

## Original Article

# Awareness, Knowledge and Practices of Pakistani Women Towards Pelvic Floor Muscle Exercises During Pregnancy

Maria Habib<sup>1</sup>, Irum Sohail<sup>2</sup>, Munazza Nasir<sup>3</sup>, Fehmia Nasir<sup>4</sup>

KRL Hospital, Islamabad

<sup>2</sup>Professor of Obs & Gynae, KRL Hospital, Islamabad

**Correspondence:** Dr. Maria Habib

Dept of Obs & Gynae

KRL Hospital, Islamabad

Email: mariahabibawan@gmail.com

## Abstract

**Objective:** To assess the awareness, knowledge, and practices of Pakistani women towards Pelvic Floor Muscle Exercises (PFMEs) during pregnancy.

**Methodology:** This cross sectional study was conducted in the outpatient department of Obstetrics/Gynaecology, Kahuta Research Laboratories (KRL) hospital Islamabad from November 2017 to January 2018. A questionnaire proforma included data on demographic profile and then questions about awareness, knowledge, and practices of women towards PFMEs during the antenatal period. Descriptive statistics and chi-square test was used.

**Results:** Out of 205 women, only 169 were willing to participate in the study making a response rate of 82.4%. The mean age of the participants was  $28 \pm 4.7$  years. The mean gestational age of the women was  $33 \pm 3.5$  weeks. The majority of the participants were well educated, belonged to a middle socioeconomic class and primiparas. Many participants knew that it is abnormal to leak during pregnancy (52.7%). A significant proportion of women had never heard about PFMEs (91.1%). Educational status had a positive correlation with an awareness of PFMEs ( $P=0.019$ ). Amongst those who were aware, the internet was the main source of information. Only a few knew that these exercises help in the prevention of stress urinary incontinence (2.4%) and uterovaginal prolapse (1.8%). Only 3.6% of the participants had ever practiced PFMEs. After providing education, almost all the participants were willing to do these exercises. Those who didn't intend to do were mostly less educated ( $P=0.016$ ) and belonged to a lower socioeconomic class ( $P=0.042$ ).

**Conclusion:** Awareness and knowledge of PFMEs in Pakistani women is very low though the majority are interested to perform them if adequate information is given. Education by healthcare professionals is mandatory to promote the implementation of PFMEs.

**Keywords:** Awareness, kegel exercises, antenatal period.

Cite this article as: Habib M, Sohail I, Nasir M, Nasir F. Awareness, Knowledge and Practices of Pakistani Women Towards Pelvic Floor Muscle Exercises During Pregnancy. J Soc Obstet Gynaecol Pak.2020; Vol 10(2):121-124

## Introduction

Pelvic floor muscles are the main support of pelvic viscera and they also play a sphincteric role. During women's whole life, these muscles undergo drastic

changes during antenatal, intrapartum & postpartum period, and then during menopause. Pelvic floor dysfunction (PFD) can occur during pregnancy due to hormonal changes and pressure of gravid uterus,

Authorship Contribution: <sup>1</sup>Conceived and planned the idea of the study, Data collection, analysis & interpretation and writing of the manuscript, <sup>2</sup>Supervised, reviewed the manuscript, <sup>3,4</sup>Active participation in active methodology.

Funding Source: none

Conflict of Interest: none

Received: Sept 9, 2019

Accepted: July 11, 2020

childbirth related events, menopause, and chronic medical illnesses like chronic obstructive pulmonary disease (COPD), asthma etc. The consequences of PFD can vary from problems in sexual function to urinary/fecal incontinence and uterovaginal prolapse. So women's quality of life is largely dependent on the proper functioning of pelvic muscles and any dysfunction will have a negative impact on the quality of life.<sup>1,2</sup>

There is growing evidence that exercises during pregnancy are very effective and safe, and women should be encouraged for them.<sup>3</sup> Various randomized controlled trials have shown that PFMEs (kegel exercises) during antenatal and postpartum period help in the prevention of stress urinary incontinence and improves sexual functioning by maintaining muscle tone.<sup>4,5</sup> Research has demonstrated a proven role of kegel exercises in improving the quality of life even in women with PFD.<sup>6</sup>

Available evidence has shown that approximately 200 million women all over the globe are unaware of any exercises that can be done during pregnancy neither they know about their beneficial effects. Amongst those who know, many are not performing them in a right way.<sup>7</sup> Data from London has highlighted that there is a need to educate all pregnant women about pelvic floor problems by healthcare professionals.<sup>8</sup> This may be because urinary problems during pregnancy are considered normal by many women and healthcare professionals also overlook them. According to National Institute of Clinical Excellence (NICE), all the women should be provided information about PFMEs during their first pregnancy.<sup>9</sup>

The importance of PFMEs during antenatal period cannot be denied anymore. There is no available local data to guide us about awareness and attitudes of our pregnant population towards PFMEs. So, the current study was designed to assess the awareness, knowledge and practices of Pakistani women towards PFMEs during pregnancy.

## Methodology

After taking approval from hospital's Ethical committee, this cross sectional study was conducted in the outpatient department of Obstetrics/Gynaecology, Kahuta Research Laboratories (KRL) hospital Islamabad during November, 2017 to January, 2018. All the booked pregnant women, more than 28 weeks of gestation and having regular antenatal visits were invited to participate in the study. A questionnaire was designed

after extensive literature review. It included data on demographic profile and then questions about awareness, knowledge, and practices of women towards PFMEs during the antenatal period. After explaining the objectives of the study, verbal informed consent was taken, and then study participants were interviewed by trainee researchers. The demographic profile included age, level of education, perceived socioeconomic status, parity, and gestational age. Awareness about PFMEs was assessed by asking two questions; Is it normal to leak during pregnancy? And then by, have you ever heard about PFMEs? Those who knew about PFMEs were further inquired about the source of information. The knowledge was assessed by asking whether PFMEs help in the prevention of urinary incontinence/fecal incontinence/uterovaginal prolapse or improves sexual function. To analyse the practices, the following questions were asked; Have you ever practiced PFMEs? If they have practiced them, then further questions were asked whether they have practiced them during current pregnancy? Or before this pregnancy? And how many times a day/week/month? Do they think that PFMEs can prevent UI? And would they perform these exercises if advised?

Statistical package for social sciences (SPSS) version 21 was used. Descriptive statistics were used to calculate mean and frequencies. Chi-square test examined the association of different variables with questionnaire items. P value <0.05 was considered statistically significant.

## Results

Of 205 women, only 169 were willing to participate in the study making a response rate of 82.4%. Mean age of the participants was  $28 \pm 4.7$  years. The characteristics of the study participants are shown in table I. In brief, mean gestational age of the women was  $33 \pm 3.5$  weeks. Majority of the participants were well educated, belonged to a middle socioeconomic class and primiparas.

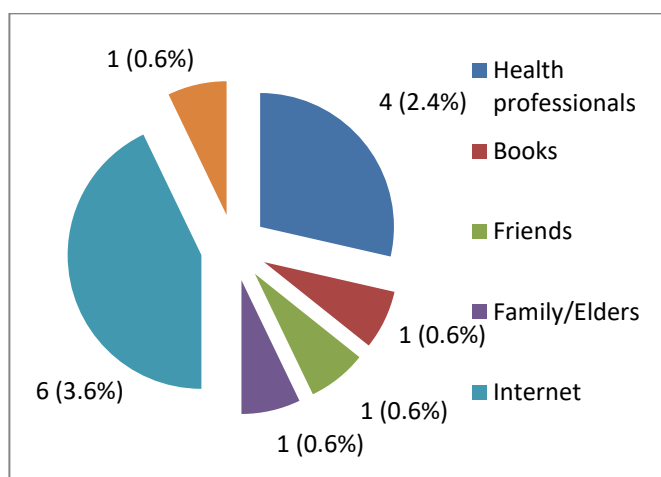
Variables		Number (n)	Percentage (%)
Level of education	Uneducated	6	3.3
	Primary	2	1.2
	Middle	4	2.4
	Matric	23	13.6
	FA/FSc	23	13.6
	Graduation	48	28.4
	Masters	52	30.8
	M.Phil/PHD	11	6.5

Percieved socioeconomic status	Lower	17	10.1
	Middle	133	78.7
	Upper	19	11.2
Parity	0	59	34.9
	1	48	28.4
	2	38	22.5
	3	16	9.5
	4	02	1.2
	>4	06	3.6

Many participants knew that it is abnormal to leak during pregnancy (52.7%). However, a large number of women were in view that urine leakage during pregnancy is normal (45%). Few women were indecisive (2.3%)

A significant proportion of women had never heard about PFMEs (91.1%). Educational status had positive correlation with awareness of PFMEs ( $P=0.019$ )

Amongst those who knew about PFMEs, internet was the main source of information. (figure 1)



**Figure 1. Source of information about PFMEs**

Amongst those who were aware of the PFMEs, majority were in view that these exercises only help in getting delivered vaginally (4.1%). While others knew that these exercises help in the prevention of stress urinary incontinence (2.4%) and uterovaginal prolapse (1.8%).

Only 3.6% of the participants had ever practiced PFMEs. Some women were aware of PFMEs but they had never practiced them due to various reasons (4.7%). A very few women were doing PFMEs in their current pregnancy (1.8%). Only two women were in a habit of doing PFMEs before their current pregnancy (1.2%). When women were inquired how regularly they do these exercises, 1.2% women were doing once daily, 1.8% on and off weekly while 0.6% were doing sometimes in a month.

When all the study participants were specifically asked about any role of PFMEs in the prevention of SUI, many

responded positively (62.1%). However, 28.4% were in view that these exercises cannot do any help while 9.5% were indecisive. Those who responded positively were more educated as compared to others ( $P=0.014$ ) and belonged to upper or middle socioeconomic class ( $P=0.002$ )

After providing education about PFMEs, almost all the participants were willing to do these exercises during and after pregnancy. Those who didn't intend to do these exercises despite providing information were mostly less educated ( $P=0.016$ ) and belonged to a lower socioeconomic class ( $P=0.042$ )

Parity had no association with awareness, knowledge or practices of women towards PFMEs ( $P>0.05$ )

## Discussion

Taking into account the important role of PFMEs during antenatal and postpartum period, it is necessary to educate all the women by healthcare professionals. This study has demonstrated that majority of pregnant women were unaware of PFMEs. Those who were aware, had not enough knowledge about these exercises. However, the participants were willing to do these exercises if they were provided adequate information.

This study has highlighted that almost half of the pregnant women thought that urine leakage during pregnancy is normal. This is consistent with the findings of study in Belgium where nullipara women had similar views.<sup>10</sup> Alarmingly, 91% of our pregnant women never heard of any PFMEs to be done during pregnancy. A study conducted by Rachana Nayak et al on Indian pregnant women found that around 65% of their pregnant women were unaware of PFMEs though their study population was well educated.<sup>11</sup> This shows that women are not taught about PFMEs by healthcare professionals during their antenatal visits. According to those who were aware of PFMEs, the internet was the main source of information in our study. This is in contrast to the results of Heather M. Whitford who found the pregnancy book to be the main source of information.<sup>12</sup> This shows that in our country, pregnancy books or cards are not given to the patients to educate them neither healthcare professionals are communicating this information to their patients.

Anne-Marie Hill et al conducted a study on Australian pregnant women to assess their knowledge about pelvic floor muscles and found that two third of the women knew that these muscles help in the prevention of urinary

incontinence.<sup>13</sup> This is in contrast to the results of our study as very few women knew about this role of PFMEs. This may be because in Australia and other developed countries, women attend antenatal classes where they are specifically taught about PFMEs and their beneficial role at least during their first pregnancy. However, there is no concept of formal antenatal classes in developing countries like Pakistan.

There were only few women in our study who were already practicing PFMEs during the current pregnancy or before pregnancy. Amongst those who were practicing these exercises, the majority were not doing according to the current recommendations. Contrary to our results, practices of PFMEs were found in almost half of the participants in other published studies. Low practices in our women maybe because of a lack of motivation and gaps in the provision of educational care. Reassurance about the efficacy and safety of PFMEs can motivate the women and help them in adherence with these exercises.<sup>12,14</sup>

When detailed information was provided about PFMEs to our study participants, more than 90% were willing to perform them. Similarly, other studies have highlighted that healthcare professionals can play a very important role in delivering adequate knowledge about PFMEs which can enhance their capability and motivation to perform them regularly.<sup>14,15</sup>

## Conclusion

Awareness and knowledge of PFMEs in Pakistani women is very low though majority are interested to perform them if adequate information given. Education by healthcare professionals is mandatory to promote implementation of PFMEs. There is a need of more research about educational tools and ways of delivering information in an effective way to all the pregnant women.

## References

1. Amaro JL, Moreira EC, De Oliveira Orsi Gameiro M et al. Pelvic floor muscle evaluation in incontinent patients. *Int Urogynecol J Pelvic Floor Dysfunct*. 2005;16:352–354.
2. Riesco ML, Caroci AS, de Oliveira SM et al. Perineal muscle strength during pregnancy and postpartum: the correlation between perineometry and digital vaginal palpation. *Rev Lat Am Enfermagem*. 2010;18:1138–1144.
3. Mbada CE, Adebayo OE, Awotidebe TO, Faremi FA, Oginni MO, Ogundele AO et al. Practice and Pattern of Antenatal and Postnatal Exercise among Nigerian Women: A Cross-Sectional Study. *IJWHR*. 2015;3(2):93–98
4. Asim HM, Hayyat K, Iqbal A. Postpartum stress; effects of pelvic floor muscle training (kegel exercises) in women with postpartum stress urinary incontinence. *Professional Med J*. 2013;20(2):208–13
5. Modarres M, Rahimkian F, Booriaie E. Effect of pelvic muscle exercise on sexual satisfaction among primiparous women. *J Nurs Midwifery Tehran Univ Med Sci*. 2012;18:10–8.
6. Naqaish T, Rizvi F, Khattak JI. Impact of kegel exercise on brink scale and activities of daily life (adls) in patients of cystocele. *J Rawal Med Coll*. 2013;17:243–6
7. Riaz H, Bashirian S, Ghelichkhani S. Kegel exercise application during pregnancy and postpartum in women visited at Hamadan health care centers. *Iran J Obstet Gynecol Infertil*. 2007;10:47–54.
8. O'Neill AT, Hockey J, O'Brien P, Williams A, Morris TP, Khan T et al. Knowledge of pelvic floor problems: a study of third trimester, primiparous women. *Int Urogynecol J*. 2017;28(1):125–129
9. National Institute for Health and Clinical Excellence: Urinary Incontinence: the management of urinary incontinence in women. Guideline 40. London. National Institute for Health and Clinical Excellence, 2006.
10. Neels H, Wyndaele JJ, Tjalma WA, De Wachter S, Wyndaele M, Vermandel A. Knowledge of the pelvic floor in nulliparous women. *J Phys Ther Sci*. 2016;28:1524–33.
11. Nayak R, Virani S, Gupta C, Kumar V, Narayan A, Thumga S et al. Awareness of antenatal exercises among pregnant women in tertiary care centres, Mangalore, India. *IJAMSCR*. 2015;3(2):243–247.
12. Whitford HM, Alder B, Jones M. A cross-sectional study of knowledge and practice of pelvic floor exercises during pregnancy and associated symptoms of stress urinary incontinence in North-East Scotland. *Midwifery* 2007;23:204–217
13. Hill AM, McPhail SM, Wilson JM, Berlach RG. Pregnant women's awareness, knowledge and beliefs about pelvic floor muscles: a cross-sectional survey. *International urogynecology journal*. 2017 ;28(10):1557–65.
14. Whitford HM, Jones M. An exploration of the motivation of pregnant women to perform pelvic floor exercises using the revised theory of planned behavior. *British Journal of Health Psychology*. 2011; 16:761–778
15. Ghaderi F, Oskouei AE. Physiotherapy for women with stress urinary incontinence: a review article. *J Phys Ther Sci*. 2014;26:1493–9.