODOLOGY

This cross-sectional descriptive study was carried out over six months, from July 2023 to December 2023. Ethical approval for this study was obtained from the Ethical Research Committee (ERC) of University of Biological and Applied Sciences under reference number DPT/ERB/16 on 5-10-2023. A non-probability convenience sampling method was employed to select participants from various hospitals in Lahore, including National Hospital, CMH Hospital, Hameed Latif Hospital, Surgimed Hospital, Mid-City Hospital, Fauji Foundation, Sheikh Zaid Hospital, Fatima Memorial Hospital, Omer Hospital, and Shalamar Hospital. The sample size was set at 100 participants, determined through a census method to capture a broad and relevant sample of the target population¹². Adult women between the ages of 19 to 44 years who were pregnant with a normal singleton pregnancy and proficient in English were included in this study. Participants could be in any trimester. However, individuals with specific conditions such as abortions/miscarriages, hypertension, placenta previa, incompetent cervix, gestational diabetes, and amniotic fluid loss were excluded. These inclusion and exclusion criteria ensured the selection of a relevant participant group, focusing on women with uncomplicated pregnancies.

A structured questionnaire was utilized for data collection, consisting of three sections of closed-ended questions. The first section included ten

questions designed to evaluate the awareness of expectant women regarding physiotherapy, antenatal exercises, and different types of exercise. The second section focused on various exercises offered during antenatal care and the third section focused on participants' perspectives on the role of physical therapy in prenatal care. The interclass coefficient of the questionnaire was 0.945¹³.

Statistical analysis

The SPSS version 26 was utilized to evaluate the gathered data. Whereas categorical variables were presented as frequencies and percentages, continuous variables were represented as means and standard deviations. Data presentation included frequency tables and group charts to effectively illustrate the findings.

RESULTS

Table 1 presents the demographic characteristics of the participants. The age of participants ranged from 19 to 43 years, with a mean age of 27.9 years (SD \pm 5.24). The majority (70%) were graduates or postgraduates, while 26% had completed an intermediate degree, and 4% held a high school certificate. In terms of employment, 64% were unemployed, whereas 22% were professionals and 14% were semiprofessionals. Regarding parity, 62% were multiparous, while 38% were primiparous.

Table 2 presents the findings related to the utilization of private healthcare and awareness of physiotherapy among participants. It shows that 85% have access to private healthcare, but only 40% have visited a physiotherapist, indicating a significant underutilization of services. Furthermore, 50% of participants were uncertain whether private healthcare provides better information on antenatal care, while only 30% agreed. Income was identified as a factor influencing the decision to seek antenatal physiotherapy by 65% of respondents. When asked about recommending physiotherapy, 50% would do so based on their experience, while 25% were unsure. Regarding awareness, the majority of participants (79%) were familiar with physiotherapy. Of those, 50% associated it with exercise, while 38% understood it to involve multiple modalities, such as massage and electrical stimulation. Awareness of antenatal exercises was present in 47% of participants, with healthcare centers (17%), media (16%), and family/friends (14%) being the main sources of information. Gynecologists were viewed as the most suitable guide for exercise during pregnancy by 55% of participants, followed by physiotherapists (29%). The data also reveals varying levels of awareness about specific antenatal exercises, with the highest awareness for relaxation and breathing exercises (73%) and back care exercises (68%). Pelvic floor exercises had the lowest awareness (41%), while awareness of aerobics (45%) and abdominal

Table 1. Demographic Characteristics of Participants

Variables	Descriptive statistics	
Age (years)	Mean \pm Std.	27.9 \pm 5.24
	Construct	n (%)
Education Level	High School	4 (4%)
	Intermediate	26 (26%)
	Graduate/Postgraduate	70 (70%)
Employment Status	Unemployed	64 (64%)
	Semi-professional	14 (14%)
	Professional	22 (22%)
Parity	Primiparous	38 (38%)
	Multiparous	62 (62%)

exercises (56%) also reflect the need for greater educational efforts on these topics among pregnant women.

Table 3 presents participants' knowledge and attitudes toward antenatal physiotherapy. Most participants recognized the benefits of prenatal exercise, with 60% acknowledging its role in reducing back pain, 50% in

Table 2. Socioeconomic factors, awareness of physiotherapy & antenatal exercises

Variables	Responses	n	(%)
Socioeconomic Factors			
Access to private healthcare facilities	Yes	85	85%
	No	15	15%
Ever visited a physiotherapist for antenatal care	Yes	40	40%
	No	60	60%
Are private healthcare services more informative about antenatal physiotherapy?	Yes	30	30%
	No	20	20%
	Not sure	50	50%
Does income influence the decision to seek antenatal physiotherapy?	Yes	65	65%
	No	25	25%
	Not sure	10	10%
Would you recommend antenatal physiotherapy based on your experience?	Yes	50	50%
	No	25	25%
	Not sure	25	25%
Awareness of Physiotherapy & Antenatal Exercises			
Awareness of physiotherapy	Yes	79	79%
	No	21	21%
Perception of physiotherapy	Exercise	50	50%
	Massage	8	8%
	Electrical stimulation	4	4%
	All of the above	38	38%
Awareness of antenatal exercises	Yes	47	47%

Variables	Variables	n	(%)
Source of antenatal exercise awareness	No	53	53%
	Family/Friend	14	14%
	Media	16	16%
	Healthcare centers	17	17%
	Other	8	8%
	No response	45	45%
Who is the most qualified person to advise on pregnancy exercises?	Physiotherapist	29	29%
	Gynecologist	55	55%
	Self	10	10%
	Other	6	6%
Engagement in antenatal exercises	Aerobics Exercises	Yes	45%
		No	55%
	Back Exercises	Care Yes	68%
		No	32%
	Pelvic Floor Exercises	Yes	41%
		No	59%
	Abdominal Exercises	Yes	56%
		No	44%
	Relaxation/ Breathing Exercises	Yes	73%
		No	27%

preventing excessive weight gain, 75% in increasing energy and stamina, 61% in easing labor and delivery, and 82% in promoting fetal health. However, awareness of its role in managing pregnancy-related conditions was lower, as only 30% knew about its effectiveness in preventing urinary incontinence and 35% in reducing

gestational diabetes. Regarding attitudes toward antenatal physiotherapy, 51% of participants agreed that physiotherapy is beneficial during pregnancy, while 77% believed exercises should be performed under professional supervision. Additionally, 78% thought it helped postpartum recovery, 50%

believed it aided in regaining pre-pregnancy shape, and 61% recognized its role in reducing pregnancy-related complications. However, 40% believed that exercise regimens should be tailored to individual needs.

Table 3. Participants' knowledge and attitude towards antenatal physical therapy.

Questions	Disagree n (%)	Not sure n (%)	Agree n (%)
Knowledge			
Reduces risk of back pain	15 (15%)	25 (25%)	60 (60%)
Prevents excessive weight gain	12 (12%)	38 (38%)	50 (50%)
Helps to cope with labor and delivery	22 (22%)	17 (17%)	61 (61%)
Reduces risk of gestational diabetes	18 (18%)	47 (47%)	35 (35%)
Increases energy and stamina	7 (7%)	18 (18%)	75 (75%)
Reduces risk of urinary incontinence	15 (15%)	55 (55%)	30 (30%)
Causes high blood pressure	39 (39%)	39 (39%)	22 (22%)
Benefits general health & development of the baby	1 (1%)	17 (17%)	82 (82%)
Attitude			
Is physical therapy beneficial for antenatal care?	7 (7%)	42 (42%)	51 (51%)
Is it crucial to exercise under the supervision of medical professionals?	10 (10%)	13 (13%)	77 (77%)
Do you think physical activity can lessen pregnancy-related issues?	5 (5%)	34 (34%)	61 (61%)
Do you think exercising aids in the healing process after giving birth?	5 (5%)	45 (45%)	50 (50%)
Do you think working out helps you get back to your shape?	2 (2%)	20 (20%)	78 (78%)
Do you think different pregnant women should follow different workout regimens?	15 (15%)	45 (45%)	40 (40%)
Do you recommend physical therapy during pregnancy?	5 (5%)	30 (30%)	65 (65%)

The results show that 52% of respondents had good knowledge about part of physical therapy in antenatal care, while 48% had poor knowledge. In terms of attitude, 60% of participants displayed an optimistic attitude toward the role of physical therapy during pregnancy, while 40% had a less favorable attitude as shown in Table 4.

Table 4. Perception of Participants

Variables	Poor	Good
Knowledge	48%	52%
Attitude	40%	60%

DISCUSSION

Antenatal physical therapy has become a crucial component of maternal healthcare, offering benefits that can improve both prenatal outcomes and overall well-being. In this study, the perception of antenatal physical therapy care among elite-class pregnant women in Lahore was assessed, with a focus on how socioeconomic factors influence their access to these services. Our findings reveal that while a positive attitude toward antenatal physical therapy is common, there is a significant gap in actual awareness and utilization; only about half of the participants recognized its full benefits despite their favorable views.

Bolarinde *et al.* (2018) did a cross-sectional study to evaluate the perceptions and knowledge of female healthcare workers in a government tertiary health institution on the role of physical therapy in prenatal and postnatal care¹⁴. According to the survey, 86.57% of individuals exercised during their pregnancies, with walking being the most popular activity. Furthermore, 95% of respondents demonstrated adequate knowledge of physiotherapy, and 80% recognized its relevance in both antenatal and postnatal care. Conversely, the current study found that just 52% of high-end expectant mothers knew about the importance of physical therapy in antenatal care, while 60% had a positive attitude toward its importance. The discrepancy may be attributed to the specific focus of the current study on elite-class pregnant women, unlike the 2018 study, which involved a broader range of healthcare professionals, including both pregnant and non-pregnant women from various backgrounds.

However, Mbada *et al.* (2014) did a cross-sectional study to evaluate Nigerian pregnant women's attitudes and knowledge of antenatal exercises¹⁵. The study found that a significant percentage of participants were familiar with antenatal exercises, with 59.8% aware of relaxation and breathing exercises, and 51.3% aware of the importance of muscle-strengthening activities and back care. Additionally, 75.9% of participants recognized that these exercises could prevent back pain, while 69.1% believed they could help control weight gain. Despite this awareness, 15.8% expressed concerns about inadequate knowledge of physical activity (83.3%) and fatigue (70.0%). In the current study, 47% of elite pregnant women were aware of antenatal exercises, with 73% knowing about breathing and

relaxation exercises, and 68% familiar with back care exercises. Additionally, 50% believed exercise could prevent weight gain, and 60% thought it could help with back pain.

Belache *et al.* (2021) conducted a cross-sectional study to evaluate the levels of prenatal physical exercise and related variables in pregnant women in Hawassa, Ethiopia¹⁶. According to the study, 25.5% of expectant mothers exercised enough; while 43.7% had a good understanding of antenatal exercise. Women exposed to mass media, with educated husbands, adequate knowledge, and access to supportive facilities were more likely to exercise regularly. Conversely, the present study revealed that 52% of women were aware of the role physical therapy plays in antenatal care, and 60% had a positive attitude toward its role. However, it did not assess the percentage of women practicing antenatal exercises or the influence of the husband's education level on women's knowledge and attitudes.

In a systematic review conducted by Masoud *et al.* (2020) to assess how prenatal exercise affects the length of the birth. The length of the second stage of labor was found to be significantly shortened by exercise¹⁷. The length of the first stage of labor, the incidence of perineal lacerations, and the requirement for analgesia, however, did not differ significantly. The goal of the current study was to evaluate pregnant women's attitudes and knowledge regarding antenatal exercise. The findings showed that 61% of women agreed that exercises aid in labor and delivery, while 82% believed that it benefits the healthy development of the baby. Additionally, 50% of participants believed that exercise helps in post-delivery recovery. However, the current study did not provide specific duration values regarding how much exercise reduces the duration of labor.

Godsday *et al.* (2022) carried out a cross-sectional study where they found that 53% had good knowledge, 44% had a positive attitude, and only 10% practiced antenatal exercises well. Age, BMI, trimester, number of children, and education level were all related to the participant's knowledge, attitude, and repetition of antenatal exercises. Knowledge and attitude were significantly linked, but practice didn't show a significant association¹⁸. In the current study, it was found that 52% of women knew about physical therapy in antenatal care, and 60% had a positive attitude towards it. The current study didn't find any connection between

education level or the number of children and their attitude and knowledge regarding physical therapy in antenatal care.

In a cross-sectional study conducted by Nkhata *et al.* (2015) to gather data on exercise habits among pregnant patients at the University Teaching Hospital (UTH) in Lusaka, Zambia¹⁹. Most of the women (74%) didn't have enough knowledge about exercise and the ideal exercises. The study found that education level didn't affect exercise practice, but cultural background did. Also, the more pregnancies a woman had, the more likely she was to exercise during pregnancy. However, the current study did not find any associations between the variables examined.

Edinah Sabiri *et al.* (2018) carried out a cross-sectional study they found that most of the participants were aged between 20-24 years²⁰. Surprisingly, 17% of the participants didn't know that exercise was beneficial during pregnancy, even though a majority had been active in sports during school. The findings also demonstrated a high correlation between awareness about exercise during pregnancy and educational attainment. This emphasizes how crucial education is to a safe pregnancy. In this current study, it was found that women had some knowledge regarding the importance of physical therapy in antenatal care. The present study, however, found no correlation between education level and its effect on pregnant women's awareness of exercise.

The study faced limitations, such as a small sample size and participant hesitancy in providing data. Additionally, it was limited to a few settings in Lahore, which reduces its generalizability. Time constraints also affected the study's overall effectiveness. Future research should involve larger sample sizes with improved methodologies. Expanding the study to cover all provinces of Pakistan would enhance its validity.

CONCLUSION

This study demonstrates that although elite-class pregnant women in Lahore are well-informed and hold positive views about antenatal physical therapy, many do not translate this awareness into practice. The gap between understanding and actual use is notably influenced by socioeconomic factors, particularly income. These insights underscore the need for targeted educational initiatives and proactive promotion within private healthcare settings to bridge this gap and enhance maternal care outcomes.

Ethical Statement: This study has been approved by the Ethical Research Committee (ERC) of Lahore College of Physical Therapy under reference number DPT/ERB/16 on 5-10-2023.

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