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Original Research

Assessing The Practice And Knowledge Of Postnatal Exercise Practices In Indian Females

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Abstract
Background: Pregnancy and delivery are vital aspects of a female's life, and postpartum exercise has proved to create a more relaxed and apt relationship between mother and child. However, studies concerning this aspect are scarce in the literature.
Aim: The present study aimed to assess the practice and knowledge of postnatal exercise practice in Indian females.
Methods: The study assessed 200 females admitted to the institute's postnatal ward within the defined study period. All these females were assessed using the "Health Belief Model" designed by Hochbaum and modified by Rosenstock. A structured interview was conducted to assess the practice and knowledge concerning potential exercises in these females.
Results: The study results showed that in 52% of females, moderately adequate knowledge was seen for postnatal exercise followed by inadequate knowledge in 28% of females, and lowest knowledge in 20% of females respectively. Also, moderately accurate and inaccurate practice of postnatal exercises was seen in 53% and 47% of females respectively. A significant association was seen between knowledge score to occupation and education of the mothers and between practice scores to information source, mother's occupation, education, parity, and age of the females.
Conclusion: The present study concludes that there was inadequate practice and knowledge of postnatal exercises in postpartum females. Hence, health awareness programs, concerning postnatal exercises must be done by healthcare personnel to improve practice and knowledge in mothers.
Keywords: knowledge of postpartum exercise, postnatal exercise, practice of postpartum exercise, Postpartum mother

Introduction

A vital aspect of a female's life is becoming a mother. The most versatile aspect of a female's life is growth towards parenthood which is accurately known as a post-partum period. Females who experience motherhood for the first time may feel anxious concerning the coping of looking after themselves and their newborns. Most of the Indian females believe in having no control over their pregnancies and associated outcomes. After birth, movement in females is restricted to movement inside the house. This confinement period is nearly 40 days and is considered vulnerable in a female's life.[1]

After the birth of an infant and placenta expulsion, the mother enters a phase of psychological and physical recuperation which is termed as postpartum period. Overall, it is expected that by 6 weeks of delivery, all the systems in a female body will be recovered from pregnancy effects and return to a non-pregnant state. After the birth of the baby, females must start exercising as soon they feel able, however, it should be a gradual process. Postnatal depression is less likely in females who return to exercise relatively soon after birth.[2]

Exercise is a state of physical exertion in the body that helps improve muscle tone in the pelvic floor and abdomen region along with improved bowel and bladder function. Postnatal exercise plays a vital role such as keeping abdominal muscles contracted, body alignments, concentrating on proper postures,helping

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in losing extra body weight and getting fit and healthy,preventing backache and genital prolapse,minimizing future prolapse and stress incontinence,diminishing respiratory and vascular complications,contraction and relaxation of the pelvic floor muscles,encourage anteversion of the uterus, minimize the risk of deep venous thrombosis (DVT), and encourage drainage of lochia.Recommended postnatal exercises include hip hitching and sit-ups, knee rolling, pelvic tilt, leg raising, head and shoulder raising, and abdominal exercises such as abdominal breathing,brisk walking, circulatory exercise, and deep breathing.[3]

Various previous literature studies have reported that various postpartum exercises decrease health-related concerns including diastasis recti, backache, postpartum depression, and decreased stress incontinence. However, it is estimated that 65%-85% of the World's population fails to get enough exercise and during clinical posting in postnatal wards, investigators reported that after delivery, postnatal females don't perform postnatal exercise during their hospital stay.[4]

Considering the aspects of the investigator, there was a need for assessment of practice and knowledge of postnatal females concerning postnatal exercise. Hence, the present study aimed to assess the practice and knowledge of postnatal exercise practice in Indian females.

Materials and methods

The present descriptive study was aimed to assess the practice and knowledge of postnatal exercise practice in Indian females.The study subjects were from the Outpatient Department of the Institute. Verbal and written informed consent were taken from all the subjects before study participation.

The study included 200 females who were admitted to the postnatal ward of the Institute within the defined study period. The conceptual framework used in the study was based on the "Health Belief Model" designed by Hochbaum(1958) and modified by Rosenstock (1974).

The study included both multipara and primipara females that underwent normal vaginal delivery with or without episiotomy and were on the day of delivery to 3 days after delivery (postpartum) and females that underwent cesarean section and had puerperal complications were excluded from the study.

After the final inclusion of the study subjects, a structured and performed interview was formulated to assess the practice and knowledge of participants concerning postnatal exercises in females. The questionnaire was validated with the reliability of the tool for practice and knowledge section to be 0.77 and 0.72 respectively.

Data gathered were statistically analyzed using the chi-square test, Fisher’s exact test, Mann Whitney U test, and SPSS (Statistical Package for the Social Sciences) software version 24.0 (IBM Corp., Armonk. NY, USA) using ANOVA, chi-square test, and student's t-test. The significance level was considered at a p-value of <0.05.

Results

The present descriptive study was aimed to assess the practice and knowledge of postnatal exercise practice in Indian females. The study assessed 200 females who were admitted to the postnatal ward of the Institute within the defined study period. All these females were assessed using the “Health Belief Model” designed by Hochbaum and modified by Rosenstock. The majority of the study subjects were in the age range of 18-25 years followed by 26-33 years and the least were from 34-41 years of age range. The majority of females had parity 1 followed by 2 and 3 respectively.

On assessing the association of knowledge scores and demographic variables in study subjects, it was seen that adequate knowledge was seen in 32, 12, and 2 subjects from the age range of 18-25, 26-33, and 34-41 years of age range respectively. In parity 1 female, moderately accurate knowledge was seen in 80 subjects with parity 1, 14 from parity 2, and 2 from parity 3, inadequate knowledge was seen in 36, 22, and 8 subjects with parity 1, 2, and 3 respectively. Age and parity showed statistically non-significant differences in knowledge with p=0.973 and 0.064 respectively. A similar non-significant association was seen in knowledge to family type with p=0.363. However, a significant association was seen in education and knowledge of postnatal exercise practice in study subjects with higher knowledge in more educated females with p=0.000. A similar significant association was seen for occupation and knowledge of postnatal exercise with higher knowledge in service and business class females compared to housewives with p=0.002 (Table 1).

The study results showed that for the practice of postnatal exercises in the study females, it was seen that there was a non-significant association of parity and family type to the practice of postnatal exercise in study females with a p-value of 0.43 for parity and 0.08 for family type in study subjects (Table 2).

It was seen that for age, there was a significant association between age and practice of postnatal exercise with p=0.01. Education also showed a significant association with postnatal exercise with higher practice in highly educated females with p=0.004. Occupation of service and business class had a higher moderately accurate practice of postnatal exercise compared to housewives with p=0.003.Information sources for postnatal exercise were from the healthcare profession in 16 subjects with inadequate and moderately adequate practice in 2 and 14 subjects, from relatives and friends with inadequate and moderately adequate practice in 44 and 42 subjects, from media in 90 subjects in 48 and 42 subjects, and self-learning in 8 subjects with all 8

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having moderately adequate knowledge with p=0.01 (Table 2).

Table 1: Association of knowledge scores and demographic variables in study subjects

S. No	Variables	Knowledge			p-value
		Inadequate	Moderate	Adequate	
1.	**Age range (years)**				
a)	18-25	44	70	32	0.973
b)	26-33	16	22	12	
c)	34-41	4	4	2	
2.	**Parity**				
a)	1	36	80	30	0.064
b)	2	22	14	10	
c)	3	8	2	0	
3.	**Education**				**0.000**
a)	Illiterate	22	0	0	
b)	Primary	8	8	0	
c)	Senior Primary	8	18	2	
d)	Higher Secondary	26	66	18	
e)	Above higher secondary	0	4	20	
4.	**Occupation**				**0.002**
a)	Service	0	0	6	
b)	Business	0	4	4	
c)	Housewife	64	92	30	
5.	**Family type**				0.363
a)	Joint family	36	64	30	
b)	Nuclear family	28	32	10	

Table 2: Association of practice scores and demographic variables in study subjects

S. No	Variables	Practice			p-value
		Inadequate	Moderate	Adequate	
1.	**Age range (years)**				
2.	18-25	56	90	0	**0.01**
3.	26-33	30	14	0	
4.	34-41	8	2	0	
5.	**Parity**				
6.	1	60	86	0	0.43
7.	2	26	20	0	
8.	3	8	0	0	
9.	**Education**				**0.004**
10.	Illiterate	20	2	0	
11.	Primary	10	6	0	
12.	Senior Primary	18	10	0	
13.	Higher Secondary	38	72	0	
14.	Above higher secondary	8	16	0	
15.	**Occupation**				**0.03**
16.	Service	0	6	0	
17.	Business	0	8	0	
18.	Housewife	94	86	0	
19.	**Family type**				0.08
20.	Joint family	42	28	0	
21.	Nuclear family	52	78	0	
22.	**Information source for postnatal exercise**				**0.01**
23.	Healthcare personnel	2	14	0	
24.	Relatives/friends/parent	44	42	0	
25.	Media	48	42	0	
26.	Self-learning	0	8	0	

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Discussion

The present study assessed 200 females who were admitted to the postnatal ward of the Institute within the defined study period. All these females were assessed using the "Health Belief Model" designed by Hochbaum and modified by Rosenstock. The majority of the study subjects were in the age range of 18-25 years followed by 26-33 years and the least were from 34-41 years of age range. The majority of females had parity 1 followed by 2 and 3 respectively. These data were comparable to the previous studies of Mohammed A et al[5] in 2019 and Ibrahim WA et al[6] in 2015 where authors assessed postnatal females with demographic data comparable to the present study in their respective studies.

The study results showed that on assessing the association of knowledge scores and demographic variables in study subjects, it was seen that adequate knowledge was seen in 32, 12, and 2 subjects from the age range of 18-25, 26-33, and 34-41 years of age range respectively. In parity 1 female, moderately accurate knowledge was seen in 80 subjects with parity 1, 14 from parity 2, and 2 from parity 3, inadequate knowledge was seen in 36, 22, and 8 subjects with parity 1, 2, and 3 respectively. Age and parity showed statistically non-significant differences in knowledge with p=0.973 and 0.064 respectively. A similar non-significant association was seen in knowledge to family type with p=0.363. However, a significant association was seen in education and knowledge of postnatal exercise practice in study subjects with higher knowledge in more educated females with p=0.000. A similar significant association was seen for occupation and knowledge of postnatal exercise with higher knowledge in service and business class females compared to housewives with p=0.002. These results were consistent with the findings of Mbada CE et al[7] in 2015 and Daley AJ et al[8] in 2012 where authors reported a similar association of knowledge scores and demographic variables in their studies as seen in the results of the present study.

It was seen that for the practice of postnatal exercises in the study females, it was seen there was a non-significant association of parity and family type to the practice of postnatal exercise in study females with a p-value of 0.43 for parity and 0.08 for family type in study subjects. These findings were in agreement with the results of Sahu S et al[9] in 2019 and Alharbi JH[10] in 2019 where similar to the present study authors also reported a non-significant association of parity and family type to the practice of postnatal exercise in their respective studies.

The study results also showed that for age, there was a significant association between age and practice of postnatal exercise with p=0.01. Education also showed a significant association with postnatal exercise with higher practice in highly educated females with p=0.004. Occupation of service and business class had a higher moderately accurate practice of postnatal exercise compared to housewives with p=0.003. Information sources for postnatal exercise were from the healthcare profession in 16 subjects with inadequate and moderately adequate practice in 2 and 14 subjects, from relatives and friends with inadequate and moderately adequate practice in 44 and 42 subjects, from media in 90 subjects in 48 and 42 subjects, and self-learning in 8 subjects with all 8 having moderately adequate knowledge with p=0.01. These results were in line with the findings of Sreenivasan A[11] in 2017 and Kołomańska-Bogucka D et al[12] in 2019 where authors reported a significant association of postnatal exercise practice to age, education, and occupation as seen in the results of the present study.

Conclusion

Within its limitations, the present study concludes that there was inadequate practice and knowledge of postnatal exercises in postpartum females. Hence, health awareness programs, concerning postnatal exercises must be done by healthcare personnel to improve practice and knowledge in mothers.

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