



# KNOWLEDGE, ATTITUDE, AND PRACTICE OF EXERCISE DURING PREGNANCY AMONG ANTENATAL MOTHERS

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## **Abstract**

**Introduction** –To date, intervention studies show that exercise during pregnancy may enhance quality for wellbeing, improve self-image, fitness, prevent excessive maternal weight gain, low back pain, pelvic girdle pain, and urinary in-continance also decrease the risk of depression pregnancy and postpartum. Though there are many literatures showing befits of exercises in ANC period , very less studies are present shoeing the knowledge, attitude towards the exercises among pregnant women. Hence, this study was carried out to assess the knowledge and attitude about exercise during pregnancy among antenatal mothers.

**Methodology-** A total of 67 antenatal mothers were included in the study, who filled in the questionnaire. The questionnaire comprised of 13 questions ( 11 knowledge, 1 attitude, 1 practice) for knowledge first 5 questions item categorical responses ( yes, no )( 1,0) and other 6 questions of knowledge categorical responses as ( yes , I don't know, no ) (2,1,0) respectively. For attitude and practice answers were either YES or NO. Data were analysed using Statistical package for social sciences (SPSS).

**Results-** Response rate was 100%. The mean knowledge score is 1.47 and for benefits of exercise are 4.32 respectively. 67% women felt that exercise during pregnancy is necessary and 29% among them have already done exercise during pregnancy.

**Conclusion-** This study found that knowledge regarding benefits of exercises of our women during pregnancy was less, and their attitude was favourable. Very few were actually practicing exercise in pregnancy

**Key words** - Antenatal mothers, attitude, exercise, knowledge, practise .

## **INTRODUCTION**

Antenatal care is a part of the public health promotion and prevention program in most countries.<sup>[1]</sup> Antenatal care (ANC) is —care before birthl and includes education, screening, counseling, treatment, monitoring and promoting the well-being of the mother and fetus<sup>[2]</sup>. Safe maternity with improved neonatal outcomes is predicated on proper antenatal health care services, regular exercise is promoted for its overall health benefits.<sup>[1]</sup>

Modern popular culture has embraced the concept of a —fit pregnancy. Attitudes toward exercise during pregnancy have changed dramatically over the past 20 years<sup>[1]</sup>. Physical inactivity is reported to be the fourth leading risk factor for non-communicable diseases (NCDs) and it contributes to the global burden of disease. Exercise is considered safe and beneficial in most pregnancies.<sup>[13]</sup>

Physical activity, defined as any bodily movement produced by the contraction of skeletal muscles. In all stages of life , maintains and improves cardio respiratory fitness, reduce risk of obesity and associated co morbidities, and reduce results in greater longevity.<sup>[10]</sup> Recent studies show that, in most cases, exercise is safe for both the mother and foetus during pregnancy and support the recommendation to initiate of continue exercise in most pregnancies.. Pregnancy can be seen as a great time for lifestyle modifications. Moderate intensity exercises are proven to be beneficial for both mother and foetus in low-risk pregnancy with the necessary modifications.<sup>[4]</sup>

The American Congress of Obstetricians and Gynecologists' recommended that pregnant women can exercise moderately for 30 min on most days of the week.<sup>[1]</sup> Exercise improves the health of the mother and the well-being of the infant.<sup>[4]</sup> In spite of fact that exercise programs during pregnancy and after childbirth are designed to minimize impairment and help the women maintain or regain function while she is preparing for the arrival of the baby and then caring for the infant.<sup>[9]</sup> All active pregnant women should be examined periodically to assess the effects of their exercise programs on the developing foetus and hence that adjustments can be made if necessary.<sup>[1]</sup>

Physiotherapy is of great importance in the prenatal period, as well as in the preparation of labour and during vaginal delivery, promoting relief of pain during the period of contractions and labor, and reduction of labor time, making the movement easier for the pregnant woman and bringing more security to her. Exercise has repercussions way beyond just pregnancy- regular exercise relieves stress, allows mothers' to enjoy nature, lose weight, lower blood pressure and cholesterol, and enhances self- confidence.<sup>[4]</sup>

Examples of exercise that have been Extensively studied in pregnancy and found to be safe and beneficial: - Walking, Stationary Cycling , Aerobic exercises , Resistance exercises , Stretching exercises .<sup>[10]</sup>

Benefits of Exercise in Pregnancy: - Higher incidence of—Vaginal delivery. Lower incidence of – Excessive gestational weight gain, Gestational diabetes mellitus, Gestational hypertensive disorders, Preterm birth, Cesarean birth, Lower birth weight. Psychological benefits: - Reduce Fatigue, stress, anxiety and depression as well as improved well being.<sup>[10]</sup>

Warning signs to Discontinue Exercise While Pregnant: - Vaginal bleeding, Abdominal pain, Regular painful contractions, Dizziness, Chest pain, Muscle weakness affecting balance.<sup>[10]</sup>

Adaptations to physical activity are needed to reduce the risk of injury for both mother and baby.<sup>[11]</sup> This also extent to the mothers increased cardiac output, ventilation and energy expenditure, improve sleep, reduce fatigue, stress, anxiety. A recent study shown that higher levels of physical activity by pregnant women are associated with improved breastfeeding outcomes.<sup>[13]</sup>

To date, intervention studies show that exercise during show that exercise during pregnancy may enhance quality of life and wellbeing, improve self-image and fitness prevent excessive maternal weight gain, low back pain, pelvic girdle pain, and urinary incontinence as well as decrease the risk of depression pregnancy and postpartum.<sup>[5]</sup>

Though there are many literatures showing befits of exercises in ANC period , very less studies are present shoeing the knowledge, attitude towards the exercises among pregnant women. Hence, this study was carried out to assess the knowledge and attitude about exercise during pregnancy among antenatal mothers.

## MATERIALS AND METHODOLOGY

1. **Type of Study** : Cross Sectional Study.
2. **Method of Sampling** : Convenient Sampling.
3. **Study setting** : Antenatal ward in Dr. Ulhas Patil Medical College and Hospital.
4. **Study Population** : Antenatal Mother's in Dr. Ulhas Patil Medical College and Hospital.
5. **Sample Size** : 67 ( $4\delta^2/E^2$ )
6. **Study Duration** : 6 Months.
7. **Study place** : Dr. Ulhas Patil Medical College, Jalgaon.
8. **Outcome measure** : Self-administrated questionnaire.
9. **Materials required** : Pen, Paper, and Questionnaire.
10. **Selection criteria:**
  - **Inclusion criteria.**
    - a) Pregnant Women Visiting Antenatal Care Unit.
  - **Exclusion criteria.**
    - a) Women who unable to give consent.
    - b) Women having pre suspected complications in pregnancy
    - c) Women having psychological impairment
    - d) Presence of physical deficiency

## PROCEDURE

- Permission from institutional ethical committee was taken.
- Subjects were screened according to selection criteria.
- Detail procedure of the study was explained and the consent form was signed by antenatal mothers.
- Subjects were provided with questionnaire and information was collected.
- Statistical Analysis was done and results were collected.

## METHOD

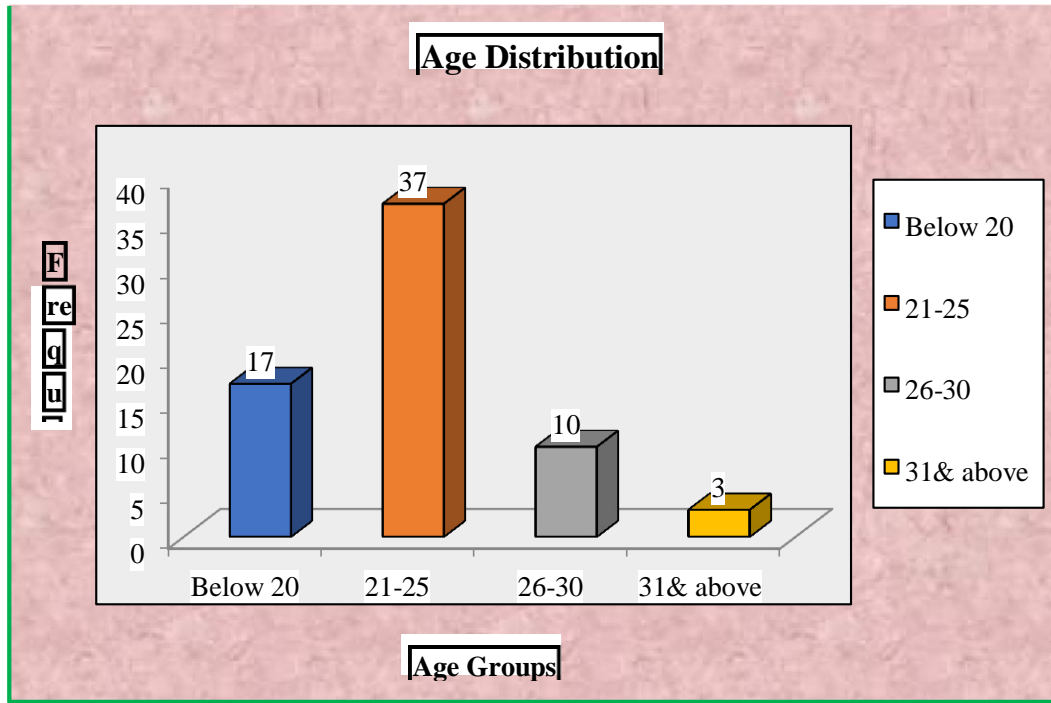
The study was conducted in the antenatal ward of DUPMC Jalgaon. All antenatal mothers attending our OPD for antenatal care and for those who volunteered for the study were enrolled in this study. It was a cross sectional descriptive study to analyze the knowledge, attitude and practice of exercise during pregnancy among antenatal mothers.

Participation to the study was on voluntary basis. All were assured of anonymity and confidentiality of responses. Data were collected using self administered close ended questionnaire. The questionnaire comprised of 13 questions ( 11 knowledge, 1 attitude, 1 practice) for knowledge first 5 questions item categorical responses ( yes, no )( 1,0) and other 6 questions of knowledge categorical responses as ( yes , I don't know, no ) (2,1,0) respectively. For attitude and practice answers were either YES or NO. Data were analyzed using Statistical package for social sciences (SPSS).

## DATA ANALYSIS

Table no. 1: Age of Participants.

Variable	Groups	Frequency	Percentage
Age	Below 20	17	25.37
	21-25	37	55.22
	26-30	10	14.93
	31 & above	3	4.48

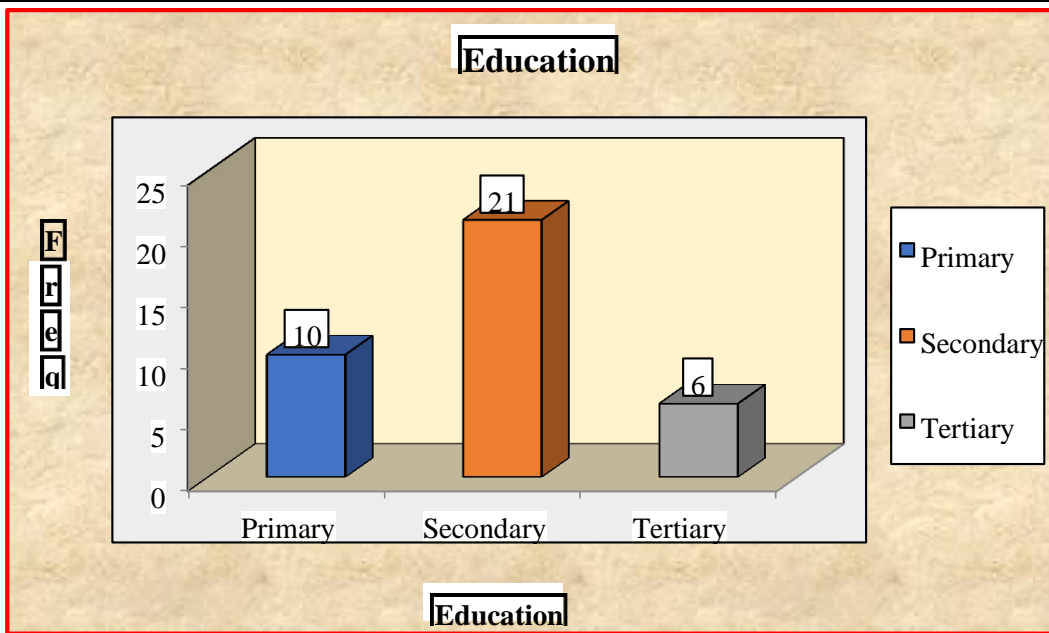


Graph No.1

**Interpretation:** The bar diagram shows 17 (25.37) participants were below 20 years of age, 37 (55.22%) participants were 21-25 year of age, 10(14.93%) participants were 2630 year of age & 3(4.48%) participants were 31 and above year of age.

Table no. 2: Education of Participants.

Variable	Groups	Frequency	Percentage
Education	Primary	10	14.93
	Secondary	21	31.34
	Tertiary	6	8.96

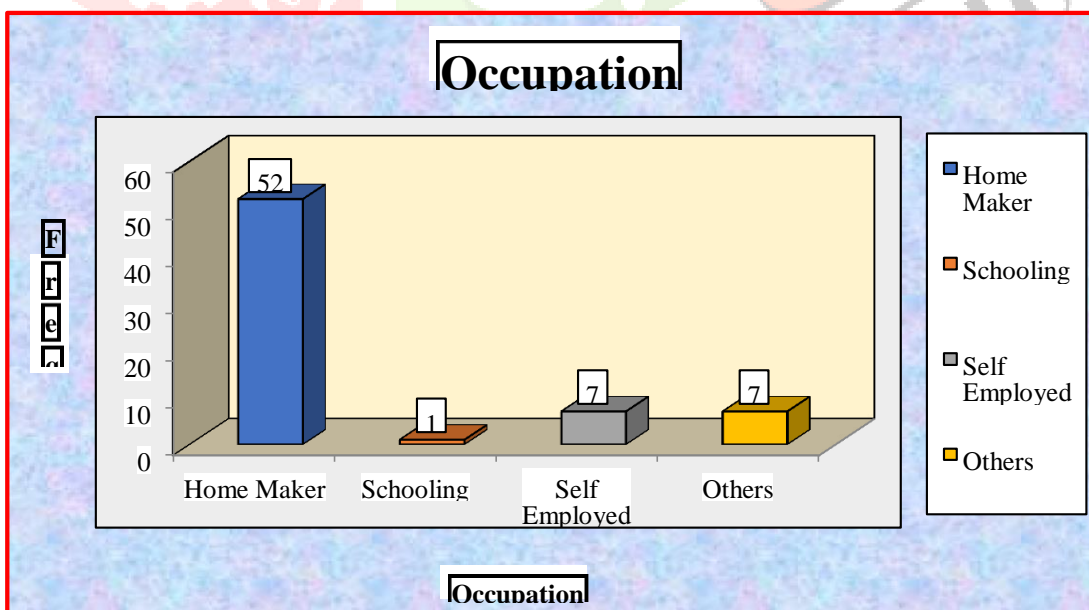


Graph No.2

**Table No.2 & Graph No.3** - The bar diagram shows 10(14.93%) participants are primary educated, 21(31.34%) participants are secondary educated, 6(8.96%) participants are tertiary educated.

**Table no. 3: Occupation of Participants.**

Variable	Groups	Frequency	Percentage
Occupation	Home Maker	52	77.61
	Schooling	1	1.49
	Self Employed	7	10.45
	Others	7	10.45



Graph No.3

**Table No.3 & Graph No.3** -The bar diagram shows 52(77.61%) participants are Home maker , 1(1.49%) participants are schooling , 7(10.45%) participants are self employed , 7(10.45%) participants are others.

Table no. 4: Knowledge of Participants.

Sr. No.	Knowledge	Yes		No	
		Frequency	Percentage	Frequency	Percentage
1	Have you heard of antenatal Exercises?	31	46.27	36	53.73
2	Have you heard of breathing exercise?	20	29.85	47	70.15
3	Have you heard about back exercise during pregnancy?	18	26.87	49	73.13
4	Have you heard about abdominal exercise during pregnancy?	18	26.87	49	73.13
5	Do you know the benefits of aerobics during pregnancy?	12	17.91	55	82.09

Above table contains Knowledge of participants. It contains of 5 questions regarding antenatal exercises.

Table no 5. Knowledge of Participants.

Sr. No.	Knowledge	Yes		Don't Know		No	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
6	Do you know exercise reduce risk of back pain during pregnancy?	23	34.33	11	16.42	33	49.25
7	Did you know exercise prevents excessive weight gain during pregnancy?	22	32.84	11	16.42	34	50.75
8	Did you know exercise strengthens pelvic floor muscles in pregnancy?	11	16.42	19	28.36	37	55.22
9	Did you know exercise can increase energy and stamina during pregnancy?	14	20.90	18	26.87	35	52.24
10	Do you know exercise give better ability to cope with labor and delivery?	16	23.88	12	17.91	39	58.21
11	Do you have any knowledge that exercise gives more rapid postnatal recovery?	17	25.37	13	19.40	37	55.22

Above table shows knowledge about benefits of exercise in participates during pregnancy. It contains 6 questions.

**Table no 6. Attitude of Participants.**

Sr. No.	Attitude		
		Frequency	Percentage
12	<b>Exercise during pregnancy is necessary?</b>		
	Yes	45	67.16
	No	22	32.84
Yes	a. Reduces ailments during pregnancy	11	24.44
	b. Facilitates normal delivery	26	57.78
	c. Rapid postnatal recovery If No, Why?	8	17.78
No	a. I feel tired to exercise	2	9.09
	b. I do not feel like exercising	5	22.73
	c. I have busy schedule	4	18.18
	d. I am afraid of exercise	4	18.18
	e. I do not have sufficient information on exercise	4	18.18
	f. I have a lot of child care activities	3	13.64

Above table contains attitude of participants regarding exercise during pregnancy. 45(67.16%) answered YES and 22(32.84%) answered NO.

**Table no.7 Practice of Participants.**

Sr. No.	Practice	Yes		No	
		Frequency	Percentage	Frequency	Percentage
13	<b>Have you practiced exercise in pregnancy?</b>	20	29.85	47	70.15

Above table shows practice of participants during pregnancy. 20(29.85%) answered YES, 47(70.15%) answered No.

## RESULTS

The study involved of 67 antenatal mothers, and all completed the questionnaire. The response rate was 100%. The age range of study group was 18- 45 years .Majority of them where in between 21-25 years of age (Table no.1).

The majority of study population had undergone secondary education (31%) (Table no 2) and most of the women were home makers (77%) (Table no 3). The mean knowledge score is 1.47 and for benefits of exercise are 4.32 respectively. The level of knowledge of antenatal exercises among the study population is presented in Table no 4 and 5. Considering the overall response of the antenatal mothers on antenatal exercises, their knowledge was less than average based on the mean knowledge score.46% participants answered that they have heard about antenatal exercises and 53% of participants answered No that they did not heard about antenatal exercises. Regarding the types of exercises awareness was better for variable such as breathing exercises, was same for back exercises and abdominal exercises and least for aerobics exercise, viz., 29%, 26%, 26%, 18%. When asked about the benefits of antenatal exercises the total mean score was 4.32. (Table no. 5). The benefits regarding exercise includes that exercise reduce risk of back during pregnancy, prevents excessive weight gain, strengthens pelvic floor muscles, increase energy and stamina, give better ability to cope up with labor., give more rapid postnatal recovery.

Issues relating to the attitude of antenatal exercises are shown in Table no.6. The result showed that 67% women felt that exercise during pregnancy is necessary and 29% among them have already done exercise during pregnancy. The main reason for doing exercise in pregnancy was the belief that exercise facilitates normal delivery (57%), reduce ailments in pregnancy (24%), and rapid post natal recovery (17%) (Table no 6). And whereas a reason behind those who felt that exercise in pregnancy was not necessary was they not feel like exercising (22%),have busy schedule (18%), afraid of exercising (18%),have not sufficient information about antenatal exercises(18%).(Table no. 6) . The level of practice of exercise during pregnancy among our respondents was less (29%) (Table no.7)

## DISCUSSION

The aim of our study was to assess Knowledge, attitude, and practice of exercise during pregnancy among pregnant women visited in antenatal ward of DUPMC, Jalgaon. 67 women were selected on basis of the selection criteria and used a self-administered questionnaire to assess knowledge, attitude and belief of them. The women in this study were in wide group of age 18-45 years and were generally between the age of 21-25 years (55.22%). Majority of them had a secondary education (31.34%) and are homemakers (77.61%). It has been found from previous studies that subject's

characteristics such as age, level of education, significantly influence knowledge, attitude and perceptions of mothers towards exercises. In the study of Elamurugan Sujindra et al 74% population were homemakers and 63% had undergone primary education whereas in the study of Mabada et al. 76% of study population were Christians. And nearly 70% were employed and undergone tertiary education.

Our study estimated mean knowledge score is 1.47 and for benefits of exercise is 4.32 respectively. Whereas the studies by Mbada et al. showed a mean knowledge score of 28.9±4.6 and Riberio and Milanez demonstrated that 67% respondents had adequate knowledge. Most of the women in this study had heard about antenatal exercises, breathing exercises and back exercises, 46%, 29%, 26% respectively however abdominal and aerobics, 26%, 17%. Were mostly not known as types of antenatal exercises. Considering the knowledge about benefits of exercise such as exercise reduce risk of back pain during pregnancy, prevents excessive weight gain, strengthens pelvic floor muscles, increase energy and stamina, etc are considered in this study, we found that women have least knowledge regarding benefits of exercise in pregnancy. The mean of benefits of knowledge is 4.32.

The attitude of respondents towards the practice of exercise in pregnancy was quite different. Nearly 67% participants feel exercise in pregnancy is necessary, for the reason exercise reduce ailments during pregnancy, facilitates normal delivery, rapid postnatal recovery. Whereas 32% participants don't consider exercise during pregnancy is necessary the main reason behind this was because they don't feel like exercising. This indirectly suggests that people who feel exercise is not necessary can be motivated by proper awareness programs. Riberio and Milanez submitted that the fact that the principal barriers to exercising during pregnancy included feeling too tired, uncomfortable or sick and being busy.

The practice of the participants in this study shows less people did exercise in pregnancy (29%). The practice of simple and regular exercise in pregnancy will significantly improve physical well-being in pregnancy and good prenatal outcome. The cost is insignificant, but the benefits in terms of gestational wellbeing and health are considerable.

In spite of the fact that, knowledge, attitude and practice of exercise during pregnancy among the study population were less when compared to previous studies, the reason for this outcome is easily identified as lack of awareness is the issue. Hence, healthcare programs should be organized to improve the awareness of antenatal mothers on exercise during pregnancy.

## CONCLUSION

This study found that knowledge regarding benefits of exercises of our women during pregnancy was less, and their attitude was favorable. Very few were actually practicing exercise in pregnancy.

## CLINICAL IMPLICATION

Awareness camp about physiotherapy exercises can be held for women to increase the knowledge about benefits of exercise during pregnancy.

## LIMITATIONS

The study was carried out in single hospital because of which the sample size we got was less.

## FUTURE SCOPE OF STUDY

Same study can be carried out in all the maternity care hospitals in Jalgaon district as no data is present having same aims and objectives in this geographical area.

## FUNDING – SELF FUNDING

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