



# International Journal of Obstetrics and Gynaecological Nursing

E-ISSN: 2664-2301  
P-ISSN: 2664-2298  
[www.gynaecologicalnursing.com](http://www.gynaecologicalnursing.com)  
IJOGN 2024; 6(2): 14-18  
Received: 12-05-2024  
Accepted: 16-06-2024

**Gurbinder Kaur**  
Assistant Professor,  
Department of Physiotherapy,  
RIMT University, Mandi  
Gobindgarh, Punjab, India

**Jaspreet Singh**  
Assistant Professor,  
Department of Physiotherapy,  
RIMT University, Mandi  
Gobindgarh, Punjab, India

## Awareness, knowledge and attitude of females about the antenatal exercise in Punjab region: A cross- sectional study

**Gurbinder Kaur and Jaspreet Singh**

DOI: <https://doi.org/10.33545/26642298.2024.v6.i2a.155>

### Abstract

The 3-4 antenatal care visits, the knowledge of associated risk factors related to pregnancy, antenatal exercises, proper diet and proper care are essential on regular basis for first time mothers to achieve optimum fitness levels.

**Objective:** This study was carried out with the objective of exploring awareness levels, knowledge of benefits and attitudes of females regarding the antenatal exercises.

**Methodology:** A cross-sectional study was conducted online. A self-structured questionnaire was distributed through social sites such as what's app, facebook, instagram among married healthy females within the age group of 18-50 years of age. 51 females participated in this survey.

**Results:** In this study 66.7% females were aware of antenatal exercise. 66.7% to 74.5% of participants had knowledge of antenatal exercises such as back care exercises, abdominal strengthening exercises, pelvic floor strengthening exercises, relaxation exercises. 31.3% to 90.2% had knowledge of antenatal exercise benefits. 85.7% believe that physiotherapy has a positive role in antenatal care. 92.2% believe that exercise can reduce the pregnancy related complications.

**Conclusion:** The key finding of the study was that the most women were aware about antenatal exercises. The physiotherapists should create awareness among mothers, caregivers, family members and the other health care professionals about importance of the antenatal exercises in reducing the risks of pregnancy related complications as if women would have adequate knowledge about the antenatal exercise benefits and harms then they would definitely attend to it.

**Keywords:** Antenatal exercise, awareness, mothers, maternal health

### Introduction

Antenatal period brings sequence of anatomical and physiological changes in female bodies. An average maternal mortality ratio (MMR) among women in India is 212 per 100,000 live births (SRS - 2007-2009). The government had set goals in the 12<sup>th</sup> 5 year plan to reduce infant mortality rate to 25 per 1000 live births and MMR to 100 per 100,000 live births by 2017 <sup>[1]</sup>. Antenatal exercises has a very important role to play in maternal health. It helps in treatment of antenatal and postnatal back pain, diastasis recti, urinary incontinence, fatigue, tiredness, excessive weight gain, speed up the postnatal recovery process, reduces the risk of gestational diabetes, pre-eclampsia, postnatal depression <sup>[2-4]</sup>. The individualized exercise programme specific to mothers need is useful for them in maintaining the optimum health. Antenatal exercises improves various fitness parameters such as cardiovascular health, muscle performance, lowers blood pressure and protects against gestational diabetes mellitus <sup>[5]</sup>. Antenatal exercises includes brisk walking, relaxation exercises, breathing exercises, ankle toe exercises, back care exercises, aerobics, upper limb strengthening exercises, pelvic floor According to National institute for health and care excellence guidelines (NICE) and American College of Obstetricians and gynecologists (ACOG), there are more benefits than risks of antenatal exercise and needs to be modified according to fetal and maternal health. The low impact or moderate exercise for 30 minutes on most of the days of the week exercise is recommended for better health outcomes by the ACOG and ACSM (American College of Sports and Medicine) <sup>[6]</sup>. The various factors that such as education, economic status, employment, and empowerment have important role to play in attendance to 3-4 antenatal care visits, skilled birth attendance and postnatal care.

**Corresponding Author:**  
**Gurbinder Kaur**  
Assistant Professor,  
Department of Physiotherapy,  
RIMT University, Mandi  
Gobindgarh, Punjab, India

The government should review the policies related to education, economic status, employment and empowerment [7].

The available studies related to maternal health are very few in India. The various studies showed that the mothers were not aware of antenatal exercises as they were not informed about the importance of antenatal exercise program. The data collection from different regions of the country is required to know the status of maternal health so that required steps will be taken to improve maternal health and the health of the babies. This study was not conducted in the Punjab state before. The objective of the study was to know the level of awareness, knowledge and attitude of females towards the antenatal exercise.

### Research Methodology

**Study design:** This study is observational cross-sectional study.

**Participants:** The study was conducted online. A total of 51 women participated in the study. The inclusion criterion were willingness to participate, age limit between 18-50 years, married healthy females, planning for their first baby, who can understand english language. The individuals who were not willing to participate, and who did not match the selection criteria of age were excluded. After explaining about the objective of the study and instructions to fill the form, the consent was obtained online through google forms prior to the participation. The percentages and frequencies

were used to illustrate the results that were evaluated using descriptive statistics.

### Data collection tool

The structured questionnaire modified from the study (Sarfaraz *et al.*) comprising of close ended questions about the awareness, knowledge, and attitude about the antenatal exercise [8]. This survey was conducted online through social sites such as What's App, Instagram, and Face book.

### Results

The results in the form of frequencies and percentages using descriptive statistics are shown in Table 1-3 and 4 and graphs 1, 2. The results revealed that the people are becoming aware with time. 66.7% females were aware of antenatal exercise. The source of information were books for 75% for many and for few were internet, physiotherapists. Most of the females believed that physiotherapists could be the best guide for antenatal exercises.

More than half of females had knowledge about back care exercises in pregnancy, abdominal exercises in pregnancy, knew pelvic floor exercises, females knew of relaxation exercises. They had adequate knowledge believe that about the exercises benefits but not very much sure about the blood pressure changes with the exercises. They believed that the exercises have a positive role in antenatal care and reduces the pregnancy related complications.

**Table 1:** Awareness about antenatal exercises

Questions	Response	Frequency (51)	Percentage (%)
Employment Status	Employed	26	51%
	Unemployed	25	49%
Are you aware of physiotherapy?	Yes	50	98%
	No	1	2%
Are you aware of antenatal exercises?	Yes	34	66.7%
	No	10	19.6%
	Not sure	7	13.7%
If yes, where did you learn about it?	Doctor/Gynecologist	1	2.8%
	Physiotherapist	1	2.8%
	Books	27	75%
	TV/ Internet	6	16.7%
	Family	1	2.8%
According to you, who can serve the best guide regarding antenatal exercises?	Physiotherapist	40	78.4%
	Gynecologist	9	17.6%
	Self	-	-
	Others	1	1.9%

**Table 2:** Knowledge of antenatal exercises

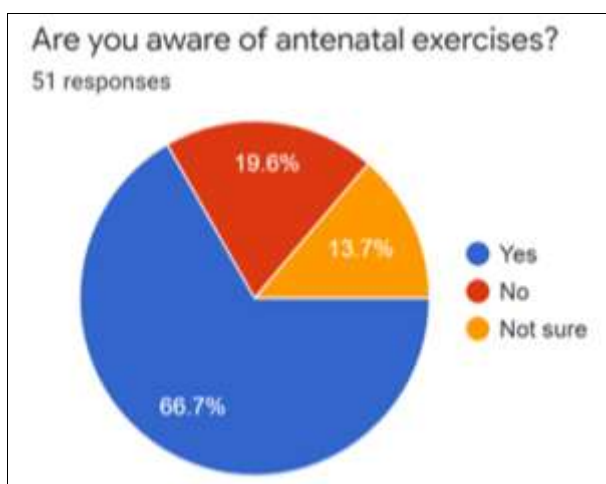
Questions	Response	Frequency (/51)	Percentage (%)
Do you know about the back care exercises in pregnancy?	Yes	37	72.5%
	No	13	25.5%
	May be	1	1.9%
Do you know about the abdominal exercises in pregnancy?	Yes	35	68.6%
	No	13	25.5%
	May be	3	5.9%
Do you know about the pelvic floor exercises in pregnancy?	Yes	34	66.7%
	No	14	27.5%
	May be	3	5.9%
Do you know about the relaxation exercises in pregnancy?	Yes	38	74.5%
	No	10	19.6%
	May be	3	5.9%

**Table 3:** Knowledge of antenatal exercise benefits

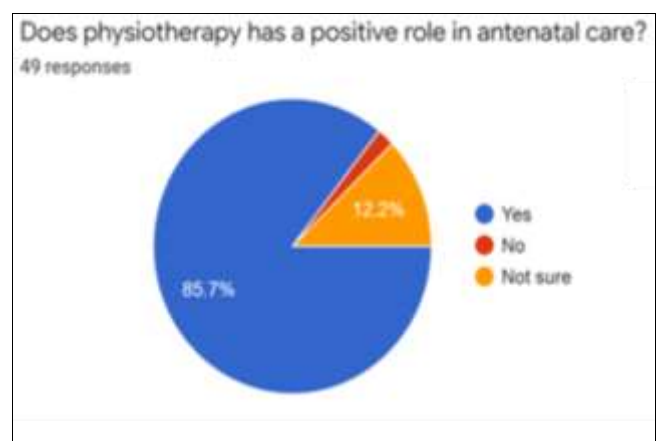
Questions	Response	Frequency (/51)	Percentage (%)
Exercises during pregnancy reduces the risk of back pain?	Yes	45	88.2%
	No	1	1.9%
	Not sure	5	9.8%
Exercises during pregnancy prevents excessive weight gain?	Yes	37	72.5%
	No	4	7.8%
	Not sure	10	19.6%
Exercises can help to cope with labour and delivery?	Yes	44	86.3%
	No	1	1.9%
	Not sure	6	11.8%
Exercises during pregnancy reduces the risk of gestational diabetes?	Yes	37	72.5%
	No	4	7.8%
	Not sure	10	19.6%
Exercises during pregnancy increases energy and stamina?	Yes	46	90.2%
	No	2	5.9%
	Not sure	3	3.9%
Exercises during pregnancy would reduce the risk of urinary incontinence?	Yes	38	74.5%
	No	4	17.6%
	Not sure	9	7.8%
Exercises during pregnancy causes high blood pressure?	Yes	26	54.2%
	No	15	31.3%
	Not sure	7	14.6%
Exercises benefits general and development of the baby?	Yes	42	85.7%
	No	1	2%
	Not sure	6	12.2%

**Table 4:** Attitude of participants towards antenatal exercises

Questions	Response	Frequency (/51)	Percentage (%)
Physiotherapy has a positive role in antenatal care.	Yes	42	85.7%
	No	1	2%
	Not sure	6	12.2%
Is it important to perform exercise under the guidance of healthcare professionals?	Yes	49	98%
	No	-	-
	Not sure	1	2%
Do you feel exercise can reduce pregnancy related complications?	Yes	47	92.2%
	No	-	-
	Not sure	4	15.7%
Do you feel exercise helps in post-delivery recovery?	Yes	47	92.2%
	No	1	1.9%
	Not sure	3	5.9%
Do you feel exercise helps get back you in shape?	Yes	45	88.2%
	No	2	3.9%
	Not sure	4	7.8%
Do you feel exercise regimen should vary from one pregnant women to another?	Yes	41	80.4%
	No	-	-
	Not sure	10	19.6%



**Fig 1:** Percentage distribution of level of awareness among females about antenatal exercises



**Fig 2:** Percentage distribution of female’s perception about the positive role of antenatal care

## Discussion

In this study 66.7% females were aware of antenatal exercise. They believe that the physiotherapists can serve as their best guides for antenatal exercises. 66.7% to 74.5% of participants had knowledge of antenatal exercises such as back care exercises, abdominal strengthening exercises, pelvic floor strengthening exercises, relaxation exercises. 31.3% to 90.2% had knowledge of antenatal exercise benefits. 85.7% believe that physiotherapy has a positive role in antenatal care. 92.2% believe that exercise can reduce the pregnancy related complications.

From this study we concluded that two- third of participants were aware of antenatal exercises. Nearly one-third of participants had no knowledge or were not sure of different types of exercises and a very few had no knowledge or were not sure of exercise benefits.

The knowledge of benefits and contraindications to antenatal exercise significantly influence attitude towards the exercise <sup>[9]</sup>. The healthcare professionals should understand the needs and difficulties that the mothers face during different trimesters of the pregnancy and should provide them with the knowledge, proper content, and facilities related to regular coming for the antenatal visits, associated problems that may occur due to pregnancy, treatments available to deal with these problems, importance of antenatal exercises, indications for antenatal exercises, contraindications for antenatal exercises. The gynecologist should update All healthy pregnant women should remain physically active at a moderate intensity level for at least 30 minutes a day for better health outcomes of fetus and mother <sup>[10]</sup>. The females if they would be aware of pregnancy related complications, different types antenatal exercise benefits, contraindications to exercise then they would surely participate in antenatal exercise program. This would result in better health outcomes of mothers and their babies. The physiotherapists should disseminate the results of this study among the females who are planning for their pregnancy so that would understand the importance of antenatal exercises in reducing the risks of pregnancy related complications.

The antenatal exercise knowledge among females may attribute to their education as the most of them learnt about it during their study period. But proper information needs to be spread for the optimization of the maternal health status. Women also have positive attitude towards the exercises but no guidance to them usually provided to them by professionals adequately. Hence the literature supporting updated antenatal exercise guidelines should be distributed among healthcare professionals <sup>[11]</sup>. The healthcare professionals should follow the recommended ACOG and ACSM guidelines and address the importance of physical activity among pregnant and non- pregnant females.

The physiotherapist should use the available data in support of antenatal exercise to create awareness among government, other healthcare professionals, caregivers, family members and mothers about the benefits, risks and precautions related to it during the antenatal period. More studies need to be conducted to find out the current status of the maternal health, so that the required amendments will be made in the healthcare system for the best outcomes of maternal and fetal health.

## Clinical Implications

As less literature is available on maternal and child health

from Punjab, more studies need to be conducted on large scales from time to time so that correct figures are available for the evaluation of the situation. In this study two third of women were aware of antenatal exercises. The healthcare professionals and government should come forward and stress on more researches with the objective of finding the root cause of problems that prevents mothers from availing antenatal care facilities. The physiotherapists should create awareness programmes among mothers about the importance of antenatal exercise programmes to promote maternal health.

## Conclusion

In our study 66% women had awareness about antenatal exercise. They believed that physiotherapist can serve as their best guides and had positive attitudes towards the antenatal exercise in preventing pregnancy related complications. If the healthcare professionals properly address the females about their doubts related to antenatal exercise, then would certainly join the antenatal exercise program conducted under the guidance of professionals. The physiotherapist and the government should make combine efforts for the awareness of antenatal care importance among mothers and their caregivers including doctors, nurses, family and others. The study should be conducted on large population for better outcomes. The study can be conducted among healthcare professionals to find out if they do recommend antenatal exercise to women according to ACOG and ACSM guidelines.

## Recommendations

Similar study can be under taken for large samples so that results can be generalize.

1. The same study can be done with an experimental research approach having a control group.
2. A comparative study can be conducted using two different teaching strategies to educate the students in relation to procedural preparation, management, and care of upper respiratory tract infection in children.
3. The chapter deals with the summary of the research study, bringing forth the major finding of the study, conclusion, nursing implication and recommendation given at the end of the study.

## Conflict of Interest

The authors declare that they have no conflict of interest.

## Financial Support

Not available

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**How to Cite This Article**

Kaur G, Singh J. Awareness, knowledge and attitude of females about the antenatal exercise in Punjab region: A cross-sectional study. *International Journal of Obstetrics and Gynaecological Nursing* 2024; 6(2): 14-18.

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