ORIGINAL ARTICLE

Pelvic Floor Muscle Exercise for Reducing Urinary Incontinence: Knowledge and Attitude Among the Postnatal Mothers

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ABSTRACT

Background: Urinary incontinence is a prevalent issue for young women during pregnancy and postpartum, affecting their quality of life and leading to mental health issues like depression and poor self-esteem. Providing clear information about postnatal registration and pelvic floor muscle exercises (PFME) can help identify symptoms and take appropriate action. This study assessed the level of knowledge and attitude on PFME for reducing urinary incontinence among the postnatal multiparous pregnant women in selected hospitals in Dhaka city, Bangladesh. **Methods:** Cross-sectional research with 121 participants, using a non-probability sampling approach, was conducted on postnatal mothers at the Maternal and Child Health Training Institute, the Institute of Child & Mother Health, and Dhaka Medical College and Hospital in Bangladesh, using SPSS version 20 for analysis. **Results:** Most participants (n=84, 69%) are aware of the benefits of exercising the pelvic floor muscle. The findings revealed that 59 (48.8%) of the 121 participants had experienced urinary incontinence, and 37 (30.6%) had followed the Kegel exercise treatment. One hundred and three (85.1%) of postnatal mothers expressed their views on the value of pelvic floor muscle training for expectant mothers. Overall, 78 (64.76%) of participants had this degree of understanding, and 87 (71.96%) had this attitude. **Conclusion:** This study provides information on PFME, highlighting its benefits for postpartum management and preventing pregnancy complications. It suggests that knowledgeable postpartum mothers can adopt a positive attitude towards pelvic floor workouts, strengthening and relaxing PFMs.

INTRODUCTION

Pelvic floor disorders are increasingly recognized as significant health issues affecting women globally, particularly in developing nations. These conditions impact millions of individuals, often without their knowledge, due to limited access to healthcare, as well as a lack of awareness and autonomy in decision-making regarding the management of pelvic floor disorders. The prevalence of these disorders varies widely across different countries, ranging from 11.9% to 67.5%. In high-income nations, such as the United States, approximately 25% of women report experiencing at least one pelvic floor disorder during their lifetime, with urinary incontinence being the most prevalent at 17.1%, followed by fecal incontinence at 9.4% and pelvic organ prolapse at 2.9%. Conversely, the incidence of pelvic floor disorders is notably higher in developing countries; for example, in Bangladesh, the prevalence is reported at 35.3%, with urinary incontinence constituting 23.7%, fecal incontinence at 5.3%, and pelvic organ prolapse at 16.2% (Demissie et al., 2024).

Lifestyle changes such as adopting a healthier diet, exercising regularly, and maintaining an optimal weight are effective in preventing and treating pelvic floor dysfunction. Among physical interventions, PFME has proven to strengthen the pelvic floor muscles (Huang, 2023).

The pelvic floor consists of a group of muscles interconnected by ligaments, forming a dome-shaped diaphragm that covers the bony pelvic outlet. This intricate arrangement of muscles extends from the pubis at the front to the sacrum and coccyx at the back, as well as laterally to the ischial tuberosities. The pelvic floor muscles serve three primary functions: They provide support for

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the pelvic organs, including the bladder, urethra, prostate (in males), vagina and uterus (in females), as well as the anus and rectum, while also offering general support to the contents within the abdominal cavity. They play a crucial role in maintaining urinary and fecal continence. They are involved in sexual functions, specifically in relation to arousal and orgasm (Grimes & Stratton, 2022).

The inadequacy of pelvic floor muscles in females may result in pelvic floor dysfunction, consequently heightening the likelihood of urinary and fecal incontinence. Additionally, since these muscles offer essential physical support to the reproductive organs, their weakness can contribute to prolapse of the reproductive organs, sexual dysfunction, and may affect sexual arousal and the experience of orgasm (Derrar et al., 2022).

For strengthening the PFM, Kegel exercises are the most popular and widely recommended. First described in 1948 by American physician Arnold H. Kegel, these exercises involve contracting and relaxing the PFM repeatedly. It may be developed further or changed to create additional variations. It is frequently advised to carry out the exercise numerous times a day for a few minutes each time. For the desired results, it must be done for a minimum of one to three months. The purpose of pelvic floor muscle exercises for postnatal multiparous mothers is to enhance the tone and strength of their PFM. Strong pelvic floor muscles, particularly after childbirth, aid in preventing urinary stress incontinence by improving the ability to retain urine (Okeke, 2020).

A study by Muhammad et al. (2019) of European nations indicated prevalence rates ranging from 23% to 44%. Notably, the prevalence appears to be elevated during pregnancy, with 45% in the later stages of pregnancy, while Francis noted a prevalence of 6% to 31% in the postpartum period. In Malaysia, the prevalence among women attending outpatient clinics was found to be 40.4%, and 22.1% among women five months after childbirth. Additionally, one study revealed that 76.6% of women visiting a menopause clinic exhibited some level of uterine prolapse. Despite the high rates of pelvic floor muscle dysfunction (PFMD), the practice of PFME remains low among women. Only 17% of antenatal mothers engaged in PFME at least once a week during their pregnancy, and another study indicated a usage rate of 54%.

In addition to fecal and/or urinary incontinence (UI), prolapse of the female reproductive organs is another common symptom of female pelvic floor dysfunction. Depending on the classification, the proportion of women with pelvic floor dysfunction varies from 30% to 50%. A 2007 health study on urine incontinence from the Robert Koch Institute states that numerous common myths and preconceptions concerning pelvic floor dysfunction, particularly with regard to urinary incontinence, impede people from seeking proper therapy and preventative strategies. Many individuals think that since incontinence is a natural aspect of aging, treating it is pointless and unlikely to be successful (Jundt, 2015).

Exercises aimed at strengthening the pelvic floor muscles (PFM) have been demonstrated to alleviate urinary incontinence during pregnancy, the postpartum period, and beyond. Furthermore, these exercises decrease the occurrence of fecal incontinence episodes following childbirth and improve sexual dysfunction during this time, as noted by the National Institute for Health and Care Excellence, (Boyle et al., 2014, and Mørkved et al., 2014). Studies have shown how beneficial PFME are for preventing fecal and urinary incontinence (Park et al., 2013). Kegel exercises are typically performed with an empty bladder. Either sitting or lying down, the individual contracts their pelvic floor muscle, keeps it there, and counts for three to five seconds, and relaxes (Wesnes et al., 2012).

Urinary incontinence represents a significant public health issue for women, affecting their physical, psychological, and social well-being, while also being associated with financial difficulties. It has been established for some time that pregnancy poses a risk for the onset of urinary incontinence, which may become increasingly prevalent as women age or progress through different stages of life. Postpartum urinary incontinence is a notable and often overlooked contributor to morbidity among mothers (Fritel, 2012 and Lukacz, 2011).

PFME education represents a valuable and low-risk approach that can substantially decrease urinary incontinence across diverse populations and should be prioritized as an initial intervention. For PFME to be effective, postnatal mothers must be able to contract the right muscles and follow a certain exercise plan. A postnatal mother's ability to perform an effective pelvic muscle contraction cannot be determined merely by clinical factors such as age, severity, urethral support, or urethral profile. Vaginal examination is essential for identifying active contractions and determining a proper exercise routine. Pelvic floor muscle exercise helps to recover bladder control, prevent prolapse, and support the restoration of normal sexual function for both partners. This study encourages postnatal mothers to actively participate in pelvic floor muscle exercises as often as possible. To mitigate urinary incontinence concerns, healthcare professionals must effectively instruct their

clients on the proper execution of Kegel exercises and emphasize the importance of consistency. Enhancing health education is crucial for improving comprehension of pelvic floor muscle exercises, which not only helps in preventing urinary incontinence but also facilitates the recovery of normal bladder function. This study aims to assess the level of knowledge and attitudes toward PFME and to determine whether this exercise can prevent UI among postnatal mothers.

MATERIALS AND METHODS

A cross-sectional descriptive study was designed with a sample size of 121 postnatal mothers. The sampling method employed was non-probability convenience sampling. Data was collected from three tertiary healthcare institutions: the Maternal & Child Health Training Institute, the Institute of Child & Mother Health, and Dhaka Medical College and Hospital, all located in Dhaka City, Bangladesh. This study aimed to assess the levels of knowledge and attitudes on pelvic floor muscle exercise for reducing urinary incontinence among the postnatal multiparous pregnant mothers.

The study period was from 1st July 2018 to 30th December 2019, with data collected between August and September 2018. Before beginning the data collecting process, the data collector received an orientation from the supervisor about the questionnaires and the criteria for their implementation. Before the interview, a verbal briefing was given to clarify the purpose of the interview. The study population then gave informed written consent, as necessary. A structured questionnaire designed by the researchers in accordance with the study's objectives and variables was used. Data was collected through face-to-face interviews. Each participant had around 30 minutes to complete the questionnaire.

The questionnaire was divided into three sections. Section I focused on demographic information, including age, height, weight, religion, number of children, type of family, place of residence, educational level, and family income. Section II evaluated participants' knowledge of pelvic floor muscle exercises, such as awareness of exercises, prior practice, and contributing factors like postpartum problems, constipation, persistent coughing or sneezing, and being overweight. Section III assessed participants' attitudes toward pelvic floor muscle exercises, including their perceived importance and willingness to perform them. Knowledge and attitude levels were categorized as low (1–33%), medium (34–66%), and high (67–100%) based on predefined values. Data was collected and checked for accuracy on a daily basis. As part of the coding procedure after data collection, each response was assigned a unique serial number. Every day, the data was checked, cleaned, and validated to ensure that there were no errors or inconsistencies. Data entry, management, and analysis were carried out using version 20 of SPSS (Statistical Package for the Social Sciences). The data analysis was carried out through the application of descriptive statistics, which primarily concentrated on assessing frequency and percentage distributions. In addition, inferential statistics were utilized to investigate the relationship between specific sociodemographic characteristics and the level of knowledge and attitude regarding PFME. To determine statistical significance, a p-value was employed, allowing for a rigorous evaluation of the findings.

The study was approved by the Ethical Review Committee of Bangladesh University of Health Sciences (BUHS). Participants selected for the study were provided with a comprehensive overview of the research, and their consent was obtained prior to participation. Written consent was secured from all individuals before their recruitment. They received an explanation of the study in Bengali, a language they comprehend. The study was designed to ensure that no harm of any nature came to the participants. Participants were given the option to withdraw from the study at any time should they wish to do so. Data confidentiality was guaranteed, with all information stored in locked cabinets that are not accessible to unauthorized individuals. Access to the data is restricted to the researcher, and those conducting statistical analyses. The information and results obtained from the study are to be used completely for the purposes of the research.

RESULTS

Socio-demographic Characteristics of the Postnatal Mothers

Table 1 presents data that outlines the demographic, socioeconomic, and familial characteristics of 121 postnatal mothers. This analysis emphasizes their age distribution, religious affiliation, family structure, number of children, educational attainment, residential area, and monthly family income. The key findings from the data are as follows: The largest group of mothers, 34 (28.1%) were aged 40-44 years; mothers aged 35-39 years comprised 32 (26.4%). A significant portion of 26 (21.5%) mothers were over 45 years old. Younger age groups were less represented, with 10 (8.3%) aged 25-29 years and 30-34 years. Nine (7.4%) mothers were aged below 20 years or 20-24 years. A majority of 50 (41.3%) participants were identified as Muslim. The smallest group, 16 (13.2%), were identified as Buddhist. Most mothers had a significant

number of children. Forty (33.1%) had four or more children, 25 (20.7%) had three children and 16 (13.2%) had two children. 58.7% of mothers belonged to nuclear families. 39 (32.2%) lived in joint families. 11 (9.1%) were part of broken or extended families. A large majority, 88 (72.7%) of mothers lived in urban areas. Only 11 (9.1%) resided in semi-urban regions. A large majority, 88 (72.7%) of mothers lived in urban areas. Only 11 (9.1%) resided in semi-urban regions. Sixty-three (52.1%) mothers had a primary-level education, 32 (26.4%) had completed secondary education, 9 (7.4%) reached higher secondary levels and 17 (14.0%) were illiterate. Most families, 46 (38%), earned between 10,001 and 20,000 taka, 44 (36.4%) earned below 10,000 taka, while the other 31 (25.6%) earned between 20,001 and 30,000 taka.

Table 1: Socio-demographic characteristics of participants of the study (n=121)

Variable	Frequency	Percentage (%)
Age (in years)		
Less than 20 & 20-24	9	7.4
25-29	10	8.3
30-34	10	8.3
35-39	32	26.4
40-44	34	28.1
More than 45	26	21.5
Religion		
Islam	50	41.3
Hindu	33	27.3
Christian	22	18.2
Buddhist	16	13.2
Number of children		
Two	16	13.2
Three	25	20.7
Four	40	33.1
More than four	40	33.1
Type of family		
Nuclear family	71	58.7
Joint family	39	32.2
Broken/Extended Family	11	9.1
Residence area		
Rural	22	18.2
Urban	88	72.7
Semi-Urban	11	9.1
Level of last education		
Illiterate	17	14.0
Primary	63	52.0
Secondary School Certificate	32	26.4
Higher Secondary Certificate	9	7.4
Monthly family income		
Below 10,000/=	44	36.4
10,001-20,000/=	46	38.0
20,001-30,000/=	31	25.6

Findings Related to Knowledge and Attitude

The data presented highlights various health concerns, knowledge, and attitude gaps related to pelvic health among postnatal mothers. Figure 1 illustrated that a majority, 84 (69%), of participants are aware of pelvic floor muscle exercises but do not understand their proper execution or importance. Conversely, 37 (31%) of participants are entirely unfamiliar with the term.

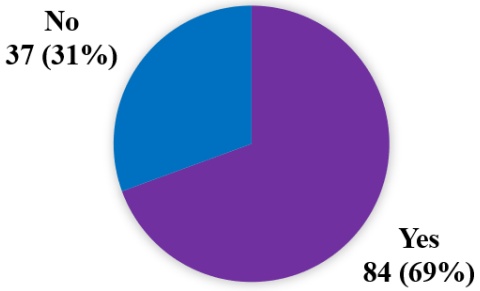

Figure 1: Distribution of study subjects who heard about pelvic floor muscle exercise during the postnatal period

Based on Table 2, of 121 participants, 59 (48.8%) participants reported a history of urinary incontinence, 53 (43.8%) participants contacted the doctors, and 68 (56.2%) did not. Fifty-nine (48.8%) sought medical treatment, 37 (30.6%) practiced Kegel exercises, and 25 (20.6%) underwent surgical interventions. Eighty-nine (73.6%) participants did not undergo any gynecological surgeries, while 32 (26.4%) did. A large portion of postnatal mothers (74.4%) reported a history of lower back pain, whereas 31 (25.6%) did not. Additionally, 85 (70.2%) of participants experienced pelvic region injuries, leaving 36 (29.8%) injury-free. Ninety-six (79.3%) of participants reported issues with constipation or frequent straining during bowel movements, while 25 (20.7%) did not. Urinary problems were also prevalent, with 93 (76.9%) of participants experiencing urinary leaks and 96 (79.3%) reporting significant bladder urgency. Regarding urinary frequency, 39 (32.2%) of mothers empty their bladders 3-4 times daily, while other frequency distributions are provided. A notable 100 (82.6%) experienced challenges in completely emptying their bladders, and 99 (81.8%) of postnatal mothers reported trouble fully emptying their bowels. Ninety-three (76.9%) mothers experienced pain or discomfort during or after intercourse. Twenty-six (21.5%) participants were unaware of the pelvic floor muscle exercise technique. This lack of knowledge raises concerns regarding the potential for future health complications, suggesting that these individuals may not be able to take preventive measures against pelvic floor health issues. However, only 31 participants (37.51%) practiced these exercises regularly, while the majority (83.49%) reported not practicing them at all.

Table 2 focuses on the attitude towards PFME among postnatal mothers. One hundred and two (84%) participants were interested in learning more about PFMEs, and 103 (85.1%) of participants emphasized the importance of educating postnatal mothers about pelvic floor muscle exercises during pregnancy.

Table 2: Knowledge and attitude related to pelvic floor muscle exercise (n=121)

Variable	Frequency (n)	Percentage (%)
Have you ever had a previous history of urinary incontinence during the postnatal period?		
Yes	59	48.8
No	62	51.2
If yes according to the previous question, have you ever contacted the doctor		
Yes	53	43.8
No	68	56.2
If yes according to the previous question, what type of treatment was taken?		
Surgery Treatment	25	20.6
Medical Treatment	59	48.8
Follow Kegel Exercise	37	30.6
Have you ever undergone gynecological surgery?		
Yes	32	26.4
No	89	73.6
Do you have a history of lower back pain?		
Yes	90	74.4
No	31	25.6
Have you ever injured your pelvic region?		
Yes	36	29.8
No	85	70.2
Do you suffer from constipation or regularly strain on the toilet?		
Yes	96	79.3
No	25	20.7
Do you have a chronic cough or sneeze?		
Yes	94	77.7
No	27	22.3
Do you frequently lift heavy weights?		
Yes	76	62.8
No	45	37.2
Do you experience leakage of urine during daily activities?		
Yes	93	76.9
No	28	23.1
Do you experience strong bladder urgency?		
Yes	96	79.3
No	25	20.7
How many times a day do you empty your bladder?		
1-2 times	25	20.7
3-4 times	39	32.2
5-6 times	23	19.0
7-8 times	20	16.5
9-10 times	14	11.6
Do you find it difficult to completely empty your bladder?		
Yes	100	82.6
No	21	17.4
Do you find it difficult to fully empty your bowel?		
Yes	99	81.8
No	22	18.2
Have you experienced pain or discomfort during or after intercourse?		
Yes	93	76.9
No	28	23.1
Do you know the pelvic floor muscle relaxation exercise technique?		
Yes	26	21.5
No	95	78.5
If yes, do you do regular pelvic floor muscle exercises?		
Yes	31	37.51
No	69	83.49
Are you interested in learning more about PFMEs?		
Yes	102	84
No	19	16
In your opinions is it important for women to know about pelvic floor muscle exercise in pregnancy?		
Yes	103	85.1
No	18	14.9

Findings Related to Overall Knowledge and Attitude

Table 3 demonstrated the data highlights the overall knowledge and attitude levels of 121 postnatal mothers. These percentages provide insight into the level of awareness and mindset among the participants regarding post-natal care or related topics.

- **Knowledge level:** Out of 121 participants, 78 (64.46%) had a moderate knowledge level. This suggests that nearly two-thirds of the mothers possessed a good understanding of the subject in question (e.g., post-natal care or health-related topics).
- **Attitude level:** The attitude level among participants was higher, with 87 (71.90%) exhibiting a highly positive or favorable attitude. This indicates that most of the postnatal mothers not only had knowledge but also demonstrated an encouraging mindset toward the topic.

Table 3: Overall level of knowledge and attitudes of participants (n=121)

Level	Knowledge of participants	Attitudes of participants
Low (1-33%)	-	-
Moderate (34-66%)	78 (64.46%)	-
High (67-100%)	-	87 (71.90%)

Findings related to the association between the knowledge and attitude score with selected demographic variable

The data from this study examines the relationship between various demographic factors and the knowledge and attitudes towards PFME among postnatal mothers. Most participants in the aware group believed that PFMEs could improve a wide range of pelvic floor dysfunctions. These included sexual dysfunction, pelvic pain/back pain, urinary incontinence, voiding dysfunction, pelvic organ prolapse symptoms, constipation, fecal incontinence, and overall quality of life. This highlights the widespread belief in the positive impact of PFME on both specific pelvic health issues and overall well-being.

The study found that knowledge scores about PFME were significantly associated with several demographic factors, including age, number of children, education level, residence area and monthly family income.

Attitudes towards pelvic floor muscle exercises were significantly linked to different factors, including age, religion and education level.

DISCUSSION

The results of the study have been examined in relation to the objectives, assumptions, and outcomes of other pertinent research, organized under the following headings:

Section I: Discussion of the demographic characteristics of the participants

The findings of this study indicate that the age distribution reveals that most postnatal mothers fall within the middle-aged category, specifically between 35 and 44 years. Younger age groups and teenage mothers (below 20 years) formed a smaller proportion, suggesting that motherhood at a younger age was less common in this population. Mothers aged 35 to 45 exhibit a reluctance to pursue education with ease. They are often hesitant to discuss their challenges. Consequently, it is essential to develop policies that specifically target this demographic, ensuring their active participation in a variety of educational initiatives. The predominance of nuclear families (58.7%) over joint families (32.2%) indicates a shift towards smaller family units. Additionally, the high percentage of mothers with four or more children (33.1%) reflects a trend of larger sizes. The majority of participants, comprising 41.3%, identified as Muslim, a group that frequently exhibits reluctance in seeking medical care and addressing reproductive health issues. As a result, many Muslim women in Bangladesh delay seeking medical attention until their symptoms deteriorate, causing their health problems to worsen over time. The purpose of this research work is to raise knowledge about reproductive health issues, such as pelvic floor dysfunction, among Bangladeshi mothers, as well as to promote the benefits of PFME to support proactive health management. The finding that 52.1% of mothers attained primary education, and only 7.4% achieved higher secondary levels, points to limited access to advanced education for women in this population. Most families earned a moderate monthly income (10,001-20,000 and below 10,000 taka), with fewer families earning 20,001-30,000 taka. This highlights an economic disparity within the group. A large majority (72.7%) of mothers living in urban areas indicates a concentration of the population in urban settings, potentially due to better access to healthcare and other resources.

These findings align with studies reporting higher fertility rates and larger family sizes in middle-income countries. Based on Wu et al. (2023), the majority of participants were aged between 18 and 27 years (35.9%), with a significant portion being married (71.0%) and sexually

active (83.1%). A notable percentage had not experienced pregnancies (30.3%), while others had one child (38.7%). The mode of delivery for many was vaginal (32.9%). In terms of education, 62.3% held either a bachelor's or associate degree, and 36.7% were employed in professional occupations. Most participants resided in urban areas (65.5%) and reported an income ranging from 2,000 to 5,000 (43.5%).

Section II: Discussion of assessment of knowledge and attitude on pelvic floor muscle exercise for reducing urinary incontinence and its consequences among the postnatal multiparous pregnant mothers

The study presented a significant statistical analysis: high percentages of postnatal mothers reported experiencing issues related to urinary incontinence (93, 76.9%), and a proportion of participants may benefit from pelvic floor muscle exercises and education. Despite the awareness of pelvic floor muscle exercises by 64 (69%) of the participants, the lack of understanding about their execution and significance suggests a gap in effective education. The majority, 89 (73.6%), of participants had not undergone gynecological surgery, which might indicate a younger cohort, although a significant proportion, 32 (26.4%), had. This could influence their experiences with pelvic health issues. This high prevalence percentage focuses on these problems that are often exacerbated by pregnancy, childbirth, and other physical stresses. The fact that most participants expressed a desire for education on pelvic floor exercises highlights the importance of providing accessible information and training. The discrepancy between familiarity with the term "pelvic floor exercises" 64 (69%) and a lack of understanding about their significance suggests a potential area for educational intervention. This gap may be addressed through targeted campaigns or healthcare provider training, ensuring that postnatal mothers understand not just the term but also the exercises and their long-term benefits.

The findings in this study are consistent with previous research that highlights the prevalence of pelvic floor issues among postnatal mothers. For instance, in a study by Rosediani et al. (2012), the prevalence of urinary incontinence was found to be 19.6%. Of those affected by UI, 36.6% expressed concern regarding the issue and felt the necessity to utilize some form of protective measures. Furthermore, the study by Okeke et al. (2020) emphasizes the benefits of pelvic floor muscle exercises as a preventive measure for pelvic floor dysfunction, aligning with 41.6% of participants believing these exercises help prevent urinary incontinence, 4.5% thinking they prevent fecal incontinence, 62.0% asserting that they enhance sexual function, and 1.6% indicating that they lower the risk of pelvic organ prolapse.

Section III: Discussion of Overall Knowledge and Attitude Score

The data shows a higher percentage of participants (71.90%) with a positive attitude compared to those with moderate knowledge, 78 (64.4%). This could suggest that, while some post-natal mothers may lack detailed knowledge, they still hold positive perceptions or are open to learning and engaging with relevant practices. While the majority demonstrated moderate knowledge and attitude, a significant portion of participants (35.54% for knowledge and 28.10% for attitude) fell short, pointing to potential gaps in awareness and mindset. The findings reflect an encouraging trend where most post-natal mothers have a moderate level of knowledge and a favorable attitude. Bridging the knowledge gap could further reinforce these attitudes and lead to better practices or behaviors.

These results align with studies emphasizing the critical role of education and awareness in maternal health. Wu et al., 2023) reported that the percentages of participants exhibiting moderate knowledge, a positive attitude, and good practice are 36.5% (184 out of 504), 36.1% (182 out of 504), and 33.3% (168 out of 504), respectively.

Section IV: Discussion of association between the knowledge score of postnatal multiparous pregnant mothers at selected hospitals with demographic variable

The significant correlations between knowledge scores and factors such as age, number of children, education level, residence area, and monthly income suggest that older, younger, more educated individuals with higher income levels and more children may have a greater awareness of PFME. Additionally, those living in urban areas may have greater access to resources and information about PFME, leading to better knowledge.

The significant associations between attitude scores and age, religion, and education level suggest that individuals with certain demographic characteristics may have more positive or open attitudes towards PFME. For instance, older mothers may have a greater appreciation for the importance of pelvic health, and those with higher education may be more receptive to scientific health information. Religious beliefs might also influence personal health practices and attitudes toward exercise.

Overall findings suggest that many post-natal mothers in the aware group understand the comprehensive benefits of PFME, indicating a high level of awareness regarding its

potential to address a wide variety of pelvic health issues. However, the study also reveals that knowledge of PFME is influenced by specific demographic factors, such as age, education levels and family income. These factors likely determine access to health information and resources, highlighting the need for targeted interventions to increase awareness in underrepresented groups, especially those with lower education levels, lower incomes, or in rural areas.

Furthermore, attitudes towards PFME appear to be influenced not only by demographic factors like education and age but also by religion, suggesting that cultural and personal beliefs can play a significant role in shaping individuals' perceptions of pelvic health and exercise. This implies that health education programs should consider these factors to be more effective.

These results align with previous studies that have explored the factors influencing mothers' health behaviors. In a study by Wu et al., (2023) the knowledge scores were notably elevated among patients aged 28 to 33 years, particularly those with higher education levels, engaged in professional occupations, residing in urban settings, possessing a relatively high income, and who identified as non-drinkers and non-smokers. Additionally, these individuals had been diagnosed with pelvic floor dysfunction, although they had not yet received treatment. Similarly, a study by Temtanakitpaisan et al. (2020) found that pregnant women believed the PFMT had beneficial impacts on their health, including enhancements in incontinence, pelvic organ prolapses, overall quality of life, and heightened sexual satisfaction.

This research was carried out utilizing a validated questionnaire aimed at examining knowledge and attitudes towards the impact of PFME on improved outcomes and pelvic floor function. Given that this was a cross-sectional study, we focused solely on compliance and did not assess the techniques of PFME, which constitutes a limitation of our investigation.

CONSIDERATION, LIMITATION AND RECOMMENDATION

The study's data are specified to 121 postnatal multipara mothers, which may not fully represent the broader population. The income categories and educational levels lack detailed granularity for deeper analysis. Factors such as cultural or regional differences are not explored.

Investigate the impact of urbanization on family health and childbearing trends. Explore barriers to higher education for women in semi-urban and rural areas. Analyze the relationship between family income and access to maternal healthcare. Further research should explore the effectiveness of tailored education programmes that consider the demographic and cultural factors influencing knowledge and attitudes towards PFME. Studies could investigate the role of healthcare professionals in educating mothers about pelvic health and whether personalized, culturally sensitive counseling improves the adoption of PFME. Additionally, research could examine long-term outcomes of PFME intervention on pelvic health and overall quality of life for postnatal mothers.

CONCLUSION

This study provides valuable insight into the pelvic health challenges faced by postnatal mothers and the knowledge and attitude gaps related to pelvic floor muscle exercises. Despite a high awareness of the term, the lack of understanding regarding its significance calls for increased educational efforts. Addressing pelvic health through education, particularly during pregnancy, could help alleviate common issues such as urinary incontinence, lower back pain, and pelvic injuries, thus improving maternal well-being. The perceived benefits of PFME for a wide range of pelvic health issues highlight its potential as a valuable intervention. However, the study also identifies significant factors-such as age, education, religion, and family income—that influence both knowledge and attitudes. These factors must be considered when designing educational programs to ensure that they have the resources they need to improve their pelvic health.

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