



Faculty of Medicine

**University of Dhaka**

**ATTITUDES AND ASSOCIATED FACTORS TO ANTENATAL  
PHYSIOTHERAPY IN PREGNANT WOMEN AT SELECTED  
HOSPITALS IN BANGLADESH.**

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Bachelor of Science in Physiotherapy (B.Sc.PT)

DU Roll No: 815

Reg. No.: 6853

Session: 2016-17

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**Bangladesh Health Professions Institute (BHPI)**

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Bangladesh

June, 2022

We the undersigned certify that we have carefully read and recommended to the Faculty of Medicine, University of Dhaka, for the acceptance of this dissertation entitled

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PHYSIOTHERAPY IN PREGNANT WOMEN AT SELECTED  
HOSPITALS IN BANGLADESH.**

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## **Declaration**

I declare that the work presented here is my own. All sources used in the study have been cited appropriately. Any mistakes or inaccuracies are my own. I also declare that for any publication, presentation or dissemination of information of the study. I would be bound to take written consent from Physiotherapy Department, Bangladesh Health Professions Institute (BHPI).

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# Contents

<b>Contents</b>	<b>Page No.</b>
Acknowledgement	i
Acronyms	ii
List of tables	iii
List of figures	iv
Abstract	v
<b>CHAPTER-I: INTRODUCTION</b>	<b>1-8</b>
1.1 Background	1-4
1.2 Rationale	4-5
1.3 Research Question	6
1.4 Study objectives	7
1.5 Conceptual framework	8
1.6 Operational definition	9-10
<b>CHAPTER-II: LITERATURE REVIEW</b>	<b>11-19</b>
<b>CHAPTER-III: METHODOLOGY</b>	<b>20-26</b>
3.1 Study design	20
3.2 Study area	20
3.3 Study population	21
3.4 Sample size	21-22
3.5 Inclusion criteria	22
3.6 Exclusion criteria	22
3.7 Sampling technique	22
3.8.1 Data Collection Tools	23
3.8.2 Data Collection Procedure	23

3.8.3 Exercise Barrier Scale	24
3.9 Data analysis	24-26
3.10 Inform consent	26
3.11 Ethical Consideration	26
<b>CHAPTER-IV: RESULTS</b>	<b>27-54</b>
<b>CHAPTER-V: DISCUSSION</b>	<b>55-58</b>
5.1 Limitation of the study	59
<b>CHAPTER-VI: CONCLUSION AND RECOMMENDATIONS</b>	<b>60-61</b>
<b>REFERENCES</b>	<b>62-67</b>
<b>APPENDIXES</b>	<b>68-65</b>
Inform consent in Bangla	68
Inform consent in English	69
Questionnaire in Bangla	70-77
Questionnaire in English	78-84
Permission letter	85-86
IRB approval	87-88

## Acknowledgement

First of all, I'd like to thank God for giving me the skills I needed to finish this research project on time and with great success. I would want to express my appreciation to my parents, who have always supported me in completing this project. My deepest gratefulness goes to my honorable supervisor & respected teacher **Fabiha Alam**, Assistant professor, Department of Physiotherapy, BHPI, CRP, Savar, Dhaka, for her keen supervision and tireless effort with excellent guidance and support without which I could not be able to complete this project.

Additionally, I appreciate all of my respected teachers, particularly Professor **Md. Obaidul Haque**, Vice principal, BHPI, CRP, Savar, Dhaka; **Mohammad Anwar Hossain**, Associate Professor, Department of Physiotherapy, BHPI, Senior consultant and Head, Department of Physiotherapy, CRP, Savar, Dhaka. I gratefully acknowledge my respect to **Md. Shofiqul Islam**, Associate Professor, Head of the Department of Physiotherapy, BHPI, CRP, Savar, Dhaka and **Asma Islam**, Assistant professor, Department of physiotherapy, BHPI, CRP, Savar, Dhaka for their support during the project. I would want to show my gratitude to **Muhammad Millat Hossain**, Assistant Professor, Department of Rehabilitation Science, Member Secretary, Institutional Review Board, (IRB), BHPI, CRP, Savar, Dhaka, for allowing me to conduct this research. I would like to express my appreciation. **Ehsanur Rahman**, Associate Professor & MPT Coordinator, Department of Physiotherapy, Bangladesh Health Professions Institute (BHPI), CRP, Savar, Dhaka, for his support during the project.

I also would like to thank the BHPI librarian and other supporting personnel for their constructive assistance throughout the project study. My special thanks to all the staff of Super Medical Hospital and **Dr. ANM Mashud Rana**, Head, Department of Physiotherapy & Rehabilitation, Enam Medical College and Hospital. Above all, I'd want to thank everyone of the study's participants for their remarkable cooperation during data collection. Finally, thank you to everyone who has always been my well-wisher and friend without any expectation

## Acronyms

<b>ACOG</b>	American College of Obstetricians and Gynecologists
<b>AIDS</b>	Acquired Immunodeficiency Syndrome
<b>APTA</b>	American Physical Therapy Association
<b>ANC</b>	Ante Natal Care
<b>BMRC</b>	Bangladesh Medical Research Council
<b>DRAM</b>	Diastasis of Recti Abdominis Muscles
<b>GDM</b>	Gestational Diabetes Mellitus
<b>HIV</b>	Human Immunodeficiency Virus
<b>LBP</b>	Low Back Pain
<b>MDG</b>	Millennium Development Goal
<b>MMR</b>	Maternal Mortality Ratio
<b>PID</b>	Pelvic Inflammatory Disease
<b>PFD</b>	Pelvic Floor Dysfunction
<b>PFMT</b>	Pelvic Floor Muscle Training
<b>POP</b>	Pelvic Organ Prolapse
<b>RAZCOG</b>	Royal Australian and New Zealand College of Obstetricians and Gynecologist
<b>SOGC</b>	Society of Obstetricians and Gynecologists of Canada
<b>SWEP</b>	Study of Water Exercise during Pregnancy
<b>UI</b>	Urinary Incontinence
<b>WCPT</b>	World Confederation for Physical Therapy
<b>WHO</b>	World Health Organization

## List of tables

List of tables	Page no
<b>Table 1:</b> Socio-demographic characteristics of the sample	27-28
<b>Table 2:</b> Physical complaints among the participants	36
<b>Table 3:</b> Attitudes to antenatal physiotherapy among the participants	41
<b>Table 4:</b> Association of socio demographic factors with attitudes towards antenatal physiotherapy of the participants	42-43
<b>Table 5:</b> Physical exertion subscale	44
<b>Table 6:</b> Time Expenditure subscale	44
<b>Table 7:</b> Exercise Environment subscale	45
<b>Table 8:</b> Family discouragement subscale	46
<b>Table 9:</b> Descriptive Statistics for Exercise Barriers Scale	47
<b>Table 10:</b> EBS total score	48
<b>Table 11:</b> Associated factors (enablers) related to exercise	48
<b>Table 12:</b> Association between level of education and awareness of antenatal physiotherapy.	49
<b>Table 13:</b> Association between aware of antenatal physiotherapy and recommendation for physiotherapy.	51
<b>Table 14:</b> Association between referral status and receiving antenatal physiotherapy	53



## List of figures

List of figures	Page no
<b>Figure 1:</b> Age range of the participants	29
<b>Figure 2:</b> Occupation of the participants	30
<b>Figure 3:</b> Living area of the participants	31
<b>Figure 4:</b> Educational status of the participants	32
<b>Figure 5:</b> Socio economic status of the participants	33
<b>Figure 6:</b> Gestational age of the participants	34
<b>Figure 7:</b> No of pregnancies among the participants	35
<b>Figure 8:</b> Awareness about antenatal physiotherapy	37
<b>Figure 9:</b> Referral status of the pregnant women	38
<b>Figure 10:</b> Receiving antenatal physiotherapy status	39
<b>Figure 11:</b> Perception about role of antenatal physiotherapy	40
<b>Figure 12:</b> Association between education level and awareness of antenatal physiotherapy	50
<b>Figure 13:</b> Association between aware of antenatal physiotherapy and recommendation for physiotherapy.	52
<b>Figure 14:</b> Association between referral status and receiving antenatal physiotherapy.	54

## Abstract

**Purpose:** The purpose of the study was to know about in-depth attitudes toward antenatal physiotherapy in pregnant woman and exploring the associated factors that are related in receiving antenatal physiotherapy. **Objectives:** To know awareness about antenatal physiotherapy, to find out referral percentage to receive antenatal physiotherapy, to explore the barriers and influencing factors related in receiving antenatal physiotherapy. **Methods:** A cross-sectional study design was conducted to accomplish the study. 97 subjects were selected through convenient sampling technique from Enam Medical College and Hospital, Savar, Super Medical Hospital, Savar-1343. The interviewer administered Bengali version of The Exercise Barrier Scale. Each item of Exercise Barrier Scale questionnaire was rated on a 4-point Likert scale, from 1 (strongly agree) to 4 (strongly disagree). Data were analyzed through descriptive and inferential statistics. The Chi-square test, Fisher Exact test were applied. **Results:** In the study the total participants mean age was  $25.5 \pm 4.21$ , the minimum age was 18 years old and the maximum age was 36. 67% of participant had awareness about antenatal Physiotherapy and 33% were not aware about antenatal Physiotherapy. This research indicates that 53.6% pregnant women feel that prenatal physiotherapy plays a beneficial function, whereas 40.2% are unsure and 6.2% declines it. Among all participants, just 2.1% of pregnant women were recommended to prenatal physiotherapy by their doctor, while 97.9% of women were neither referred nor advised by their consultant doctor. In this study significant association was found between awareness of antenatal physiotherapy with educational qualification (p-value .00) and recommendation for antenatal physiotherapy (p-value .005). Significant associations were found between referral status and receiving antenatal physiotherapy status (p-value .001). **Conclusion:** this study explains the attitudes and barriers perceived by the pregnant women. .Physiotherapy can provide great support to the suffering of a pregnant woman's antenatal musculoskeletal complaints as their attitude is quite positive still more knowledge and publicity needed about prenatal physiotherapy among different level of the population of this country. **Keywords:** Pregnancy, Antenatal physiotherapy, Perceived barriers etc.

### **1.1 Background**

Pregnancy is a unique physiological state that causes massive changes in the body in order to support a developing fetus (Haddox et al., 2020). Pregnancy and childbirth are biological events that can have a great influence on both mother and infant health. Maternal health is a major public health issue worldwide and Millennium Development Goal 5 has set the goal of reducing maternal mortality ratios by three-quarters by 2015. The key to reducing the maternal mortality rate is health-care measures, including appropriate referrals to other health teams. Antenatal care is one of the most important interventions aimed at lowering maternal and neonatal mortality globally (Nayak et al., 2015).

According to WHO standards, physiotherapy for musculoskeletal pain prevention and group therapy for aerobic and psychological wellbeing are important aspects of prenatal care (Sheth et al., 2019). These prenatal workouts are designed to maintain physical fitness and cardiovascular endurance in individuals who participate. Aerobics, core stability, pelvic floor exercises, breathing exercises, posture education, and back care are among the exercises (Nayak et al., 2015).

Antenatal care is the routine health supervision of presumably healthy pregnant women without symptoms, with the goal of diagnosing illnesses or aggravating obstetric disorders without symptoms and providing information about lifestyle, pregnancy, and delivery. It safeguards the safety of the pregnant woman and her baby till delivery (Yadufashije et al., 2017). It is one of the most important interventions in the fight against maternal and neonatal mortality around the world. Quality antenatal therapies should address frequent pregnancy-related problems as well as the necessity of guided antenatal activities during pregnancy, which ensure safe parenting and improve newborn outcomes (Nayak et al., 2015).

Pregnant women acquire between 10 and 25 kilograms, with a mean of 15 kg. Vascular, hormonal, and metabolic changes are also linked to pregnancy. Hormonal alterations cause joint laxity and physiological changes that cause fluid retention, which compresses soft tissues. Musculoskeletal discomfort can develop as a result of these changes, and daily activities or work-related duties that were simple and insignificant while not pregnant become challenging. (Haddox et al., 2020).

Backaches are common in pregnancy, with estimates ranging from 30% to 70%. In research on pelvic girdle relaxation in pregnancy, 31.7% of pregnant women experienced discomfort in the symphysis pubis. In addition to low back pain and symphysis pubis pain, a pregnant woman may experience upper back pain, sacroiliac joint pain, muscle cramps, lower limb joint aches, foot discomforts, pedal edema, carpal tunnel syndrome, loss of balance, and falls (Ramachandra et al., 2015). Antenatal care is a crucial component of a healthy pregnancy and delivery. The goal is to provide the mother with the best possible care so that she can successfully complete the nine months of pregnancy. A healthy fitness program also aids in getting appropriate care (Sarfraz et al., 2013).

Exercise has the ability to improve both maternal and fetal health. Despite the morphological and physiologic changes in the maternal body, physical activity should be promoted throughout pregnancy, according to the American College of Obstetricians and Gynecologists (ACOG). Exercise has been linked to better results for mothers and their children, as well as protection against chronic disease development (Dias et al., 2018). Antenatal exercises are suggested for expecting moms due to the health advantages and safe delivery they provide. These antenatal workouts are designed to keep women physically active and cardiovascular fit (Nayak et al., 2015).

Aerobic exercise is an effective method because it raises the heart rate and boosts oxygen and blood demand for muscles, prompting them to breathe faster. Walking, dancing, calisthenics, and swimming are examples of aerobic exercises. Another method is through strength training, which is a method of increasing muscle mass. Lifting weights and conducting pushing and pulling movements are all part of this type of training. Kegel

exercises are also an essential component of a maternal training routine. This entails tightening your pelvic muscles, which are the muscles responsible for controlling urine flow. Performing all or a combination of different exercises under the guidance of a physical therapist results in a variety of advantages. Aerobic exercises promote heart health and the circulatory system throughout pregnancy. Muscle strengthening prepares for the challenges of labor and delivery, such as pushing with muscles and practicing how to breathe correctly. Kegel exercises can also be beneficial after the baby is delivered, as the pelvic muscles may stretch after delivery, becoming lax and difficult to control. Exercise and physical activities also boost overall mental well-being (Sarfraz et al., 2013).

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. Exercise during pregnancy relieves the discomfort experienced by pregnant women and prepares the body for an easier delivery and decreases the chances of cesarean section. However, people are not well informed about the same, which is why it is always neglected. Proper knowledge in pregnant mothers is critical to promoting its use (Hashmi et al., 2020). 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 (Sheth et al., 2019).

Although physical therapy plays an important and prominent role, awareness is rare. Due to a lack of resources, physical therapy is one of the neglected fields not only in developing countries but also in overall Asia and Africa. Another problem in the field of physical therapy is the referral system. Utilization of services depends upon the knowledge and attitude of physicians towards physical therapists, and their professional skills depend upon health team members and knowledge of other team members' cooperation (Maqsood et al., 2017).

Women and their families sometimes rely on the information provided by clinics. As a result, illiterate women should have access to all information, and health pamphlets should be written in a language suited to their literacy levels (Afroz, 2015). Preventive

maternal health care, such as physiotherapy as part of prenatal treatment, can be beneficial to both the mother and the fetus throughout pregnancy. As a result, the focus of this research is to determine pregnant women's views about prenatal physiotherapy, as well as the factors that influence their opinions.

## **1.2 Rationale**

Obstetric and gynecologic physiotherapy is a subspecialty of physiotherapy concerned with the promotion of health throughout the child-bearing period and assists the mother in adjusting advantageously to the physical and psychological changes of pregnancy and the post-natal period, thereby minimizing the stresses of child-bearing. In obstetrics and gynecology, the physiotherapist helps during pregnancy, childbirth, and the postpartum period, as well as before and after surgery.

Nonetheless, improving effective maternal care in Bangladesh remains a major concern. During pregnancy, a woman's body and body functions change in ways that can have a big effect on the health of both the mother and the baby.

Physical therapy plays an essential and visible role. Awareness is limited. Due to a lack of resources in Bangladesh, antenatal physiotherapy is one of the things that gets the least attention.

The referral system is another issue in the field of physical therapy. Utilization of services is dependent on physicians' knowledge and attitude toward physical therapists, and their professional capabilities are dependent on health team members' knowledge and knowledge of other team members' cooperation.

In comparison to developed countries, gynecological physiotherapy is well documented and practiced on women of reproductive age in developed countries, whereas in Bangladesh, gynecological physiotherapy is unfamiliar to the respective population and is not practiced in a widespread context.

Gynecological physiotherapy is a relatively new field in Bangladesh. As a result, the purpose of this study is to learn about the attitudes and variables related to undergoing prenatal physiotherapy. After the study is completed, the patients will profit since they will be familiar with the benefits of prenatal physiotherapy for both the mother and her child.

This study will provide an overview of pregnant women's attitudes toward antenatal physiotherapy in our country, as well as identify what the actual barriers are to getting antepartum physiotherapy, why the percentage of women receiving antenatal care is not increasing, and where the actual gaps exist. As a result, working with a multidisciplinary team is helpful for physiotherapists. This research will also help the many organizations that work in this field by allowing them to include physiotherapy staff in their plans for setting up a holistic intervention strategy.

This study will highlight the necessity to examine physiotherapists' abilities, notably in the fields of gynecology and obstetrics, as a basis for increasing the scope of practice and generating a future perspective for the physiotherapy profession. It will assist experts in providing better quality care to these patients in the future. Researchers will get an in-depth understanding of this sector for future research. This study will also aid in enhancing cooperation among members of the healthcare team.

Also, in order to finish my B.Sc. in physiotherapy, I had to do a research project of my choice that was approved by a professional group.

### **1.3 Research Question**

What are the attitudes and associated factors related to receiving antenatal physiotherapy in pregnant women?



### **1.3 Study Objectives:**

#### **1.4.1 General objective:**

To know about in-depth attitudes toward antenatal physiotherapy in pregnant woman and find the associated factors related in receiving antenatal physiotherapy

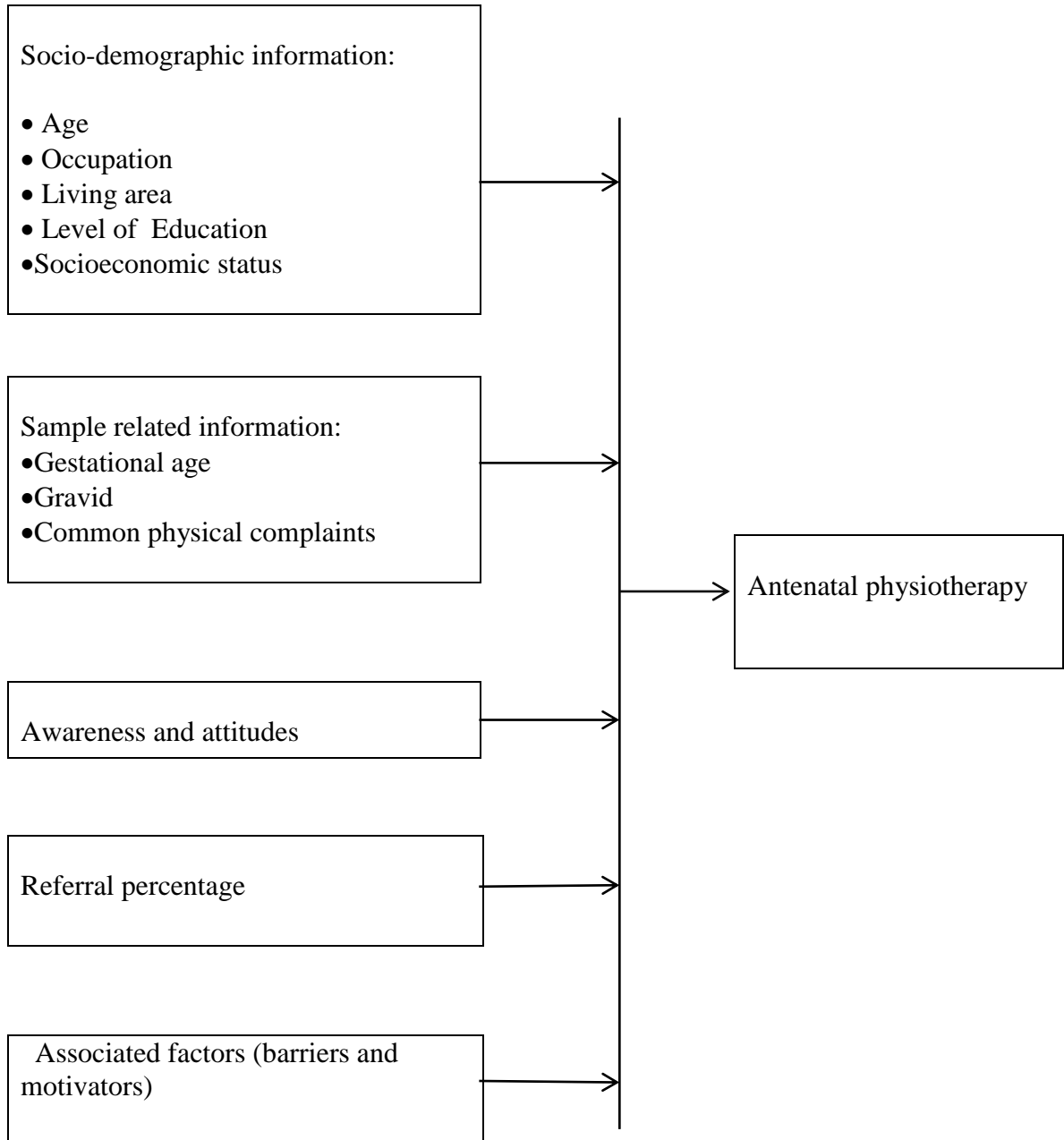
#### **1.4.2 Specific objectives:**

- i. To know socio demographic (age, Living area, Educational status) information of the pregnant woman
- ii. To know how much pregnant women are aware about antenatal physiotherapy
- iii. To find out referral percentage to receive antenatal physiotherapy
- iv. To explore the barriers in receiving antenatal physiotherapy
- v. To determine factors that influence to receive physiotherapy services.

## 1.5 Conceptual Framework

### Independent variables

### Dependent variable



## **1.6 Operational definition**

**Pregnancy:** The word "pregnancy" refers to the period of time during which a baby grows inside a woman's uterus.

Measuring from the last menstruation cycle through delivery, a typical pregnancy lasts roughly 40 weeks, or a little more than nine months in total. Three distinct stages of pregnancy, known as trimesters, are referred to by health care personnel.

**First trimester:** 1st 3 months of pregnancy (1 to 12 weeks).

**Second trimester:** 4 to 6 months of pregnancy (13 to 24 weeks).

**Third trimester:** 7 to 9 months of pregnancy (25 weeks up to delivery).

**Prenatal period:** Period of time from conception to delivery (the pregnancy period).

**Gestational age:** Period of time for intrauterine development.

**Gravida:** Number of pregnancies including the current one.

**Primi gravida:** A woman who is pregnant for the first time.

**Multi gravida:** A women who has been pregnant more than once.

**Antenatal care:** According to WHO, Antenatal care (ANC) can be defined as the care provided by skilled health-care professionals to pregnant women and adolescent girls in order to ensure the best health conditions for both mother and baby during pregnancy. The components of ANC include: risk identification; prevention and management of pregnancy-related or concurrent diseases; and health education and health promotion.

**Attitude:** As the name suggests, attitude is a predisposition to behave or react in a certain manner previous knowledge that affects how a person responds to things and how that responds to the current circumstance. The way we respond to a situation and the way we view things are both influenced by our attitudes.

**Antenatal physiotherapy:** Constitutes of exercises that is aimed at improving the physical and psychological well-being of an expected mother for labor and preventing pregnancy-induced pathologies by various physical means. It generally includes low impact aerobic exercises and stretching exercises.

Safe maternity means supporting all women with the care they require to be safe and healthy during pregnancy and delivery. Motherhood should be an amazing moment for a woman, her family, and the community. (WHO, 2020)

Women in need of hospitalization in the early nineteenth century were cared for by general physicians who had not been educated as obstetricians; later in 1901, a Greek physician highlighted the necessity for pre maternity as a fundamental idea for prenatal care. Prior to the growth of prenatal care facilities, maternal mortality was a major burden to the globe in general in the 1990s. In 2013, there were an estimated 289 000 maternal deaths worldwide, 45% decrease from 1990. Only Sub-Saharan Africa accounted for 62 percent (179 000) of worldwide fatalities, with Southern Asia accounting for 24 percent (69 000). In 2012, the average maternal mortality ratio in third world nations was reported to be 240 per 100,000 live births, compared to 16 per 100,000 rates in affluent countries, demonstrating a significant disparity. In considerations of MMR decrease, it is anticipated that by 2016, MMR will have reduced to half, and in certain countries, more than half. In 2015, the maternal mortality ratio in developing world was 239 per 100 000 live births, compared to 12 per 100 000 live births in wealthy countries, indicating a strong link between prenatal care service attendance. Nowadays globally, 85% of pregnant women receive prenatal care from a trained health professional in at least one visit, while 68% receive at least four antenatal appointments. According to studies, over 80% of maternal fatalities might be avoided if women had access to needed maternity and basic health-care services, particularly prenatal care ( Yadufashije, D. et al., 2017).

According to a 2018 analysis from nine state MMRCs, bleeding, cardiovascular disorders, cardiomyopathy and infection accounted for over half of all pregnancy-related fatalities. Preeclampsia and embolism were the most prevalent underlying causes of

mortality among non-Hispanic black women. Mental illness was the greatest cause of mortality among non-Hispanic white women. Despite the fact that cesarean birth can save lives, the average yearly cesarean delivery rate in the United States has increased from 23% in 1996 to 33% in 2011, with no comparable reduction in maternal or newborn morbidity or mortality. When compared to vaginal birth, cesarean delivery is linked to higher maternal mortality and morbidity (especially bleeding, infection, and thromboembolism), as well as an increased risk of abnormal placentation such as placenta previa in following pregnancies. The American College of Obstetricians and Gynecologists (ACOG) has created recommendations for the safe avoidance of primary cesarean births in an effort to minimize the incidence of unnecessary cesarean deliveries. (Collier and Molina, 2019)

Muscle strains, cramps, tiredness, and discomfort are common musculoskeletal complaints in pregnant women's lower extremities. These hormonal, structural, and physiologic changes persist throughout pregnancy; a 20% rise in weight can increase the stress put on a joint. The hormone relaxin causes an increase in joint laxity, which increases the amount of stress exerted on the bones and joints of the lower extremities (Mantle et al., 2004). Women acquire an average of 10 to 12 kg (22.0–26.4 pounds) during pregnancy, resulting in a 20% increase in body mass due to uterine, fetal, and breast enlargement. Furthermore, sacroiliac ligament loosening results in increased lumbar lordosis and a 48 percent rise in anterior pelvic tilt. The thoracolumbar segment's moment of inertia rises during pregnancy, and the center of mass shifts anteriorly in the sagittal plane. Increases in stance width of up to 30%,<sup>11</sup> an increase in step duration, a decrease in stride length, and a prolonged stance phase are the most regularly seen biomechanical compensating strategies. During pregnancy, the lower extremities experience a lot of discomfort which is linked to improper foot posture caused by changes in muscular balance. During the second and third trimesters, 82% of postpartum mothers reported experiencing lower-extremity pain. (Anselmo et al., 2017)

According to a research in 2012 done by Chanda at selected hospitals in Bangladesh, the incidence of low back pain among pregnant women was 51%. The housewives' main complaint was low back ache. Low back pain was most common in the first trimester of

pregnancy (45.1%), and it was most common in the second trimester of pregnancy (47.06 %) (Chanda, 2012). In 2015 a study conducted by Afroz, at selected maternity hospital in Bangladesh showed that 74% sample were not aware about the Physiotherapy service during pregnancy whereas only 26% pregnant women's were aware about Physiotherapy service.

Gestational diabetes mellitus is a carbohydrate sensitivity that develops during pregnancy. It is the most prevalent metabolic disease observed during pregnancy, representing about 90–95% of all cases of diabetes. GDM is becoming more common, and it is linked to the frequency of type 2 diabetes in a particular community. GDM is linked to a number of negative consequences for both the mother and the fetus. Perinatal problems, hypertension during pregnancy, and preeclampsia are all possible repercussions for the mother. Type 2 diabetes, metabolic syndrome, obesity, cardiovascular morbidity, and recurring GDM are all elevated risks over time. Maternal hyperglycemia produces an inadequate transfer of nutrients to the fetus, mainly glucose, leading in fetal hyper insulinemia, fetal obesity, macrosomia, and perinatal problems. Overweight, endothelial dysfunction, type 2 diabetes, and hypertension are all risks that these infants face in the long run (Kokic, I.S. et al., 2018).

According to a recent meta-analysis, the prevalence of GDM in Europe is 5.4%. GDM complicates around 7% of all pregnancies, according to the American Diabetes Association . Women with GDM have an increased risk of getting type 2 diabetes later in life, with around half of them having type 2 diabetes within five years after giving birth. Exercise during pregnancy has been shown to be a beneficial strategy for preventing excessive weight gain in studies. Furthermore, exercising throughout pregnancy has been shown to be an excellent way to reduce blood sugar levels and prevent and treat GDM (Barakat, R. et al., 2019).

Several women notice an increase in the inter-recti abdominal muscle distance during and after pregnancy due to stretching and weakening of the linea alba. A pathological diastasis of the rectus abdominis muscle is defined as a widening of >2.7 cm at the level of the umbilicus. DRAM generally develops in the second half of pregnancy, with the third trimester being the most common. According to studies, the inter-recti distance rises

at 14 weeks of pregnancy and continues to expand until birth. Regular activity prior to pregnancy and throughout the prenatal period appears to minimize the likelihood of acquiring DRAM and decrease the size of DRAM, respectively. Postural and back care instruction, external support and cardiovascular workouts are all commonly utilized non-surgical therapies in women with DRAM (Benjamin et al., 2014).

The most frequent mental problems during pregnancy and the postpartum period are maternal stress and anxiety. According to a comprehensive analysis based on 28 research conducted in a variety of affluent nations, the prevalence of prenatal depression ranges from 6.5% to 12.9%, with depression within the first three months postpartum reaching up to 19 percent. Pregnancy anxiety affects 4% to 39% of all pregnant women, while postpartum anxiety affects up to 16% of all women. Premature birth and post natal depression are both higher in women with prenatal depression. Antenatal anxiety has been linked to a higher risk of intrauterine growth retardation as well as attention and hyperactivity issues. Exercise has been found in randomized studies to improve symptoms of sadness and anxiety in clinically depressed people. Relaxation and breathing exercises are extremely useful for relieving labor pain and improving emotional wellness (Hashmi et al., 2020).

Every stage of life, including pregnancy, has been shown to benefit from adopting a healthy lifestyle that includes appropriate physical exercise (Piercy et al., 2018). Routine exercise during pregnancy may benefit both the pregnant lady and the fetus if there are no contraindications. Preventing musculoskeletal low back pain, reducing excessive maternal weight gain (Black et al., 2017), lowering the incidence of gestational diabetes mellitus, improving glycemic control in situations of pre gestational diabetes, and lowering the rates of deep vein thrombosis and preeclampsia are just a few of them. Furthermore, physical exercise benefits pregnant women's psychological health as they cope with the physical changes that occur during pregnancy. However, there are several circumstances in which pregnant women should not exercise to avoid fetal damage or other pregnancy issues. Because each pregnancy is different, individualized counseling and physical activity monitoring are required. All guidelines agree that pregnant women who do not have comorbidities should be recommended to engage in regular aerobic and



muscle activity. The ACOG advises 150 minutes of exercise a week (20–30 minutes per day) for pregnant women (ACOG 2002), whereas the RAZCOG recommends 150-300 minutes of normal exercise each week or 70–150 minutes of strenuous exercise each week (no more than 60 minutes each session) (Tsakiridis et al., 2020).

In pregnancy, high-intensity exercise is linked to hypoglycemia. When it comes to strengthening workouts, pregnant women should avoid manual labor because it might contribute to premature birth (Runge et al., 2013). On the other contrary, according to all criteria, inactive women before pregnancy should begin with low-intensity exercise and progressively raise the intensity based on their capacity. SOGC suggests beginning exercise three times per week for 15 minutes and progressively increasing the frequency and duration to four times per week for 30 minutes of continuous activity. Meanwhile, overweight pregnant women should initiate with low-intensity, short-duration physical activity; moderate exercise is indicated for those women who are in good health. (Tsakiridis et al., 2020)

According to the APTA (American Physical Therapy Association) Guide to Physical Therapist Work, "prevention and promotion of health, wellness, and fitness" is part of physical therapists' practice. Physical therapist curriculum and practice standards have begun to emphasize the importance of health promotion. According to the APTA vision statement, physical therapy services will be provided by physicians of physical therapy and maybe board approved specialists by 2020. Physical therapists will be available to consumers in all settings for patient/client management, preventative, and wellness services. Physical therapists will be the professionals of choice in patients'/clients' health networks, with full autonomy (APTA, 2019).

Physical therapists are expected to act as advocates. Advocacy is a legal word that refers to the practice of advocating in court on behalf of another person. The Code of Conduct statement for the profession mentions physiotherapists' advocacy role. "Adopting a community health education strategy will broaden the roles of physical therapists, increase the efficacy of physical therapy services, and positively affect patient outcomes," they explain (WCPT, 1999).

International literature defines the function of the physiotherapist in obstetrics and gynecology emphasizes the importance of physiotherapy treatments in obstetrics and gynecology in enhancing maternal service delivery. Their study, which was conducted among Nigerian obstetricians and gynecologists, indicated that physiotherapy services were underutilized due to their lack of information regarding the function of physiotherapy in delivery. The authors emphasized the need of clinical meetings, seminars, and workshops to improve contact and communication between physiotherapists and obstetricians and gynecologists. Based on the above, prenatal physiotherapy may be regarded as the most effective intervention for promoting health education in close coordination with the other health professionals working in the antenatal clinic (Oduniaya et al., 2013).

According to previous research, the prevalence of pelvic inflammatory disease in Pakistan is 12.8%. Patients with pelvic inflammatory disease are not sent to physical therapists until the illness is proven to be resistant to medication therapy, which can be efficiently treated by employing short wave diathermy therapy, particularly in those who are refractory to chemotherapy. According to one study, only 64.7% of gynecologists in Pakistan are aware of prenatal physical therapy, whereas 68% are aware of postnatal physical therapy. (Maqsood et al., 2017)

A physiotherapist may educate women on pelvic floor muscle training and add a back care lesson into prenatal programs. The detrusor muscles of the bladder diminish with repeated births and age. As a result, pelvic floor exercises, or Kegel exercises, should be stressed even during the prenatal period. Prenatal pelvic floor exercises lower the risk of urine incontinence in stages of pregnancy and the early postnatal period (Park et al., 2013). PFDs affect one-quarter of all women in the United States. PFDs have been linked to decreased quality of life. Pelvic organ prolapse, defecator difficulty, and sexual problems are all examples of PFDs. Vaginal delivery is a substantial risk factor for pelvic floor problems. PFDs are most likely caused by pregnancy. Those who have prenatal urine and fecal incontinence are more likely to have postnatal urinary and fecal incontinence (Bodner-Adler et al., 2019).

Pelvic floor muscle training during pregnancy may reduce the chance of reporting urine leakage in late pregnancy and for up to 6 months after delivery. Pregnancy UI is an unpleasant and embarrassing condition that affects a significant number of women during and throughout pregnancy: Between 34.8 and 41.1% of nulliparous women had UI symptoms, whereas 38.7% to 55.9% reported symptoms during pregnancy. Being 35 years or older, having a BMI of 30 kg/m<sup>2</sup>, and experiencing occasional episodes, i.e., UI less than once per month prior to pregnancy, are all risk factors for developing UI during pregnancy. Furthermore, women who develop new-onset stress UI at their first pregnancy and are still symptomatic at 3 months postpartum have an 88% chance of experiencing symptoms 5 years later. In 2012, a survey of prenatal education class attendance at Rotanda Hospital in Dublin revealed that only 25.2% of all pregnant women attended courses that included a structured PFME education session conducted by a physiotherapist (Daly et al., 2019).

According to one study done in Brazil by Carmen P Ribeiro and Helaine Milanez, 65.6 % of pregnant women were well informed about the practice of physical activity during pregnancy, and the great majority (93.8%) supported it. Nonetheless, just slightly more than 20% of the women in our group exercised adequately. The great majority (93.8%) supported the habit of physical activity during pregnancy. Nonetheless, just slightly more than 20% of the women in exercised adequately (Sarfraz et al., 2013). Consequently, usage of physical therapy treatments is dependent on gynecologist knowledge and attitudes regarding physiotherapy (Maqsood et al., 2017).

According to a research performed by Munawar et al., 2013 in Pakistan, 64.7% of gynecologists were aware of pre-natal physiotherapy exercise sessions, but only 18.7 % referred their patients to the prenatal classes. In terms of prenatal and postnatal referral, it was shown that 13.7% of participants recommended their patients most of the time, 67.7 % rarely, and 18.7% never advised their patients. During the prenatal stage, the social assistance provided is critical. Stress is reduced by group interactions in ANC classes when problems are addressed. Depression was found as a critical psychological risk factor in a study conducted by owing to a bad connection between the lady and her spouse (Buultjens et al., 2013).

Physical activity provides undeniable health advantages, with risk lowering of at least 20% – 30% for premature death and over 25 long - term medical disorders. According to research, regular physical exercise tends to diminish during pregnancy, although its known benefits for both the mother and the baby. This shift in behavior might be attributed to mothers' and possibly health care providers' concerns regarding the safety of physical activity during pregnancy, the most suitable form of exercise, and its frequency, intensity, and duration. There are concerns that physical exercise may lead to the mother's miscarriage. Other reasons for to become less fit and healthy include sickness during pregnancy, as well as increased body mass. Furthermore, the reduction in physical activity during pregnancy might last up to six months following delivery. Aquarobic exercise programs for pregnant women have been found to increase their preparation and physical growth, as well as to optimize well-being, mood, and sleep patterns, as well as to encourage daily physical activity, improve job performance, and reduce pregnancy-related disorders. The SWEP approach is a regimen of strength and conditioning exercises conducted in water that is specifically created for pregnant women and designed to guide them in achieving the advantages (Rodríguez-Blanke et al., 2020).

According to (Igwesi-Chidobe, 2012), physiotherapy is not widely used in Nigeria's rural areas. Some of the barriers to employing physiotherapy were recognized as a lack of information about the spectrum of physiotherapy among health workers and a lack of health practice in those remote locations. Similar research among Anganwadi health workers in rural Karnataka, India, revealed a lack of awareness about physiotherapy. Non-attendance in pregnancy clinics for physiotherapy is due to a lack of information and awareness (Oduniaya et al., 2013).

Women should also be able to make conscious decisions about their health and treatment, sometimes in partnership with medical experts. Most typically, poor interaction and conversational skills damage relationships between health care workers and patients. Teamwork among health professionals is stressed. To address pelvic pain in women, health professionals such as nurses, gynecologists, physiotherapists, and social workers must work together more closely within the maternal health care system. As a result, effective communication between health care providers and women is critical (Lyndon et al., 2011)

According to recent study, the majority of women do not start exercising because of their healthcare system providers. It is not impossible to bind a pregnant woman to completely follow the aims of exercise as prescribed. Individual fitness level, kind of exercise that affects each pregnancy, and the manner a physiotherapist or health care expert counsels and motivates an individual to modify their life style throughout pregnancy are all variables that pregnant ladies must consider if they want to be active (Sangrasi et al., 2016).

Yadufashije, D. et al., 2017, found that in western Kenya , some barriers to women fully utilizing ANC and delivery services included fear of being tested positive for HIV/AIDS, beliefs of health care providers, long clinic waiting times, and expenses of both service charges and transportation, access to health facility.

### **3.1 Study design**

The purpose of this study was to determine the attitudes and factors associated with pregnant women attending prenatal physiotherapy at selected hospitals in Bangladesh. The study used a cross-sectional design. This design entails defining groups of individuals and then gathering the necessary information when they utilize a certain service. Cross-sectional studies are considered to provide a "snapshot" of the prevalence and features of a disease in a community at a certain moment in time. It is considered that a cross-sectional design is a cost-effective and time-saving method for reaching a big number of individuals. Therefore, a cross-sectional design was adopted to determine if prenatal women are aware of physiotherapy interventions.

### **3.2 Study sites**

The sites of study were two selected hospitals -

- Enam medical college and hospital, located at 9/3 Parboti Nagar, Thana Road, Savar Union 1340 and
- Super Medical hospital, Savar-1340.

Enam medical college and hospital is a tertiary hospital where patients have easy access to all resources. In the near future, the hospital will offer gynecological physiotherapy services. Super medical hospital, a private institution located at Savar bus stand, Savar-1340, Dhaka, is renowned among pregnant women for its painless normal delivery service. A large number of pregnant women are admitted to the hospital each day.

### 3.3 Study population

Though in this type of study the population should be for all the pregnant women in Bangladesh but it was too large and also not possible to include them all in the study. The study population was those pregnant women who were attended Enam medical college and hospital, Super Medical hospital, Savar for antenatal services and their regular checkups both in indoor and outdoor service.

### 3.4 Sample size

The equation of sample size calculation are given below-

$$n = \frac{(z^2 pq)}{d^2}$$

Here, n= the desired sample size (eventual sample size).

z = 1.96 which corresponds to the 95% confidence level.

$$z (1 - \alpha/2) = 1.96$$

P = 0.20 (Here, P=Prevalence and P=20%) (World Bank, 2022)

$$q = 1 - p$$

$$= 1 - 0.2$$

$$= 0.8$$

d = degree of accuracy set at 5% = 0.05.

$$n = \frac{(z^2 pq)}{d^2}$$

$$= \frac{(1.96)^2}{(0.05)^2} \times 0.2 \times 0.8$$

$$= 245.86$$

But as the study was performed as a part of academic research project and there were some limitations. Due to some limitations 97 pregnant women were selected as the sample of this study.

### **3.5 Inclusion criteria:**

- Pregnant women with  $\geq 18$  years old
- Pregnant women with any trimester (1st , 2nd or 3rd)
- Subjects who participated willingly and had interest
- Multigravida or Primi gravida both were selected

(Nkhata et al.,2015)

### **3.6 Exclusion criteria:**

- Subjects who were medically unstable
- Pregnant women's age above 40 years was excluded

(Sheth et al.,2019).

### **3.7 Sampling technique**

Due to time restrictions and the fact that convenience sampling was one of the most simple, efficient, and effective methods of sample selection, the study was conducted using convenience sampling procedures. The researcher used this technique to collect samples with characteristics related to the aims of the study. The objective of convenience sampling is to gather population samples. Inclusion and exclusion criteria determine the procedure for sampling. Sampling refers to the process of identifying the number and kind of study participants. (Hicks et al., 2000).



### **3.8.1 Data Collection Instruments and Tools**

- Record or Data collection form
- Informed Consent
- Questionnaire (Bangla) containing personal, socio-demographic information
- 14 item Exercise barriers scale questionnaire for those who had not received antenatal physiotherapy.
- Papers, pen, and pencil etc.

### **3.8.2 Questionnaire**

A structured questionnaire was used to collect data for this study. A questionnaire is a method for collecting data in which respondents answer a preset list of questions. This questionnaire had structured questions to obtain information from participants. In order to aid in the formulation of the questionnaire and the identification of fundamental elements, the researcher reviewed relevant questionnaires from earlier study. The data were collected after receiving permission from the administrations of Enam medical college and hospital, Savar, and Super Medical hospital, Savar. A participant required around ten minutes to gather responses to questions. The researcher indicated at the beginning that individuals might refuse to answer any questionnaire item. They have the option to withdraw at any time. The researcher also explained to all participants the goal of the study. Participants were guaranteed that their private information would never be disclosed. Using a permission form, the researcher got written approval from each willing participant. Following participant consent, a standard questionnaire was used to outline the objectives of the research and collect demographic information. The questions were formulated in Bangla. The researcher employed a face-to-face interview to conduct the interview. To avoid creating errors, the researcher collected all the data individually. The questionnaire consists of three parts: socio-demographic information, an exercise barrier scale used to determine the perceived obstacles to exercise by pregnant women, and enablers to prenatal physiotherapy that inspire pregnant women to undergo antenatal physiotherapy.

### **3.8.3 Exercise Barrier Scale**

The Exercise Barriers Scale (EBS) was created in response to a demand for an instrument to measure people' views of the barriers to exercise participation. The Exercise Barriers Scale (EBS) established by Sechrist et al., 1987 has adequate validity and reliability according to published international research. The scale consists of 14 items. Each item of Exercise Barrier Scale questionnaire was rated on a 4-point Likert scale, from 1 (strongly agree) to 4 (strongly disagree).

### **3.9 Data analysis**

Statistical Package for the Social Sciences (SPSS) version 22 is used to evaluate the data. The information collected by the researcher is known as descriptive information. Each questionnaire was reviewed again to see if any information was missing or unclear. First, populate the variable view of SPSS with the variable names, types, values, decimals, label alignment, and measurement levels. Next, the data were loaded into SPSS's data view. After entering all of the data, the researcher verified that all of the data from the questionnaire sheet had been accurately entered into SPSS data view. Using descriptive statistics, the data were examined, converted to percentages, and shown in tables, bar graphs, and pie charts, along with other formats. The raw data might then be examined with SPSS. In addition to utilizing column and pie charts to display data in Microsoft Office Excel 2010, the correlation between two variables was shown using the Fisher Exact Test and Pearson Chi square test.

## **Chi square ( $\chi^2$ ) Test**

The most common discrete data hypothesis testing method is the Chi square ( $\chi^2$ ) test. It is a statistically significant non-parametric test for bivariate tabular analysis with a contingency table. The Chi square ( $\chi^2$ ) test was used in this investigation to assess the relationships between two variables. It was used to assess the statistical significance of bivariate table data.

### **Test Assumptions:**

Assumption 1: Both variables are categorical.

Assumption 2: All observations are independent.

Assumption 3: Cells in the contingency table are mutually exclusive.

Assumption 4: Expected value of cells should be 5 or greater in at least 80% of cells.

Formula: the test statistics follow:

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

Here,  $\chi^2$  = Chi square value

$\Sigma$  = The sum of

O = Observed count

E = Expected count

Chi square is the sum of the squared differences between observed (O) and the expected (E) data divided by expected (E) data in all possible categories.

### **Fisher Exact Test:**

Fisher's Exact Test is used to see whether there is a significant relationship between two category variables. When one or more of the cell counts in a  $2 \times 2$  table is fewer than 5, it is sometimes used as an alternative to the Chi-Square Test of Independence.

Fisher's Exact Test uses the following null and alternative hypotheses:

- $H_0$ : (null hypothesis): The two variables are independent.
- $H_1$ : (alternative hypothesis): The two variables are not independent.

Level of significance (P value < .05)

The Fisher Exact test uses the following formula

$$P = \frac{(a+b)!(c+d)!(a+c)!(b+d)!}{a!b!c!d!N!}$$

In this formula, the 'a,' 'b,' 'c' and 'd' are the individual frequencies of the 2X2 contingency table, and 'N' is the total frequency.

### **3.10 Inform consent**

All individuals provided written permission before completing the questionnaire.

### **3.11 Ethical Consideration**

Participants were informed about their participation in the study. Participants were informed specifically that their information would remain confidential. Participants were assured that their involvement would not be harmful. The participants might at any time rescind their consent and terminate their involvement. The data for this investigation were coded anonymously to preserve confidentiality. The ethical committee has authorized this research after reviewing the proposal and approving the project. To collect the data, permission was sought from Enam medical college and hospital, Savar, and Super Medical hospital, Savar. Data collection commenced after the researcher obtained a letter of approval from the ethical review committee and authorization from the designated hospital authorities. All the data was examined in a secure and confidential setting. The data records were secured and inaccessible to the general public. The BMRC and WHO recommendations were followed. The BHPI Institutional Review Board (IRB) has approved approval for the study.

### Socio-demographic characteristics

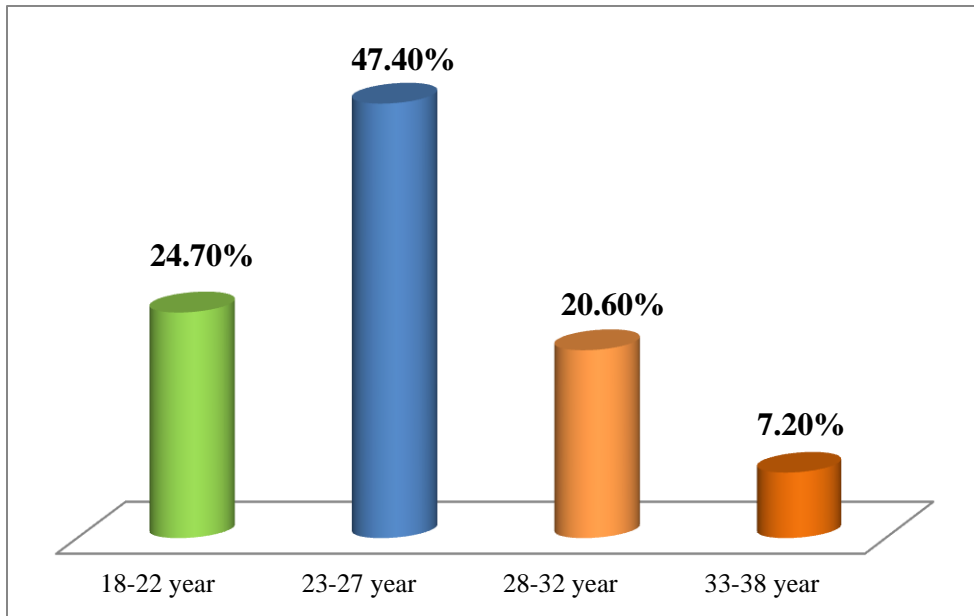
Socio-demographic characteristics of the respondents include their age range, occupation, living area, educational qualification and socio economic status.

**Table-1: Socio-demographic characteristics of the sample**

<b>Variables</b>	<b>Categories</b>	<b>Frequency</b>	<b>Percentage</b>
Age Range	18-22 years	24	24.7
	23-27 years	46	47.4
	28-32 years	20	20.6
	33-38 years	7	7.2
Occupation	Housewife	72	74.2
	Govt. employee	5	5.2
	Private employee	3	3.1
	Teacher	5	5.2
	Student	12	12.4
Living area	Urban	56	57.7
	Semi urban	38	39.2
	Rural	3	3.1
Educational status	Some primary education	8	8.2
	Completed primary education	4	4.1
	Some secondary education	7	7.2
	Completed secondary education	21	21.6
	Higher secondary	29	29.9
	Bachelor or above	28	28.9

<b>Variables</b>	<b>Categories</b>	<b>Frequency</b>	<b>Percentage</b>
Socio economic	Upper class	4	4.1
Status	Middle class	81	83.5
	Lower class	12	12.4

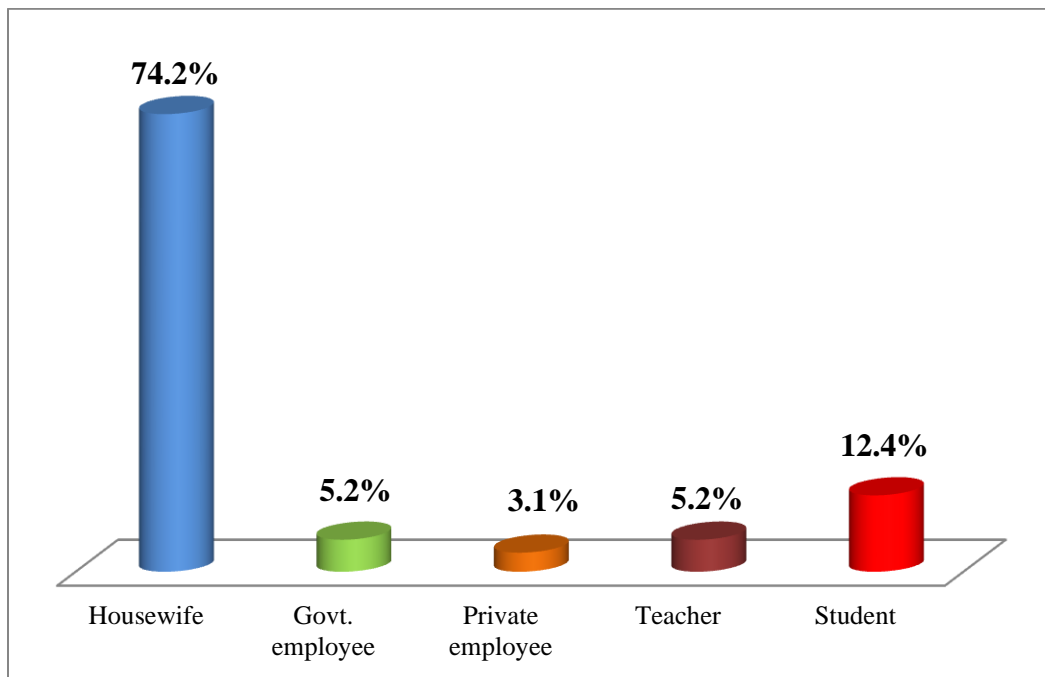
## Age range of the participants



**Figure 1: Age range of the participants**

Among n=97 participants the mean age of the participants was 25.5 year. Minimum age was 18 year and maximum age was 36 years, n=24 (24.7%) was between 18-22 years, n=46 (47.4%) was between 23-27 years, n=20 (20.6%) was between 28-32 years and n=7 (7.2%) was between 33-38 years.

## Occupation of the participants

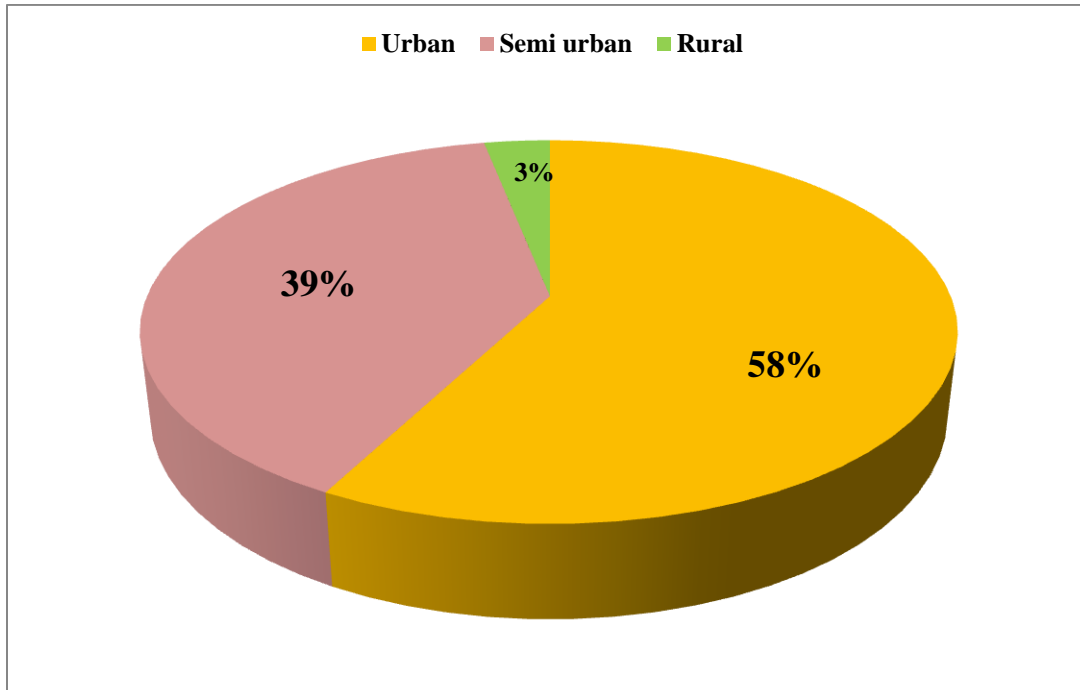


**Figure 2: Occupation of the participants**

Study shows within all the participants 74.2% (n=72) was housewife, 8% (n=12) was student, 5.2% (n= 5) are in Govt. employee and teacher individually, 3.1% (n=3) was private employee.



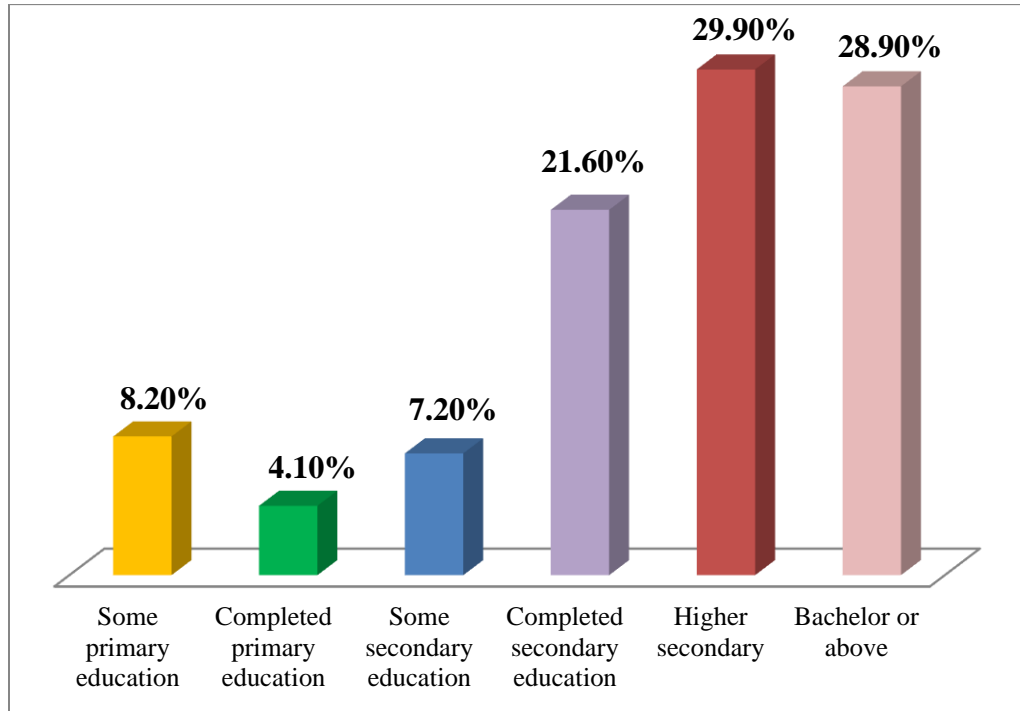
### Living area of the participants



**Figure 3: Living area of the participants**

Study shows with 97 participants 58% (n=56) lives in urban area, 39% (n=38) lives in semi urban area and 3% (n=3) lives in rural area.

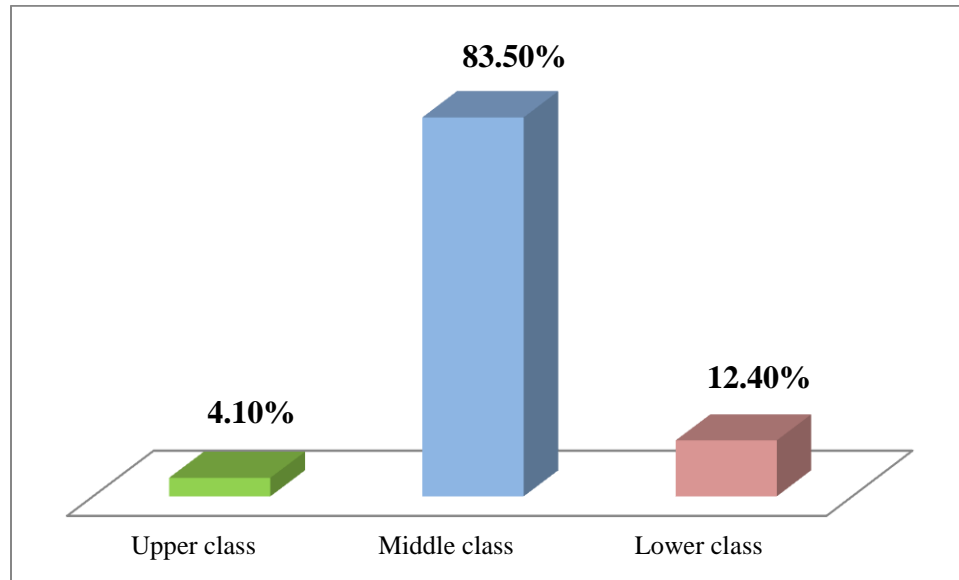
## Educational qualification



**Figure 4: Educational status of the participants**

This study find out that in all the pregnant women 29.9% (n=29) were completed higher secondary education, followed by 28.9% n=28 were completed their Bachelor or above degree, 21.6% (n=21) completed secondary education, 8.2% (n=8) were some primary education, 7.2% (n=7) were Some secondary education and 4.1% (n=4) were completed primary education level in this study.

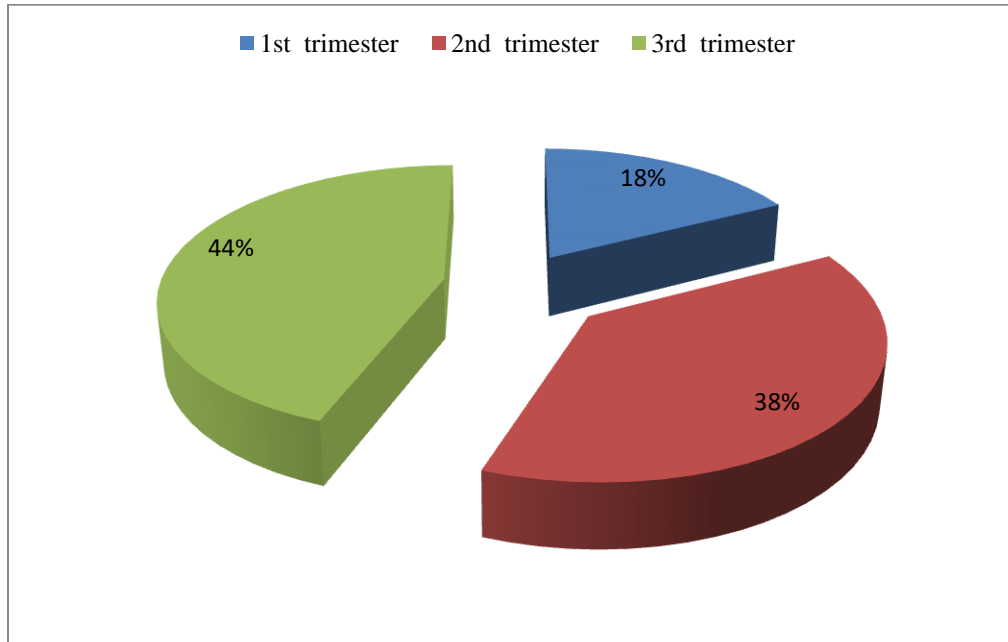
### Socio-economic status



**Figure 5: Socio economic status of the participants**

Study shows that 81% (n=81) pregnant women was from middle class, 12% (n=12.4) was from lower class and 4% (n=4.1) was from upper class.

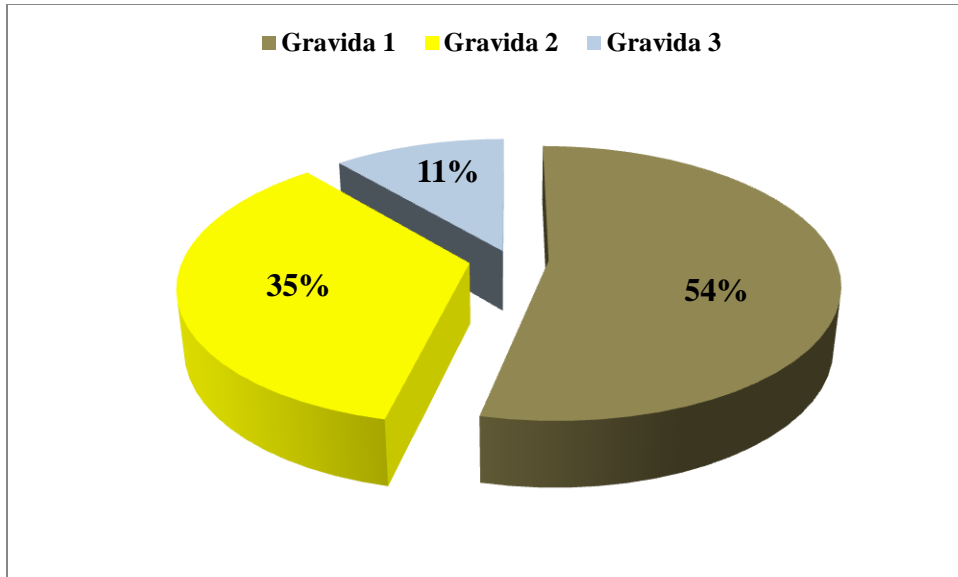
## Gestational age



**Figure 6: Gestational age of the participants**

Pregnant women of all trimester were selected for this study. Majority of the participants 44.3% (n=43) were in third trimester of their pregnancy, 38.1% (n=37) were in second trimester of their pregnancy and 17.5% (n=17) were in first trimester of their pregnancy.

## Gravida



**Figure 7: No of pregnancies among the participants**

Sequential order of this child of the participants were first child in 53.6% (n=52) cases, second child in 35.1% (n=34) cases and more than two children in 11.3% (n=11) cases. That means almost 53.6% participants were primi-gravida and rest of the 46.4% participants were multigravida in this study

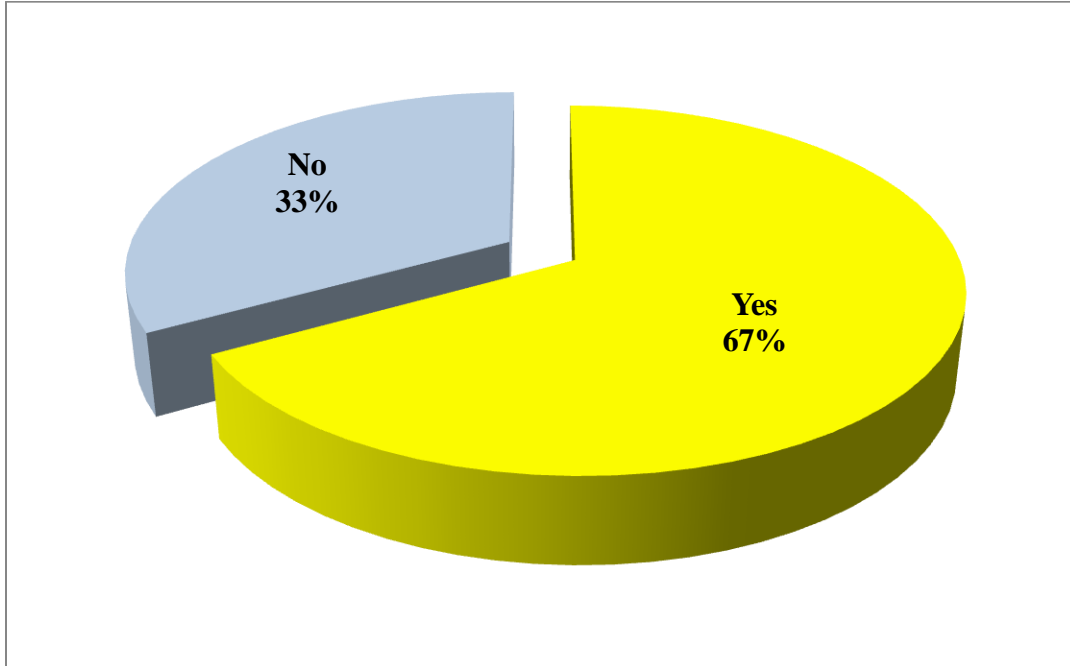
## Physical complaints among the participants

**Table 2: Physical complaints among the participants**

<b>Physical complaints</b>	<b>Percentage</b>	<b>Frequency</b>
Back pain	40.2%	39
Chest pain	19.6%	19
Lower abdominal pain	30.9%	30
Joint pain	39.2%	38
Swelling	23.7%	23
Urinary urgency	73.2%	71
Muscle spasm	37.1%	36
Muscle cramp	33%	32
Numbness	35.1%	34
Others (constipation, allergy)	9.3%	9

Result shows that in 97 pregnant women 73.2% women experienced urine urgency, 40.2% women had back pain, 39.2% had joint pain, 37.1% had muscle spasm, 35.1% experienced tingling sensation, 33% had muscle cramp, 30.9% experienced lower abdominal pain, 23.7% experienced swelling and 19.6% had chest pain. 9.3% participants had others physical complaints (constipation, allergy etc.)

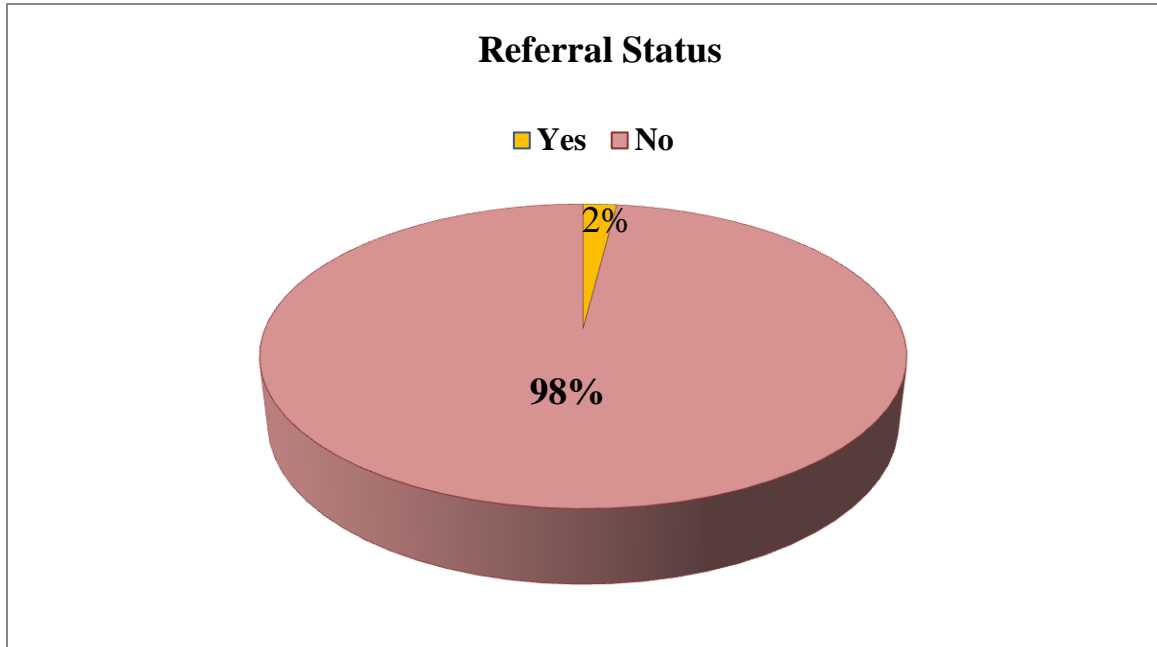
### Awareness about antenatal physiotherapy



**Figure 8: Awareness about antenatal physiotherapy**

Among the participants 67% (n=65) pregnant women were about the antenatal Physiotherapy service and 33% (n=32) pregnant women were not aware about antenatal physiotherapy.

## Referral status

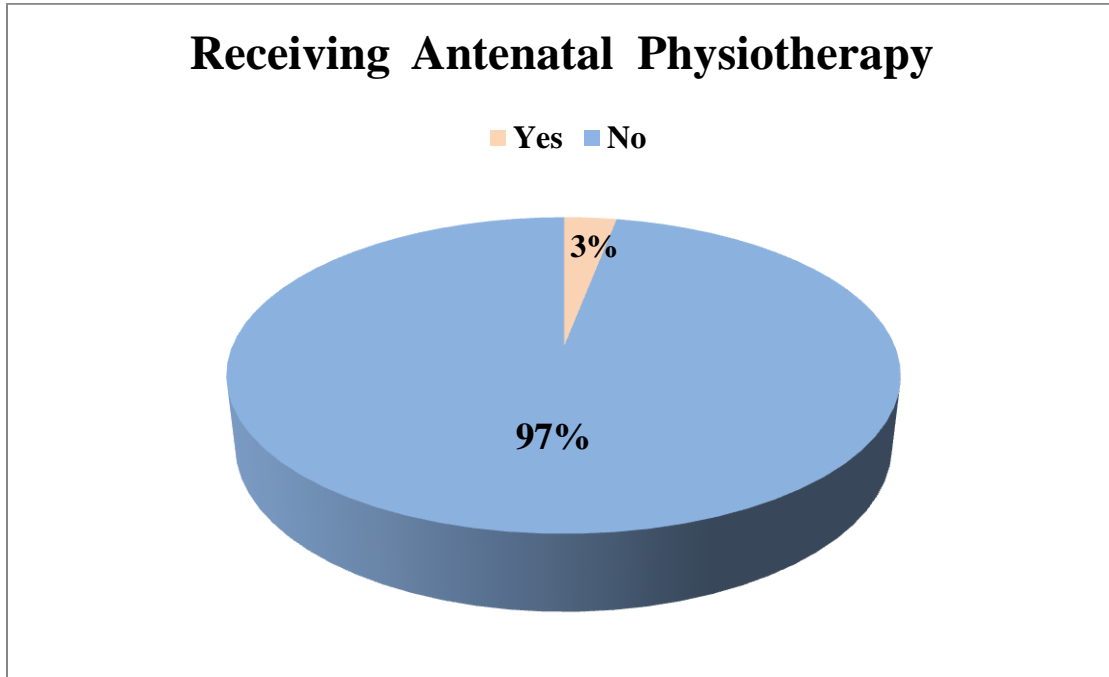


**Figure 9: Referral status of the pregnant women**

Among all participants, just 2.1% (n=2) of pregnant women were recommended to prenatal physiotherapy by their doctor, while 97.9% (n=95) of women were neither referred nor advised by their consultant doctor that physiotherapy is an important treatment during pregnancy. A significant majority of pregnant women are not recommended by their attending gynecologist for prenatal physiotherapy.



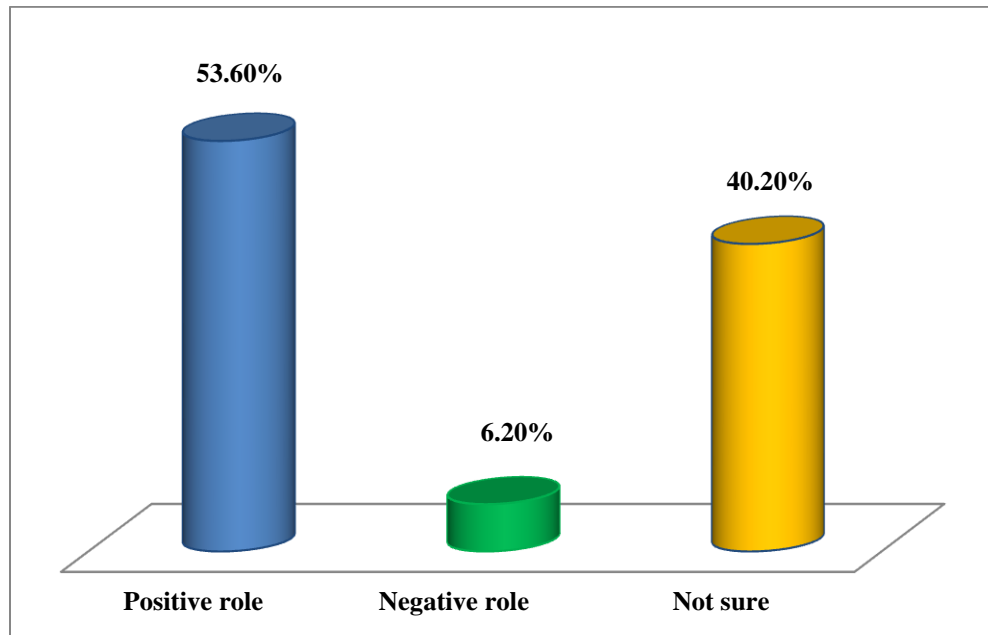
## Receiving antenatal physiotherapy



**Figure 10: Receiving antenatal physiotherapy status**

Among 97 pregnant women, 97% (n= 94) participants are not receiving antenatal physiotherapy, only 3% (n=3) are taking antenatal physiotherapy.

## Role of antenatal physiotherapy



**Figure 11: Perception about role of antenatal physiotherapy**

53.6% (n=52) of 97 pregnant women believed that prenatal physiotherapy plays a good role in antenatal care, whereas 40.20 % (n=39) were unsure about the function of antenatal physiotherapy. 6.2% (n=06) of pregnant women were informed that prenatal physiotherapy had no beneficial function.

**Table 3: Attitudes to antenatal physiotherapy among the participants**

<b>Variables</b>	<b>Responses</b>	<b>Percentage (%)</b>	<b>Frequency (n)</b>
1. Do you feel exercise can reduce pregnancy related complications?	Yes	59.8	58
	No	6.2	6
	Not sure	34	33
2. Do you feel exercise helps in post-delivery recovery?	Yes	52.6	51
	No	9.3	9
	Not sure	38.1	37
3. Do you believe antenatal exercises are beneficial for labor?	Yes	56.7	55
	No	6.2	6
	Not sure	37.1	36
4. Do you think antenatal exercise doesn't harm your baby?	Yes	28.9	28
	No	12.4	12
	Not sure	58.8	57
5. Do you feel the exercising is beneficial for pregnancy symptom relieve?	Yes	50.5	49
	No	5.2	5
	Not sure	44.3	43
6. Do you feel exercise regimen should vary from one pregnant woman to another?	Yes	59.8	58
	No	16.5	16
	Not sure	23.7	23
7. Do you recommend physiotherapy during pregnancy based on physiotherapist advice?	Yes	46.4	45
	No	34	33
	Not sure	19.6	19

**Table 4: Association of socio demographic factors with attitudes towards antenatal physiotherapy of the participants:**

Variables	Exercise can reduce pregnancy related complications		Exercise helps in post-delivery recovery		Antenatal exercises are beneficial for labor		Antenatal exercise doesn't harm your baby	
	n	p-value	n	p-value	n	p-value	n	p-value
<b>Age</b>								
18-22 years	24	.284	24	.264	24	.309	24	<b>.054*</b>
23-27 years	46		46		46		46	
28-32 years	20		20		20		20	
33-38 years	7		7		7		7	
<b>Occupation</b>								
Housewife	72	.579	72	.186	72	.231	72	.134
Govt. employee	5		5		5		5	
Private employee	3		3		3		3	
Student	5		5		5		5	
Teacher	12		12		12		12	
<b>Living area</b>								
Urban	56	.622	56	.095	56	.084	56	.415
Semi urban	38		38		38		38	
Rural	3		3		3		3	
<b>Educational status</b>								
Some primary	8	<b>.033*</b>	8	<b>.001*</b>	8	.096	8	.065
P.SC.	4		4		4		4	
Some secondary	7		7		7		7	
S.S.C.	21		21		21		21	
H.S.C	29		29		29		29	
Bachelor or above	28		28		28		28	
<b>Economic</b>								
Upper class	4	<b>.007*</b>	4	<b>.009*</b>	4	.654	4	.120
Middle class	81		81		81		81	
Lower class	12		12		12		12	

*\*=significant [p<0.05]*

Variables	Exercising is beneficial for pregnancy symptom relieve		Antenatal physiotherapy has a positive role		Exercise regimen should vary from one pregnant woman to another		Recommend physiotherapy during pregnancy based on physiotherapist advice	
	n	p-value	n	p-value	n	p-value	n	p-value
<b>Age</b>								
18-22 years	24		24		24		24	
23-27 years	46		46	<b>.045*</b>	46		46	
28-32 years	20	.155	20		20	.201	20	.481
33-38 years	7		7		7		7	
<b>Occupation</b>								
Housewife	72		72		72		72	
Govt. employee	5		5		5		5	
Private employee	3		3		3		3	
Student	5	.981	5	.138	5	.124	5	.062
Teacher	12		12		12		12	
<b>Living area</b>								
Urban	56		56		56		56	
Semi urban	38		38		38		38	
Rural	3	.818	3	.432	3	.776	3	.498
<b>Educational status</b>								
Some primary	8		8		8		8	
P.SC.	4		4		4		4	
Some secondary	7		7		7		7	
S.S.C.	21	<b>.017*</b>	21	<b>.000*</b>	21	.796	21	.760
H.S.C	29		29		29		29	
Bachelor or above	28		28		28		28	
<b>Economic</b>								
Upper class	4		4		4		4	
Middle class	81	.729	81	<b>.034*</b>	81	.359	81	.821
Lower class	12		12		12		12	

\*=*significant [p<0.05]*

## The Exercise Barriers Scale (Perceived Barriers Items)

**Table 5: Physical exertion subscale**

Physical exertion subscale	Strongly agree	Agree	Disagree	Strongly disagree
	n(%)	n(%)	n(%)	n(%)
Exercise tires me	5(5.2)	<b>59(60.8)</b>	25(25.8)	5(5.2)
I am fatigued by exercise	6(6.2)	<b>56(57.7)</b>	26(26.8)	6(6.2)
Exercise is hard work for me.	3(3.1)	<b>45(46.4)</b>	43(44.3)	3(3.1)

In the physical exertion subscale, among 94 pregnant women , who did not receive antenatal physiotherapy in their pregnancy period, more than half of participants agreed with the points that exercise tires them (60.8%), they were fatigued by exercise (57.7%) and (46.4%) agreed that exercise is hard work for them.

**Table 6: Time Expenditure subscale**

Time Expenditure subscale	Strongly agree	Agree	Disagree	Strongly disagree
	n (%)	n(%)	n(%)	n(%)
Exercise takes too much of my time	7(7.2)	<b>51(52.6)</b>	34(35.1)	2(2.1)
Exercise takes too much time from family relationships	<b>40(41.2)</b>	16(16.50)	18(18.6)	20(20.6)
Exercise takes too much time from my family responsibilities	<b>34(35.1)</b>	21(21.6)	24(24.7)	15(15.5)

In the time expenditure subscale of the exercise barriers scale, more than half of the participants (52.6%) agreed that exercise takes too much of their time, 41.2% and 35.1% participants strongly agreed that exercise takes too much time from their family relationships and family responsibilities.

**Table 7: Exercise Environment subscale**

<b>Exercise Environment subscale</b>	<b>Strongly agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly disagree</b>
	<b>n (%)</b>	<b>n(%)</b>	<b>n(%)</b>	<b>n(%)</b>
Places for me to exercise are too far away.	14(14.4)	<b>44(45.4)</b>	23(23.7)	13(13.4)
I am too embarrassed to exercise.	13(13.4)	<b>40(41.2)</b>	33(34)	8(8.2)
It costs too much money to exercise.	24(24.7)	18(18.6)	<b>42(43.3)</b>	10(10.3)
Exercise facilities do not have convenient schedules for me	21(21.6)	<b>40(41.2)</b>	23(23.7)	10(10.3)
I think people in exercise clothes look funny.	<b>49(50.5)</b>	19(19.6)	17(17.5)	9(9.3)
There are too few places for me to exercise.	<b>38(39.2)</b>	22(22.7)	28(28.9)	6(6.2)

In exercise environment subscale, 45.4% participants agreed that places for them to exercise were too far away. , 41.2% agreed that they were too embarrassed to exercise and exercise facilities do not have convenient schedules for them. 43.3% disagreed that it costs too much money to exercise. 50.5% participants and 39.2% participants strongly agreed that they think people in exercise clothes look funny and there were too few places for them to exercise respectively.

**Table 8: Family discouragement subscale**

<b>Family discouragement subscale</b>	<b>Strongly agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly disagree</b>
	<b>n(%)</b>	<b>n(%)</b>	<b>n(%)</b>	<b>n(%)</b>
My spouse does not encourage exercising.	21(21.6)	<b>31(32)</b>	27(27.8)	15(15.5)
My family members do not encourage me to exercise	<b>32(33)</b>	27(27.8)	22(22.7)	13(13.4)

In the family discouragement subscale, 32% samples agreed that their spouse does not encourage exercising and 33% participants strongly agreed that their family members do not encourage them to exercise.



**Table 9: Descriptive statistics for Exercise Barriers Scale**

<b>Physical exertion subscale</b>	<b>N</b>	<b>Mode</b>	<b>Range</b>
Exercise tires me	94	2	1-4
I am fatigued by exercise	94	2	1-4
Exercise is hard work for me.	94	2	1-4
<b>Time Expenditure subscale</b>	<b>N</b>	<b>Mode</b>	<b>Range</b>
Exercise takes too much of my time	94	1	1-4
Exercise takes too much time from family relationships	94	1	1-4
Exercise takes too much time from my family responsibilities	94	1	1-4
<b>Exercise Environment subscale</b>	<b>N</b>	<b>Mode</b>	<b>Range</b>
Places for me to exercise are too far away.	94	2	1-4
I am too embarrassed to exercise.	94	2	1-4
It costs too much money to exercise.	94	3	1-4
Exercise facilities do not have convenient schedules for me	94	2	1-4
I think people in exercise clothes look funny.	94	1	1-4
There are too few places for me to exercise.	94	1	1-4
<b>Family discouragement subscale</b>	<b>N</b>	<b>Mode</b>	<b>Range</b>
My spouse does not encourage exercising.	94	2	1-4
My family members do not encourage me to exercise	94	1	1-4

**Likert scale responses:** 1= Strongly agree, 2= Agree, 3= Disagree, 4= Strongly Disagree

**Table 10: EBS total score**

<b>Mean</b>	<b>Median</b>	<b>Mode</b>	<b>SD</b>	<b>Minimum score</b>	<b>Maximum Score</b>
31	31	25	6.43	17	48

**Table 11: Associated factors (enablers) related to exercise**

<b>Intra personal factor</b>	<b>N</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
Prescribed	03	0	1	2	0
Confident	03	1	2	0	0
For reducing pregnancy related discomforts	03	0	3	0	0
For easier delivery	03	1	2	0	0
Aware	03	0	3	0	0
Affordable	03	0	3	0	0
For baby's health appearance	03	0	2	1	0
<b>Interpersonal (social) factor</b>	<b>N</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
Support from family	03	0	3	0	0
Socialization with other pregnant women	03	0	3	0	0
<b>Environmental factor</b>	<b>N</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
Access to local resources	03	0	2	1	0

**Likert scale responses:** 1= Strongly disagree, 2= Disagree, 3= Agree, 4= Strongly agree

**Association between level of education and awareness of antenatal physiotherapy.**

Table 11 shows the statistical comparison between level of education and knowledge of antenatal physiotherapy.

**Null Hypothesis (H0):** There is no association between level of education and aware of antenatal physiotherapy.

**Alternative Hypothesis (HA):** There is an association between level of education and aware of antenatal physiotherapy.

**Test assumptions:**

In case of Fisher Exact Test,

1. Two categorical variables including two or more subcategories.
2. Expected frequency is <5, cell count is > 20%

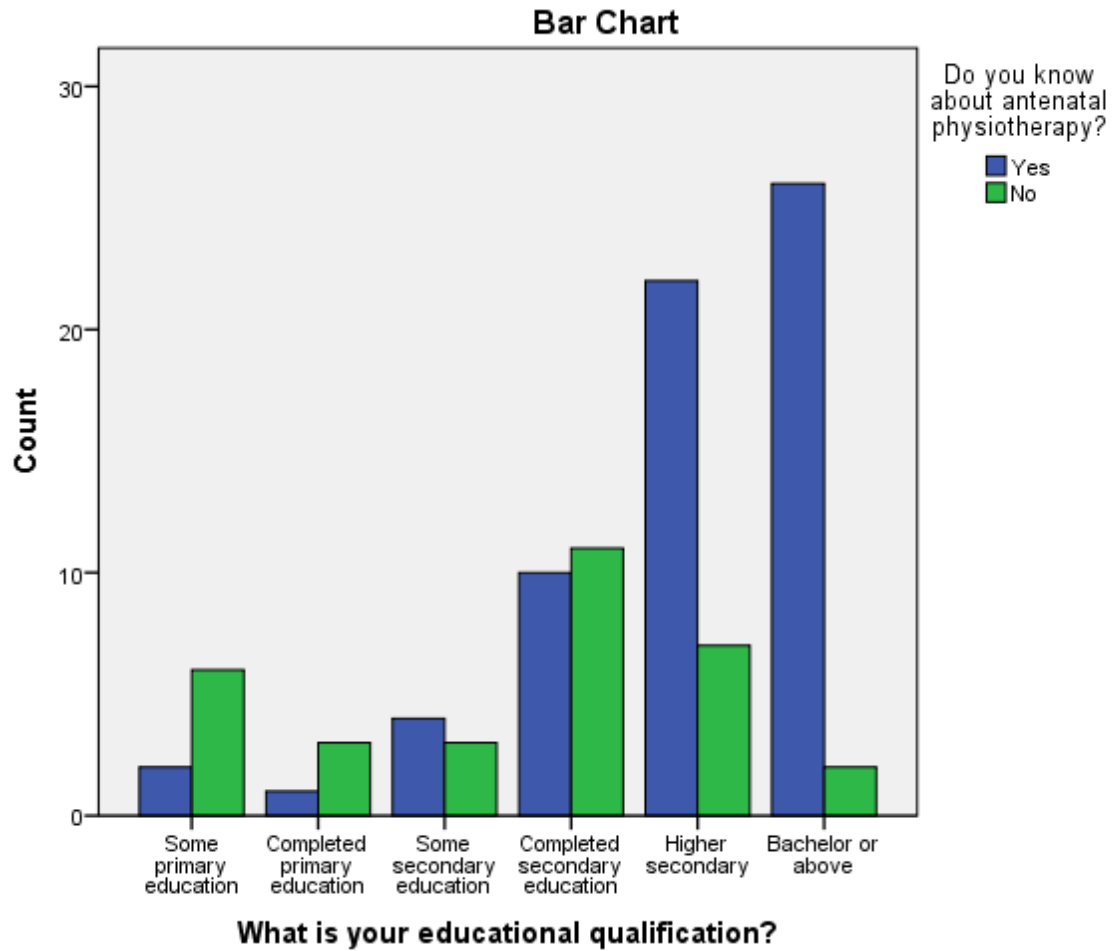
**Level of significance (P value < .05)**

**Table 12: Association between level of education and awareness of antenatal physiotherapy.**

Educational qualification	Awareness about antenatal physiotherapy		Total	Fisher-Exact value	P value
	Yes	No			
Some primary education	2	6	8	23.398	0.00*
Completed primary education	1	3	4		
Some secondary education	4	3	7		
Completed secondary education	10	11	21		
Higher secondary	22	7	29		
Bachelor or above	26	2	28		
Total	65	32	97		

**Alpha value=.05 \*Significant**

In this case, Fisher Exact Value is 23.398 and p value is 0.00 which is < .05. So, it means there is strong association between Level of education and awareness of antenatal physiotherapy in the participants.



**Figure 12: Association between level of education and aware of antenatal physiotherapy**

**Association between awareness of antenatal physiotherapy and recommendation for physiotherapy.**

Table 12 shows the statistical comparison between knowledge of antenatal physiotherapy and recommendation for physiotherapy.

**Null Hypothesis (H0):** There is no association between aware of antenatal physiotherapy and recommendation for physiotherapy.

**Alternative Hypothesis (HA):** There is an association between aware of antenatal physiotherapy and recommendation for physiotherapy.

**Test assumptions:**

In case of Pearson Chi Square Test,

1. Two categorical variables including two or more subcategories.
2. 0-1 cells (0%-20%) have expected count less than 5.

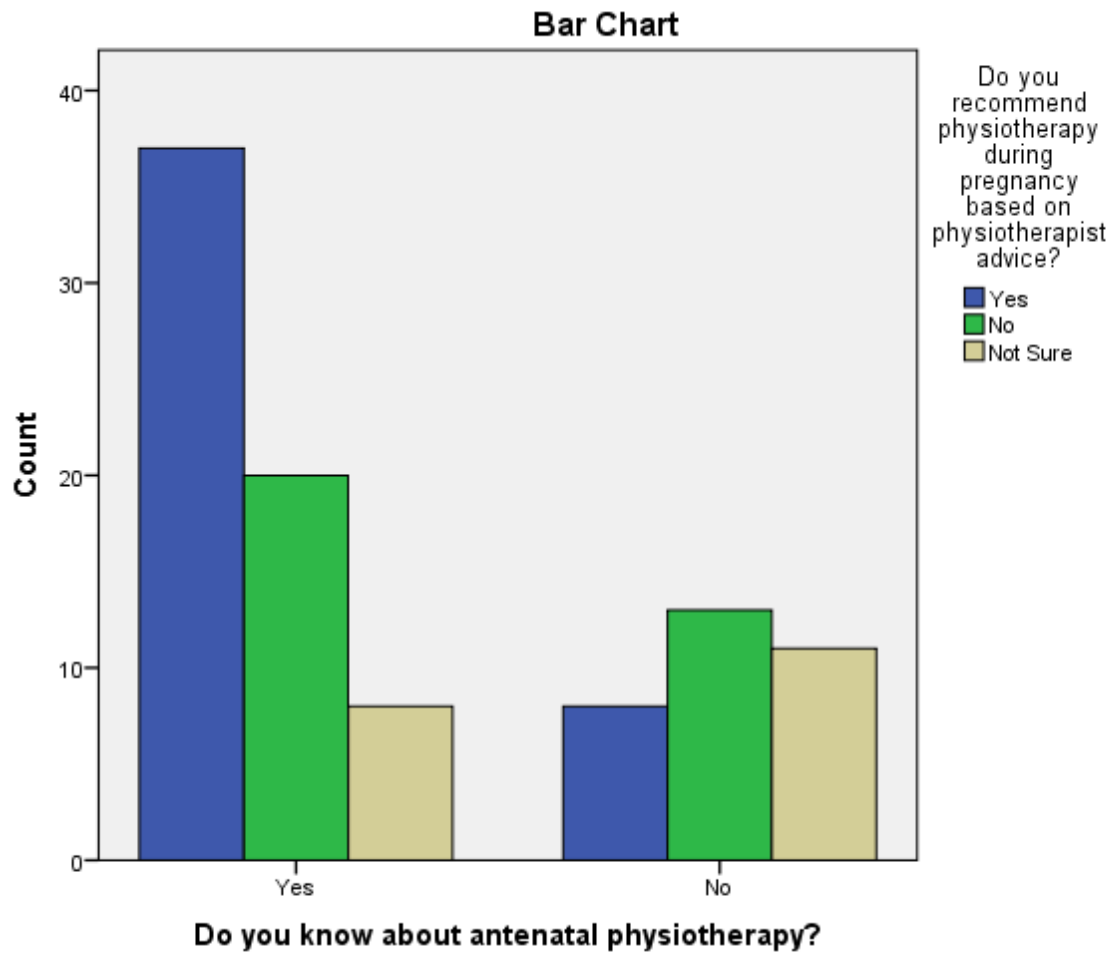
**Level of significance (P value < .05)**

**Table 13: Association between awareness of antenatal physiotherapy and recommendation for physiotherapy.**

Awareness about antenatal physiotherapy	Recommendation for physiotherapy			Total	Chi square value	P value
	Yes	No	Not sure			
Yes	37	20	8	65	10.654	0.005*
No	8	13	11	32		
Total	45	33	19	97		

**Alpha value=.05 \*Significant**

This observed Chi-square value was 10.654 and 5% level of significant state chi-square was 1.96 which is less than the observed chi-square value and the p value is 0.005. So, it means there is association between awareness about antenatal physiotherapy and recommendation for physiotherapy in the participants.



**Figure 13: Association between awareness of antenatal physiotherapy and recommendation for physiotherapy.**

### Association between referral status and receiving antenatal physiotherapy

Table 13 shows the statistical comparison between referral status and receiving antenatal physiotherapy.

**Null Hypothesis (H0):** There is no association referral status and receiving antenatal physiotherapy.

**Alternative Hypothesis (HA):** There is an association between referral status and receiving antenatal physiotherapy.

#### Test assumptions:

In case of Fisher Exact Test,

1. Two categorical variables including two or more subcategories.
2. Expected frequency is  $<5$ , cell count is  $> 20\%$

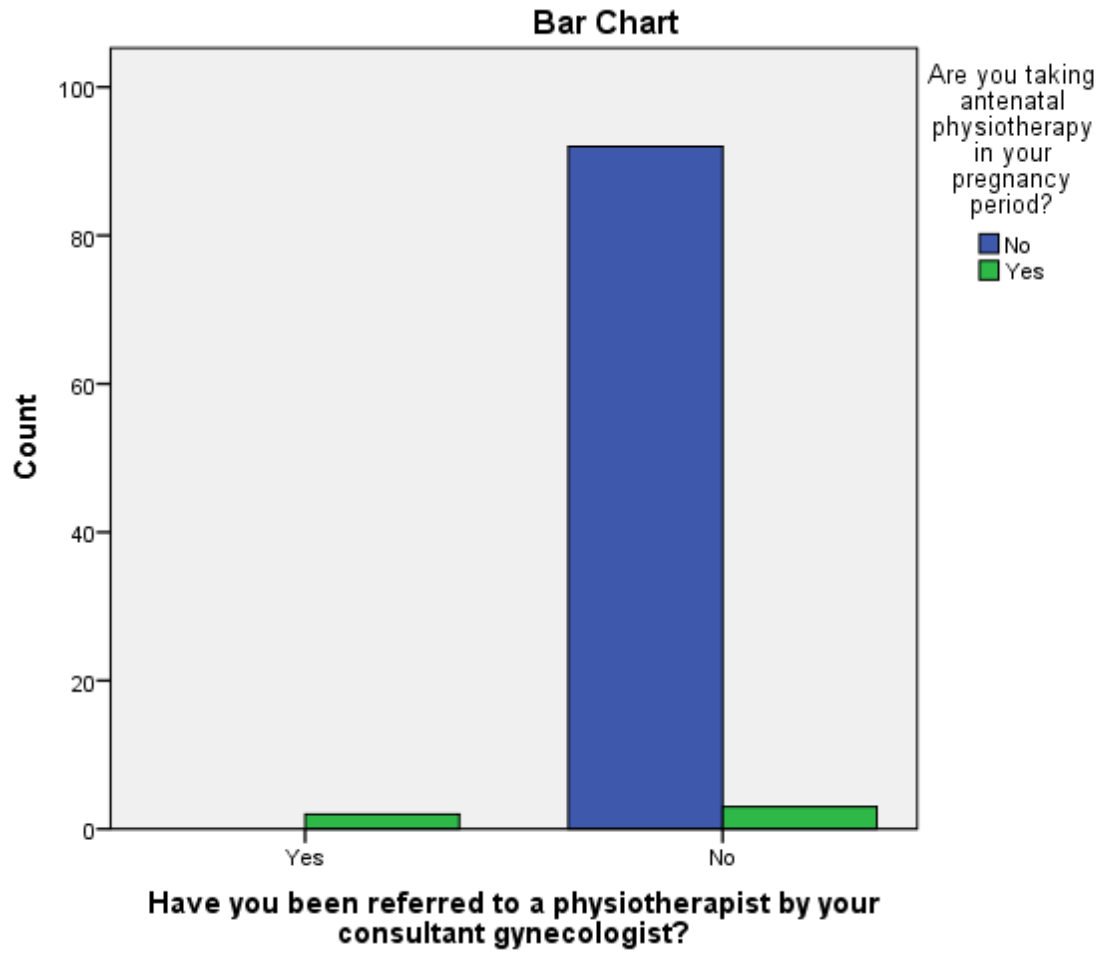
**Level of significance (P value  $< .05$ )**

**Table 14: Association between referral status and receiving antenatal physiotherapy**

Referral status	Receiving antenatal physiotherapy		Total	Fisher-Exact value	P value
	Yes	No			
Yes	2	0	2	12.755	0.002*
No	3	92	95		
Total	5	92	97		

**Alpha value=.05 \*Significant**

In this case, Fisher Exact Value is 23.398 and p value is 0.002 which is  $< .05$ . So, it means there is strong association between referral status and receiving antenatal physiotherapy.



**Figure 14: Association between referral status and receiving antenatal physiotherapy.**



The goal of the study was to find out more about how pregnant women feel about prenatal physiotherapy and to find out what kinds of things are linked to getting antenatal physiotherapy.

Researchers looked at 97 pregnant women and found that their average age was 25.5 years, with a standard deviation of 4.21 years. The majority of pregnant women (47%) were between the ages of 23 and 27. The bulk of those who took part in this research (58.8%) reside in rural areas, whereas just 41.2% of the participants in this survey live in metropolitan areas. According to the results of my research, 74.2% of pregnant women are housewives. The educational level of the participants reveals that 29.9% of them have finished the upper secondary level of education, and 28.9% of them have studied at the bachelor's level or above. The lowest proportion of participants came from the first trimester of pregnancy, which was also the trimester in which the majority of the participants were in the third trimester of their pregnancies ( $n = 43$ ). In this particular research, about 53.6% of the participants were first-time mothers, while the remaining 46.4% were mothers of multiple children.

The findings of this study indicate that 67% of participants were aware of prenatal physiotherapy, whereas the other participants, who represented 33% of the total, were not aware of antenatal physiotherapy. According to the findings of a study conducted by Afroz, F. (2015) on pregnant women's awareness about physiotherapy services at a selected maternity hospital in Bangladesh, only 26% of participants had knowledge about physiotherapy services in pregnancy, while the remaining 74% of participants had no knowledge about physiotherapy services in pregnancy. Hashmi, M. and her colleagues (2020) carried out a study with the working title, "Awareness and Attitude of Pregnant Women Regarding Prenatal Exercises." The researchers found that about 44.7% of women knew about prenatal exercises before they got pregnant.

According to Ashraf and Ahmad (2019), the majority of pregnant women in Nigeria demonstrated inadequate understanding of prenatal workouts; nonetheless, the attitude was favorable toward exercise. Among the 97 pregnant women who participated in this study, 53.6% (n = 52) believed that prenatal physiotherapy is beneficial in antenatal care, while 40.20% (n = 39) were unsure. 6.2% (n = 06) of women who were expecting a child were given the impression that prenatal physiotherapy served no useful purpose.

In this particular research, the majority of pregnant women, or 73.2% (n = 71), reported having urinary urgency. Additionally, 40.2% (n = 39) of the women reported having back pain; 39.2% (n = 38) reported having joint pain; 37.1% (n = 36) reported having muscle spasm; 35.1% (n = 34) reported having numbness; 33% (n = 32) reported having muscle cramps; and 30.9% (n = 30) reported having lower abdominal pain. Other physical symptoms were reported by 9.3% of individuals (n = 9) (constipation, allergy etc.).

Research was carried out by Trina in 2012 on the prevalent pregnancy-related musculoskeletal issues that were experienced by women in Bangladesh while they were in the prenatal stage at different hospitals. 63.3% (57) of participants complained of low back pain, 45.6% (41) participants complained of pelvic girdle pain, 44.4% (40) participants complained of ankle swelling, vessels of the legs swelling (varicose veins) in 26.7% (24) cases, stretch marks in abdominal muscle occurred in 40% (36) cases, and urinary incontinence in 14.4% (13) cases during their pregnancies, according to the findings of that study.

Research was undertaken by Shimul in 2012 to determine the incidence of pregnancy-related low back pain among pregnant women who were receiving treatment at a particular hospital in Bangladesh. The findings showed that 51% of pregnant women had low back discomfort, with the majority of cases occurring in women older than 26 years old who were pregnant.

The research conducted by Sarfraz et al. (2013) revealed that the majority of pregnant women report experiencing discomfort in their backs (56%), legs (16.8%), and lower abdominal regions (12%). 41.1% of women reported having swelling in their ankles

and/or feet. In contrast, 19.5% of women reported experiencing numbness in either their upper or lower limbs. This complaint was equally prevalent in both locations. When asked about urine incontinence, 66.1% of Pakistani women said they had it.

Only 2.1% (n = 2) of pregnant women were urged by their doctor to attend prenatal physiotherapy, while the remaining 97.9% (n = 95) of women were neither referred to nor advised by their consulting doctor that physiotherapy is an essential treatment during pregnancy. Prenatal physiotherapy is not advised for the vast majority of pregnant women by the attending gynecologist in those women's medical care. When questioned about referral, 54.9% of participants in Sarfraz et al.'s (2013) study claimed that they were recommended by their gynecologists for physiotherapy. Out of those participants, 41.9% attended the sessions consistently. This information was published in the researcher's study. The majority of the attendees (14.9%) who did not attend the event said that they were unaware of physiotherapy, while the remaining participants cited problems with both time and interest in Pakistan.

According to Sheth et al., 2019, a high percentage of the subject population (91%) was aware of the function that physiotherapy plays in the maintenance and improvement of overall health and well-being. A significant number of subjects, numbering 59 altogether, were educated on the benefits of physiotherapy for those suffering from backache. However, only 2% of the population was aware of the role that pelvic floor muscle strengthening plays in the prevention and treatment of urinary incontinence. In Ahmedabad, the patients had a positive attitude toward prenatal physiotherapy to the tune of 72% (n = 72), while they had a somewhat less positive attitude toward postnatal physiotherapy to the tune of 39% (n = 39). Nayak et al. (2015) found that only 13% of the participants in their research were recommended for physiotherapy as part of the standard prenatal care regimen in India. This indicates that there is restricted referral for physiotherapy in India.

According to the findings of Hasan et al., 2019, a majority of the pregnant women (218), or 87.2%, showed a definite unfavorable attitude toward prenatal activities. However, only a small percentage of pregnant women had a good attitude toward physical activity

throughout their pregnancy. According to the current study, a lack of sufficient information on the topic (80.8%) and a lack of time (41.6%) were found to be the most significant factors in determining an individual's attitude toward antenatal exercise during pregnancy. This factor was found to account for 52.8% of the variance. According to Mbada CE et al. (2014), women's attitudes towards exercise during pregnancy were mainly influenced by factors such as an unwillingness to exercise, feelings of fatigue, and a lack of appropriate data on exercise. Similar results were discovered by Nayak et al. in 2015. It was found that tiredness and not having enough time were also big problems for pregnant women who wanted to exercise.

In the research conducted by Ali, Z.A., 2019, it was found that out of 349 pregnant women, 138 (39.5%), 193 (55.3%), and 138 (39.5%), respectively, had enough knowledge, a positive attitude, and excellent practice. More than half of the pregnant women, 53.6, felt that antenatal exercises did not fit in with Ethiopian society and that it should be avoided. Knowledge, attitude, and practice of antenatal exercises are substantially linked with greater levels of education, employment in the government, exercise before pregnancy, and having received advice on antenatal exercises in the past among pregnant women. Women who have enough knowledge have a higher odds of having good practice (adjusted odds ratio = 4.53, 95% confidence interval = 1.64–15.3).

According to the findings of this research (p-value.005), awareness of prenatal physiotherapy was shown to have a significant connection with educational qualification (p-value of.005), as well as recommendations for antenatal physiotherapy. It was revealed that there was a significant connection between the referral status and the receipt of prenatal physiotherapy status (p-value.001). According to Nayak et al.'s (2015), the majority of respondents in India, 74% (n = 222), demonstrated insufficient levels of knowledge on exercise and the kinds of workouts that are appropriate. There was no significant correlation between the amount of exercise practiced and educational levels. Nevertheless, the women's cultural backgrounds showed a strong relationship to the exercise practices that they engaged in (p-value 0.025). In addition, the number of pregnancies was shown to have a positive correlation (p-value of 0.01) with the amount of activity that women did while they were pregnant.

**Limitations of the study:**

- Despite the fact that the planned sample size for this study was 246, researchers were only able to get 97 samples. This isn't a big enough sample to say that the results are true for all pregnant women.
- In this study, the researcher had a limited amount of time to collect data from two hospitals (Enam Medical College and Hospital and Super Medical Hospital). Because the hospitals are in the Savar region, it will be hard to use the study's results with a larger group of people.
- There haven't been many published articles regarding physiotherapy and women's health in Bangladesh. As a result, comparing this research to others is difficult.
- There was a low referral rate; if there was a higher referral rate, researchers would investigate why individuals were not getting prenatal physiotherapy despite being recommended to the physiotherapist.
- According to the researcher, only 3% of patients received prenatal physiotherapy. As a result, it was difficult to determine what motivated patients to get antenatal physiotherapy. There may be other options that help prenatal physiotherapy that were not looked at in this study.

**6.1 Conclusion**

Musculoskeletal problems are common during pregnancy. Appropriate physiotherapy may assist in decreasing this difficulty as well as avoiding other pregnancy-related complications. The study's goal was to look at pregnant women's opinions about prenatal physiotherapy and to discover variables linked with getting antenatal physiotherapy. 97 pregnant women who attended hospitals during their pregnancy were conveniently chosen. A questionnaire was employed by the researcher. A questionnaire was given to each participant in order to ascertain in-depth thoughts regarding antenatal physiotherapy and associated features among pregnant women at a specified hospital in Bangladesh. In addition, the researcher creates a database from the patient records for the whole study population.

According to this study, more than half of the participants believe that prenatal physiotherapy is good, some are doubtful, and little believe that antenatal physiotherapy is not beneficial. Despite being aware of the benefits of prenatal physiotherapy, the vast majority of participants do not receive it. The referral process among inter professionals in the health sector in our country is dismal. According to the study's findings, 98 percent of pregnant women with musculoskeletal problems were not advised to receive prenatal physiotherapy. It is critical to close gaps and weaknesses between them by holding workshops, seminars, and conferences on a regular basis to promote the flow of information and ideas and the building of beneficial connections. This study revealed barriers that pregnant women face while seeking to get prenatal treatment. Several intrapersonal (lethargy, insufficient time, awkwardness, financial concerns), interpersonal (lack of family support, lack of partner support), and environmental (lack of access to resources, lack of a secure space) variables are seen as obstacles to undergoing prenatal physiotherapy. As a consequence, Bangladesh has to provide prenatal physiotherapy treatments in every hospital and maternal health care center.

## **6.2 Recommendations**

It is suggested that the next generation of physiotherapy professionals keep researching this area, which could include a large sample size and people from different parts of Bangladesh. Undertake studies on other reproductive health issues where physiotherapists may be employed. The attitudes and perceptions of prenatal physiotherapy among gynecologists and obstetricians may be studied further, perceived benefits and barriers to exercises during pregnancy in previously inactive and active women, as can the quality of physiotherapy services for treating pregnancy-related problems.

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## সম্মতি পত্র

( অংশগ্রহনকারীকে পড়ে শোনাতে হবে )

আসলামুআলাইকুম/নমস্কার,

আমার নাম সেলিনা বেগম, আমি এই গবেষণা প্রকল্পটি বাংলাদেশ হেলথ প্রফেশনস ইনস্টিটিউট (বি এইচ পি আই ) এ পরিচালনা করছি যা আমার ঊর্ধ্ব বর্ষ বি এস সি ইন ফিজিওথেরাপী কোর্সের অধিভুক্ত। আমার গবেষণার শিরোনাম বাংলাদেশের নির্বাচিত হাসপাতালসমূহে গর্ভবতী মহিলাদের মধ্যে প্রসবপূর্ব ফিজিওথেরাপি সম্পর্কে মনোভাব এবং এর সাথে সমপূক্ত সংশ্লিষ্ট কারণগুলি। আমি এক্ষেত্রে আপনার কিছু ব্যক্তিগত এবং আনুষ্ঠানিক প্রশ্ন প্রসবপূর্ব ফিজিওথেরাপি সম্পর্কে করতে চাচ্ছি। এতে আনুমানিক ১০-১৫ মিনিট সময় নিবো।

আমি আপনাকে অবগত করছি যে,এটা আমার অধ্যয়নের অংশ এবং যা অন্য কোন উদ্দেশ্যে ব্যবহার হবে না। গবেষক সরাসরি এই অধ্যয়নের সাথে অন্তর্ভুক্ত নয়। তাই এই গবেষণায় আপনার অংশগ্রহণ বর্তমান ও ভবিষ্যৎ চিকিৎসায় কোন প্রকার প্রভাব ফেলবেনা। আপনি যে সব তথ্য প্রদান করবেন তার গোপনীয়তা বজায় থাকবে এবং আপনার প্রতিবেদনের ঘটনা প্রবাহে এটা নিশ্চিত করা হবে যে এই তথ্যের উৎস অপ্রকাশিত থাকবে।এই অধ্যয়নে আপনার অংশগ্রহন স্বেচ্ছাপ্রণোদিত এবং আপনি যে কোন সময় এই অধ্যয়ন থেকে কোন নেতিবাচক ফলাফল ছাড়াই নিজেকে প্রত্যাহার করতে পারবেন। এছাড়াও কোন নির্দিষ্ট প্রশ্ন অপছন্দ হলে উত্তর না দেয়ার এবং সাক্ষাৎকারের সময় কোন উত্তর না দিতে চাওয়ার অধিকারও আপনার আছে।এই অধ্যয়নে অংশগ্রহনকারী হিসেবে যদি আপনার কোন প্রশ্ন থাকে তাহলে আপনি আমাকে অথবা /এবং ফাবিহা আলম, সহকারি অধ্যাপক, ফিজিওথেরাপি বিভাগ, বি এইচ পি আই ,সিআরপি, সাভার ,ঢাকা-১৩৪৩-তে যোগাযোগ করতে পারেন। সাক্ষাৎকার শুরু করার আগে আপনার কি কোন প্রশ্ন আছে?

আমি আপনার অনুমতি নিয়ে এই সাক্ষাৎকার শুরু করতে যাচ্ছি।

হ্যাঁ...

না...

১। অংশগ্রহনকারীর স্বাক্ষর.....।

২। সাক্ষাৎগ্রহনকারীর স্বাক্ষর.....।

৩। গবেষকের স্বাক্ষর.....।

## VERBAL CONSENT STATEMENT

(Please read out to the participant)

Assalamualaikum, I am Selina Begum, 4th Professional, B.Sc. in Physiotherapy student at Bangladesh Health Professions Institute (BHPI) under the Faculty of Medicine, University of Dhaka. To obtain my Bachelor degree, I have to conduct a research project and it is a part of my study. My research title is “**Attitudes and associated factors to antenatal physiotherapy in pregnant women at selected hospitals in Bangladesh.**” To fulfill my research project, I need some information from you to collect data. So, you can be a respected participant of this research and the conversation time will be 10-15 minutes. I would like to inform you that this is a purely academic study and will not be used for any other purposes. I assure that all data will be kept confidential. Your participation will be voluntary. You may have the right to withdraw consent and discontinue participation at any time from this study. You also have the right to reject a particular question that you don't like.

Do you have any questions before start this session?

So, I can proceed with the interview.

Yes

No

Signature of the participant and Date.....

Signature of the researcher and Date.....

Signature of the witness and Date.....

Address.....

Mobile no.....

প্রশ্নাবলীঃ বাংলা

শিরোনামঃ বাংলাদেশের নির্বাচিত হাসপাতালসমূহে গর্ভবতী মহিলাদের মধ্যে প্রসবপূর্ব ফিজিওথেরাপি সম্পর্কে মনোভাব  
এবং এর সাথে সমপৃক্ত সংশ্লিষ্ট কারণগুলি

ব্যক্তিগত শনাক্তকরণ

নং

সাক্ষাৎ গ্রহণের তারিখঃ

সাক্ষাৎ গ্রহণকারির নামঃ

উত্তরদাতার নামঃ

বয়সঃ

তথ্য গ্রহণের স্থানঃ ১।এনাম মেডিকেল কলেজ হাসপাতাল

২।সুপার মেডিকেল হাসপাতাল

মোবাইল নং

ধাপ-১- আর্থ সামাজিক বিষয়ক প্রশ্নসমূহঃ

প্রশ্ন নং	প্রশ্নাবলী / প্রশ্নসমূহ	সম্ভাব্য উত্তর	কোড
১.১	ঠিকানা		
১.২	আপনার আবাসিক এলাকা কি?	<ul style="list-style-type: none"><li>● শহর</li><li>● আধা শহুরে</li><li>● গ্রাম</li></ul>	<ul style="list-style-type: none"><li>● ০১</li><li>● ০২</li><li>● ০৩</li></ul>
১.৩	আপনার শিক্ষাগত যোগ্যতা	<ul style="list-style-type: none"><li>● নিরক্ষর</li><li>● কিছু প্রাথমিক শিক্ষা</li><li>● প্রাইমারি স্কুল পাস</li><li>● কিছু মাধ্যমিক শিক্ষা</li><li>● এস এস সি পাশ</li><li>● এইচ এস সি পাশ</li><li>● স্নাতক বা এর অধিক</li></ul>	<ul style="list-style-type: none"><li>● ০১</li><li>● ০২</li><li>● ০৩</li><li>● ০৪</li><li>● ০৫</li><li>● ০৬</li><li>● ০৭</li></ul>
১.৪	আপনার পেশা কি?	<ul style="list-style-type: none"><li>● গৃহিণী</li><li>● ব্যবসায়ি</li><li>● সরকারি চাকুরি</li></ul>	<ul style="list-style-type: none"><li>● ০১</li><li>● ০২</li><li>● ০৩</li></ul>



		<ul style="list-style-type: none"> <li>• বেসরকারি চাকুরি</li> <li>• শিক্ষকতা</li> <li>• ছাত্র/ছাত্রি</li> </ul>	<ul style="list-style-type: none"> <li>• ০৪</li> <li>• ০৫</li> <li>• ০৬</li> </ul>
১.৫	আর্থ সামাজিক অবস্থা	<ul style="list-style-type: none"> <li>• উচ্চ বিত্ত</li> <li>• মধ্য বিত্ত</li> <li>• নিম্ন বিত্ত</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> <li>• ০৩</li> </ul>

ধাপ - ২ নমুনা সম্পর্কিত তথ্য

২.১.১	আপনার গরভাবস্থার ধাপ কোনটি	<ul style="list-style-type: none"> <li>• ১ম ধাপ</li> <li>• ২য় ধাপ</li> <li>• ৩য় ধাপ</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> <li>• ০৩</li> </ul>
২.১.২	আপনার সন্তানের ক্রমসংখ্যা কত?	<ul style="list-style-type: none"> <li>• ১ম</li> <li>• ২য়</li> <li>• ৩য়/ ৩য়+</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> <li>• ০৩</li> </ul>
২.১.৩	আপনার কোন দীর্ঘস্থায়ী রোগ আছে কিনা তা অনুগ্রহ করে নির্দেশ করুন:	<ul style="list-style-type: none"> <li>• ডায়াবেটিস</li> <li>• উচ্চ রক্তচাপ</li> <li>• উচ্চ কলেস্টেরল</li> <li>• হৃদরোগ</li> <li>• ফুসফুসের রোগ</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> <li>• ০৩</li> <li>• ০৪</li> <li>• ০৫</li> </ul>
২.১.৪	আপনি কোন কোন লক্ষণের সম্মুখীন হয়েছেন?	ব্যথা <input type="checkbox"/> হ্যাঁ <input type="checkbox"/> না অঞ্চল: ফোলা <input type="checkbox"/> হ্যাঁ <input type="checkbox"/> না অঞ্চল: মাসল স্প্যাজম <input type="checkbox"/> হ্যাঁ <input type="checkbox"/> না অঞ্চল: মাসল ক্র্যাম্প <input type="checkbox"/> হ্যাঁ <input type="checkbox"/> না অঞ্চল: অসাড়াতা: <input type="checkbox"/> হ্যাঁ <input type="checkbox"/> না অঞ্চল: অন্যান্য:	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> <li>• ০৩</li> <li>• ০৪</li> <li>• ০৫</li> </ul>
২.১.৫	প্রস্রাব ধরে রাখার সমস্যায় সম্মুখীন হয়েছিলেন?	<ul style="list-style-type: none"> <li>• হ্যাঁ</li> <li>• না</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> </ul>
২.১.৬	এই সমস্যার জন্য কি চিকিৎসা নিয়েছিলেন?	<ul style="list-style-type: none"> <li>• ঔষধ</li> <li>• ফিজিওথেরাপি</li> <li>• কিছুই না</li> <li>• অন্যান্য</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> <li>• ০৩</li> <li>• ০৪</li> </ul>

প্রশ্ন নং	প্রশ্নাবলী / প্রশ্নসমূহ	সম্ভাব্য উত্তর	কোড
২.২.১	আপনি কি ব্যায়াম করেন?	<ul style="list-style-type: none"> <li>• হ্যাঁ</li> <li>• না</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> </ul>
২.২.২	স্ট্রেচিং বা শক্তিশালীকরণ ব্যায়াম	<ul style="list-style-type: none"> <li>• কোনোটিই নয়</li> <li>• ৩০ মিনিট/সপ্তাহের কম</li> <li>• ৩০-৬০ মিনিট/সপ্তাহ</li> <li>• ১-৩ ঘন্টা/সপ্তাহ</li> <li>• ৩ ঘন্টার বেশি/সপ্তাহ</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> <li>• ০৩</li> <li>• ০৪</li> <li>• ০৫</li> </ul>
২.২.৩	ব্যায়ামের জন্য হাঁটেন?	<ul style="list-style-type: none"> <li>• কোনোটিই নয়</li> <li>• ৩০ মিনিট/সপ্তাহের কম</li> <li>• ৩০-৬০ মিনিট/সপ্তাহ</li> <li>• ১-৩ ঘন্টা/সপ্তাহ</li> <li>• ৩ ঘন্টার বেশি/সপ্তাহ</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> <li>• ০৩</li> <li>• ০৪</li> <li>• ০৫</li> </ul>
২.২.৪	ব্যায়ামের জন্য সাইকেল চালান?	<ul style="list-style-type: none"> <li>• কোনোটিই নয়</li> <li>• ৩০ মিনিট/সপ্তাহের কম</li> <li>• ৩০-৬০ মিনিট/সপ্তাহ</li> <li>• ১-৩ ঘন্টা/সপ্তাহ</li> <li>• ৩ ঘন্টার বেশি/সপ্তাহ</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> <li>• ০৩</li> <li>• ০৪</li> <li>• ০৫</li> </ul>
২.২.৫	কে আপনাকে ব্যায়ামের জন্য গাইড করে?	<ul style="list-style-type: none"> <li>• নিজে নিজে</li> <li>• ফিজিওথেরাপিস্ট</li> <li>• প্রসূতিবিশেষজ্ঞ</li> <li>• অন্যান্য.....</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> <li>• ০৩</li> <li>• ০৪</li> </ul>
২.২.৬	আপনার পরামর্শদাতা গাইনোকোলজিস্ট দ্বারা আপনাকে কি একজন ফিজিওথেরাপিস্টের কাছে রেফার করা হয়েছে?	<ul style="list-style-type: none"> <li>• হ্যাঁ</li> <li>• না</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> </ul>

ধাপ-৩- গর্ভবতী মহিলাদের মধ্যে প্রসবপূর্ব ফিজিওথেরাপি সম্পর্কে মনোভাব

প্রশ্ন নং	প্রশ্নাবলী / প্রশ্নসমূহ	সম্ভাব্য উত্তর	কোড
৩.১	আপনি কি প্রসবপূর্ব ফিজিওথেরাপি সম্পর্কে জানেন?	<ul style="list-style-type: none"> <li>• হ্যাঁ</li> <li>• না</li> <li>• নিশ্চিত না</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> <li>• ০৩</li> </ul>
৩.২	আপনি কি মনে করেন ফিজিওথেরাপি প্রসবপূর্ব যত্নে ইতিবাচক ভূমিকা রাখে?	<ul style="list-style-type: none"> <li>• হ্যাঁ</li> <li>• না</li> <li>• নিশ্চিত না</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> <li>• ০৩</li> </ul>
৩.৩	স্বাস্থ্যসেবা পেশাদারদের নির্দেশনায় প্রসবপূর্ব সময়ে ব্যায়াম করা কি গুরুত্বপূর্ণ?	<ul style="list-style-type: none"> <li>• হ্যাঁ</li> <li>• না</li> <li>• নিশ্চিত না</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> <li>• ০৩</li> </ul>
৩.৪	আপনি কি মনে করেন ব্যায়াম গর্ভাবস্থা সংক্রান্ত জটিলতা কমাতে পারে	<ul style="list-style-type: none"> <li>• হ্যাঁ</li> <li>• না</li> <li>• নিশ্চিত না</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> <li>• ০৩</li> </ul>
৩.৫	আপনি কি মনে করেন ব্যায়াম ডেলিভারি পরবর্তী সমস্যা থেকে মুক্তি লাভে সাহায্য করে?	<ul style="list-style-type: none"> <li>• হ্যাঁ</li> <li>• না</li> <li>• নিশ্চিত না</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> <li>• ০৩</li> </ul>
৩.৬	আপনি কি বিশ্বাস করেন যে প্রসবপূর্ব ব্যায়াম প্রসব বেদনার জন্য উপকারী?	<ul style="list-style-type: none"> <li>• হ্যাঁ</li> <li>• না</li> <li>• নিশ্চিত না</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> <li>• ০৩</li> </ul>
৩.৭	আপনি কি মনে করেন প্রসবপূর্ব সময়ের ব্যায়াম আপনার শিশুর কোন ক্ষতি করবে না	<ul style="list-style-type: none"> <li>• হ্যাঁ</li> <li>• না</li> <li>• নিশ্চিত না</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> <li>• ০৩</li> </ul>
৩.৮	আপনি কি মনে করেন ব্যায়াম গর্ভাবস্থার লক্ষণ উপশমের জন্য উপকারী?	<ul style="list-style-type: none"> <li>• হ্যাঁ</li> <li>• না</li> <li>• নিশ্চিত না</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> <li>• ০৩</li> </ul>
৩.৯	আপনি কি মনে করেন ব্যায়ামের নিয়ম প্রত্যেক গর্ভবতী মহিলার জন্য ভিন্নরকম পরিবর্তিত হওয়া উচিত?	<ul style="list-style-type: none"> <li>• হ্যাঁ</li> <li>• না</li> <li>• নিশ্চিত না</li> </ul>	<ul style="list-style-type: none"> <li>• ০১</li> <li>• ০২</li> <li>• ০৩</li> </ul>

৩.১০	আপনি কি ফিজিওথেরাপিস্টের পরামর্শের ভিত্তিতে গর্ভাবস্থায় ফিজিওথেরাপির পরামর্শ দেন?	<ul style="list-style-type: none"> <li>● হ্যাঁ</li> <li>● না</li> <li>● নিশ্চিত না</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> </ul>

আপনি কি আপনার গর্ভকালীন সময়ে প্রসবপূর্বক ফিজিওথেরাপি নিচ্ছেন?

যদি আপনার উত্তর না হয় তবে ৪.১ নং থেকে ৪.১৪ নং প্রশ্নের উত্তর দিন।

যদি আপনার উত্তর হ্যাঁ হয় তবে ৫.১ নং থেকে ৫.১ ৪ নং প্রশ্নের উত্তর দিন।

ধাপ ৩ গর্ভবতী মহিলাদের মধ্যে প্রসবপূর্ব ফিজিওথেরাপি এর সাথে সমপূক্ত সংশ্লিষ্ট কারণগুলি

প্রশ্ন নং	প্রশ্নাবলী / প্রশ্নসমূহ	সম্ভাব্য উত্তর	কোড
৪.১	ব্যায়াম করা আমার অনেক বেশি সময় নেয়	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে সম্মত</li> <li>● সম্মত</li> <li>● অসম্মত</li> <li>● দৃঢ়ভাবে অসম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
৪.২	ব্যায়াম আমাকে ক্লান্ত করে	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে সম্মত</li> <li>● সম্মত</li> <li>● অসম্মত</li> <li>● দৃঢ়ভাবে অসম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
৪.৩	আমার ব্যায়াম করার জায়গাগুলো অনেক দূরে	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে সম্মত</li> <li>● সম্মত</li> <li>● অসম্মত</li> <li>● দৃঢ়ভাবে অসম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
৪.৪	আমি ব্যায়াম করতে খুব বিব্রত	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে সম্মত</li> <li>● সম্মত</li> <li>● অসম্মত</li> <li>● দৃঢ়ভাবে অসম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
৪.৫	ব্যায়াম করতে অনেক বেশি খরচ হয়	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে সম্মত</li> <li>● সম্মত</li> <li>● অসম্মত</li> <li>● দৃঢ়ভাবে অসম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>

8.৬	ব্যায়ামের জন্য আমার জন্য সুবিধাজনক সময়সূচী নেই	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে সম্মত</li> <li>● সম্মত</li> <li>● অসম্মত</li> <li>● দৃঢ়ভাবে অসম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
8.৭	আমি ব্যায়াম দ্বারা ক্লান্ত	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে সম্মত</li> <li>● সম্মত</li> <li>● অসম্মত</li> <li>● দৃঢ়ভাবে অসম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
8.৮	আমার পত্নী (বা উল্লেখযোগ্য অন্য) ব্যায়ামকে উৎসাহিত করেন না	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে সম্মত</li> <li>● সম্মত</li> <li>● অসম্মত</li> <li>● দৃঢ়ভাবে অসম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
8.৯	ব্যায়াম পারিবারিক সম্পর্ক থেকে খুব বেশি সময় নেয়	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে সম্মত</li> <li>● সম্মত</li> <li>● অসম্মত</li> <li>● দৃঢ়ভাবে অসম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
8.১০	আমি মনে করি ব্যায়ামের পোশাকে লোকেদের মজার দেখায়।	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে সম্মত</li> <li>● সম্মত</li> <li>● অসম্মত</li> <li>● দৃঢ়ভাবে অসম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
8.১১	আমার পরিবারের সদস্যরা আমাকে ব্যায়াম করতে উৎসাহিত করে না	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে সম্মত</li> <li>● সম্মত</li> <li>● অসম্মত</li> <li>● দৃঢ়ভাবে অসম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
8.১২	ব্যায়াম আমার পারিবারিক দায়িত্ব থেকে অনেক বেশি সময় নেয়	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে সম্মত</li> <li>● সম্মত</li> <li>● অসম্মত</li> <li>● দৃঢ়ভাবে অসম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
8.১৩	ব্যায়াম আমার জন্য কঠিন কাজ	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে সম্মত</li> <li>● সম্মত</li> <li>● অসম্মত</li> <li>● দৃঢ়ভাবে অসম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>

		অসম্মত	
৪.১৪	ব্যায়াম করার জন্য আমার জন্য খুব কম জায়গা আছে।	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে সম্মত</li> <li>● সম্মত</li> <li>● অসম্মত</li> <li>● দৃঢ়ভাবে অসম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
প্রশ্ন নং	প্রশ্নাবলী / প্রশ্নসমূহ	সম্ভাব্য উত্তর	কোড
৫.১	আমি প্রসবপূর্ব ফিজিওথেরাপি পেয়েছি কারণ এটি আমার পরামর্শদাতা স্ত্রীরোগ বিশেষজ্ঞদের দ্বারা নির্ধারিত ছিল	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে অসম্মত</li> <li>● অসম্মত</li> <li>● সম্মত</li> <li>● দৃঢ়ভাবে সম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
৫.২	আমি প্রসবপূর্ব ফিজিওথেরাপি নিতে আত্মবিশ্বাসী ছিলাম	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে অসম্মত</li> <li>● অসম্মত</li> <li>● সম্মত</li> <li>● দৃঢ়ভাবে সম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
৫.৩	আমি প্রসবের আগে ফিজিওথেরাপি নিয়েছিলাম কারণ এটি গর্ভাবস্থা সম্পর্কিত অস্বস্তি কমাতে সাহায্য করে	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে অসম্মত</li> <li>● অসম্মত</li> <li>● সম্মত</li> <li>● দৃঢ়ভাবে সম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
৫.৪	সহজ প্রসবের জন্য আমি প্রসবপূর্ব ফিজিওথেরাপি পেয়েছি	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে অসম্মত</li> <li>● অসম্মত</li> <li>● সম্মত</li> <li>● দৃঢ়ভাবে সম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
৫.৫	আমি প্রসবপূর্ব ফিজিওথেরাপি নিয়েছিলাম কারণ আমি প্রসবপূর্ব ফিজিওথেরাপি ব্যায়াম সম্পর্কে সচেতন ছিলাম	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে অসম্মত</li> <li>● অসম্মত</li> <li>● সম্মত</li> <li>● দৃঢ়ভাবে সম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
৫.৬	প্রসবপূর্ব ফিজিওথেরাপি নেওয়ার জন্য আমার পরিবারের সমর্থন ছিল	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে অসম্মত</li> <li>● অসম্মত</li> <li>● সম্মত</li> <li>● দৃঢ়ভাবে সম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
৫.৭	প্রসবপূর্ব ফিজিওথেরাপি নেওয়া আমার পক্ষে শাস্যীয় ছিল	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে অসম্মত</li> <li>● অসম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> </ul>

		<ul style="list-style-type: none"> <li>● সম্মত</li> <li>● দৃঢ়ভাবে সম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০৪</li> </ul>
৫.৮	প্রসবপূর্ব ফিজিওথেরাপি গ্রহণের জন্য আমার কাছে স্থানীয় সম্পদ ছিল	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে অসম্মত</li> <li>● অসম্মত</li> <li>● সম্মত</li> <li>● দৃঢ়ভাবে সম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
৫.৯	আমি শিশুর স্বাস্থ্যের জন্য ফিজিওথেরাপি নিয়েছিলাম	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে অসম্মত</li> <li>● অসম্মত</li> <li>● সম্মত</li> <li>● দৃঢ়ভাবে সম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
৫.১০	অন্যান্য গর্ভবতী মহিলাদের সাথে সামাজিকীকরণের জন্য আমি ফিজিওথেরাপি সেশন নিয়েছিলাম	<ul style="list-style-type: none"> <li>● দৃঢ়ভাবে অসম্মত</li> <li>● অসম্মত</li> <li>● সম্মত</li> <li>● দৃঢ়ভাবে সম্মত</li> </ul>	<ul style="list-style-type: none"> <li>● ০১</li> <li>● ০২</li> <li>● ০৩</li> <li>● ০৪</li> </ul>
৫.১১	অন্যান্য কারণ ..... ..... .....		

**“Attitudes and associated factors to antenatal physiotherapy in pregnant women at selected hospitals in Bangladesh.”**

Identification number:
Date of Interview:
Name of the Patient: <span style="float: right;">Age:</span>
Name of the Interviewer:
Consent Taken : <span style="float: right;">No</span> Yes
Phone number:

**Part 1: Demographic Questions:**

<b>QN</b>	<b>Questions</b>	<b>Responses</b>	<b>Code</b>
1.1	Address	➤	➤
1.2	Your residential area	<ul style="list-style-type: none"> <li>➤ Urban</li> <li>➤ Semi urban</li> <li>➤ Rural</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> </ul>
1.3	What is your educational qualification?	<ul style="list-style-type: none"> <li>➤ Never attended school</li> <li>➤ Some primary education</li> <li>➤ Completed primary education</li> <li>➤ Some secondary education</li> <li>➤ Completed secondary education</li> <li>➤ Higher secondary</li> <li>➤ Bachelor or above</li> <li>➤ Other .....</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> <li>➤ 05</li> <li>➤ 06</li> <li>➤ 07</li> </ul>



<b>1.4</b>	What is your occupation?	<ul style="list-style-type: none"> <li>➤ Housewife</li> <li>➤ Self employed</li> <li>➤ Govt. employee</li> <li>➤ Private employee</li> <li>➤ Student</li> <li>➤ Other.....</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> <li>➤ 05</li> </ul>
<b>1.5</b>	Gravid	<ul style="list-style-type: none"> <li>➤ Gravid 1</li> <li>➤ Gravid 2</li> <li>➤ Gravid 3</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> </ul>
<b>1.6</b>	Socio economic status	<ul style="list-style-type: none"> <li>➤ Upper</li> <li>➤ Middle</li> <li>➤ lower</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> </ul>

**Part 2- Sample related questions**

<b>QN</b>	<b>Questions</b>	<b>Responses</b>	<b>Code</b>
<b>2.1.1</b>	Gestational period	<ul style="list-style-type: none"> <li>➤ 1<sup>st</sup> trimester</li> <li>➤ 2<sup>nd</sup> trimester</li> <li>➤ 3<sup>rd</sup> trimester</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> </ul>
<b>2.1.2</b>	Parity	<ul style="list-style-type: none"> <li>➤ Primi- gravida</li> <li>➤ Second pregnancy</li> <li>➤ Multi para</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> </ul>
<b>2.1.3</b>	Please indicate which chronic condition(s) you have:	<ul style="list-style-type: none"> <li>➤ Diabetes</li> <li>➤ High cholesterol</li> <li>➤ High blood pressure</li> <li>➤ Heart disease</li> <li>➤ Lung disease</li> <li>➤ Other chronic condition Specify: _____ _____</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> <li>➤ 05</li> </ul>

2.1.4	Have you experienced any of the following complains?	<ul style="list-style-type: none"> <li>➤ Pain: <input type="checkbox"/> Yes <input type="checkbox"/> No Region: _____</li> <li>➤ Swelling: <input type="checkbox"/> Yes <input type="checkbox"/> No Region: _____</li> <li>➤ M/s Spasm: <input type="checkbox"/> Yes <input type="checkbox"/> No Region: _____</li> <li>➤ M/s cramps: <input type="checkbox"/> Yes <input type="checkbox"/> No Region: _____</li> <li>➤ Numbness: <input type="checkbox"/> Yes <input type="checkbox"/> No Region: _____</li> <li>➤ Other: _____ Region: _____</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> <li>➤ 05</li> </ul>
2.1.5	Have you experienced urinary incontinence/ discharge?	<ul style="list-style-type: none"> <li>➤ Yes</li> <li>➤ No</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> </ul>
2.1.6	What treatment did you receive for it?	<ul style="list-style-type: none"> <li>➤ Physical therapy</li> <li>➤ Medicines</li> <li>➤ Not any</li> <li>➤ other: _____</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> </ul>

QN	Questions	Responses	Code
2.2.1	Do you perform exercises?	<ul style="list-style-type: none"> <li>➤ <input type="checkbox"/> Yes</li> <li>➤ <input type="checkbox"/> No</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> </ul>
2.2.2	Stretching or strengthening exercises	<ul style="list-style-type: none"> <li>➤ None</li> <li>➤ Less than 30 min/week</li> <li>➤ 30-60 min/week</li> <li>➤ 1-3 hrs/week</li> <li>➤ More than 3 hrs/week</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> <li>➤ 05</li> </ul>
2.2.3	Walk for exercise.	<ul style="list-style-type: none"> <li>➤ None</li> <li>➤ Less than 30 min/week</li> <li>➤ 30-60 min/week</li> <li>➤ 1-3 hrs/week</li> <li>➤ More than 3 hrs/week</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> <li>➤ 05</li> </ul>
2.2.4	Bicycling	<ul style="list-style-type: none"> <li>➤ None</li> <li>➤ Less than 30 min/week</li> <li>➤ 30-60 min/week</li> <li>➤ 1-3 hrs/week</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> </ul>

		➤ More than 3 hrs/week	➤ 05
2.2.5	Who teach/guide you for the exercises?	➤ Self ➤ Physiotherapist ➤ Gynecologist ➤ other source: _____	➤ 01 ➤ 02 ➤ 03
2.2.6	Have you been referred to a physiotherapist by your consultant gynecologist?	➤ Yes ➤ No	➤ 01 ➤ 02

### Part 3- Attitudes to antenatal physiotherapy in pregnant women

QN	Variables	Responses	Code
3.1	Does physiotherapy have a positive role in antenatal care?	➤ Yes ➤ No ➤ Not Sure	➤ 01 ➤ 02 ➤ 03
3.2	Is it important to perform exercise under the guidance of health care professionals?	➤ Yes ➤ No ➤ Not Sure	➤ 01 ➤ 02 ➤ 03
3.3	Do you feel exercise can reduce pregnancy related complications	➤ Yes ➤ No ➤ Not Sure	➤ 01 ➤ 02 ➤ 03
3.4	Do you feel exercise helps in post-delivery recovery?	➤ Yes ➤ No ➤ Not Sure	➤ 01 ➤ 02 ➤ 03
3.5	Do you believe antenatal exercises are beneficial for labor?	➤ Yes ➤ No ➤ Not Sure	➤ 01 ➤ 02 ➤ 03
3.6	Do you think antenatal exercise doesn't harm your baby	➤ Yes ➤ No ➤ Not Sure	➤ 01 ➤ 02 ➤ 03
3.7	Do you feel the exercising is beneficial for pregnancy symptom relieve?	➤ Yes ➤ No ➤ Not Sure	➤ 01 ➤ 02 ➤ 03
3.8	Do you feel exercise regimen should vary from one pregnant woman to another?	➤ Yes ➤ No ➤ Not Sure	➤ 01 ➤ 02 ➤ 03
3.9	Do you recommend physiotherapy during pregnancy based on physiotherapist advice?	➤ Yes ➤ No ➤ Not Sure	➤ 01 ➤ 02 ➤ 03

**Are you taking antenatal physiotherapy in your pregnancy period?**

**If no, then answer the question number from 4.1 to 4.14**

**If yes, then answer the question number from 5.1 to 5.11**

**Exercise barriers scale**

<b>QN</b>	<b>Variables</b>	<b>Responses</b>	<b>code</b>
4.1	Exercising takes too much of my time	<ul style="list-style-type: none"> <li>➤ Strongly agree</li> <li>➤ Agree</li> <li>➤ Disagree</li> <li>➤ Strongly disagree</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> </ul>
4.2	Exercise tires me	<ul style="list-style-type: none"> <li>➤ Strongly agree</li> <li>➤ Agree</li> <li>➤ Disagree</li> <li>➤ Strongly disagree</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> </ul>
4.3	Places for me to exercise are too far away.	<ul style="list-style-type: none"> <li>➤ Strongly agree</li> <li>➤ Agree</li> <li>➤ Disagree</li> <li>➤ Strongly disagree</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> </ul>
4.4	I am too embarrassed to exercise.	<ul style="list-style-type: none"> <li>➤ Strongly agree</li> <li>➤ Agree</li> <li>➤ Disagree</li> <li>➤ Strongly disagree</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> </ul>
4.5	It costs too much to exercise.	<ul style="list-style-type: none"> <li>➤ Strongly agree</li> <li>➤ Agree</li> <li>➤ Disagree</li> <li>➤ Strongly disagree</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> </ul>
4.6	Exercise facilities do not have convenient schedules for me	<ul style="list-style-type: none"> <li>➤ Strongly agree</li> <li>➤ Agree</li> <li>➤ Disagree</li> <li>➤ Strongly disagree</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> </ul>
4.7	I am fatigued by exercise	<ul style="list-style-type: none"> <li>➤ Strongly agree</li> <li>➤ Agree</li> <li>➤ Disagree</li> <li>➤ Strongly disagree</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> </ul>
4.8	My spouse (or significant other) does not encourage exercising.	<ul style="list-style-type: none"> <li>➤ Strongly agree</li> <li>➤ Agree</li> <li>➤ Disagree</li> <li>➤ Strongly disagree</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> </ul>
4.9	Exercise takes too much time from family relationships.	<ul style="list-style-type: none"> <li>➤ Strongly agree</li> <li>➤ Agree</li> <li>➤ Disagree</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> </ul>

		➤ Strongly disagree	➤ 04
4.10	I think people in exercise clothes look funny.	➤ Strongly agree ➤ Agree ➤ Disagree ➤ Strongly disagree	➤ 01 ➤ 02 ➤ 03 ➤ 04
4.11	My family members do not encourage me to exercise	➤ Strongly agree ➤ Agree ➤ Disagree ➤ Strongly disagree	➤ 01 ➤ 02 ➤ 03 ➤ 04
4.12	Exercise takes too much time from my family responsibilities	➤ Strongly agree ➤ Agree ➤ Disagree ➤ Strongly disagree	➤ 01 ➤ 02 ➤ 03 ➤ 04
4.13	Exercise is hard work for me	➤ Strongly agree ➤ Agree ➤ Disagree ➤ Strongly disagree	➤ 01 ➤ 02 ➤ 03 ➤ 04
4.14	There are too few places for me to exercise.	➤ Strongly agree ➤ Agree ➤ Disagree ➤ Strongly disagree	➤ 01 ➤ 02 ➤ 03 ➤ 04

<b>QN</b>	<b>Variables</b>	<b>Responses</b>	<b>Code</b>
<b>5.1</b>	I received antenatal physiotherapy because it was prescribed by my consultant gynecologists	➤ Strongly disagree ➤ Disagree ➤ Agree ➤ Strongly agree	➤ 01 ➤ 02 ➤ 03 ➤ 04
<b>5.2</b>	I was confident to take antenatal physiotherapy	➤ Strongly disagree ➤ Disagree ➤ Agree ➤ Strongly agree	➤ 01 ➤ 02 ➤ 03 ➤ 04
<b>5.3</b>	I took antenatal physiotherapy because it helps to reduce pregnancy related discomforts	➤ Strongly disagree ➤ Disagree ➤ Agree ➤ Strongly agree	➤ 01 ➤ 02 ➤ 03 ➤ 04
<b>5.4</b>	I received antenatal physiotherapy for easier delivery	➤ Strongly disagree ➤ Disagree ➤ Agree ➤ Strongly agree	➤ 01 ➤ 02 ➤ 03 ➤ 04
<b>5.5</b>	I took antenatal physiotherapy	➤ Strongly disagree	➤ 01

	as I was aware about antenatal physiotherapy exercises	<ul style="list-style-type: none"> <li>➤ Disagree</li> <li>➤ Agree</li> <li>➤ Strongly agree</li> </ul>	<ul style="list-style-type: none"> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> </ul>
<b>5.6</b>	I had support from my family to take antenatal physiotherapy	<ul style="list-style-type: none"> <li>➤ Strongly disagree</li> <li>➤ Disagree</li> <li>➤ Agree</li> <li>➤ Strongly agree</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> </ul>
<b>5.7</b>	It was affordable for me to take antenatal physiotherapy	<ul style="list-style-type: none"> <li>➤ Strongly disagree</li> <li>➤ Disagree</li> <li>➤ Agree</li> <li>➤ Strongly agree</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> </ul>
<b>5.8</b>	I had available local resources to receive antenatal physiotherapy	<ul style="list-style-type: none"> <li>➤ Strongly disagree</li> <li>➤ Disagree</li> <li>➤ Agree</li> <li>➤ Strongly agree</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> </ul>
<b>5.9</b>	I took antenatal physiotherapy for baby's health appearance	<ul style="list-style-type: none"> <li>➤ Strongly disagree</li> <li>➤ Disagree</li> <li>➤ Agree</li> <li>➤ Strongly agree</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> </ul>
<b>5.10</b>	For socialization with other pregnant women I took the physiotherapy sessions	<ul style="list-style-type: none"> <li>➤ Strongly disagree</li> <li>➤ Disagree</li> <li>➤ Agree</li> <li>➤ Strongly agree</li> </ul>	<ul style="list-style-type: none"> <li>➤ 01</li> <li>➤ 02</li> <li>➤ 03</li> <li>➤ 04</li> </ul>
<b>5.11</b>	Other reason..... ..... ..... ..... .....		



বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)  
BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)

(The Academic Institute of CRP)

CRP-Chapain, Savar, Dhaka, Tel: 02224445464, 02224441404, Website: www.bhpi.edu.bd

Date: 16.03.2022

To  
The Manager,  
Super Medical Hospital,  
Savar, Dhaka.

Subject: *Regarding Data collection for dissertation.*

Greetings from Bangladesh Health Professions Institute (BHPI). I would like to inform you that, BHPI, the Academic Institute of CRP is running B. Sc in Physiotherapy Course, under Faculty of Medicine, University of Dhaka.

According to the content of 4<sup>th</sup> year of University course curriculum, the students have to do Research and Course work in different topics to develop their skills. Considering the situation, your institute will be the most appropriate place to collect data.

4<sup>th</sup> year students of BHPI Selina Begum would like to collect data in your organization in your convenient time.

We shall remain grateful to you if you could kindly allow us in conducting the placement.

With regards

Md. Shofiqul Islam  
Associate Prof. & Head  
Dept. of Physiotherapy  
BHPI



22-03-22  
MANAGEH  
SUPER MEDICAL HOSPITAL (SMH) LTD.  
SAVAR, DHAKA



বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)  
BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)  
(The Academic Institute of CRP)  
CRP-Chapain, Savar, Dhaka, Tel: 02224445464, 02224441404, Website: www.bhpi.edu.bd

Date: 16.03.2022

To  
The CEO,  
Enam Medical College and Hospital  
Savar, Dhaka

Subject: *Regarding Data collection for dissertation.*

Greetings from Bangladesh Health Professions Institute (BHPI). I would like to inform you that, BHPI, the Academic Institute of CRP is running B. Sc in Physiotherapy Course, under Faculty of Medicine, University of Dhaka.

According to the content of 4<sup>th</sup> year of University course curriculum, the students have to do Research and Course work in different topics to develop their skills. Considering the situation, your institute will be the most appropriate place to collect data.

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We shall remain grateful to you if you could kindly allow us in conducting the placement.

With regards

*Shofiq*  
Md. Shofiqul Islam  
Associate Prof. & Head  
Dept. of Physiotherapy  
BHPI

*Approved*  
*[Signature]*





The Chairman  
Institutional Review Board (IRB)  
Bangladesh Health Professional Institute (BHPI), CRP  
Savar, Dhaka-1343.Bangladesh

Subject: Application for review and ethical approval.

Dear sir,

With due respect, I am Selina Begum, student of final year B.Sc. in Physiotherapy program at Bangladesh Health Professional Institute (BHPI) the academic institute of Centre for the Rehabilitation of the Paralyzed (CRP) under the Faculty of Medicine, University of Dhaka. As per the course curriculum, I have to conduct a research project entitled "**Attitudes and associated factors to antenatal physiotherapy in pregnant women at selected hospitals in Bangladesh.**" under the supervision of Fabiha Alam, Lecturer, Department of Physiotherapy, BHPI.

The purpose of the study is to know about in-depth attitudes toward antenatal physiotherapy in pregnant woman and find the associated factors related in receiving antenatal physiotherapy. The study involves face-to-face interview by using questionnaire to explore the attitude and associated factors to antenatal physiotherapy at Global Specialized Hospital, Mirpur 1, Mirpur CRP, Enam Medical College and Hospital, Savar that may take 10 to 15 minutes to fill in the questionnaire and there is no likelihood of any harm to the participants. Data collectors will receive informed consent from all participants and the collected data will be kept confidential.

Therefore, I look forward to having your kind approval for the research project and to start data collection. I can also assure you that I will maintain all the requirements for study.

Sincerely,

*Selina Begum*

Selina Begum  
Final Year B.Sc. in Physiotherapy  
Session: 2016 – 2017,  
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Thesis presentation date: 12<sup>th</sup> October 2021

*Shafiq*

Head of Department  
B.Sc. in Physiotherapy, BHPI.  
**MD. SHOFIQU ISLAM**  
Associate Professor & Head  
Department of Physiotherapy  
Bangladesh Health Professional Institute (BHPI)  
CRP, Chapatia, Savar, Dhaka-1343

Recommendation from the Supervisor

*Fabiha Alam*  
Fabiha Alam  
Lecturer

Department of Physiotherapy, BHPI.



বাংলাদেশ হেল্থ প্রফেশন ইনস্টিটিউট (বিএইচপিআই)  
**Bangladesh Health Professions Institute (BHPI)**  
(The Academic Institute of CRP)

Ref:

CRP/BHPI/IRB/03/2022/567

Date:

02/03/2022

Selina Begum  
4<sup>th</sup> Year B.Sc. in Physiotherapy  
Session: 2016 – 2017  
BHPI, CRP, Savar, Dhaka- 1343, Bangladesh

**Subject:** Approval of the research project proposal “Attitudes and associated factors to antenatal physiotherapy in pregnant women at selected hospitals in Bangladesh” by ethics committee.

Dear Selina Begum,  
Congratulations.

The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application to conduct the above-mentioned dissertation, with yourself, as the principal investigator and Fabiha Alam as thesis supervisor. The Following documents have been reviewed and approved:

Sr. No.	Name of the Documents
1	Dissertation Proposal
2	Questionnaire (English and Bengali version)
3	Information sheet & consent form.

The purpose of the study is to know about in-depth attitudes toward antenatal physiotherapy in pregnant woman and find the associated factors related in receiving antenatal physiotherapy. Since the study involves questionnaire that takes maximum 10-15 minutes and have no likelihood of any harm to the participants, the members of the Ethics committee approved the study to be conducted in the presented form at the meeting held at 09:00 AM on 12<sup>th</sup> October, 2021 at BHPI (30<sup>th</sup> IRB Meeting).

The institutional Ethics committee expects to be informed about the progress of the study, any changes occurring in the course of the study, any revision in the protocol and patient information or informed consent and ask to be provided a copy of the final report. This Ethics committee is working accordance to Nuremberg Code 1947, World Medical Association Declaration of Helsinki, 1964 - 2013 and other applicable regulation.

Best regards,

Muhammad Millat Hossain  
Assistant Professor, Dept. of Rehabilitation Science  
Member Secretary, Institutional Review Board (IRB)  
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

