



# KNOWLEDGE, AWARENESS AND ATTITUDE TOWARDS THE ROLE OF PHYSIOTHERAPY DURING ANTENATAL CARE IN MEHSANA DISTRICT, GUJARAT - A CROSS-SECTIONAL STUDY

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**Abstract:** The study aims to assess awareness, knowledge, and attitudes regarding physiotherapy among pregnant women in Gujarat's Mehsana District. It includes 60 educated pregnant women aged 18-35, excluding those with major neurological issues. Results show most respondents were graduates (58.3%) and unemployed (76.7%). Only 33.3% had sufficient physiotherapy knowledge. Attitudes varied, with 38.6% positive, 49.8% unsure, and 11.7% negative. While 93% were aware of physiotherapy, only 21% knew about antenatal exercises. Understanding of physiotherapy's significance for antenatal care was low, with only 36.7% believing they understood it.

**Index Terms** - Physiotherapy, antenatal care, knowledge, awareness, attitude.

## INTRODUCTION

Maternal health refers to a woman's health during her pregnancy, childbirth, and postpartum period.<sup>[1]</sup>

A fit woman is the most crucial tie in the family, and this, in turn, has a significant impact on society. Pregnancy, delivery, and postpartum are typical experiences in women's life that have an impact on every element of their lives. According to several research, women's physical performance, as well as their level of health and well-being, decline after childbirth when compared to the pre-pregnancy period, lowering their quality of life significantly.<sup>[2]</sup>

A female's body experiences several transformations and physical changes during her nine-month pregnancy as a result of hormonal swings and the necessity to support a developing fetus. Women face a variety of problems as a result of these happenings.<sup>[3]</sup>

According to certain research, women's quality of life is negatively impacted by the decline in their physical performance as well as their overall health and well-being following childbirth when compared to the pre-pregnancy period.<sup>[4]</sup>

The pregnancy's morphological and physiological changes cause a range of musculoskeletal system symptoms. Pregnancy-related lower back and pelvic pain are by far the most frequent complication.<sup>[5]</sup>

It has been shown that urinary incontinence is highly prevalent during and after pregnancy. Pregnancy-related lower extremity issues include a high frequency of oedema, lower limb pain and discomfort, and an unsteady gait. Pregnant women's quality of life and degree of physical activity are both impacted by these symptoms. Lower levels of physical activity cause muscles, particularly those in the abdomen, to weaken. This increases the risk of diastasis rectus, which is linked to weak pelvic floor muscles and lumbopelvic instability.<sup>[5]</sup>

"A health care field concerning human function and mobility and enhancing potential" is how physiotherapy (PT) is defined. In modern times, it is commonly recognized as a discipline that primarily employs physical

methods intending to foster, preserve, and regaining social, psychological, and physical well-being. Health care providers tentatively highlight the advantages of exercise for women because it is crucial for maintaining good health throughout their lives.<sup>[6]</sup>

Pregnant women can stand to gain from many of the services that physiotherapists provide, such as stress management advice, musculoskeletal pain relief, and postural reeducation. However, due to a insufficient knowledge about the services physiotherapists can provide during pregnancy, physical therapy is frequently underutilized.<sup>[6]</sup>

A physiotherapist may teach women how to develop their pelvic floor muscles and include a back care session in the antenatal (ANC) and postnatal programs. Thus, it is crucial to emphasize pelvic floor strength training and Kegel's exercises even during the prenatal stage.<sup>[6]</sup>

In obstetrics and gynaecology, a physiotherapist's intervention includes preoperative and postoperative times, as well as pregnancy, childbirth, and the puerperium.<sup>[7]</sup>

As members of the healthcare team, physiotherapists are crucial in minimizing the length of hospital stays, speeding up recovery, and facilitating rehabilitation for improved quality of life.<sup>[6]</sup>

Recognizing the benefits of physical and mental activity for overall health is critical. It will take time to persuade the subjects and their family members to let go of their myths and erroneous cultural beliefs. In our arrangement, this appears to be the most difficult problem. The two main challenges are ignorance and mistaken beliefs.<sup>[8]</sup>

Exercises for the pelvic floor, core stability, abdominal muscles, breathing techniques, aerobics, posture instruction, and back care are all included in prenatal fitness programs. To strengthen the pelvic floor muscles, preterm workouts frequently incorporate pelvic floor exercises.<sup>[9]</sup>

Pregnant women are advised to engage in physical exercise programs, which are becoming increasingly popular. However, there are several reasons why pregnant women may avoid exercise or develop a fear of it. Education level, race/ethnicity, and perceptions of fitness during pregnancy are one of these factors.<sup>[10]</sup>

People's attitudes about exercise differ, and it's usual to reduce exercise during pregnancy. Those who have experienced losses or difficulty conceiving tend to be more concerned.<sup>[2]</sup>

Pregnant women do not exercise as recommended despite these positive advantages, particularly in underdeveloped nations. In actuality, inactive lifestyles during pregnancy are frequently caused by low educational attainment, unfavorable socioeconomic circumstances, lack of access to quality healthcare services, and anxieties about exercising while pregnant.<sup>[11]</sup>

This study discovered that fatigue, a lack of desire to exercise, and a lack of knowledge about exercise were the main factors influencing attitudes toward exercise during pregnancy. Other writers have observed similar findings.<sup>[11]</sup>

Specifically, empirical research has shown that the advantages of exercise include maintaining and enhancing levels of aerobic and musculoskeletal fitness, enhancing posture, balance, and coordination, increasing stamina and endurance, preventing excessive weight gain in mothers, controlling gestational diabetes, enhancing psychological adjustment to changes in pregnancy and the postpartum period, facilitating labor, and hastening the postoperative recovery.<sup>[12]</sup>

Women who regularly participate in recreational activities or moderate exercise saw a 33% to 35% decrease in pre-eclampsia incidence. Although it is evident that preventing pre-eclampsia benefits mother and child in the near term, it may also have long-term benefits.<sup>[13]</sup>

30 minutes or more of activity every day, five days a week, is considered moderate exercise. Walking at a moderate pace, riding a bike, vacuuming, gardening, or engaging in any activity that results in slight increases in heart rate or breathing are examples of moderate activities.<sup>[13]</sup>

The benefits and contraindications of prenatal exercise also had a big impact on the women's attitudes regarding exercise throughout pregnancy. Consequently, determining whether or not women would exercise during and after pregnancy may be aided by evaluating their knowledge and attitudes on the topic. For the residents of Pune, Indore, Pondicherry, Iran, Zambia, Pakistan, Brazil, Saudi Arabia, Nigeria, and Gangawatakorall, this kind of study has previously been completed. Therefore, this study aims to evaluate participants' knowledge, attitudes, and awareness on the significance of physical therapy in prenatal care.<sup>[2]</sup>

**RESEARCH METHODOLOGY****TYPE OF RESEARCH** - Observational study**STUDY DESIGN** - Cross-sectional study**SAMPLE DESIGN** - Convenient Sampling**STUDY POPULATION** - Pregnant women**SAMPLE SIZE** - 60 participants**STUDY SETTING** - Devanshi hospital, Mothercare hospital.in mehsana**STUDY DURATION** - Feb-March2024(2 month)**SAMPLING CRITERIA:****Inclusion Criteria:**

Age:- 18 -35 years

Any trimester

Those who can read, write, and understand English.

**Exclusion Criteria:**

Those who don't want to participate

Those who have any major neurological problem

**OUTCOME MEASURES**

The modified self-administered a questionnaire adapted from a previous study

**DATA COLLECTION PROCEDURE**

This cross-sectional study was conducted after obtaining ethical approval from the institutional ethical committee of Nootan College of Physiotherapy, Sankalchand patel university, Visnagar, Gujarat, India. A Convenient sample of 60 pregnant women age between 18 to 35 was taken from different hospital like mother care hospital Devanshi hospital etc after receiving permission from the head of the hospital Mehsana, Gujarat. Participants were selected for the study based on inclusion and exclusion criteria. The whole procedure was clearly explained to all the participants and their consent was taken and then the assessment form was filled. After that participants was ask to fill up modified questionnaire by vijya kumar about knowledge attitude and awareness of physiotherapy during antenatal care. Then the data was collected and then it was further used for analysis.

**STASTICAL ANALYSIS**

The data was analyzed using MS Excel. Descriptive statistics were performed for demographics. The role of physiotherapy during antenatal care will be determined by considering number of participants level of knowledge attitude and awareness about it and dividing it by the total number of participants who answer the question.

## IV. RESULTS AND DISCUSSION

**Table 5.1: shows demographics data of all participants**

SOCIO DEMOGRAPHICS CHARACTERSTICS		
AGE	NO OF FEMALES	PERCENTAGE
18-25 YEAR	17	28.33
25 OR ABOVE	43	71.7
EDUCATION LEVEL	NO OF FEMALES	PERCENTAGE
High School Certificate	24	40
Intermediate / Post High School diploma	1	1.7
Graduate / post Graduate	35	58.3
OCCUPATION	NO OF FEMALES	PERCENTAGE
Unemployed	46	77
Semi professional	2	3.3
Professional	12	20
SOCIO ECONOMIC STATUS	NO OF FEMALES	PERCENTAGE
Upper	31	51.7
Middle	29	48.3
PARITY	NO OF FEMALES	PERCENTAGE
Primiparous	30	50
Multiparous	30	50

**Table 5.2: Shows Knowledge Towards Physiotherapy During Antenatal Care**

KNOWLEDGE			
QUESTION	DISAGREE%	NOT SURE%	AGREE%
Exercise during pregnancy reduces risk of Back pain :-	5	33	22
Exercise during pregnancy prevents excessive weight gain :-	6	29	25
Exercise can help cope with labor and delivery :-	9	31	20
Exercise during pregnancy reduces risk of gestational diabetes:-	8	41	11
Exercise during pregnancy increases energy and stamina. :	2	7	51
Exercise during pregnancy would reduce risk of urinary incontinence. :-	39	19	2
Exercise during pregnancy causes high blood pressure. :-	13	41	6
Exercise benefits general health and development of the baby:-	4	33	23
TOTAL:-	86	234	160
PERCENTAGE :-	17.9%	48.8%	33.3%

**Table 5.3: Shows Attitude Towards Physiotherapy During Antenatal Care**

ATTITUDE			
QUESTION	DISAGREE%	NOT SURE %	AGREE%
Does physiotherapy have a positive role in antenatal care ?	3	49	8
Is it important to perform exercise under the guidance of health care professionals?	11	4	45
Do you feel exercise can reduce pregnancy related complications?	8	43	9
Do you feel exercise helps in post-delivery recovery?	5	44	11
Do you feel exercising helps you get back to your shape?	3	20	37
Do you feel exercise regimen should vary from one pregnant woman to another?	9	12	39
Do you recommend physiotherapy during pregnancy?	10	37	13
TOTAL	49	209	162

PERCENTAGE	11.67	49.76	38.57
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**Table 5.4:-Shows Awareness Towards Physiotherapy During Antenatal Care**

AWARENESS			
VARIABLE	RESPONSES	FREQUENCY	PERCENTAGE
Are you aware of physiotherapy?	YES	56	93.3
	NO	4	6.67
What is your perception of physiotherapy?	EXERCISE	32	53.3
	MASSAGE	18	30
	ELECTRICAL STIMULATION	0	0
	ALL	10	16.67
Are you aware of antenatal exercise?	YES	13	21.67
	NO	47	78.3
If yes, where did you learn about it?	MEDIA	1	8.33
	FAMILY/FRIEND	6	50.00
	HELP CARE CENTER	5	41.7
	OTHERS	1	7.69
Who can serve as a best guide to exercise during pregnancy ?	PHYSIOTHERAPIST	22	36.7
	GYNECOLOGIST	31	51.7
	SELF	6	10
	OTHERS	1	1.67
<b>AWARENESS OF DIFFERENT TYPES OF ANTENATAL EXERCISES</b>	YES	NO	NOT SURE
AEROBICS	17	42	1
BACK CARE EXERCISES	12	48	0
ABDOMINAL EXERCISES	9	50	1
PELVIC FLOOR EXERCISE	33	26	1
RELAXATION/BREATHING EXERCISES	25	35	0
	96	201	3
	32	67	1

**Table 5.5: Shows Practice Patterns for Antenatal References and Physical Activity among Participants**

VARIABLE	RESPONSES	FREQUENCY	PERCENTAGE
Has physiotherapy for antenatal exercise been prescribed during the present pregnancy?	YES	5	8.3
	NO	55	91.7
If yes, what exercises was prescribed?	ABDOMINAL EXERCISE	0	0
	NO	5	100
BACK FLOOR EXERCISE	YES	2	40
	NO	3	60
PELVIC FLOOR EXERCISE	YES	5	100
	NO	0	0
RELXATION/BREATHING	YES	4	80
	NO	1	20
Do you perform exercise now? :-	YES	57	95
	NO	3	5
If yes, what type of exercise do you practice.:-	[WALKING]	57	95
	NO	3	5
[YOGA]	YES	13	21.7
	NO	47	78.3
[EASY EXERCISE]	YES	45	75
	NO	15	25
If you had practiced exercise before pregnancy, are there any reasons why you discontinue them?	[LACK OF TIME]	38	63.3
	NO	22	36.7
[TIREDNESS]	YES	33	55
	NO	27	45

Sixty prenatal females participated in the study based on inclusion and exclusion criteria. The mean age was 28 +/- 3.08 years, with an age range of 18–35 years. Individuals' average weight was 62.3 ±12.98. A total of 58.3% of the participants were graduates. Based on the Kuppu swamy scale [16], which was used to evaluate their socioeconomic level, 51% of our respondents were classified as upper class, and 48.3% as middle class. 76.7% of women were currently unemployed, which was the majority.(TABLE 1)

Table 2 presents the participants' level of knowledge on the role of physiotherapist prenatal care. If we take the mean and observe the predicted response (for knowledge), we can conclude that only 33.3% of women had enough understanding about the function of physical therapy, while 48.8% of women were unsure about the questions, indicating a lack of information in our population. Conversely, 17.9% of respondents were unaware of the need of physical therapy in prenatal care.

Table 3 displays the participants' opinions about the function of physiotherapy in prenatal care. Following the predicted response (for attitude) and using the mean, we may conclude that only 38.6% of women have a favorable attitude regarding prenatal care, whereas 49.8% of women were unsure of their attitude and 11.7% had a negative attitude.

Table 4 displays the participants' level of awareness of the significance of physical therapy in prenatal care. It reveals that whereas around 93% of women were aware of physiotherapy, just 21% of them were aware of prenatal exercise. and just 36.7% believed to be aware of the significance of physiotherapy for antenatal care.

**DISCUSSION :**

The purpose of our study was to evaluate the prenatal moms in our community on their awareness, attitude, and degree of knowledge regarding physical therapy during pregnancy. The majority of the women in this research were over 25, and 33.33% of them had knowledge, 38.6% had a good attitude, and 93% of the women knew about physiotherapy, but only 21% of them knew about physiotherapy for prenatal exercise.

The bulk of the females (58.33%) were graduates. Previous research has shown that the age, education level, and employment of the subjects have a substantial impact on the knowledge, attitude, and awareness of mothers toward exercise.

Like previous research [3] there is an increase in the likelihood that older people will have a positive outlook and be knowledgeable about engaging in prenatal exercises. Other research, like that done by Kaur et al. in 2021 [14], however, did not discover a meaningful correlation between age and practice or attitude. Consequently, encouraging expectant mothers including all age ranges to engage in prenatal exercise is advised. In this study, the majority of participants were graduates or postgraduates (58.3%), 40% were graduates from high schools, and 1% had completed a diploma, but previous research has shown that the majority of high school dropouts/secondary education (57%) [15]. Since there are 58.3% graduate females in our study, they have a positive attitude, knowledge, and awareness during antenatal care.

Among all participants in this survey, 76.7% of women were jobless, compared to 20% who were employed; comparable studies have also reported that the majority of women are unemployed [16]. In contrast to earlier research, there was no significant shift in the families' attitudes on the elderly based on their employment in these investigations.

Participants' awareness of the function of physical therapy in prenatal care We may conclude that just 33.3% of women had enough knowledge about the function of physiotherapy, whereas 48.8% of women were unsure about the questions, indicating a lack of information in our population, if we take the mean and observe the expected answer (for knowledge). whereas 17.9% were ignorant of the need of physical therapy in prenatal care. Sujindra et al.'s [15] research revealed a mean knowledge score of  $28.9 \pm 4.6$ , whereas Ribeiro and Milanez's [17] study revealed that 67% of participants have sufficient knowledge.

the participants' opinions about the function of physical therapy in prenatal care Depending on the expected the response (for attitude) and using the mean, we may conclude that only 38.6% of women have a favorable attitude regarding prenatal care, while 49.8% of them were unsure of their attitude and 11.7% had a dismissive attitude.

The majority of participants had a good attitude toward the performance exercise that was being guided during prenatal care. However, 81.7% of respondents were unsure about the function of physical therapy in prenatal care. Additionally, only 16.7% of them agreed to the advised physiotherapy during prenatal care, and fewer than 30% of them had a favorable attitude toward exercise's ability to prevent pregnancy-related problems

Out of all the participants, the majority of women (93%) were aware of physical therapy; however, only 21% of them were aware of prenatal exercise. In terms of how participants felt about physiotherapy, 53.3% thought that exercise was a part of physiotherapy, 30% thought that physiotherapy was massage, and just 16.7% thought that physiotherapy was multipurpose.

The majority (67%) were unaware of the various forms of exercise in prenatal care, while only 32% were aware of them. These findings are consistent with a previous research [10]. Among those with awareness, there was a greater knowledge of relaxation and pelvic floor exercises (34.4%) and 26%, respectively, and a somewhat higher awareness of aerobic and back care exercises (17.7% and 12.5%), but a very low awareness of abdomen exercises (9.4%). The statement implies that education and social influence are crucial, and it also highlights the negative effects of not being exposed to modernity and societal developments.

only 13% of pregnant women preferred yoga, and 45% preferred gentle exercise. Almost all of the females who exercised regularly during their pregnancies (95%) preferred walking. The participants' cultural



background and society's views on exercise during pregnancy may potentially play a role in their inability to exercise regularly.

### **The Study Concluded Following :**

1. There is a high overall awareness of physiotherapy among participants with notable gap in awareness specifically regarding antenatal exercises.
2. Knowledge about the role of physiotherapy in antenatal care is lacking, with a significant portion of participants expressing uncertainty or having no knowledge.
3. Attitudes towards antenatal care, including physiotherapy, vary, with a considerable proportion being unsure about their attitudes.

### **Limitation of the study:**

Compared to earlier research on different regions of India, a smaller sample size was used in this investigation. such a large populace can benefit from it. Additionally, this study can be conducted over wide areas because it is restricted to the Mehsana district's small size and popular

### **Future recommendations of the study:**

There is a need for targeted education and awareness campaigns to improve both knowledge and attitudes towards the role of physiotherapy, particularly in the context of antenatal care. Efforts should focus on increasing awareness of the specific benefits of antenatal exercises offered through physiotherapy.

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