

# Knowledge, attitude, and perception about antenatal physiotherapy among pregnant women in Ahmedabad

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## ABSTRACT


**Background:** Antenatal physiotherapy plays a key role in the health of the fetus and the pregnant woman. Awareness regarding the same is very important to motivate women to attend antenatal classes. **Objectives:** The aim of this study is to assess the knowledge of antenatal physiotherapy as well as an insight into the attitude and perception of the same among pregnant women of Ahmedabad. **Materials and Methods:** A descriptive cross-sectional study was conducted in a semi-government hospital. A total of 100 pregnant women, in any trimester were approached with a self-administered multiple choice questionnaire. Questions regarding their knowledge, attitude, and perception regarding antenatal physiotherapy were asked. Descriptive analysis of data obtained was done. **Results:** Knowledge regarding antenatal exercises was fairly low. A large number of subject population (91%,  $n = 91$ ) was aware of the role of physiotherapy in general health and well-being. A sufficient number of subjects (59%,  $n = 59$ ) were informed regarding the uses of physiotherapy in backache. However, only 2% of the population was familiar with the role of pelvic floor muscle strengthening in urinary incontinence. The attitude of the patients toward antenatal physiotherapy was favorable (72%,  $n = 72$ ), whereas the attitude toward postnatal physiotherapy was comparatively less favorable (39%,  $n = 39$ ). The perception of physiotherapy was restricted to exercises (88%,  $n = 88$ ), massage (63%,  $n = 63$ ), and hot water fomentation (18%,  $n = 18$ ). **Conclusion:** Knowledge and perception regarding antenatal physiotherapy were fairly low, but the attitude of the patients was favorable.

**KEY WORDS:** Knowledge; Attitude; Perception; Antenatal Physiotherapy; Pregnancy

## INTRODUCTION

Antenatal care plays a key role in the health of the fetus and the pregnant woman. Awareness and promotion of this needs to be focused upon by the expecting mother. Appropriate antenatal health-care exercises are essential for safe maternity and improved neonatal outcomes.<sup>[1]</sup> However, people are not well informed about the same which is why it is always neglected. The advantages of antenatal physiotherapy should

be explained to all pregnant patients throughout rural and urban areas. According to the guidelines given by the WHO, a major role of antenatal care is physiotherapy which is needed to prevent musculoskeletal pain and group therapy for aerobic and psychological wellness.<sup>[2]</sup> Furthermore, antenatal physiotherapy helps in avoiding other pregnancy-related complications such as loss of bladder control, back pain, fatigue, muscle weakness, pregnancy-induced hypertension, obesity, varicosity, numbness and swelling of extremities, decreased functional residual capacity, premature labor, and other sympathetic and skeletal symptoms.<sup>[3,4]</sup> In addition, promotion of aerobic and musculoskeletal fitness levels, improvement in posture, coordination and balance, increase in endurance and stamina, deterrence of extreme maternal weight gain, and gestational glucose control may help the pregnant woman to adapt to the physical, psychological, and hormonal changes in her body during childbearing.<sup>[5,6]</sup> Recent

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advances have also shown that women tend to respond more to water aerobics. This not only helps with increased cardiac efficiency and blood circulation but also plays an important role in decreasing edema, decreasing the use of analgesics by decreasing musculoskeletal pain, and increasing diuresis and, in turn, avoiding urinary tract infections.<sup>[7]</sup> Regardless, skepticism regarding the same is still prevalent.<sup>[5]</sup> There are conservative opinions and myths that physical exercises are unsafe for pregnant women.<sup>[5]</sup> Moreover, women hesitate to participate in antenatal exercise programs due to the fear that it will have a negative impact on the fetus along with themselves.<sup>[5]</sup> In addition, cultural perceptions also play an important role in the same.<sup>[5]</sup> Women in our country are expected to take rest during pregnancy. This has been a belief since the older times. Awareness regarding the importance of activity for physical and psychological well-being is extremely important. The subjects and their relatives need to be convinced to change with time and let go of their myths and false cultural perceptions. This seems to be the biggest challenge in our setup. Lack of awareness and false perceptions are the two major obstacles.

Nonetheless, physiotherapy is quite significant in antenatal care. Enhancing this, the American Congress of Obstetrics and Gynaecology recommends that pregnant women can exercise moderately for 30 min on most, if not all days of the week.<sup>[5]</sup> However, moderate exercise intensity and specific weekly energy expenditure have not been defined by the former.<sup>[3]</sup> Even so, women with sedentary lifestyle should follow a simpler exercise protocol with less intensity which can be progressively increased.<sup>[8]</sup> Recently, it has been determined that exercise intensity that reaches 60% of the heart rate reserves during pregnancy along with gradual progression helps in reducing the risk of gestational diabetes.<sup>[3]</sup>

Knowledge regarding physical activity may be a prerequisite for developing a positive attitude to participate in the same.<sup>[9]</sup> How they perceive exercises and physiotherapy determines their motivation to be part of an exercise program which may benefit them. Hence, awareness and adequate knowledge regarding antenatal physiotherapy among women should be considered important criteria to involve the participant in exercises. Therefore, pregnant women should be encouraged to participate in antenatal physiotherapy sessions according to medical recommendations and under suitable guidance of a qualified physiotherapist. However, over the past 60 years, antenatal health in our country has been staggering, especially in rural and less developed urban areas.<sup>[10]</sup> Enhancement in the standard of services and awareness of antenatal care guidelines is required.<sup>[10]</sup> Antenatal care is the pillar of safe motherhood.<sup>[11]</sup>

Studies regarding the knowledge, attitude, and perception about antenatal exercises are few in Gujarat. As mentioned above, adequate knowledge is extremely essential for the patients to have a positive attitude toward antenatal physiotherapy. Thus, the main objective of this study is to

assess the knowledge of antenatal physiotherapy as well as an insight into the attitude and perception of the same among pregnant women of Ahmedabad.

## MATERIALS AND METHODS

A descriptive cross-sectional study was performed among 100 antenatal participants at a semi-government hospital of Ahmedabad. The 100 antenatal subjects selected by convenience sampling with variable period of amenorrhea were included in the study regarding the knowledge, attitude, and perception of antenatal physiotherapy. Participants having high-risk pregnancy according to the obstetrician were excluded from the study. The participants were explained the study and a written informed consent to participate was obtained from them. They could leave the survey whenever they wished. Permission to conduct the study, from the head of the department at the hospital and the physiotherapy college, was also taken.

The subjects were approached with a self-administered multiple choice questionnaire. It was reviewed for validity by five experienced obstetricians (practicing since more than 15 years) and five senior physiotherapists. Changes suggested were made in the questionnaire. Five antenatal participants were also administered the questionnaire for ease of understanding. No further changes were suggested. Thus, the questionnaire was finalized. The questionnaire comprised 13 questions covering three headings – perception, knowledge, and attitude.

Demographic data of the participant, along with medical history, were taken. However, confidentiality was maintained.

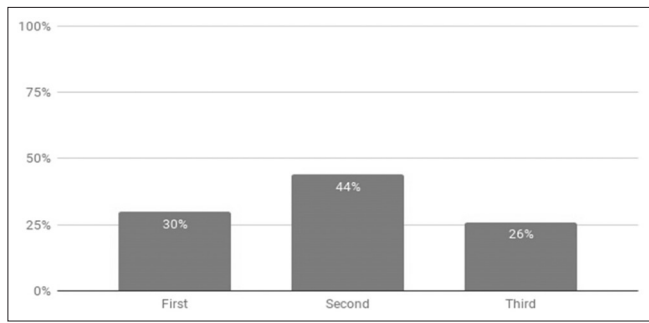
## Statistics

Statistical analysis was performed using Microsoft Excel. Descriptive analysis was done and the results described in tables, figures, and graphs.

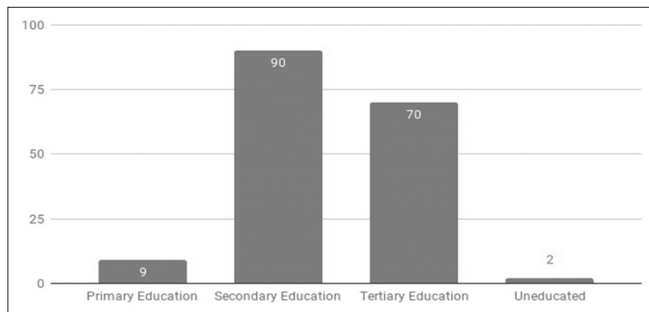
## RESULTS

The response rate of the study was 100%. Of the 100 antenatal subjects that responded, 44 participants were in their second trimester as shown in Figure 1. The mean age of the subjects was  $28.19 \pm 4.71$  years. The majority of the study population were Hindus (78%,  $n = 78$ ) followed by Muslim (21%,  $n = 21$ ) and Christian (1%,  $n = 1$ ), respectively. Most of the subjects were educated (tertiary – 70%,  $n = 70$ ; secondary – 19%,  $n = 19$ ; primary – 9,  $n = 9$ ; and uneducated – 2%,  $n = 2$ ) as shown in Figure 2.

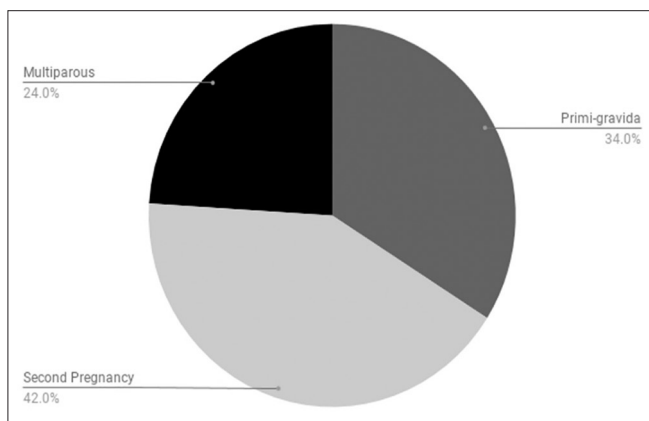
The parity of the subject population as shown in Figure 3 shows that 42% were conceiving for the 2<sup>nd</sup> time. From the total subject population, 97% of participants were with no other medical condition as shown in Figure 4.



**Figure 1:** Number of subjects in each trimester



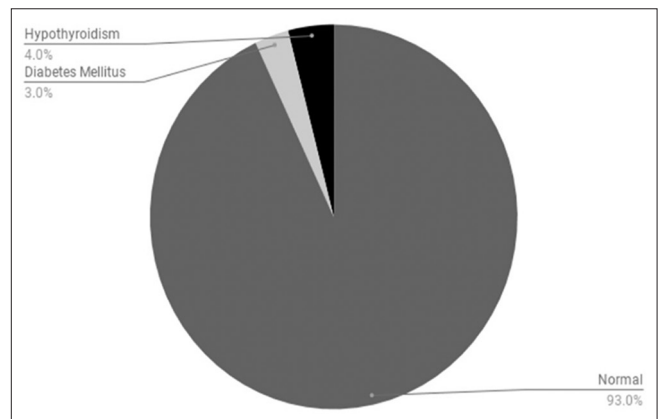
**Figure 2:** Education of the subjects



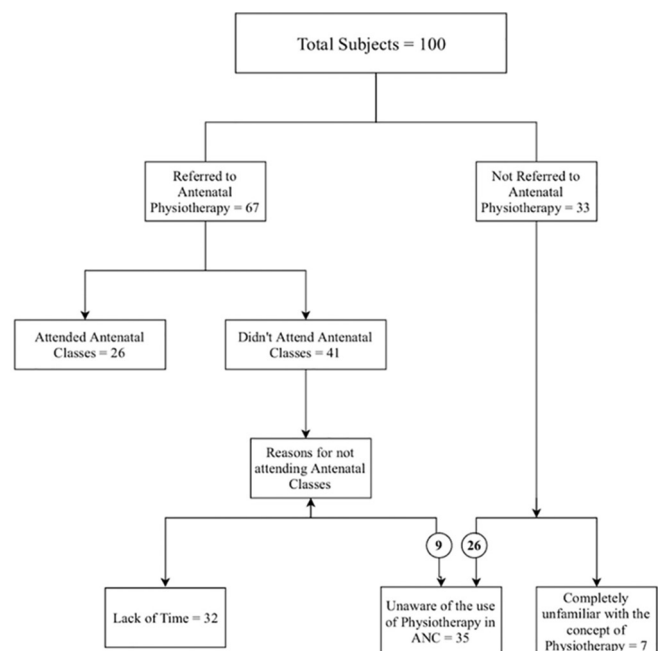
**Figure 3:** Parity of participants

Of the 67 patients referred for antenatal physiotherapy, only 26 attended the antenatal classes, and among the 41 that did not attend, 32 said that it was due to lack of time. Thirty-five subjects did not attend antenatal classes because they were unaware of the uses of physiotherapy in antenatal care. Of these 35, nine subjects were referred and did not go, whereas 26 were not referred by the obstetrician. Seven subjects were completely unfamiliar with the idea of physiotherapy. Figure 5 shows the number of subjects that did and did not attend antenatal physiotherapy and the reasons for the same.

The knowledge of the subjects regarding the usefulness of exercises during certain conditions is presented in Table 1. Table 2 describes the knowledge of contraindications to exercises during pregnancy. Table 3 shows the knowledge of participants about the types of exercise that would be



**Figure 4:** Number of subjects with medical conditions



**Figure 5:** Flowchart of participants attending/not attending antenatal physiotherapy classes

helpful and Table 4 depicts the attitude of the subjects toward physiotherapy.

From the collected data, it was evident that 93% ( $n = 93$ ) had heard about physiotherapy. The perception of physiotherapy among subjects was limited to exercises (88%,  $n = 88$ ) and massage (63%,  $n = 63$ ). However, a small number of subjects also included hot packs/hot water fomentation (18%,  $n = 18$ ) in the same.

**DISCUSSION**

This study was conducted to assess the knowledge, attitude, and perception of antenatal physiotherapy in pregnant women of Ahmedabad. The mean age of the women was  $28.19 \pm 4.71$  years. Most of the women did not have any additional medical conditions. However, most of them complained of nausea, back pain, swelling, and numbness

**Table 1:** Knowledge of participants regarding the use of physiotherapy

Complaints/conditions faced by patients during pregnancy	Number of subjects that felt antenatal physiotherapy would be helpful
Back pain	59% (n=59)
To cope with labor and delivery	13% (n=13)
Gestational diabetes mellitus	18% (n=18)
Urinary incontinence	4% (n=4)
Hypertension	32% (n=32)
General health and well-being	91% (n=91)

**Table 2:** Knowledge of contraindications to exercises during pregnancy

Contraindications	Number of subjects who felt exercises should be contraindicated in the presence of the condition
Difficulty in breathing	38% (n=38)
Abdominal pain	43% (n=43)
Chest pain	89% (n=89)
Diabetes mellitus	27% (n=27)
Vaginal bleeding	87% (n=87)
Premature labor	41% (n=41)

**Table 3:** Knowledge of participants about type of exercise that would be helpful

Antenatal exercises	Number of subjects that found the exercises helpful
Back exercises	57% (n=57)
Relaxation exercises	68% (n=68)
Breathing exercises	23% (n=23)
Abdominal exercises	2% (n=2)
Pelvic floor muscles strengthening exercises	2% (n=2)
Aerobic exercises	63% (n=63)

**Table 4:** Attitude of the subjects toward physiotherapy

Attitude of the subjects	Number of subjects
Positive role of physiotherapy in pregnancy	78% (n=78)
Importance of physiotherapist's guidance for antenatal exercise	71% (n=71)
Positive role of physiotherapy in postpartum recovery	39% (n=39)
Recommendation of antenatal physiotherapy	67% (n=67)

in various stages of pregnancy. Almost all of the subjects had these complaints during the first and third trimester. The knowledge of the subjects regarding antenatal physiotherapy was found to be fairly low. Very few people participated in antenatal physiotherapy mostly due to lack of time and awareness regarding the merits of physiotherapy. However, the attitude of the subjects was favorable. The perception

of physiotherapy in most subjects was limited to exercises, massage, and hot water fomentation. The knowledge of different exercises among people was found to be varied from 2% to 68%. Their knowledge regarding the role of pelvic floor muscle strengthening in urinary incontinence was extremely poor. Furthermore, more than 50% of the subjects were unfamiliar with the role of physiotherapy in diabetes and high blood pressure. Hence, it can be said that although the subjects seemed fairly knowledgeable about the role of physiotherapy in backache and general health, they were fairly unaware to the advantages of physiotherapy in gestational diabetes, urinary incontinence, and hypertension. Supporting this, most people when asked about the exercises that should be performed, selected relaxation, breathing and aerobic exercises along with back strengthening to manage the problems. A very poor response was generated regarding the abdominal and pelvic floor muscle exercises. However, the subjects were fairly aware of the contraindications of physiotherapy. Contrasting this, the attitude of the subjects toward antenatal physiotherapy is very favorable at almost 70%. However, the attitude of subjects toward postnatal physiotherapy was comparatively unfavorable at almost 40%. Most of the subjects felt that physiotherapy has a positive role when done under the proper guidance of a physiotherapist. This is further supported by the fact that most subjects are positive about the recommendations of antenatal physiotherapy too. In spite of this, the number of subjects actually attending the antenatal classes was quite low. Most people were not aware of the usefulness of physiotherapy in antenatal time period, whereas others did not have the time to attend these classes due to social responsibilities. The solution for this can be proper counseling and shorter exercise prescriptions covering various muscle groups.<sup>[1]</sup> Further, the religious taboos and restraint from physical exercises during pregnancy are prevalent widely in our country.<sup>[5]</sup> This needs to be dealt with carefully through awareness programs and counseling of relatives. The perception of physiotherapy among the subjects had contrasting responses such as 88% considered it to be just exercises, 63% considered it to be massage, and a small 18% of the population considered it to be hot water fermentation. Where most people had heard about physiotherapy, through advertisements, relatives, or social media; most of them perceived physiotherapy as exercises and massages. Few of them included hot packs in the same. The science behind the therapy and the different aspects of physiotherapy seemed alien to the subjects. Thus, the perception among people cannot be considered adequate. The myth regarding physiotherapy just being about exercises and massages has always prevailed. Moreover, this has been once again proved in the above-conducted study. Proper comprehensive counseling regarding this needs to be done with the people.

As seen in earlier studies, economic factor played an important role in the results.<sup>[10]</sup> In the present study, most people agreed



that physiotherapy does play an important role in the general wellness, whereas only a little more than half the subject population believed it could help in relieving backache. The present study shows an improvement when compared to similar studies in the country, where the resultant knowledge regarding physiotherapy was <50%.<sup>[1]</sup> Nevertheless, the knowledge regarding abdominal exercise in the aforementioned study was exceedingly greater (42%) in comparison to this.<sup>[1]</sup> Similarly, a study conducted in Nigeria shows that the knowledge regarding the importance of pelvic floor muscle strengthening is quite high at 13.7% when compared with the mere 2% as observed here.<sup>[5]</sup> Contrasting this, the same study also showed that 84.7% of women had heard of physiotherapy as compared to the booming 93% in this study.<sup>[5]</sup> However, it was observed that fewer subjects (66%) had heard about physiotherapy in a similar study conducted in Puducherry.<sup>[1]</sup> The attitude toward antenatal physiotherapy was also more positive in this study (72%) compared to the one conducted in Puducherry (51%).<sup>[1]</sup>

### Limitations of the Study

The questionnaire was formulated in English. The sample was collected from just one hospital of Ahmedabad which cannot be generalized to the whole population. However, it is the first study in Ahmedabad and can be considered accordingly. Correlation with education and number of pregnancies was not performed which could give an idea for the reason of the results. However, the aim of the study was a qualitative analysis and so the former was not considered.

### Strength of the Study

This research is the first of its kind in Gujarat. Summarizing, it can be said that simple interventions and community level propagation of healthy lifestyle and proper counseling of the patient can ensure healthy maternity and better neonatal outcomes.<sup>[1]</sup> This study discusses the knowledge, attitude, and perception of antenatal physiotherapy in pregnant women of Ahmedabad.

### CONCLUSION

The knowledge of the subjects regarding antenatal physiotherapy was low which can be attributed to the lack of awareness and incorrect perception of the subjects. Very few people participated in antenatal physiotherapy mostly due to lack of time and awareness regarding the merits of physiotherapy. However, the attitude of the subjects was favorable which is promising to bring about the necessary changes to lead a healthy lifestyle.

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