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Publisher of open access books and journals
PJMLS
Print ISSN: 2707-4471. Online ISSN: 2707-448X

Research Article	Pak-Euro Journal of Medical and Life Sciences
DOI: 10.31580/pjmls.v6i3.2862	Copyright © All rights are reserved by Corresponding Author
Vol. 6 No. 3, 2023: pp. 386a-386f	
www.readersinsight.net/pjmls	**Revised:** August 19, 2023 **Accepted:** September 04, 2023
Submission: January 08, 2023	**Published Online:** September 30, 2023

KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS PELVIC FLOOR KEGEL EXERCISES IN ANTENATAL PREGNANT WOMEN OF 3RD TRIMESTER

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Abstract

Background: *Exercises are specifically designed to improve health benefits for expectant moms and fetus, so pregnant women should be encouraged to continue their exercise regimens so they can benefit from them. Antenatal exercise provides great advantages and minimal hazards; however, it may need to be modified based on the requirements of the woman and the fetus. Women should exercise for 30 minutes, on average, five days a week.*

Objective: *The objective of this study was to determine knowledge attitude and practice towards pelvic floor Kegel exercises in antenatal pregnant women of 3rd trimester.*

Methodology: *A descriptive cross-sectional KAP survey with a sample size of 388 targeting prenatal women of district Gujrat, Punjab Pakistan. Data was collected by self-structured, close ended questionnaire whose reliability was calculated by a pilot study. The reliability of the questionnaire was (Cronbach's a=0.752). Questionnaire contained segments demographic data, gynecological history, questions about knowledge practice and attitude. Considering inclusion and exclusion criteria data was collected from the targeted population after a written informed consent. SPSS software version 20 was used to analyze data.*

Results: *There were 189(55.9%) women of age group 18-30 and 149(44.1%) belonged to age group 30-40. 12.7% women had 3-7 no. of births, 61.8% had 1-3 and 25.4% women had no children. In type of delivery 45.9% women had c-section, 30.5% had vaginal delivery remaining 23.7% were primigravida. In my study only 24.9% women had high level of knowledge, 13.3% had moderate and the remaining 61.8% had poor knowledge of pelvic floor Kegel exercises, 219.9% women had positive and 70.1% had negative attitude towards exercises, 7.98% had good practice 10.9% had moderate and 81.07% had poor practice of exercises. The associations between knowledge and attitude, knowledge and practice, attitude and practice were significant (p-value <0.05).*

Conclusion: *The findings of the study show that there is low level of knowledge, attitude, and practice of pelvic floor Kegel exercises during antenatal pregnant women. Very few of them were practicing and most of the participants had negative attitude towards exercises.*

Keywords: *Attitude, Keagle exercises, Pelvic floor, Pelvic floor dysfunction, Knowledge*

INTRODUCTION

Exercises are specifically designed to improve health benefits for expectant moms and fetus, so pregnant women should be encouraged to continue their exercise regimens so they can benefit from them. Since pregnant females might not be able to practice due to physiological changes that occur during pregnancy, the specific exercise programmes they follow may change significantly (1).

Antenatal exercise provides great advantages and minimal hazards; however, it may need to be modified based on the requirements of the woman and the fetus. Women should exercise for 30 minutes, on average, five days a week, according to the American College of Obstetricians and Gynecologists (ACOG), in order to control their weight, lower their chance of developing gestational diabetes mellitus (GDM), and improve their mental health (2).

Following denervation or pelvic muscle damage, pelvic floor dysfunction (PFD), which includes pelvic organ prolapse and urinary incontinence, is a terrible condition. Pelvic floor muscle training (PFMT) is recommended as the initial course of treatment to reduce pelvic discomfort to avoid and heal such damage. To treat and prevent urinary incontinence, it is commonly advised to use PFMT before and after conception (3).

Dysfunction of the pelvic floor muscles can also lead to prolapse of the female reproductive organs. Vaginal delivery may worsen urine incontinence due to the pelvic floor's injury and weakening. PMs are a major factor in UI, and pregnant women with continence had muscles that were bigger and stronger than those with incontinence (4).

Weak-PFM is associated with urine incontinence (UI) in nulliparas. Another SUI risk factor that could change during pregnancy is having weak muscles. In order to ensure a vaginal delivery, the body normally weakens muscles, the vaginal wall, and supporting tissues as a result of the relaxine and steroid hormones released during pregnancy (5). Lack of knowledge and the widespread belief that these pelvic dysfunctions are "normal" discourage women from seeking professional care for disorders; As a result, these conditions are frequently not reported to medical professionals. So, their participation in such exercises is not well established (6).

A disorder that may be avoided and perhaps treated during pregnancy causes many women to feel ashamed, alone, and to have a lower quality of life. Pelvic muscle training is one of the first-line therapies for pelvic floor disorders (7). Women rarely think about disclosing their general health until questioned. The genuine advisers who are knowledgeable about the living structures of the outer muscular framework and can recognize contrasts may assist in the diagnosis and treatment of postpartum pelvic floor problems. Postnatal physiotherapy and monitoring can help control and treat pelvic discomfort (8).

At their initial meeting, women are unable to contract their pelvic muscles, and some researchers contend that pelvic training is challenging for all women. The number of pregnant women who now participate in training is unknown. Additionally, nothing is known about the disparities between those who exercise and those who don't (9). Similarly, many women are aware of the benefits of exercise, but only before or after giving birth. Many women are embarrassed and reluctant to express concerns about dysfunctions since it affects the genitalia. Medical professionals may play a crucial role by encouraging patients with pelvic illnesses to practice pelvic exercises and by routinely assessing those who are at high risk for PFMD (10).

However, many women are unaware of the Keagle exercise, and those who are aware of it have not received enough instruction in how to carry it out, therefore they do not practice it. There are several presumptions about PFME, particularly among elderly women who think that pelvic organ prolapses, and urine incontinence are inevitable effects of growing older. Possessing the appropriate information has an impact on attitudes and behavior, such as seeking treatment and following advice regarding pelvic floor exercise (11).

The National Institute of Clinical Excellence (NICE) recommends that all women get information on PFMEs during their initial pregnancies. It is now impossible to dispute the significance of PFMEs throughout the prenatal period. We lack local data to help us understand the attitudes and awareness of our pregnant population about PFMEs (12).

This study will help us in the assessment of knowledge, attitude, and practice of pelvic floor Kegel exercises in antenatal pregnant women. There is a need to raise awareness related to kea Kegel exercises among pregnant women, as these exercises aim to improve an expectant mothers physical and mental well-being for labor and prevent pregnancy-induced pathologies. Previously many studies were conducted about postnatal exercises but only few studies considered antenatal exercises. The study's goal was to gather data on prenatal exercise knowledge, attitudes, and practices and to determine the awareness level regarding these exercises in pregnant women.

MATERIALS AND METHODS

In District Gujrat, a descriptive cross-sectional KAP survey was carried out. Data was gathered in the city of Kharian. This research took 4 months to complete. Data was gathered using a self-structured, closed-ended questionnaire. The approach of non-probability convenient sampling was applied. The study included 338 women who were expecting. The women of age 18 to 40 were included in the study, as this is the

reproductive age group. The study only included the women who were willing to participate, thus the selection of women from each age group was random. Women who have experienced a miscarriage in the past, or have any mental health difficulties were not allowed to participate in the study. Non pregnant women were also not included in the study. Participants that were included were given consent forms to complete. Participants received written and spoken information about the objectives and execution strategies. After signing the consent form and agreeing to participate in the study, participants were then asked to complete a short questionnaire. Pilot Study was conducted to check the reliability of the questionnaire which was very good (Cronbach's a=0.752) assessed from data collection from selected population and the value was envaulted through SPSS. The data was collected under the rules and regulations of ethical committee of University of Lahore.

Data was entered and analyzed using Statistical Package for Social Sciences (SPSS) software version 20. For descriptive analysis, mean and standard deviation was calculated for quantitative variables whereas frequency and percentages were calculated for qualitative variables. Chi-Square test was applied for qualitative data. Appropriate statistical test and ANOVA were used to determine the significance of the inferential statistics. All results were calculated at 95% confidence interval and p-value <0.05 was considered as a significant value.

RESULTS

DEMOGRAPHIC CHARACTERISTICS

Among the 338 participants, 55.92% were in the age group of 18-30 years, while 44.08% were in the age group of 30-40 years. The majority of participants belonged to the middle class (69.8%), followed by the upper class (29.9%), and with only 0.3% from the lower class. 53.8% of participants had a secondary education, whereas 46.2% were highly educated (Table I).

A significant proportion of participants (61.8%) exhibited poor knowledge (<3) regarding. Only a minority of participants demonstrated moderate (13.3%) or high (24.9%) levels of knowledge (3-5 and 6-7, respectively) regarding Kegel exercises (Table II). The majority of participants (70.1%) had a negative attitude (<3) towards Kegel exercises. A smaller percentage of participants (29.9%) had a positive attitude (>3) towards Kegel exercises (Table III). The practice level of participants varied, with the majority (81.1%) exhibiting poor practice (<3) of Kegel exercises. A smaller proportion of participants demonstrated moderate (10.9%) or good (8.0%) practice levels (3-5 and 6-7, respectively) of Kegel exercises (Table IV).

Table I. Age, socioeconomic and education level of the study subjects

Variables		n (%)
Age of participants	18-30	189 (55.9%)
	30-40	149 (44.1%)
Socio-economic	Upper	1 (0.3%)
	Middle	236 (69.8%)
	Lower	101 (29.9%)
Education	Secondary	182 (53.8%)
	Higher	156 (46.2%)

Table II. Knowledge level of Kegel exercises of participants (%)

Knowledge Level		Frequency	Percent	Valid percent	Cumulative Percent
Valid	<3(poor)	209	61.8	61.8	61.8
	3-5(moderate)	45	13.3	13.3	75.1
	6-7(high)	84	24.9	24.9	100.0
	Total	338	100.0	100.0	

Table II shows that 61.8% participants had poor knowledge, 13.3% had moderate, and 24.9% participants had High levels of knowledge towards Kegel exercises. Table III shows 70.1% of participants had negative and 29.9% had positive attitude towards exercises. Table IV explains that 81.1% had poor, 10.9% moderate and 8% participants had good level of practice.

Table III. Attitude level of Kegel exercises of participants (%)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<3(negative)	237	70.1	70.1	70.1
	>3(positive)	101	29.9	29.9	100.0
	Total	338	100.0	100.0	

Table IV. Practice level of Kegel exercises of participants (%)

		Frequency	Percent	Valid Percent	Cumulative Percentage
Valid	<3(poor)	274	81.1	81.1	81.1
	3-5(moderate)	37	10.9	10.9	92.0
	6-7(good)	27	8.0	8.0	100.0
	Total	338	100.0	100.0	

In summary, the study indicates that among antenatal pregnant women in the 3rd trimester, there is a notable lack of knowledge, negative attitudes, and poor practice towards pelvic floor Kegel exercises. These findings underscore the importance of targeted interventions and education programs aimed at improving awareness and promoting the adoption of Kegel exercises during pregnancy for better pelvic floor health and overall well-being.

DISCUSSION

The findings of the present study on the knowledge, attitude, and practice towards pelvic floor Kegel exercises among antenatal pregnant women in the 3rd trimester align with previous research, highlighting persistent gaps and challenges in this area. Similar studies have reported suboptimal levels of knowledge, negative attitudes, and poor practice towards Kegel exercises among pregnant women.

For instance, a study by Davenport et al. (2018) found that a significant proportion of pregnant women had limited awareness and understanding of Kegel exercises, with many expressing reluctance or discomfort in incorporating them into their routine (14). This echoes our findings of poor knowledge and negative attitudes towards Kegel exercises among participants. Additionally, Smith et al. observed low adherence to Kegel exercises, consistent with the high prevalence of poor practice identified in our study.

Similarly, research by Adjei et al. (2005) highlighted socioeconomic disparities in the adoption of pelvic floor exercises during pregnancy, with women from lower socioeconomic backgrounds exhibiting lower levels of knowledge and engagement. While our study did not find a significant association between socioeconomic status and knowledge or attitude towards Kegel exercises, the majority of participants were from middle to upper-class backgrounds, potentially limiting the generalizability of our findings to lower socioeconomic groups (15). Moreover, the discrepancy between knowledge and practice identified in our study is consistent with existing literature, indicating that despite adequate awareness and positive attitudes towards Kegel exercises, pregnant women often struggle to incorporate them into their daily routine effectively.

These comparisons underscore the need for targeted interventions and educational initiatives aimed at improving awareness, addressing misconceptions, and promoting consistent practice of Kegel exercises among antenatal pregnant women. Healthcare providers play a crucial role in delivering evidence-based information and guidance to empower women to prioritize pelvic floor health during pregnancy. Additionally, community-based programs and digital platforms can serve as valuable resources for disseminating information and providing support to pregnant women, ultimately contributing to better maternal and fetal outcomes.

In the present study, there were 189 (55.9%) women of age group 18-30 and 149 (44.1%) belonged to age group 30-40. Education of the participants was 53.8% secondary and 46.2% were highly educated. 12.7% women had 3-7 no. of births, 61.8% had 1-3 and 25.4% women had no children. In type of delivery 45.9% women had c-section, 30.5% had vaginal delivery remaining 23.7% were primigravida. According to the previous study of Farida Abdullah et.al, in 2019 in Saudia Arabia its results were 44.7% of the samples were in the 26–31 age range, 75.0% were multigravida, 85.5% had no miscarriages, 67.1% gave birth vaginally,

and 50.0% had one to three children. 25% of the respondents stated that they learned about the Keagle exercise via the media. Of the sample, 62.7% had adequate expertise. In general, 72.4% of respondents were classed as having "somewhat favorable" opinions towards Keagle exercises. For 57% of the moms, Keagle exercise has never been done. 38.5% of the participants properly performed the Keagle exercise whether seated or standing while just 29.7% of those properly performed the Keagle exercise were lying flat (4).

In 2019, a study was conducted in Lahore which revealed that the two most known prenatal activities were relaxation and breathing (n=136, or 54.4%); and back care exercises (n=178, or 71.2%). Advantages included the prevention of back discomfort n= 111 (44.4%), excess weight gain n= 127 (50.8%), muscular strengthening n= 141 (56.4%), and improved capacity for work n= 115 (46.0%). Eighty-seven percent of the women in the poll (n=218) had a negative attitude towards prenatal exercise (13). Likewise my study results showed that there was 70.1% negative & 21.9% had positive attitude among women related to Kegel exercises.

A study was held in Ethiopia in 2021 from its results; out of 349 pregnant women, n=138 (39.5%) and n=193 (55.3%) possessed the necessary information, a positive outlook, and sound practice. Only n=41 (37.9%) of the pregnant women who practiced prenatal exercise had a satisfactory practice, out of the total n=108 responses (30.9). The most popular ANEx were brisk walking (90.7%), relaxation (38.9%), and breathing exercises (36.1%), whereas pelvic floor yoga poses 3 (2.8%) and 6 (5.6%) were the least popular. Both vaginal bleeding (64.5%) and improving post-natal healing (71%) were viewed as advantages and limitations of ANEx, respectively. In accordance with 53.6 percent of the pregnant women, ANEx is not acceptable in Ethiopian society. Higher education, employment in the public sector, pre-pregnancy exercise, and receiving ANEx advice beforehand are all strongly connected with pregnant women's knowledge, attitudes, and practice of ANEx. Women with more knowledge have good practice (2). Contrary to this study, 24.9% women had high level of knowledge, 13.3% had moderate and the remaining 61.8% had poor knowledge of pelvic floor keagle exercises, 7.98% had good practice 10.9% had moderate and 81.07% had poor practice of exercises.

CONCLUSIONS

The findings of the study show that there is low level of knowledge, attitude, and practice of pelvic floor Keagle exercises during antenatal pregnant women. Very few of them were practicing and most of the participants had negative attitude towards exercises.

Study Limitations:

Depth of knowledge was not cleared by the close ended questionnaire or responses which were chosen for knowledge on ANEs. Some participants may not have understood the questions since they knew little or nothing about prenatal exercise. Due to their third trimester conditions, several of them chose not to fill out the questionnaire.

Recommendations:

It is recommended that in future educational courses to educate mother about Kegel exercises, some seminars or workshop to increase knowledge and awareness of ANEs that these exercises are safe for both mother and unborn child. In future studies open ended questions should use. To encourage the use of PMEs, health care providers must provide education. There is more need for greater study on educational resources and methods for effectively distributing information to all pregnant women.

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