

Effectiveness Of Structured Teaching Programme On Knowledge Regarding Pregnancy And Lactation Associated Osteoporosis Among Antenatal Mothers Attending Antenatal OPD At Selected Hospitals Of The City: A Pre-Experimental Study

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DOI: 10.47750/pnr.2022.13.509.468

Abstract

Background: Pregnancy and lactation A severe, early form of osteoporosis causes young women to fracture when lactating or in late pregnancy, most frequently multiple vertebral fractures. In this study all of the ladies had regular periods and no further bone loss-related conditions. ¹ **Objectives:** To assess the effectiveness of structure teaching programme on knowledge regarding pregnancy and lactation associated osteoporosis. **Methodology:** It was conducted using a one-group pretest and posttest pre-experimental research. Sample 70 expectant mothers, sampling technique non-probability purposive sample method. **Result:** According to the study, pre-test score was 9.52, and the post-test score was 20. At the 0.05 level of significance, the estimated t value of 50.28 is higher than the tabular value of 1.98. Therefore, statistical analysis suggests that a structured education programme on the subject of osteoporosis caused by pregnancy and lactation was successful. As a result, research hypothesis is approved while null hypothesis is disapproved.

Key words: pregnancy & lactation, osteoporosis, structure teaching programme, antenatal mother.

INTRODUCTION

Osteoporosis is a significant public health concern around the world because it is associated with high rates of sickness, mortality, and socioeconomic stress. Due to insufficient bone strength, it is classified as a skeletal disorder that raises the risk of fragility fractures. During pregnancy and lactation, women lose the most bone mass.¹ Fragility fractures are most frequently found in the vertebral bodies and most frequently occur during the first pregnancy, lactation, and the early postpartum period when high calcium levels diminish bone mineral density. Following delivery and for the first six months of breastfeeding, these fractures heal. Woman with Pregnancy and Lactation-Associated Osteoporosis (PLO)," a case study by Nasrin Bazgir, Elham Shafiei, Neda Hashemi, and Hassan Nour Mohamadi, claims. It is most common in primigravida in the first three months following delivery. Because it is not suspected, it goes untreated, and X-rays and densitometry are best to avoided throughout pregnancy and lactation. It could lead to osteoporotic fractures and disability if it is untreated. In their study, they discuss a case of a multigravida 24 year female who had multiple compression fractures and kyphoscoliosis 4 months after giving birth.²

BACKGROUND OF THE STUDY:

Both lactation and conception A severe, early form of osteoporosis called osteoporosis causes young women to fracture during late pregnancy or lactation, frequently with multiple vertebral fractures.³ A study was done on pregnancy-related osteoporosis and fragility fractures. a case study, Approximately 0.5% of pregnant and lactating women also have osteoporosis. Idiopathic osteoporosis is the term used when there are no known secondary causes of osteoporosis. Secondary osteoporosis is assumed to be brought on by pregnancy and breastfeeding (PLO). Due to the lack of a significant group, the total prevalence of pregnancy and lactation-related osteoporosis is still mostly unknown. In the third trimester, atraumatic unexpected onset hip pain, which can impair mobility, is the most typical pregnant symptom.⁴

Need of The Study

The literature has identified several types of osteoporosis related to pregnancy, including idiopathic osteoporosis, transitory hip osteoporosis, postpartum spinal osteoporosis, and lactation-related osteoporosis. Late in pregnancy and during breastfeeding, back pain might arise. It raises the possibility of a pathological spinal compression fracture and consequent deformity if disregarded or left untreated.⁵ According to the existing study, fractures and discomfort are the most typical signs of osteoporosis. Lactation and pregnancy are linked Over 70% of women with osteoporosis were diagnosed, during their first pregnancy.

The researcher felt the necessity to conduct a study on the efficiency of a structured training programme on pregnant mothers who were attending antenatal OPD at a chosen hospital in the city's antenatal OPD.

Problem statement

Effectiveness of Structured Teaching Programme on Knowledge regarding Pregnancy And Lactation Associated Osteoporosis among Antenatal Mothers attending Antenatal OPD at selected Hospitals of the city: A Pre-Experimental Study.

OBJECTIVES:

Primary objective:

To evaluate the impact of a structured education programme on the knowledge of osteoporosis related to pregnancy and lactation among pregnant women attending the antenatal OPD at a certain hospital of the city.

Secondary objective:

1. To evaluate antenatal mothers prior awareness of osteoporosis caused by pregnancy and lactation.
2. To evaluate antenatal mother's post-test knowledge of osteoporosis related with pregnancy and lactation.
3. To evaluate the impact of a structured training programme on pregnant mother's awareness of osteoporosis related to pregnancy and lactation.
4. To compare the knowledge post-test outcome to specific demographic variables.

DELIMITATION

This study only includes expectant mothers who visit the prenatal OPD at selected hospital of the city.

- Fluent in reading English, Hindi, and Marathi.
- Easily accessible during data collecting.

HYPOTHESIS

At a significance threshold of 0.05, the hypothesis will be teste

H0:- There would be no discernible difference between the pre-test and post-test knowledge score on pregnancy and lactation associated osteoporosis in pregnant women visiting antenatal OPD at particular hospitals in the city.

H1:- There would be difference between the pre-test and post-test knowledge score on pregnancy and lactation associated osteoporosis in pregnant women visiting antenatal OPD at particular hospitals in the city.

ETHICAL ASPECT

The proposal for this study had received clearance from the institution's ethical committee. The relevant authority gave their prior consent for the conduct of this study. The sample was informed of every aspect of the study before their written agreement was obtained in their native tongue. The sample's information was all kept private and secret.

Conceptual framework

Imogene King's goal attainment theory serves as the foundation for the conceptual framework of this study.

REVIEW OF LITERATURE

The following categories have been created from the reviewed literature:

1. Literature related to osteoporosis
2. Literature on osteoporosis caused by pregnancy and breastfeeding
3. Literature on the efficiency of instructional programmes with a framework

METHODOLOGY

Quantitative research approach

Pre- Experimental research design

Setting: The present study was conducted in selected hospitals of the city

VARIABLES:

Independent variable: an organized education programme on osteoporosis caused by pregnancy and lactation.

Dependent variable: knowledge regarding pregnancy and lactation associated osteoporosis among antenatal mothers.

Demographic variables: Age, religion, level of education, type of family, place of residence, monthly family income, gestational age in weeks, gravida, and parity

POPULATION

Target population

All antenatal mothers in selected hospital setting.

Accessible population:

Pregnant women who are present and attending antenatal OPD at the time of data collection.

The Sample size are 70 antenatal mothers

Sampling technique:

Non probability sampling purposive technique

Sampling criteria

Inclusion criteria:

Antenatal mothers who meet the following criteria were included in this study:

- Attending antenatal OPD.
- Know the English/Hindi/ Marathi.

- Interested to be a part of the study.
- Accessible when data were being collected

Exclusion criteria:

The only exclusion criteria used in this study were pregnant women who

- From medical background

DESCRIPTION OF TOOL

Section -I: A- demographic factors-related self-structured questionnaire.

Section II- Self-reporting knowledge tests

VALIDITY

21 experts evaluated the tool's construct and content validity.; including Obstetrics and Gynaecological nursing, Gynaecologist, Medical surgical nursing experts, 45 Statistician and M.A English literature, Marathi literature, Hindi literature etc.

RELIABILITY

The Karl Pearson correlation coefficient formula was applied for reliability. If the correlation coefficient was greater than 0.8, the instrument was considered to be reliable.

The tool was found to be reliable since its correlation coefficient, or "r," was 0.8465, which is greater than 0.8.

PILOT STUDY

It involved 10 expectant mothers.

Data was gathered, coded, and tabulated before being analyzed using both descriptive and inferential statistics. In terms of time, money, materials, and resources, the feasibility of the pilot study was good.

RESULT

Section I: Demographic data on pregnant women who visit the prenatal OPD at particular hospitals.

According to the aforementioned data, the majority of expectant mothers 57.10% were between the ages of 23 and 27. Majority 48.60% of antenatal mothers were Hindus, Majority 48.60% of antenatal mothers were graduates, 34.30% up to secondary standard, 14.30% of them were post graduates and 2.90% of antenatal mothers were educated up to primary standard. Majority 31.40% of antenatal mothers were from nuclear families, 67.10% were from joint and 1.40% of antenatal mothers were from extended families. Majority 54.30% of antenatal mothers were from rural, 40% of antenatal mothers were from urban areas and 5.70% of them were from semi urban areas. A majority of 58.60% had a family income of between 15001 and 20000 rupees per month, Majority 58.60% of antenatal mothers were gravida 1 and 41.40% of them were gravida 2. Majority 57.10% of antenatal mothers were Para 0 and 42.90% of them were Para 1.

Section- II: Description on Pre-test awareness of pregnancy and lactation-related osteoporosis among pregnant women attending antenatal OPD at a particular city hospital in terms of frequency and percentage-wise distribution.

The findings indicate that 11.43% of expectant moms had low levels of knowledge, 80% had average levels, and 8.57% of expectant mothers had high levels. The pretest had a minimum knowledge score of 4 and a maximum knowledge score of 13. The mean knowledge score on the pretest was 9.52 2.17, and the mean knowledge score as a percentage on the pretest was 31.76 7.26.

Section- III: Description on frequency and percentage wise distribution of post- test knowledge regarding pregnancy and lactation associated osteoporosis among antenatal mothers attending antenatal OPD at selected hospital of the city.

According to the aforementioned statistics, 24.29% of prenatal mothers had good level knowledge scores, 70% had very good level knowledge scores, and 5.71% had exceptional level knowledge scores. On the posttest, the knowledge levels were 18, and 25, respectively.

Section- IV: Description on Pregnant women were given a pre- and post-test to gauge the efficiency of a structured training program on their knowledge of pregnancy and lactation-related osteoporosis.

The comparison of expectant mother's knowledge scores on pregnancy and lactation-associated osteoporosis between the pretest and post-test is shown in this description. The student's paired "t" test is used to compare the means, standard deviations, and mean difference values at the 5% level of significance. 1.98 was the calculated value for $n=70-1$, or 69 degrees of freedom. The estimated "t" value, which is 50.28, is significantly greater than the tabulated value for the prenatal mother's total knowledge score at the 5% level of significance, which is a statistically acceptable level of significance. As a result, statistical analysis suggests that the Structured Teaching Program was successful in increasing knowledge of pregnancy and lactation-related osteoporosis. The H1 is therefore approved.

Table IV 5: Table showing Effectiveness of structured teaching programme on knowledge score of pre and post-test of antenatal mothers in selected hospitals of the city regarding pregnancy and lactation associated osteoporosis. n=70

Overall	Mean	SD	Mean Difference	t-value	df	Table value	p-value
Pre Test	9.52	2.17	10.47±1.74	50.28	69	1.98	0.0001 S, $p<0.05$
Post Test	20	1.88					

Section- V: Description on association of level of post-test knowledge score regarding pregnancy and lactation associated osteoporosis among antenatal mothers attending antenatal OPD at selected hospitals of the city in relation to demographic variables

The study reveals that there is an association between knowledge score and age (measured in years), education, but not with religion, family structure, location of homes, monthly family income, gravida, or para.

DISCUSSION

A study on osteoporosis education in college-aged women was done to see if it would raise knowledge and encourage women to alter their osteoporosis-related behaviours. In this study researcher take the age group of women 18 to 48 and the present study having the age group of antenatal mothers that is 18 to 33 and above. The study result reveals that Although osteoporosis can start as early as age 25, postmenopausal women constitute the majority of those affected. The hormone that prevents bone loss, estrogen, is no longer produced by the ovaries in women, which causes bone loss to quicken after menopause. It is a significant contributor to fractures in elderly women, which can be painful and incapacitating. Therefore, it is crucial to support educational initiatives created to prevent osteoporosis in young, pre-menopausal women. In the above study, after the intervention on prevention of osteoporosis the knowledge of college age women was increased and the educational programme was effective. The present study also having the same result that is, after giving the structured teaching programme on pregnancy and lactation associated osteoporosis antenatal mothers knowledge was increased and the structured teaching programme was effective.

CONCLUSION

Following a careful examination, this study supports the following conclusion: The mean knowledge score prior to the test was 9.52, while the mean knowledge score following the test was 20. The calculated t value of 50.28 is

greater than the tabular value of 1.98 at the 0.05 level of significance. Therefore, statistical analysis suggests that a planned education campaign on the subject of osteoporosis caused by pregnancy and breastfeeding was successful. As a result, H1 is approved while H0 is disapproved. The results of the analysis also show that the knowledge score is related to age and educational attainment, but not to any other demographic factors. Therefore, based on the previously mentioned research, it was concluded without a doubt that the investigator's educational intervention in the form of an organised training programme assisted the expectant mothers in learning more about pregnancy and lactation-related osteoporosis.

IMPLICATION OF THE STUDY

The findings of this study have consequences for administration, education, practice, research, and nursing.

NURSING PRACTICE

The focus of clinical nursing can include investigating nursing practice and intervention for health promotion, sickness prevention, and expectant mother care.

- This study will assist nursing practice in preventing osteoporosis issues associated with pregnancy and lactation.
- The parameters of the profession and the standards of behavior are set when professional liability is accepted. As a result, nurses should gain more knowledge about their profession.
- Health team members can learn about many elements of osteoporosis related to pregnancy and lactation by using the structured education programme.
- For the health members, a structured teaching programme would be a ready source of information. Nurses might utilize the knowledge to explain to expectant moms the advantages of pregnancy and lactation-related osteoporosis. The study will increase mothers' understanding and make prenatal mothers more aware of the issue.

NURSING EDUCATION

- The best individual to share their knowledge with pregnant mothers and ultimately update understanding about osteoporosis caused by pregnancy and lactation is a nurse who is knowledgeable about the condition.
- The emphasis on comprehensive care in the nursing curriculum has increased recently. Therefore, nursing instructors might use this study as an instructive example for nursing students.

NURSING ADMINISTRATION

- The nursing administrator can use the study's findings to create policies and programs for training staff nurses and other medical specialists.
- Planning and organizing continuing education to be provided to nurses and others for applying and updating knowledge addressing pregnancy and breastfeeding linked osteoporosis would be helpful to nursing administration.
- To educate nurses about the osteoporosis caused by pregnancy and lactation, in-service education must be held.

LIMITATION:

- The study was conducted only on 18-34 and above age group of people.
- The study's scope was limited to assessing pregnant moms' knowledge of osteoporosis related to pregnancy and lactation among those attending prenatal OPD at particular city hospitals.

RECOMMENDATIONS:

- The effectiveness of a structured training programme vs an information booklet on osteoporosis caused by pregnancy and lactation may be compared in a study.
- A descriptive study on prenatal mother's knowledge of osteoporosis caused by pregnancy and lactation can be done.
- The effectiveness of a video-assisted training programme for preventing pregnancy and lactation-related osteoporosis can be assessed by a comparable study.

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