

Enhancing Knowledge of pregnant women on Pelvic Floor Muscle Exercises Through Video-Assisted Teaching: A Nursing Perspective

Prof. Dr .Sindhu Kuruvila¹, Anjala Benny, Anjali A, Fathima S
, Jenida , Rasiya Razi, Rency Reji ,Sreya Benny ²

DEPARTMENT OF OBSTRETICS AND GYNAECOLOGY, LITTLE FLOWER COLLEGE OF NURSING, MONVILA, TRIVANDRUM, KERALA, INDIA

Keywords: Pelvic Floor Muscle Exercise; Pregnant Women; Video-Assisted Teaching; Knowledge; Antenatal Care; Pelvic Floor Health.

Abstract:

Pelvic floor muscle exercises (PFME) play a vital role in preventing and managing pelvic floor dysfunction during pregnancy. This study aimed to assess the knowledge regarding PFME among pregnant women, evaluate the effectiveness of a video-assisted teaching program, and determine the association between knowledge and selected demographic variables. A quantitative pre-experimental one-group pretest–posttest design was adopted among 60 pregnant women attending the antenatal outpatient department of Jubilee Memorial Hospital. Data were collected using a demographic proforma and a structured knowledge questionnaire. Pretest findings revealed that 58.3% of participants had poor knowledge, 35% had average knowledge, and only 6.6% had good knowledge regarding PFME. Following the video-assisted teaching intervention, a significant improvement in knowledge was observed ($t = -18.96$). A significant association was found between knowledge scores and gravida. The study concluded that video-assisted teaching was an effective educational strategy for improving knowledge regarding pelvic floor muscle exercises among pregnant women.

INTRODUCTION

Pregnancy is a life-changing momentous event, which can leave a feeling of ecstatic. Pregnancy is a life-cycle in every woman's life. It's a time when women need to be prepared mentally, physically, to meet the challenges of child birth and the transition to parenthood. Giving birth is asking to run a marathon it requires stamina, determination and focus. Keeping physically active during pregnancy is good preparation for the hard work of labour. The rising global incidence of lower segment caesarean section (LSCS) is a significant concern in maternal healthcare, with potential short and long-term implications for both mother and child. While caesarean deliveries are lifesaving in medically indicated cases, their overuse often driven by prolonged labor, maternal fatigue, and fetal distress calls for preventive strategies that can optimize normal vaginal deliveries. Promoting spontaneous labor and reducing unnecessary caesarean births have become essential goals in obstetric care. The pelvic floor muscles (PFMs) play a vital role in supporting the uterus, bladder, and bowel, especially during pregnancy and

childbirth. Strengthening these muscles can improve muscle tone, enhance maternal endurance during labor, and facilitate effective pushing in the second stage of labor. Research has shown that women who perform PFME regularly during pregnancy often experience shorter labor durations, decreased need for instrumental deliveries, and a lower risk of perineal trauma. By promoting better muscular coordination and control, PFME may indirectly contribute to increasing the rate of spontaneous vaginal deliveries while reducing the likelihood of caesarean sections due to labour dystocia or failure to progress. This study aims to evaluate the effectiveness of a structured video-based educational intervention on pelvic floor muscle training among pregnant women. The focus is on assessing improvements in knowledge and practice, and exploring its potential to encourage normal labour and reduce the incidence of caesarean deliveries. The findings may contribute to the development of scalable, evidence-based antenatal education models that promote maternal empowerment and optimal birth.

PROBLEM STATEMENT

Effectiveness of video-assisted teaching on knowledge regarding pelvic floor muscle exercise among pregnant women attending antenatal OPD of Jubilee memorial hospital.

OBJECTIVES

- Assess the knowledge level of pregnant women regarding pelvic floor muscle exercise.
- Develop video assisted structured teaching on knowledge of pelvic floor muscle exercise to pregnant women of OPD in Jubilee hospital.

- Analyze the effectiveness of video assisted structured teaching on knowledge of pelvic floor muscle exercise among pregnant women.
- Associate between the knowledge of pregnant women regarding pelvic floor muscle exercise with selected demographic variable.

METHODOLOGY

Research design

A pre-experimental one group pre-test post-test research design was used.

Setting

The study was conducted in Jubilee Memorial Hospital, Trivandrum

Population and sample.

The population consists of pregnant women (24th to 40th) week of gestation attending OPD in JMH. A sample of 60 pregnant women was selected using a convenience sampling technique.

Tool for data collection

The tool consists of two sections:

Tool 1: Demographic proforma.

This comprised of 10 items such as age, gestational age, gravida, educational qualification, occupation, monthly family income and previous knowledge regarding pelvic floor muscle training.

Tool 2: Structured knowledge questionnaire regarding knowledge on pelvic floor muscle training.

This questionnaire contained 25 Questions graded by 1 mark for correct answer and 0 marks for wrong and unattended questions.

Good: 18-25

Average: 10-17

Poor: 1-9

Maximum score was 25.

Hypothesis

H₁: There is a significant difference between the pretest and posttest knowledge scores regarding pelvic floor muscle exercises among pregnant women after video-assisted teaching.

H₂: There is a significant association between the knowledge scores regarding pelvic floor muscle exercises among pregnant women and selected demographic variables.

Intervention

Following the pretest, a video-assisted teaching programme on pelvic floor muscle exercises was administered to the participants. The programme covered the definition, importance, indications, contraindications, guidelines, benefits, and procedure of pelvic floor muscle exercises. The teaching session was designed to enhance the knowledge and understanding of pregnant women regarding the correct performance and significance of pelvic floor muscle exercises during pregnancy.

Data Collection Procedure

The study was conducted among 60 pregnant women attending the antenatal outpatient department of Jubilee

Memorial Hospital (JMH). Participants were selected using a convenience sampling technique. The purpose of the study was explained to the participants, and informed consent was obtained prior to data collection. Initially, a pretest was conducted using a structured knowledge questionnaire to assess the participants' knowledge regarding pelvic floor muscle exercises. Each participant was given approximately 30 minutes to complete the questionnaire. Following the pretest, a video-assisted teaching programme on pelvic floor muscle exercises was administered. The post test was conducted seven days after the intervention using the same structured knowledge questionnaire to evaluate the effectiveness of the teaching programme.

Data Analysis

The collected data were analyzed using descriptive and inferential statistics. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to describe the demographic characteristics and knowledge scores of the participants. Inferential statistics, namely the paired *t*-test, were used to assess the effectiveness of the video-assisted teaching programme by comparing the pretest and posttest knowledge scores. The chi-square test was used to determine the association between pretest knowledge scores and selected demographic variables.

RESULTS

Description of Socio-Demographic Characteristics of the Samples

In the present study, socio-demographic data were collected from 60 antenatal mothers using a structured questionnaire. The variables included age, gestational age, gravida, educational qualification, occupation, monthly family income, area of residence, previous knowledge regarding Pelvic Floor Muscle Exercise (PFME), source of information regarding PFME, and previous training or education related to pregnancy health.

Regarding age, the majority of the participants, 45% (27), belonged to the age group of 26–30 years. About 25% (15) were in the age group of 21–25 years, 22% (13) were below 20 years, and 8% (5) were above 31 years of age.

With respect to gestational age, 48.3% (29) of the samples were between 24–28 weeks of gestation, 31.7% (19) were between 35–40 weeks, and 20% (12) were between 29–34 weeks of gestation.

Regarding gravida status, the majority of the participants, 63.3% (38), were primigravida, while 31.7% (19) were second gravida and 5% (3) were multigravida.

In terms of educational qualification, nearly half of the participants, 46.7% (28), had secondary-level education. About 33.3% (20) had postgraduate education, 11.7% (7) had primary-level education, and 8.3% (5) had no formal education.

Regarding occupation, 60% (36) of the participants were housewives. About 23.3% (14) were employed in the private sector, 10% (6) were self-employed, and 6.7% (4) were employed in the government sector.

With regard to monthly family income, 36.7% (22) of the participants had a monthly family income between ₹10,001 and ₹30,000. About 35% (21) had an income below ₹10,000, 25% (15) had an income between ₹30,001 and ₹50,000, and 3.3% (2) had an income above ₹50,000.

Considering the area of residence, the majority of the participants, 58.3% (35), resided in urban areas, while 33.3% (20) belonged to semi-urban areas and 8.3% (5) belonged to rural areas.

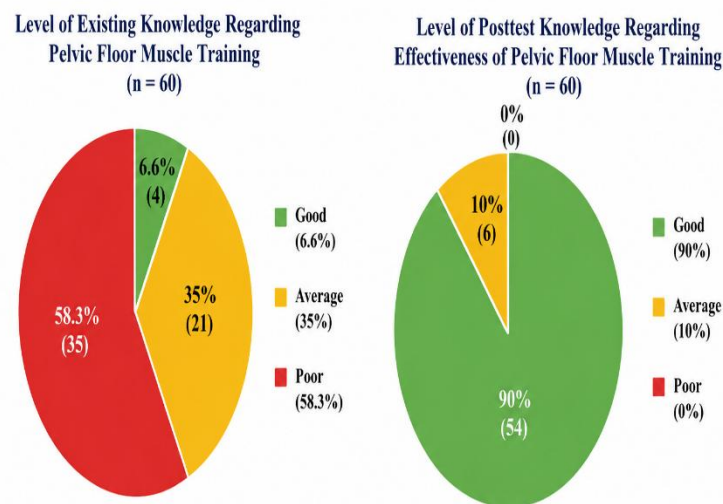
Regarding previous knowledge of PFME, 65% (39) of the participants had never heard about PFME, whereas 35% (21) had prior knowledge regarding PFME.

Among the participants who reported a source of information regarding PFME, 28.3% (17) obtained

information through the internet, 11.7% (7) through health professionals, and 1.7% (1) through antenatal classes. However, 58.3% (35) reported having no source of information regarding PFME.

With respect to previous training or education related to pregnancy health, the majority of the participants, 83.3% (50), had not received any prior training or education, while only 16.7% (10) had received such training or education.

Overall, the findings indicate that most of the antenatal mothers were aged between 26–30 years, were primigravida, had secondary-level education, were housewives, belonged to urban areas, and had limited prior knowledge and training regarding Pelvic Floor Muscle Exercise.



The pie charts depict the knowledge level regarding Pelvic Floor Muscle Exercises (PFME) among pregnant women before and after the video-assisted teaching programme. In the pre-test, the majority of participants (58.3%, 35) had poor knowledge, whereas only 6.6% (4) had good knowledge. In the post-test, 90% (54) of the participants had good knowledge and none had poor knowledge. The findings indicate a significant improvement in knowledge following the intervention, demonstrating the effectiveness of the video-assisted teaching programme.

Comparison of Pre-test and Post-test Knowledge Scores (Effectiveness of Video-Assisted Teaching Programme)

A paired *t*-test was used to assess the effectiveness of the video-assisted teaching programme on knowledge regarding Pelvic Floor Muscle Exercises (PFME) among pregnant women. The calculated paired *t*-value (10.43) was greater than the table value at the 0.05 level of significance, indicating a statistically significant increase in the post-test knowledge scores. Therefore, the video-assisted teaching programme was found to be effective in improving the knowledge of pregnant women regarding PFME.

Association Between Pre-test Knowledge Scores and Selected Demographic Variables

The Chi-square test was used to determine the association between pre-test knowledge scores and selected demographic variables such as age, gestational age, gravida, educational

qualification, and occupation. The calculated Chi-square values were lower than the table values at the 0.05 level of significance. Hence, no significant association was found between the pre-test knowledge scores and the selected demographic variables. This indicates that the baseline knowledge regarding PFME was independent of the demographic characteristics of the participants.

CONCLUSION

The present study was conducted to assess the effectiveness of a video-assisted teaching programme on knowledge regarding Pelvic Floor Muscle Exercises (PFME) among pregnant women attending the antenatal OPD of Jubilee Memorial Hospital. A total of 60 pregnant women participated in the study. The findings revealed that the majority of participants had inadequate knowledge regarding PFME during the pre-test assessment. After the administration of the video-assisted teaching programme, a significant improvement in knowledge was observed, with 90% of the participants demonstrating good knowledge and 10% demonstrating average knowledge in the post-test. The paired t-test showed a statistically significant increase in knowledge scores, confirming the effectiveness of the intervention. No significant association was found between pre-test knowledge scores and selected demographic variables. Therefore, the study concludes that video-assisted teaching is an effective method for improving knowledge regarding pelvic floor muscle exercises among pregnant women and can be used as an educational strategy in antenatal care settings.

Nursing Implications, Limitations and Recommendations

The findings of the study indicate that nurses play a crucial role in educating pregnant women regarding the importance and

benefits of Pelvic Floor Muscle Exercises (PFME). Video-assisted teaching can be incorporated into routine antenatal care to improve knowledge and awareness. Nursing educators should also train nursing students and staff using structured teaching materials to enhance their competence in promoting PFME among pregnant women.

Nurse administrators can organize in-service education programmes and awareness campaigns to strengthen the knowledge of nursing personnel and antenatal mothers regarding PFME. The study was limited to pregnant women attending the antenatal OPD of Jubilee Memorial Hospital, with a sample size of 60 participants. Furthermore, the video-assisted teaching programme was administered only once after the pre-test.

Based on the findings, awareness programmes on PFME should be strengthened among pregnant women. Supervised training sessions and inclusion of PFME in routine antenatal classes are recommended to ensure proper practice and adherence. Further studies with larger samples and in different settings are suggested to validate and generalize the finding

REFERENCES

1. Padmasree.p, Latif.A Effectiveness of video assisted structured teaching on knowledge of pelvic floor muscle Exercise among antenatal mothers at MJMH petlaburz Hyderabad (internet) 2021 January Available from: <https://51dd0990a043>
2. Angolile C, Baraka M. Global increased caesarean section rates and public health implications (Internet). National library of medicine (sited 2023 May 18). Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC10196217/>
3. Pelvic floor muscle exercises (Internet). National library of medicine (2024 Jan). Available from: <https://medlineplus.gov/ency/article/003975.htm#:~:text=Pelvic%20floor%20muscle%20training%20exercises%20can%20help%20strengthen%20the%20muscles,urinate%2C%20and%20then%20holding%20it>

4. Pelvic floor muscle training exercise (Internet). National Library of medicine ;(cited 2024 Jan 10). Available from: <https://medlineplus.gov/ency/article/003975>
5. Sabina T, Agnieszka M. The Most Common Functional Disorders and Factors Affecting Female Pelvic Floor (Internet). National library of medicine. (Sited 2021 Dec 14). Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC8704638/>
6. Antenatal classes (Internet) Department of health and aged care. (sited 2023 May). Available from: <https://www.pregnancybirthbaby.org.au/antenatal-classes>

