World Journal of Pharmaceutical and Life Sciences
WJPLS
www.wjpls.org
SJIF Impact Factor: 7.409

A STUDY TO EVALUATE THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON PELVIC FLOOR EXERCISES FOR PREVENTION AND CONTROL OF URINARY INCONTINENCE AMONG POSTNATAL MOTHERS AT VANIVILAS HOSPITAL, BANGALORE, KARNATAKA

Shanthamma B.*

Professor, Dept. of OBG Nursing, Government College of Nursing, Fort, Bengaluru.

***Corresponding Author: Shanthamma B.**
Professor, Dept. of OBG Nursing, Government College of Nursing, Fort, Bengaluru.

Article Received on 11/09/2024 **Article Revised on 01/10/2024** **Article Accepted on 21/10/2024**

ABSTRACT

Background and objectives: Urinary incontinence is a major female health problem between the ages of 25 to 45 years. The incidence is higher in women who have given birth and also increases with parity. Health personnel have more responsibility in the prevention and control of urinary incontinence by educating the postnatal mothers regarding pelvic floor exercises. This study was conducted to evaluate the effectiveness of structured teaching programme on pelvic floor exercises for the prevention and control of urinary incontinence among postnatal mothers. **Methods:** The research approach is descriptive and evaluate approach, the research design is Quasi experimental one group pretest post test design, the setting is in postnatal wards at Vanivilas Hospital, Bangalore. The samples include 50 postnatal mothers selected by purposive samplingtechnique. The tool consists of Part I demographic data consisting of 12 items, Part II Structured interview schedule consisting of 40 knowledge items, Part III observational checklist consisting of 26 items. The reliability of the tool was established by using split half technique, value was found for knowledge test was 0.9653 and for skill test was 0.9423. **Results:** The findings of the study shows that mean post test knowledge score (31.90) of the postnatal mothers was higher than the mean pretest knowledge score (18.94) and also shows that mean post test skill score (18.9) of the postnatal mothers was higher than the mean pretest skill score (5.9) which shows that the study was effective in increasing the knowledge and skill scores of the respondents. **Interpretation and Conclusion:** Over all findings showed that the structured teaching programme was effective in improving knowledge and skill score of postnatal mothers. The mothers may gain knowledge by attending health education programmes and gain skill by performing pelvic floor exercises.

INTRODUCTION

Mothers and children comprise approximately 70% of the population in developing countries. In India, women of the child bearing age 15 to 44 years constitute 19% of the total population.

Becoming a mother is an important state in every women's life. In addition, the period immediately following child birth forms an integral part of the process. There are many physiological and psychological changes that affect the mother during the postpartum period.

Women are at risk for problems related to the reproductive system from the age of menarche through menopause and the older years. These problems include structural disorders of the uterus and vagina, related to pelvic relaxation and urinary incontinence. For example the structures and soft tissues of the vagina and bladder may be injured during a prolonged labour, precipitous birth, cephalo pelvic disproportion occurs. The common problems faced by women are uterine displacement and prolapse cystocele and rectocele, urinary incontinence and genital fistulas.

A world famous physical educationist has very aptly said "Life is movement, Stagnation is a death". Physical exercise is essential for the maintenance of normal life. Lack of natural exercise is one of the chief causes of weakness and ill-health. In recent years, exercise has been insisted on even in sickness. It helps to restore the use of muscles and nerves injured by disease or accident. Patients with organic ailments are now advised to stay in bed only for the minimum period considered necessary.

In industrialized countries, medical attention is usually high during pregnancy but stops quickly after child birth. In India, postnatal check up is done after six weeks. Few recent studies on mother health after birth have found to be consistent with worrying results. The incidence of

various health problems is high. Many of these problems persist well beyond what is usually considered as the postpartum period, if they take the necessary steps. Regular exercise plays an important role in the fight against stress. It provides recreation and mental reliability, besides keeping the body physically and mentally fit. It is nature's best tranquilizer.

Nursing has rightfully claimed patient education as it domain, while other health cum professionals may spend some time educating the patient, only nurses consider patient education as essential independent component of their practice. This is certainly not new, National League for Nursing Documents dated back to 1918 state that "The nurse is essentially a teacher and an agent of health".

The midwife has a great deal to offer in this field, particularly in terms of fitness, coping with stress, maintenance of posture and promotion of continence.

Need for the Study

The new mother who has given birth to a child may look aghast at her "ruined figure" after childbirth. Her self-esteem collapses at her sagging posture, extra folds of flesh, fallen arches, flabby belly, problems with pelvic organ support and urine control, discomfort during incontinence, are very common. These symptoms arise from child bearing may be slow to develop and may subtly manifest themselves as pelvic pressure, fatigue and frustration.

Exercises are more important among all age groups, especially for postnatal mothers. So exercise is more important during postnatal period to improve muscle tone of the perineum and abdomen, it helps in prevention of backache and pelvic relaxation, helps in gaining bladder control, facilitates perineal healing, strengthening pelvic floor muscles there by prevents urinary incontinence.

Urinary incontinence is a major health problem with prevalence rates varying between 8% and 52%. Urinary incontinence can be treated with surgery, medication, and several forms of pelvic floor muscle training. The study is to evaluate the evidence from randomized controlled trials of pelvic floor muscle training in the treatment of urinary incontinence. Several randomized controlled trials have demonstrated that pelvic floor muscle training is more effective than any other treatment or electrical stimulation in the treatment of stress incontinence. Female stress urinary incontinence can be effectively treated by pelvic floor exercises. This is suggested as the first choice of treatment and hence there is a need for randomized controlled trials to evaluate the effect of pelvic floor muscle exercise in preventing urinary incontinence.

Objectives

1. To assess the knowledge of mothers about the importance of pelvic floor muscle exercise to prevent and control urinary incontinence among postnatal mothers.
2. To develop a structured teaching programme on pelvic floor exercises to postnatal mothers.
3. To conduct a structured teaching programme on pelvic floor exercises to postnatal mothers.
4. To evaluate the effectiveness of structured teaching programme on pelvic floor exercises among postnatal mothers.

Assumptions

1. Postnatal mother will be willing to provide factual information on their knowledge about pelvic floor exercises.
2. The postnatal mothers will be willing and have the ability and skill to learn pelvic exercises.
3. The level of knowledge can be measured by structured interview schedule
4. Structured teaching programme is an accepted teaching strategy.

Criteria for selecting the sample

The following criteria were set for selection of the sample.

Inclusion criteria

- Mothers who are admitted in the postnatal ward.
- Mothers who are willing to participate.
- Mothers who can speak and understand Kannada and English.

Exclusion criteria

- Mothers who are not willing to participate in the study.
- Mothers who are not present at the time of data collection.

Description of the tool

The interview schedule was constructed with the three parts with a tool number of 78 items.

Part-I: Includes 12 items pertaining into the demographic variables of the respondents such as age, age at marriage, type of family, income, educational status, number of delivery etc.,

Part-II: Consists of 40 items related to knowledge regarding pelvic floor exercises under six components.

- Anatomy and physiology
- Puerperium
- Urinary incontinence
- Benefits and importance of exercise
- Types of exercise
- Pelvic floor exercise

Part-III: Consists of 26 items to identifying the skills of postnatal mothers regarding pelvic floor exercise under 5 components.

- Pre-requisites

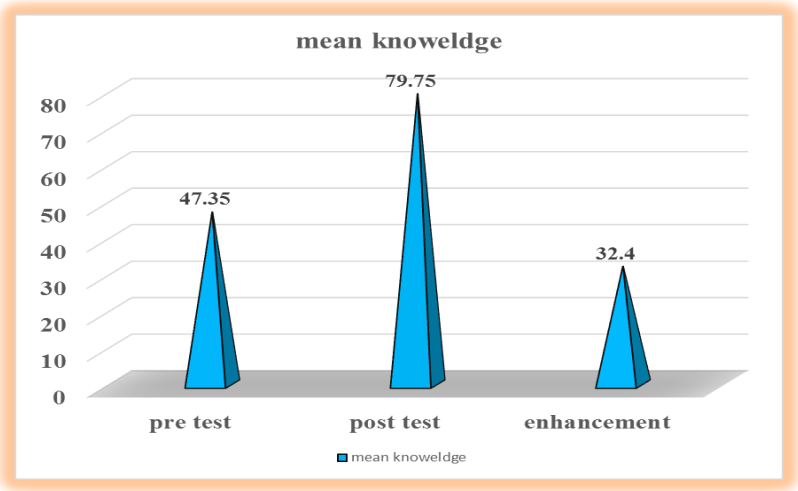
- Abdominal Breathing exercise
- Pelvic tilt exercise
- Leg roll exercise
- Pelvic floor exercise

Table 1: Description and comparison of pre-test and post-test knowledge scores. N=50

Aspects	Max scores	Mean scores	Knowledge scores		Paired t – test
			mean	SD	
Pre-test	40	18.94	47.35	5.9	33.20
Post-test	40	31.90	79.75	5.5	
Enhancement	40	12.96	32.40	6.9	

Significant at 5% level.

The data presented in table shows that mean pre-test and post-test knowledge scores were found to be 47.35% and 79.75% respectively. The enhancement in the knowledge scores was found to be 32.40% with the standard deviation value of 6.9%. the data subject for the paired pre-test was found to be significant at 5% level (t=33.20*) indicating the impact of intervention programme.



Analysis of effectiveness of STP on skill scores.

Table 2: Aspects wise pre-test mean skill scores. N=50.

NO	Aspects	statements	Range score	Mean score	Skill scores (%)	
					Mean	SD
1.	Pre-requisites of exercise	2	0-1	0.4	21.0	24.9
2.	Abdominal breathing exercise	4	0-3	1.1	27.5	22.2
3.	Pelvic tilt exercise	4	0-3	0.5	12.5	19.7
4.	Leg roll exercise	3	0-3	1.1	38.0	26.9
5.	Pelvic floor exercise	13	0-10	2.8	21.4	18.9
Combined		26	2-15	5.9	22.8	12.6

The data presented in the table indicates that the overall pre-test mean on pelvic floor exercise was 22.8% with standard deviation 12.6%. the aspects wise pretest mean skill scores on pelvic floor exercise range between 12.5% to 38% in the areas of pelvic tilt exercise and leg roll exercise and leg roll exercise respectively.

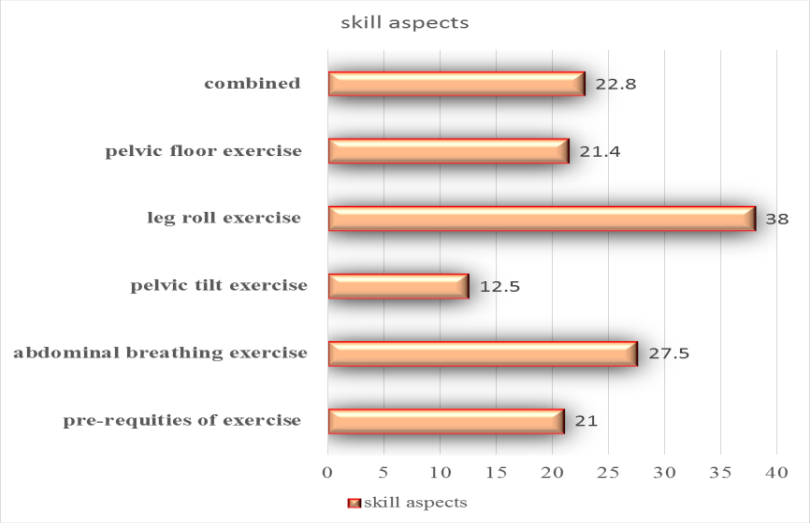


Table 3: Aspect wise post-test mean skill scores. N=50

NO	Aspects	statements	Range score	Mean score	Skill scores (%)	
					Mean	SD
1.	Pre-requisites of exercise	2	1-2	1.7	85.0	23.1
2.	Abdominal breathing exercise	4	2-4	3.3	82.0	49.5
3.	Pelvic tilt exercise	4	1-4	2.5	61.5	20.3
4.	Leg roll exercise	3	1-3	2.2	74.0	23.6
5.	Pelvic floor exercise	13	6-13	9.3	71.4	16.4
Combined		26	14-24	18.9	72.8	13.5

The data presented in the table indicates that the overall mean skill score was 72.8% among the respondents the highest mean skill 85% found on pre requisites of exercise followed by abdominal breathing exercise 82%, leg roll exercise 74% pelvic floor exercise 71.4% among the aspects the low mean skill score found in the pelvic tilt exercise 61.5%.

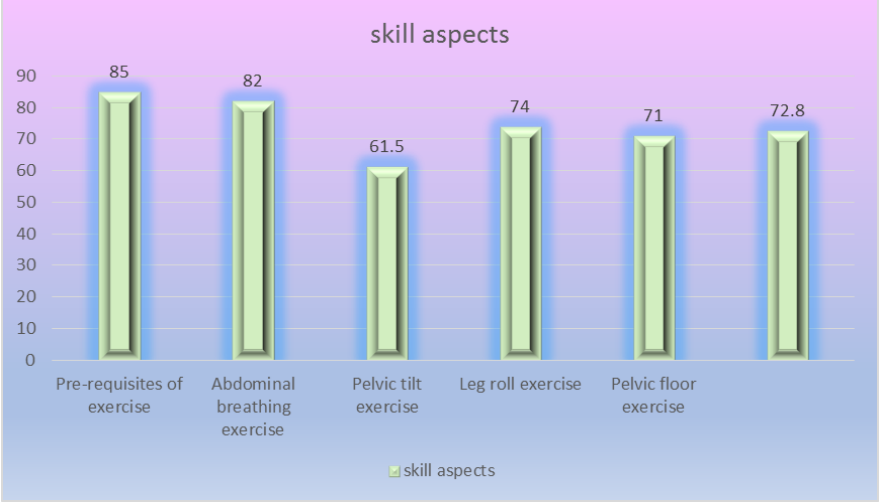
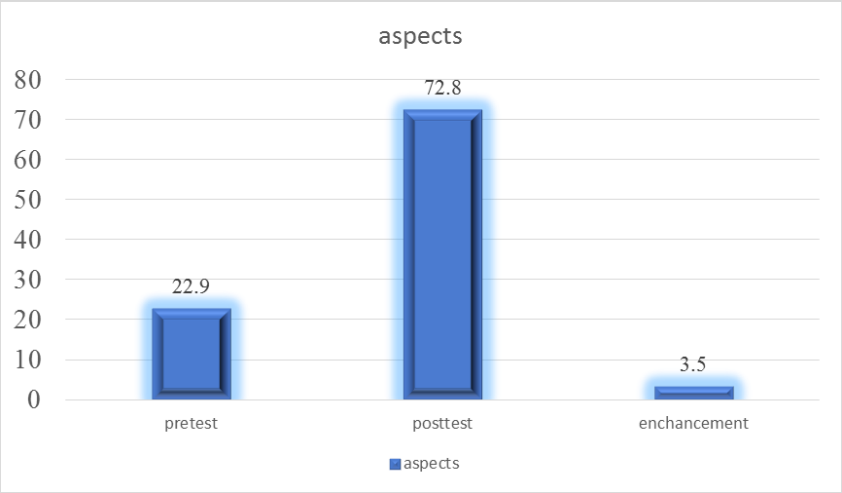


Table 4: Description and comparison of pre-test and post test skill aspects.

Aspects	Max. score	Mean score	Skill scores %		Paired "t" test
			Mean	SD	
Pre-test	26	5.9	22.9	12.6	24.38*
Post-test	26	18.9	72.8	13.5	
enhancement	26	13.0	50.0	14.5	

Significant at 5% Level

The data presented in the Table indicates the pre and post test mean skill scores on pelvic floor exercise for prevention and control of urinary incontinence. Mean pre test and post test skill score was 22.9% and 72.8% respectively. The enhancement in the skill score was 50% with S.D. value of 14.5%. The data subjected for the paired t-test was significant at 5% level (t=24.38*) indicating the impact of intervention programme.



DISCUSSION

Assess the knowledge of mothers on the importance of pelvic floor exercises prior to the implementation of structured teaching programme

In this study, the mean percentage of pre test knowledge score regarding pelvic floor exercises was 47.35%. But in the post test the mean knowledge score was 79.75% after the implantation of STP. In the present study the mean pre-test percentage of skill was 22.9% but in post-test the mean percentage was 72.8% after the implementation of the STP in the area 1(pre requisites) they have gained knowledge. The present study supported by Mason L, Glenn S. (2001) reported that 55% of women received some form of instruction in pelvic floor exercises by 34 weeks of pregnancy, 86% received instructions following birth. The present study supported by Herbert JH. (2000) reported that offering information education and on pelvic floor muscle exercise to the women is by training the health visitors. The present study supported by Morkved S. Bo K. (1996) reported that specially devised pelvic floor muscle strength training programme can add significantly to physical recovery after childbirth.

To Develop and Conduct structured teaching programme on pelvic floor exercise to mothers

Development of STP was done on the basis of objectives, knowledge level of postnatal mothers and according to their leaving needs and also valuable suggestions given by the experts. The content of pelvic floor exercises was selected through literature and research studies. Then content of tool was divided into subtopics and subtopics were broken into elements. STP was conducted after informing the 50 samples, the term and date was fixed for conducting STP. Group teaching was used to conduct STP. Group teaching was conducted in Kannada on different dates for divided samples for 1 hourby lecture cum demonstration and return demonstration by using audio visual aids and according to their convenience. The selected content was organised under the following headings.

- Anatomy and physiology
- Puerperium
- Urinary incontinence
- Benefits and importance of exercises
- Types of Exercise
- Pelvic floor exercise

In the present study the mean post test knowledge increased from 18.94 to 31.90 and mean post test skill scores increased from 5.9 to 18.9, after the implementation of STP, since teaching was effective regarding pelvic floor exercises.

Evaluate the effectiveness of structured teaching programme

In the present study comparison was done between pre test and post test of knowledge scores (t=33.20). Comparison was done between pre-test and post-test of skill scores (t=24.38). The present study was supported by Daniel Jolly (2001) who reported that planned teaching programme was very effective (t=30.6 P<0.01) in increasing the knowledge of antenatal mothers in postnatal wards. The present study was supported by Joseph Pritty (200) who reported that increase in the post-test knowledge scores (t=17.1268, P<0.05) after the administration of planned teaching programme was a positive step. The present study was supported by Akask B. et., al (2003) reported that the effectiveness of pelvic floor muscle exercise or biofeedback for the treatment of urinary stress incontinence and shows that there is a significant USI with respect to the controlled group (p<0.001).

Implications of the study
The study can be used in the following areas of Nursing.

Nursing practice
The findings of the study clearly point out that the structured teaching programme regarding pelvic floor exercises improved knowledge and skill, heads the postnatal mothers to overcome from the health problems such as urinary incontinence. Nursing personnel are in the best position to impart health education to the people in the hospital or community. Demonstration of exercises can be done and pamphlets can be issued to all postnatal mothers who are admitted in postnatal wards. The study findings signify the importance of formulating and implementing structured teaching programme on pelvic floor exercises by nursing personnel.

Nursing education
The study had proved that improving knowledge of postnatal mothers during the postnatal period could improve the skill of pelvic floor exercises. To impart this knowledge, the nursing personnel need to be equipped with adequate knowledge regarding pelvic floor exercises. Nursing personnel should be given inservice education to update their knowledge and abilities in identifying the learning needs of postnatal mothers on pelvic floor exercises.

Nursing administration
Cost effective production of materials on pelvic floor exercises used for teaching by the nursing staff should be encouraged, necessary administration support should be provided to conduct such activities.

Nursing research
It is essential to identify at present, the level of knowledge and skill of postnatal mothers regarding pelvic floor exercises to know the extent of information that is necessary to be taught. Extensive research must be conducted in this area to identify several more effective methods of education. This study also brings out the fact that more studies need to be done in different settings, which is culturally acceptable with better teaching strategies of education. This study can be a base line for future studies to be built upon.

Limitations of the study
1. The study is limited to knowledge and skill of postnatal mothers regarding pelvic floor exercises.
2. In the study, structured teaching programme was used for enhancement of knowledge and improvement in the skill.
3. The study is done only with 50 samples, hence generalization is possible only for selected samples.
4. The behaviour of the postnatal mothers with pelvic floor exercises may change as they are being observed by the researcher.

Recommendations
1. A similar kind of a study may be conducted on a large population for wider generalization.
2. A comprehensive study can e done between the effectiveness of structured teaching programme versus self instructional module.
3. A descriptive study may be conducted to assess the knowledge and skill on pelvic floor exercise amongrural postnatal mothers.
4. A comparative study can be conducted to assess the knowledge and skill on pelvic floor exercise among urban and rural postnatal mothers.
5. A comparative study can be conducted to assess the knowledge and skill on pelvic floor exercise among Private and Government hospital postnatal mothers.
6. A comprehensive study may be conducted to assess the knowledge and skill on pelvic floor exercises between primipara and multiparaous postnatal mothers.

REFERENCES

1. Park K, Text Book of Prevention and Social Medicine, Edition, Jabalpur; Banarasidas Publications; 2004; 17.
2. Lowdermilk DL, Perry TE and Bobak TM, Maternity and Women's Health Care, Edition, Mosby Publications, 1997; 6.
3. Carole Lium Eddman. Carol Lynn Mandle. Health promotion throught the life span, Edition, Morby, 2002; 5.
4. Mason L. Glenn S. The Instruction in pelvic floor exercises presented to women during pregnancy or following delivery, Journal of midwifes, 2001; 17(1): 55-64.
5. Morkved S. Bo k, The effect of postnatal exercises to strengthen the pelvic floor muscles, Acta obstet Gynaecol Scand, 1996; 75(4): 382-5.
6. Bo K. Pelvic floor muscle strength and response to pelvic floor muscle training for stress urinary incontinence, Neurourol Urodyn, Oslo, 2003; 22(7): 654-8.
7. Aksac B. Aki A. Kenan A. Yalin O. Isi kegl U M. Eskiyurt N. Biofeedback and pelvic floor exercises for the rehabilitation of urinary stress incontinence Gynaecol, obstet invent, Turkey, 2003; 56(1): 23-7.
8. Chiarelli P. Cockburn J. Promoting Urinary Continence in Women after delivery, B.M.J, 2002; 324: 1241-1252.
9. Morkved S. Bo K, Effect of postpartum pelvic floor muscle training in prevention and treatment of urinary incontinence, a one year follow up, BJOG, Norway, 2000; 107(8): 1022-8.
10. Gallo ML, Staskin DR. Cues to Action pelvic floor muscle exercise compliance in women with stress urinary incontinence, Neurourol urodyn, USA, 1997; 16(3): 167-77.
11. Morkved S. Bo K. The effect of postpartum pelvic floor muscle exercise in the prevention and treatment of urinary incontinence, Int urogynecol J pelvic floor Dysfunct, Norway, 1997; 8(4): 217-22.

12. Joseph pretty, Effectiveness of planned teaching programme, 2001.
13. Neomi. A study to evaluate the effectiveness of planned teaching programme, 1997.
14. Santhakumari K, A study to assess the effectiveness of planned teaching programme, 1996.