

Postnatal Women's Knowledge, Attitude, and Practice about Postnatal Exercises in a Tertiary Care Institution in South India

Pallavi Rajaram Barde¹ and Dr. Jyoti Sharma²

¹Department of NURSING, Shri Jagdishprasad Jhabarmal Tibrewala University, Jhunjhunu Rajasthan, India

²Department of NURSING, Shri Jagdishprasad Jhabarmal Tibrewala University, Jhunjhunu Rajasthan, India

Abstract: *Background: Exercise, a healthy diet, and enough care can help prevent the stressful puerperal stage and its problems. Many women are not aware of the full benefits of post-natal exercise (PNE), despite research showing it can help reduce the effects of perineal muscle weakening. The purpose of this study is to determine postpartum moms' knowledge, attitudes, and practices about PNE.*

Methods: For three months, from Dec2021 to Feb 2022, the department of obstetrics and gynaecology carried out a descriptive cross-sectional study. Convenient sampling was used to enlist 160 postpartum moms. A structured questionnaire was utilised to gather information about PNE practice, knowledge, attitude, and sources of information, as well as sociodemographic and obstetric facts.

Results: Health care professionals were identified by 58.8% of study participants as the most common source of information. Even while more than half of them had sufficient knowledge, many did not fully understand the advantages of PNE, with just 3–5% aware of other benefits such the prevention of urine incontinence. According to 98.8% of the women, PNE is necessary, and 62.5% of them said family chores get in the way of their goals. 92.5% of respondents stated they would tell others how important PNE is. There was no discernible relationship between sociodemographic traits and PNE knowledge, attitudes, or practices. In conclusion: Domestic chores were the most frequent obstacle to performing PNE, despite the fact that the majority of the study group had sufficient knowledge and a positive mindset. Improving adherence requires educating and raising awareness among family members. Improving adherence will require health care providers to maintain their impact throughout the prenatal and postnatal phases.

Keywords: Knowledge attitude and practice, Postnatal exercise, Postnatal women

I. INTRODUCTION

The first six weeks after giving birth, referred to as the puerperal period, are difficult for all women because during this time the pelvic organs revert to their pre-pregnancy form and physiological and psychological adaptations occur. Most issues, including as back discomfort, postpartum psychosis, and perineal muscular weakening resulting in bladder incontinence, can be caused by inadequate treatment during this time. Adequate care, such as a healthy diet and exercise regimen, can help prevent these consequences.

Post-natal exercise (PNE) serves to enhance the tone of the abdominal and pelvic floor muscles, as well as bowel and bladder function, cardio-vascular fitness, and bowel and bladder function. Examples of PNE exercises include Kegels. Because PNE keeps the mother more at ease, it will also positively impact the prevention of depression and other psychological illnesses.

PNE can begin shortly after birth with easy exercises and proceed progressively to more difficult ones based on comfort level. Even though a number of studies have shown that PNE is crucial in preventing complications like bladder incontinence, many women are not aware of the full range of benefits that come with postpartum exercise, and some societal norms and superstitions may forbid postpartum women from engaging in physical activity.

In order to create a culture of positive adherence to PNE among all postnatal mothers, this study aims to ascertain the knowledge, attitude, and practices of postnatal mothers regarding PNE.

II. METHODS

After receiving permission from the Institutional Ethics Committee, this descriptive cross-sectional study was conducted over the course of three months (December 2021 to February 2022) at the obstetrics and gynaecology department of the tertiary care institution in South India. Convenient sampling was used to enlist 160 postpartum women who had visited the paediatric outpatient department (OPD) and obstetrics and gynaecology after obtaining written informed consent. The study excluded women who were unwilling to participate, patients who were uninformed of the benefits of post-natal exercise, and the first post-natal period.

Sociodemographic information on the study participants, such as their religion, level of education, type of family, occupation, income, and type of residence, was gathered using structured proforma. Obstetric history, including parity, delivery method, and number of children, came next.

The information source for PNE was gathered in the following section. Participants' knowledge of PNE was gathered using a structured questionnaire that covered topics such as forms of PNE, when to begin, how often it's needed, and its advantages and disadvantages. The study population's attitudes and practices were also gathered using a standardised questionnaire that covered topics such as health professions, ways to enhance adherence, obstacles preventing PNE, and the importance of PNE during prenatal and postnatal visits.

Statistical Analysis

Statistical analysis was carried out using SPSS version

20. Numbers and percentages were used to express descriptive data. The study population's knowledge, attitude, and practices were correlated with socioeconomic characteristics using the Chi square test. Every knowledge, attitude, and practical question received one mark. Every category had a total score of 5, and mothers who received more than three points were regarded as excellent.

III. RESULTS

The study included 160 women who had visited the tertiary care center's OBG and Paediatric OPD departments. The study population's age range was 22–38 years, with a mean age of 28.2±4.1 years.

Table 1: Socio-demographic characters of the study population.

Socio-demographic status	Number	%
Religion		
Hindu	132	82.5%
Christian	4	2.5%
Muslim	24	15%
Education		
Illiterate	2	1.2%
Primary	2	1.2%
Middle	14	8.8%
High school	60	37.5%
Graduation and above	82	51.3%
Occupation		
Unemployed	72	45%
Govt. service	4	2.5%
Self	14	8.8%
Private employed	70	43.7%
Income in rupees		
Not applicable	72	45%
< 2500	-	-
2501-5000	-	-
5001-10000	42	26.3%

Above 10000	46	28.7%
Type of family		
Nuclear	134	83.8%
Joint	26	16.2%
Domicile		
Rural	-	-
Semiurban	84	52.5%
Urban	76	47.5%

The majority of participants (82.5%) identified as Hindu. 51.3% of the participants in the survey were graduates. The percentages of private employees and unemployed people were 45 and 43.7%, respectively. Of the participants, 55% earned more than Rs. 5000. 83.8% of people are in a nuclear family. They were all from either an urban or semi-urban area. The sociodemographic profile of the study population is shown in Table 1.

51.2% of research participants had a caesarean section, whereas 48.8% had a vaginal delivery that went normally. Of the participants, 33.7% had one child and 66.3% had two.

Health care professionals were cited by 58.8% of research participants as a source of information about PNE, followed by TV (12.5%), social media (11.2%), and friends (11.2%). The information source for postnatal exercise in this study cohort is shown in Figure 1.

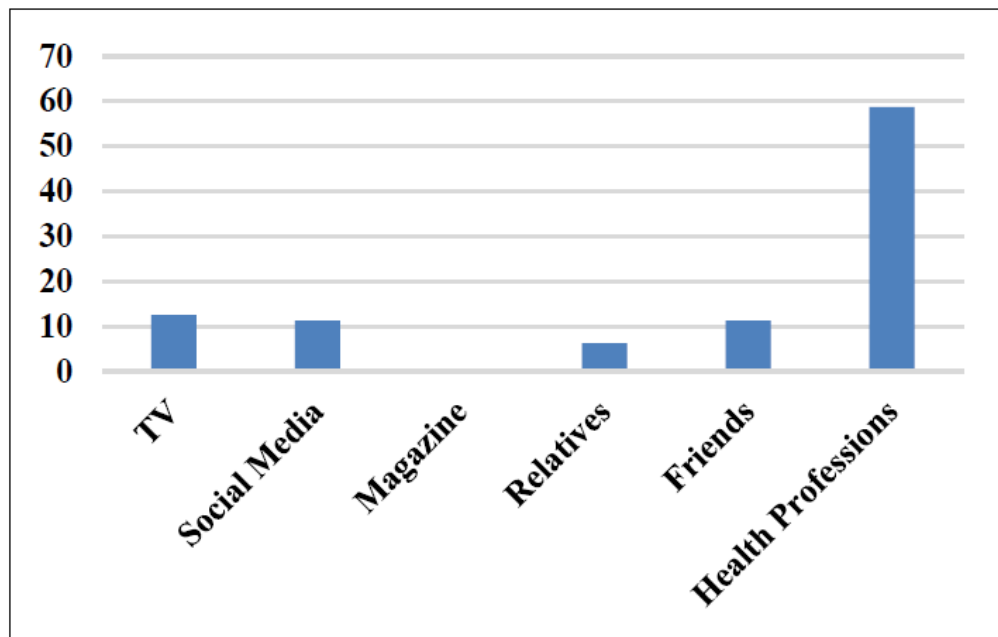


Figure 1: Source of information regarding post-natal exercise.

Table 2: Knowledge about postnatal exercise among the study populations.

Knowledge	Number	%
When to start PNE?		
Immediately	88	55%
After 2 weeks	64	40%
After 1 month	6	3.8%
After 6 months	2	1.2%
How frequently PNE is needed?		
Once a day	106	66.3%

Once a week	30	18.7%
4-5 days/weeks	24	15%
Once a month	-	-
What are the types of PNE you know?		
Breathing exercise	124	77.5%
Kegel's exercise	30	18.6%
Pelvic floor exercise	46	28.7%
Abdominal exercise	88	55%
Benefits of PNE in preventing		
Uterine prolapse	156	97.5%
Diastasis recti	8	5%
Bowel incontinence	8	5%
Urinary incontinence	6	3.7%
Disadvantage of not performing PNE?		
Weight gain	138	86.3%
High BP	-	-
Back pain	34	21.2%
Postpartum depression	20	12.5%

Of the study groups, 55% of women knew when to begin PNE, and 66.3% knew how often PNE was required. The most popular forms of exercise across the study populations were breathing exercises (77.5%) and stomach exercises (55%). Of those who knew about PNE's benefits, 97.5% were aware that it prevented uterine prolapse. Weight gain was cited by 86.3% of women as the main drawback of skipping PNE. The research populations' knowledge of PNE is shown in Table 2.

Table 3: Attitude about postnatal exercise among this study populations.

Attitude	Number	%
PNE is necessary		
Agree	158	98.8%
Disagree	2	1.2%
I adhere to PNE regularly		
Agree	78	48.7%
Disagree	82	51.3%
I feel guilty on omitting PNE		
Agree	98	61.3%
Disagree	62	38.7%
Health professions having positive influence		
Agree	152	95%
Disagree	8	5%
What prevents you to do PNE?		
Pain	14	8.8%
Fear of injury	22	13.7%
Baby care	32	20%
Household work	100	62.5%
Fatigue	14	8.7%
Lack of information	8	5%
How adherence to PNE can be improved?		
Motivation	40	25%
Training and education	20	12.5%

Display boards	4	2.5%
Awareness during antenatal visit	106	66.2%

Table 4: Practice about postnatal exercise among this study populations.

Practice	Number	%
How frequency of you are doing PNE		
Daily	90	56.3%
Once a week	58	36.3%
Occasionally	12	7.5%
Have you experienced benefits of PNE		
Yes	142	88.8%
No	18	11.2%
Antenatal visits having positive influence on PNE		
Yes	98	61.3%
No	62	38.7%
Postnatal visits having positive influence on PNE		
Yes	136	85%
No	24	15%
I will emphasize PNE to others		
Yes	148	92.5%
No	12	7.5%

While 98.8% of the women believed that PNE was necessary, only 48.7% agreed that PNE should be followed. 61.3% of respondents said to feel bad about leaving out PNE. Ninety-five percent believed that the health professions had a good impact. An examination of the factors preventing the PNE Household chores were ranked first by 62.5%, then baby care (20%) and fear of harm (13.7%). The strategy for raising adherence During the prenatal visit, 66.2% of respondents said that emphasis was significant, followed by motivation (25%). The studied populations' attitudes about PNE are shown in Table 3.

Table 5: Cross tabulation between socio demographic characteristic and total score of knowledge and practice.

Socio demographic data	Total knowledge		Total practice	
	Test statistic	Sig. (2 tailed)	Test statistic	Sig. (2 tailed)
Age	0.731	0.866	0.566	0.904
Religion	0.380	0.827	1.131	0.568
Education	3.544	0.471	1.045	0.903
Occupation	6.026	0.110	0.952	0.813
Income	3.550	0.169	0.68	0.967
Family type	0.373	0.402	1.035	0.309
Domicile	0.664	0.415	0.334	0.563
Parity	0.396	0.529	0.451	0.502
Mode of delivery	0.090	0.925	0.270	0.603

Of the women who practiced PNE, 56.6% did so daily and 36.3% did so once a week. Of those who experienced the benefits, 88.8% believed that prenatal and postnatal visits had a good impact, with 62% and 85% agreeing with this statement, respectively. 92.5% of respondents stated they would stress to others the value of PNE. The PNE practices of the research populations are shown in Table 4.

The sociodemographic profile did not significantly correlate with knowledge or practice ($p > 0.05$). The cross-tabulation between the overall knowledge and practice score and the sociodemographic characteristic is shown in Table 5.

IV. DISCUSSION

In total, 160 women with a mean age of 28.2 ± 4.1 years were included in the study; 51.2% of them had given birth via caesarean section, and 66.3% of them were multigravidas. The majority of the study population in Jawaher et al. and Mbada et al.'s studies was vaginal delivery, which was not the case in this study population group. Given the high rate of caesarean deliveries in this population, we need to raise awareness among the study participants to dispel myths and conservative cultural perceptions that pregnancy is unsafe for exercise, which prevents pregnant women from exercising out of concern for potential health risks.

When the survey participants' sources of information about PNE were examined, it was found that, for 58.8% of them, the most prevalent sources were the health care industry, followed by social media and TV (23.7%). The results of this study disagreed with those of numerous other studies, including those by Jawaher et al., Ibrahim et al., and Alharqi et al., which found that media was the most often cited source of PNE information. The tertiary care center's protocol, which includes the practice of assigning a physiotherapy consultant to every postpartum mother delivered in the hospital and emphasising the value of PNE during prenatal and postnatal visits, may be responsible for the study's findings.

According to an analysis of PNE knowledge, 55% of the sample population knew when to begin PNE, and 66.3% knew how often it was required. These results were inconsistent with those of Sreenivasan A et al. and Ashok VG et al. (6.7% and 22% awareness, respectively), but consistent with Alharqi et al. (65% awareness). The fact that all of the study population was from an urban or semi-urban location and that over half of them had degrees may have contributed to their higher level of knowledge.

Exercises that focus on breathing (77.5%) and abs (55%), respectively, were the most popular among the survey participants. Kegel's and pelvic floor exercises are unknown to 81.4% and 71.3% of people, respectively. The outcomes agreed with those of Wojno et al. There was a lack of awareness about other exercises. This could be because the majority of people who may not have been interested in learning about other exercises were those who still believed in the community that pelvic floor exercises should not be performed following a caesarean section.

Of those who knew about PNE's benefits, 97.5% were aware that it prevented uterine prolapse. Conversely, only 3–5% of people are aware of additional advantages such as preventing bladder and bowel incontinence. When examining the drawbacks of forgoing PNE, weight increase (86.3%) and back pain (21.2%) were found to be the most prevalent. This study's populations also shown a knowledge gap on advantages and disadvantages, which might be filled with appropriate instruction and training.

Analysis of the study population's attitudes towards PNE showed that 61.3% of the women felt guilty when they skipped PNE and 98.8% of the women thought PNE was necessary. The study group also suggested that health professions had a good influence, with 95% believing that health professions had a positive influence. This positive attitude may be ascribed to the health professions who consistently encourage and emphasise the importance of PNE among post-natal women.

An analysis of the factors preventing PNE showed that 62.5% of respondents thought domestic work was the biggest barrier, followed by child care (20%) and injury concern (13.7%). This was at odds with the findings of a study by Alharqi et al., which indicated that the most frequent barriers were fear of harm and ignorance. The study population's makeup of nuclear families may have contributed to this conclusion. Thus, assistance from friends and family could be beneficial in this research setting. Examining the strategies for raising adherence During the prenatal visit, 66.2% of respondents said that emphasis was significant, followed by motivation (25%). The results of this study highlight how crucial it is to win over a mother's erroneous views about PNE during prenatal and postnatal visits in order to change her attitude.

An analysis of PNE practices among the study population showed that 56% practiced PNE daily and 36.3% practiced once a week; 88.8% reported benefits; 62% and 85% believed that PNE visits had a favourable impact, respectively. 92.5% of respondents stated they would highlight PNE's significance to others. This could be explained by the prenatal and postnatal health instruction that the medical professionals gave the women.

The results of this study indicate that there was no significant correlation between any sociodemographic characteristic and knowledge, attitude, or practice of PNE, in contrast to previous studies by Jawaher et al. and Alharqi et al. that found a positive association between women's education and knowledge about PNE. This might be because of the

makeup of the study sample, which included over 50% of educated individuals who were all from urban or semi-urban areas. Additionally, adherence to PNE was positively impacted by health system protocol, as evidenced by the nearly universally positive attitudes of the patients.

V. CONCLUSION

Even though more than half of the participants in this study knew enough about PNE, many of them were unaware of its complete range of advantages. Since the majority of them stated that the health care industry was their primary source of information, it is imperative that postnatal mothers emphasise the value of exercise after giving birth and emphasise that they follow PNE. Although the majority of research participants had a positive outlook, they believed that daily domestic tasks were the main obstacle.

To increase adherence, it's also critical to educate and raise awareness among the postpartum moms' friends and family. More than half were rehearsing the activities as well and declared that they would highlight to others the significance of PNE. The community will benefit from this cultural transformation in terms of women's health. There was no correlation discovered between sociodemographic characteristics and knowledge, attitude, or practice. Therefore, maintaining the impact of healthcare professionals will be essential to raising the adherence rate among the study's target populations.

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