



Research Article

Survey on knowledge about pelvic floor muscles and pelvic floor muscle exercises in primiparous pregnant women

Authors

Shrutika Pramod Sawant*¹, Dr Anuradha Sutar²

^{1,2}Maer's Physiotherapy College, Talegain Dabhade, Pune

*Corresponding Author

Shrutika Pramod Sawant

Maer's Physiotherapy College, Pune, India

Mobile No. 9869358351, Email: sawantshrutika0@gmail.com

Abstract

Introduction: *The pelvic floor muscles are a well-defined muscular structure that supports pelvic organs. Pelvic floor dysfunctions include urinary incontinence, prolapse, and sexual problems. The current study evaluated knowledge about pelvic floor muscles and awareness about pelvic floor exercises in primiparous pregnant women above 18 years of age.*

Subjects and Methods: *In this cross-sectional survey, a validated, 36 item questionnaire was used. Women were interviewed for the questions in the questionnaire. Questionnaire included questions regarding demography, pelvic floor muscles, pelvic floor dysfunction, pelvic floor exercises. Content validity and face validity was done.*

Results: *Results are calculated by taking average of all the questions. Knowledge of pelvic floor muscles was 48%, knowledge of pelvic floor exercises was 32%, knowledge about sexual dysfunction was 51%. Many of the women knew exact location and function of pelvic floor muscles.*

Conclusion: *There was significant lack of knowledge about pelvic floor muscles and training among primiparous women. Most of the women thought they are not sufficiently informed this can be a way to reduce dysfunction.*

Keywords: *Pelvic floor, urinary incontinence, pelvic floor exercises.*

Introduction

Pelvic floor (PF) is defined muscular structure that plays role in urological, gynaecological and pulmonary functions.^{1,2,3,4,5} PF dysfunction can lead to consequences such as Urinary incontinence (UI), prolapse and sexual problems.^{1,6} Major known risk factors contributing to the PF disorders are pregnancy and childbirth.^{1,7}

PF muscles are: Superficial muscles are external anal sphincter, superficial perineal muscles-Two muscles included are ischiocavernosus and bulbospongiosus, transverse perineal superficialis, striated urogenital sphincter, sphincter urethrae, compressor urethrae, sphincter urethrovaginalis, Deep muscles are levator ani-It consists of four muscles that are puborectalis, pubococcygeus, iliococcygeus, ischiococcygeus.

These muscles stabilize and supports using a tonic muscle activity in them. They consist of high proportion of slow twitch fibres and consists of muscle spindles.⁸

Different stages in women’s life such as pregnancy, postpartum period and menopause can cause changes in these muscles which leads to PF dysfunction.⁶ PF dysfunction leads to cystocele, urethrocele, enterocele, rectocele, Uterine prolapse, incontinence(urinary & faecal).^{8,9} POP grade 2 & 3 can be corrected by surgical intervention called as hysterectomy.³

PF muscle training includes³-Kegel’s’ exercises and progression can be done by using perineometer, vaginal cones, tampons, Foley’s catheter.

Due to physiological changes occurring during pregnancy, decreased collagen may lead to reduced strength & supportive & sphincteric function of PF muscles which leads to stress UI.^{3,10} PF problems in women (UI, faecal incontinence, uterovaginal prolapse, diastasis recti) are common & have an adverse-effects on QOL.¹¹ PF muscle exercises improves strength of PF muscles.³ Hence PF muscle training during pregnancy is important to reduce above mentioned consequences.

Very little information is known about PF dysfunction amongst women.¹ The number of pregnant women with stress UI prevalence ranged from 18.6%-75% and increased with gestation.¹² Research has shown that knowledge about PF may be lacking in adult women, therefore study was designed to assess women’s knowledge. Improvement in knowledge is necessary to influence care-seeking behaviour and can improve compliance with PF training recommendations.¹

Method

Descriptive study was conducted in population of primiparous women in any of three trimesters in 208 women. Inclusion criteria was women above 18 years of age. Purposive sampling was done. Informed consent was taken and questions in the questionnaire were asked in their mother tongue

(English, Hindi, Marathi). Questionnaire consisted of 36 questions. Question were phrased in a socially and culturally sensitive manner. Five questions were open ended. All the questions were divided into four categories to calculate result.

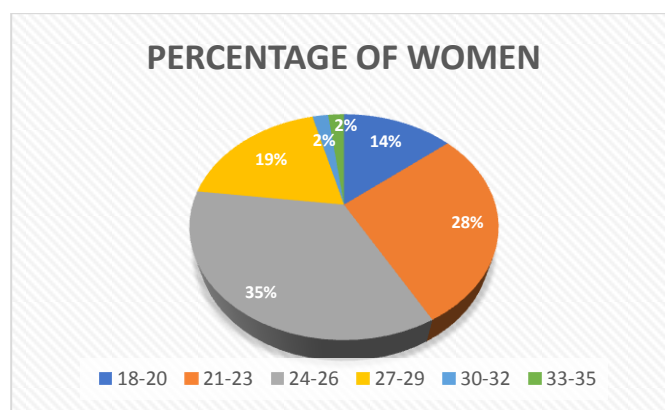
Results

Results are calculated by taking average of the questions included in one section of the result and graphs are plotted accordingly.

- Knowledge of PF muscles- 48%
- Knowledge about PF training-32%
- Knowledge about sexual dysfunction-51%

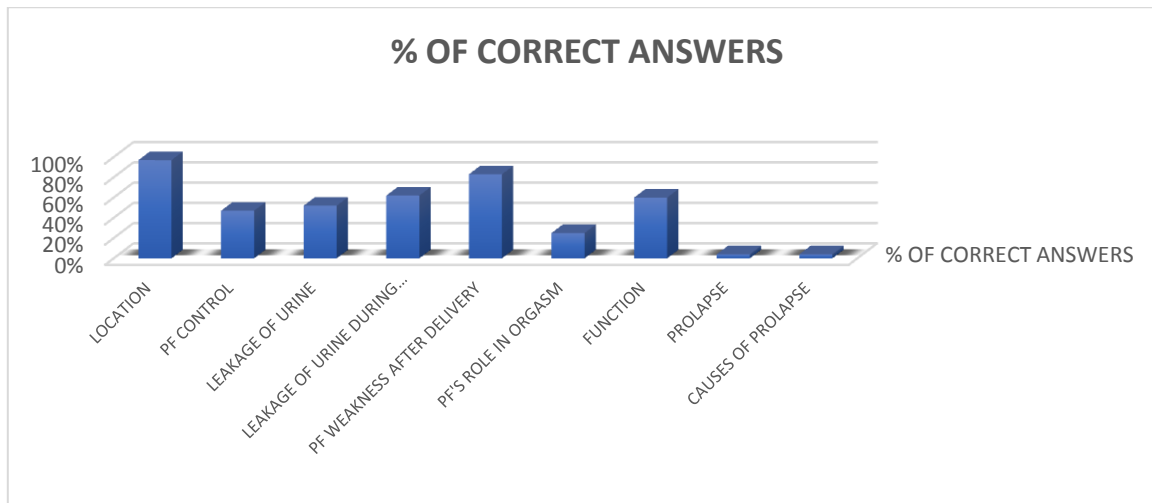
Demographic Data

AGE	PERCENTAGE OF WOMEN
18-20	14%
21-23	28%
24-26	35%
27-29	19%
30-32	2%
33-35	2%



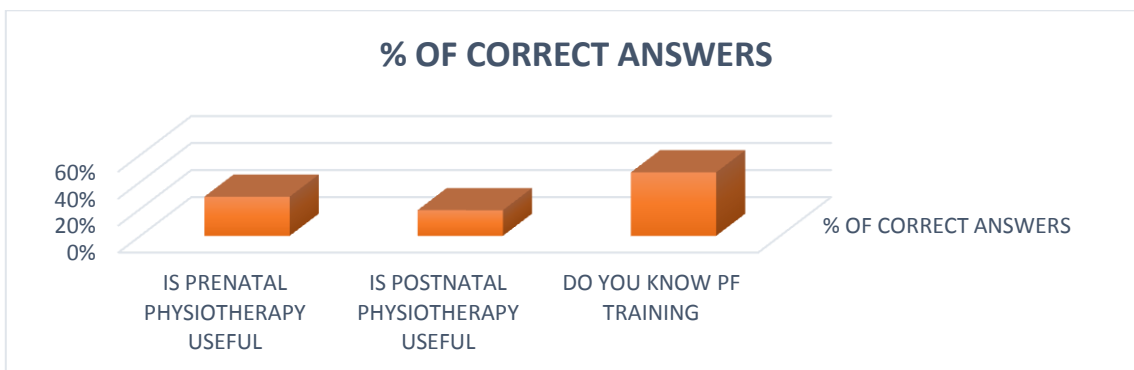
Knowledge about Pelvic Floor Muscles

QUESTION	% OF CORRECT ANSWERS
LOCATION	97%
PF CONTROL	47%
LEAKAGE OF URINE	52%
LEAKAGE OF URINE DURING EXERCISE	62%
PF WEAKNESS AFTER DELIVERY	83%
PF'S ROLE IN ORGASM FUNCTION	25%
PROLAPSE	60%
CAUSES OF PROLAPSE	4%
CAUSES OF PROLAPSE	4%



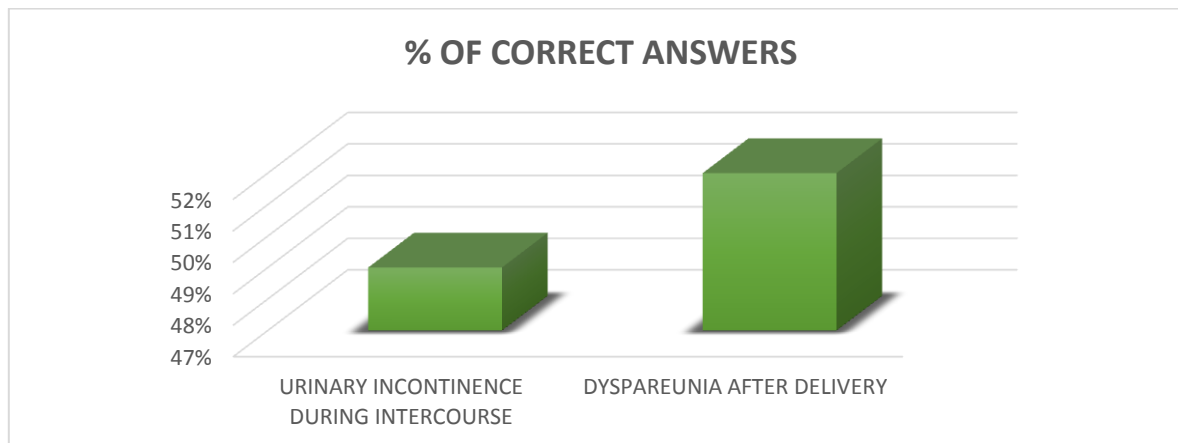
Knowledge about Pelvic Floor Training

QUESTION	% OF CORRECT ANSWERS
IS PRENATAL PHYSIOTHERAPY USEFUL	29%
IS POSTNATAL PHYSIOTHERAPY USEFUL	19%
DO YOU KNOW PF TRAINING	47%



Knowledge about Sexual Dysfunction

QUESTION	% OF CORRECT ANSWERS
URINARY INCONTINENCE DURING INTERCOURSE	49%
DYSPAREUNIA AFTER DELIVERY	52%



Discussion

The descriptive survey was undertaken to evaluate knowledge and awareness about PF muscles and PF exercises in pregnant primiparous women. All women included in the study were well educated. The high prevalence of PF disorders in women are an important medical & socioeconomical problems.¹ Women are reluctant to seek help even when they have PF disorders.¹³ Ozdemir OC found that middle aged women after one single birth have increased as 12% and 8% in prevalence of UI and POP.

Pregnancy and childbirth have been shown to be important risk factors for PF disorders in women. Women were asked questions in their own language (interview based). In this study, women said that vaginal delivery (48%) and pregnancy (29%) are important causes of PF disorders. Along with that 20% and 21% women said straining and surgery respectively.

We found that 97% of the women knew exact location of PF muscles in the diagrams provided in the questionnaire. 83% of women said PF muscles becomes weak after delivery. More than 50% of the population said UI is normal during exercise even before delivery. 60% of women knew correct function of the PF. Only 4% of women knew about prolapse and its cause of prolapse. 47% women said that PF action cannot be controlled actively.

In this study, most of the study said PF has no conscious control and 25% of women said inward lifting. 70% of women marked incorrect openings in the pelvic region. 60% of the women felt usage of pads is normal in case of urine leak. Almost all women said gapping of vagina is main reason for weakened PF.

Most of the women marked caesarean delivery and vaginal delivery with episiotomy had negative consequences on PF. Almost all women didn't know about what can be cut during vaginal delivery.

Great proportion women thought that UI and dyspareunia is normal after delivery. 75% population didn't know role of PF role in orgasm.

Coolen JC et al. found that anxiety is the main reason for poor knowledge along with anxiety hesitancy to talk to clinicians can be the reason for less knowledge. Most of the women acknowledged that they didn't actively search for information. Large number (33%) of population didn't know prenatal, postnatal training and its use.¹⁷

The strengths of this study are comparatively large number of participants, open and closed questions with validated questionnaire as well as indecisive response options.

Mellville et. Al. found interesting relationship between knowledge and behaviour, women believed that UI is caused by the factors which are out of control and think that nothing can be done to stop them.¹¹ They did not bother to take any kind of treatment in the UI. Aideen Williams, O'Neil's studied knowledge of PF in pregnant primiparous women in third trimester they found that, knowledge is very low amongst primiparous taiwani women.

This study suggested, when comparing between PF and PF training, women had less knowledge in PF training than PF muscles due to less awareness amongst rural population. 29% women searched information on this topic before and only 9% of women said they are sufficiently informed. On the scale of 0-10 women were asked to mark their knowledge about this topic, most of the women marked between 0-5.

We understand that most of the women marked their knowledge on scale of 0-10 between 3-5 that is (49%) and between 6-8 marked by 27% of women and 9-10 is marked by 4% of women. This concludes that most women acknowledged that they are not sufficiently informed about this topic. It must be acknowledged that results gathered by this study delivers only observational information about the knowledge. For approximately 10 -15 answers marked right can be considered as good knowledge.

Shortcoming of the study would be medium-educated women. Research has shown that there is no relationship between general education and health literacy and disease understanding.¹⁸

PF exercises improves pulmonary function during pregnancy. Speaking, deep breathing, coughing occur as diaphragm rises due to increased abdominal pressure, hence abdominal and PF muscles generate pressure through co-contraction. PF muscles contraction protects endopelvic organs against increased abdominal pressure, under body's certain reaction during deep breathing and coughing, PF training relieves anal and urethral obstruction.^{4,5}

Research has shown that knowledge given verbally has a more influence than written information.²⁵ Better general education is mandatory especially in rural population. General education is needed preferably earlier in life that can be in schools, colleges if not then can be given during pregnancy check-ups using PowerPoint presentations, diagrams, posters, CDs, etc. This survey in primiparous women resulted in poor knowledge and least concern about PF disorders among large amount of population.

Limitations

Some of the women felt uncomfortable as there are some open questions.

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Abbreviations

ABBREVIATIONS	FULL FORM
PF	PELVIC FLOOR
POP	PELVIC ORGAN PROLAPSE
UI	UI
QOL	QUALITY OF LIFE