

A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Postnatal Exercise among Postnatal Mother in the Mahatma Gandhi Medical College and Hospital, Jaipur

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ABSTRACT

Background: Women are potentially susceptible to complication during the postpartum period which may affect their physical mental and social wellbeing. Postnatal exercise is administered in routine clinical practice for early mobility and postnatal recovery. Post natal exercise administered during immediate postpartum period helps improve the quality of life by improving physical mental and general wellbeing. Aim of the present study was to assess the effectiveness of structured teaching programme on knowledge regarding postnatal exercise among postnatal mother in the mahatma gandhi medical college and hospital, Jaipur. **Method:** In this study the research approach was pre experimental one group pre-test post-test design was applied. Total 50 samples selected by purposive sampling technique. The intervention Structured Teaching Programme was introduced to the group after the pre test. Knowledge was assessed by self structured questionnaire and practice assessed by observation checklist tool before and after the intervention. **Results:** The result revealed that mean pre test score of knowledge was 9.940 ± 2.084 which was increased to 20.48 ± 2.735 . The mean difference was 10.54. the calculated 't' value t-critical one tail- 22.15 and t-critical two tail- 2.010. P value < 0.0001 is less than 0. 005 The null hypothesis H₀ is rejected and research hypothesis is accepted. **Conclusion:** The study concluded that, structured teaching programme on about the postnatal exercise should be improve the knowledge of postnatal mother that may help them deal better the postnatal complication.

KEYWORDS: Effectiveness, Structured Teaching Programme, Post natal Care, Knowledge, exercise, Episiotomy

INTRODUCTION

Postnatal exercise should be started as soon after delivery as possible in order to improve circulation, strengthen pelvic floor and abdominal muscles and prevent transient long term problem.¹

Postnatal period is usually considered the interval extending from the birth of the baby until 6 weeks after. It is the 6weeks interval between the birth of the

newborn and the return of the reproductive organ to their normal non pregnant state.²

Women are potentially susceptible to complication during the postpartum period which may affect their physical mental and social wellbeing. Postnatal exercise is administered in routine clinical practice for early mobility and postnatal recovery. Post natal

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exercise administered during immediate postpartum period helps improve the quality of life by improving physical mental and general wellbeing.³

March- June 2015. study showed that women knowledge regarding postpartum exercises (PPE) mainly (Kegal, Abdomen, Legs-feet and Relaxation exercises) was 72%. Women performance of PPE mainly (Kegal, Abdomen, PE, mainly either they do not know, aware of their health or occupied by the care of their children (37, 30, 13 respectively) Majority of Women 91% in Postpartum period experience and practices traditional methods used Warm drink to relief pain and comfortable 70% used Warm perineum care with warm water mixed by certain herbal twice a day for comfortable and prevention of infection Talk for relaxation, prevention of infection and comfortable by enjoy its nice order practices by 24% of the participants. There was no significant association between postpartum exercise and socio-demographic and obstetric factors women had more knowledge than practices regarding postpartum exercises and majority experience and practices traditional methods as means of PPE. In this study knowledge of the participants regarding postpartum exercises (PPE) mainly (Kegal, Abdomen, Legs-feet and Relaxation exercises) was 72%, almost same as study conducted in Selected Maternity Centre In Madurai in which the 74% of mothers had adequate knowledge regarding postnatal exercise. Knowledge regarding benefit of post partum exercise was 75.4%, this result was compatible with the Study which stated that women had basic understanding of the benefits of exercise during the postpartum period.⁴

Physical exercise during postpartum period is beneficial to mothers, and the health gains are abundantly reported. This study characterizes the postpartum exercise profile of a group of Nigerian women and reports how their exercise self-efficacies are influenced by sociodemographic characteristics. Participants were women attending the two largest postnatal clinics in Ibadan, south-western Nigeria. A self-developed questionnaire assessed the socio-demographic and exercise profile of participants, while the Exercise Self-Efficacy Scale assessed their exercise self-efficacy. About two-third (61.0%) of the participants were not aware that they could undertake physical exercise to enhance postpartum health, and 109 (47.8%) were not engaged in any exercise. Those who exercised did so for less than three days/week, and 89% of the women did not belong to any exercise support group. Exercise self-efficacy was significantly () associated with being in an exercise programme, age, employment, work hours/week,

monthly income, and number of pregnancies. Most of the women were not aware they could engage in postpartum exercise, and about half were not undertaking it. More women with high compared to moderate exercise self-efficacy undertook the exercise. Efforts at increasing awareness, improving exercise self-efficacy and adoption of postpartum exercise are desirable among the Nigerian women.⁵

This study assessed knowledge, attitude and practice of antenatal and postnatal exercises among women. Benefits of exercise during and after pregnancy have been stressed. However, empirical reports on knowledge, attitude and practice of antenatal and postnatal exercise among women are still few. The study was carried out among 365 women attending antenatal and postnatal hospitals in Ile – Ife, Nigeria. A 3-section questionnaire that assessed socio-demographic, maternal characteristics, knowledge, attitude and practice of antenatal and postnatal exercises was used in this cross-sectional study. Descriptive statistics of mean, standard deviation and frequency were used to summarize data. Inferential statistic of Chi-square was used to test the associations between knowledge, attitude and practice of mothers towards antenatal and postnatal exercise. Alpha level was set at $p < 0.05$. Awareness of antenatal and postnatal exercises was 92.6% and 61.9% respectively. 318(87.1%) respondents had a positive attitude to exercise while 81.9% engaged in exercise. There was significant association between knowledge about benefits of antenatal and postnatal exercise and each of age and educational qualification ($p < 0.05$). 180(49.3%) had above average knowledge, 11(3%) had average knowledge, while 174(47.7%) had below average knowledge regarding knowledge on benefits of antenatal exercise. Regarding knowledge on benefits of postnatal exercises 174(47.7%) had above average knowledge, 15(4.1%) had average knowledge, while 176(48.2%) had below average knowledge. regarding knowledge on benefits of postnatal exercises. 106(35.5%) of the women were on self-prescription, 86(28.8%) on prescription by nurses, 83(27.8%) on prescription by physiotherapists, 49(16.4%) on prescription by doctors and 17(5.7%) on prescription by their spouses. Lack of information about exercise (53%) and tiredness (43%) accounted mostly for not engaging in exercise. Knowledge and practice of women towards antenatal and postnatal exercises was inadequate. However, the women had a positive attitude towards exercise. Lack of information on exercise, tiredness and lack of motivation were the main reasons for poor exercise practice. Self-prescription of antenatal and postnatal exercise was a common practice among the women. Level of

education was significantly associated with knowledge, attitude and practice of antenatal and postnatal exercises.⁶

Diastasis recti abdominis (DRA) is defined as separation of recti abdominis muscles as a result of widening of the lineal alba (Nobel,1982). During pregnancy DRA can vary between a small gap of 2-3 cm wide and 12-15 cm long to a space measuring 12-20 cm in width and extending nearly the whole length of the recti muscles. DRA caused by hormonal influences and biomechanical and structural changes mainly of the rectus abdominis and linea alba during pregnancy. To compare the effect of routine antenatal exercises with inclusion of abdominal exercises along with routine antenatal exercises on their size of the diastasis rectus abdominis in the postnatal mothers. Quasi experimental posttest design carried out in this study. 50 antenatal women randomly selected in this study and divided in Group A and Group B. DRA were measured by dial caliper. The DRA was measured at the level of umbilicus on the third postpartum day. Presence of DRA was considered when the width was more than 2.5 cm (1 inch). Finally, data from 30 Antenatal women were analyzed. Chi square test was used as statistical tool. Out of 15 Antenatal women in Group A, 8 (53%) women had DRA (>2.5 cm = 1 inch) and 7 (47%) women did not have DRA (2.5 cm = 1 inch) and 1 (7%) did not have DRA There is significant effect of abdominal exercises along with routine antenatal exercises than the routine antenatal exercises alone on Diastasis rectus abdominis among the postnatal mothers.⁹

Family support, home care and long term follow up is important for postnatal mother. After the postpartum period, mother are instructed in perineal and wound care or care is essential. physician if there are any signs of anal stricture or complications.^[7] obstetrics nurse plays an important role for educating, supporting, and empowering mothers to cope with their postnatal complication. Currently, technological advances provide many different educational aids such as health education, booklets and video clips and which can facilitate the expansion of mother's knowledge and practice.⁷

Aim of the present study was to assess the effectiveness of structured teaching programme regarding on knowledge postnatal exercise regarding postnatal mother may help them deal better with postnatal women problem with postnatal complication⁸.

METHODOLOGY

In this study the research approach was pre experimental one group pre-test post-test design was

applied. Total 50 samples selected by purposive sampling technique. The intervention Structured Teaching Programme was introduced to the group after the pre test. Knowledge was assessed by self structured questionnaire assessed by observation checklist tool before and after the intervention. This study was conducted in selected obstetrics ward and postnatal OPD at mahatma gandhi medical college and Hospital, Lucknow.

Description of Tool

Part I: -Socio demographic variables-

Information on socio demographic variable of the subjects containing ten items, which included age, religion, educational status, Occupation, type of family, residence, source of information .

Part II: - Structured teaching programme

It consists of 30 self structured questionnaire related to knowledge regarding postnatal exercise among postnatal mother. It is containing 2 aspects:- Introduction of postnatal period, General knowledge regarding delivery, episiotomy ,recovery factor of postnatal exercise , knowledge regarding pelvic floor exercise and advantages of postnatal exercise.

Scoring mode: -

Each correct answer was a score of 1 and incorrect was score of 0. Maximum scoring possible was 30 in knowledge questionnaire and minimum was 0.

Part III: - observational Check list: -

It consists observation checklist related to postnatal exercise.

Scoring mode

In Practice each correct answer carries 'one' mark and wrong answer carried 'zero' mark. The total maximum score is '30' and minimum score is '0' The knowledge questionnaire consisted of 30 closed ended – multiple choice questions with a single correct answer.). The different assessments of knowledge are categorized as follows:

Range	Assessment of knowledge
21-30	Adequate knowledge
11-20	Moderately adequate knowledge
0-10	Inadequate Knowledge

Data collection procedure

The study conducted after obtaining permission from the Head of Department of obstetrics ward and postnatal OPD. Informed consent was taken from the samples with self-introduction and purpose of the study was explained to the participants.

Day 1: A pre test will be administered to postnatal mothers to assess their knowledge by using a Self Structured Questionnaire by using observation checklist on postnatal exercise among postnatal mother

Group	Knowledge score	Range	Mean	Median	SD	Standard error	M.D	t-value	p-value	result
Respondents	Pre-test	4-15	9.940	10	2.084	2.1035	10.54	2.010	<0.0001	accepted
	Post-test	9-26	20.48	20	2.735					

Day 1: A structured teaching programme on knowledge regarding postnatal exercise among postnatal mother will be conducted for about 30 minutes on the same day after pre test.

Day : After an interval of 4 days a post test will be conducted for the sample using self structured questionnaire and observation checklist for evaluating the effectiveness of structured teaching programme. Thereafter the collected raw data coded and entered master sheet of the analysis.

Plan for data analysis

Statistical analysis is the organization and analysis of quantities data using statistical procedures including both descriptive and inferential statistics.

RESULT

Section I: - Description of study samples by socio- demographic characteristics

Table 1: Frequency and percentage distribution of postnatal mother according to their demographic variables. n=50

	Sample	Frequency	percentage
1	Age(year)		
	18-20 years	19	38
	21-25 years	18	36
	26-30 year	7	14
2	31-35 year	6	12
	Religion		
	Hindu	41	82
	Muslim	7	14
	Christian	0	0
3	Others	2	4
	Education		
	Illiterate	9	18
4	Primary	12	24
	Sec secondary	14	28
	Graduate	15	30
	Occupation		
5	House wife	32	64
	Government	9	18
	Private	6	12
	Health personnel	3	6
	Type of family		
6	Nuclear	22	44
	Joint	28	56
	Extended	0	00.00
	Residence		
7	Rural	7	33.33
	Urban	16	66.67
	Source of information		
	Newspaper	12	24.00
	T.V and radio	35	70.00
	Health personnel	2	4.00

Section II:- Description of knowledge of the postnatal mother

Table 2,1: Mean, standard deviation, mean difference and 't' value of overall pre test and post test level of knowledge regarding postnatal exercise among postnatal mother n=50

The data presented in table reveal that respondent's knowledge score was high in the post test (range-9-26) than that in pre-test (range-4-15).it is also evident mean \pm SD post-test knowledge score (20.480 ± 2.734) was higher than of pre-test knowledge score was (9.940 ± 2.084).

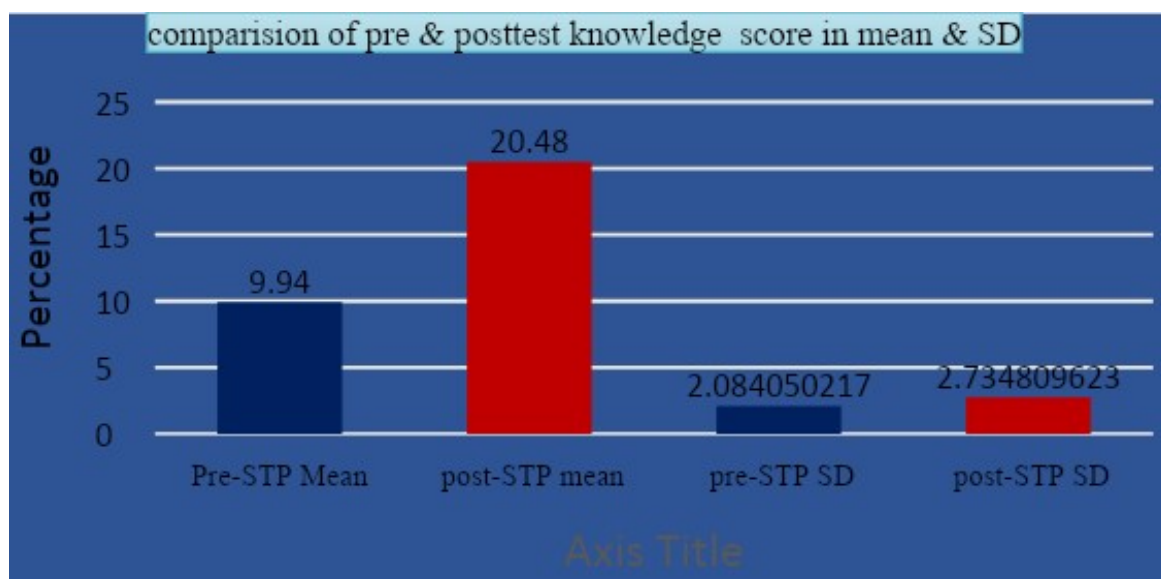


Figure 1.0 : mean & sd difference between pre-test & post-test knowledge scores

The table 2.1 and figure 1.0 shows that mean score of knowledge level of postnatal mother was 10.23 and SD 2.084. Posttests mean score of knowledge level of postnatal mother was 20.48 and, with a SD 2.734. On comparing the pre-test scores with post-test scores, it was found that all the respondents scored higher in the post-test than pre-test. This indicates that structured teaching programme was effective in increasing the knowledge of postnatal mothers regarding postnatal exercise.

TABLE 2.2: ASPECT-WISE MEAN KNOWLEDGE SCORE & STANDARD DEVIATION OF POSTNATAL MOTHERS. n= 50, DF= 49, P <0.00

Sr. no	Knowledge aspect respondent	Questionnaire aspect	Mean	Sd	Mean	Sd
1.	General knowledge regarding postnatal period	1,3,4	0.34	0.47	0.56	0.496
2.	General knowledge regarding postnatal exercise.	2	0.36	0.48	0.68	0.466
3.	General knowledge regarding pelvic anatomy	5,6	0.18	0.38	0.74	0.439
4.	General knowledge regarding delivery, episiotomy, recovery factor of postnatal exercise.	7,8,9,11,12,13,14	0.24	0.39	0.60	0.450
5.	General knowledge regarding pelvic floor exercise	15,16,17,18,19,20,21,22,23	0.38	0.48	0.68	0.532

table 2.2 this table show the aspect wise mean and standard deviation knowledge of respondents on postnatal exercise

This section show the general knowledge of postnatal period score in the pre-test mean is (0.34)& standard deviation (0.47) and general knowledge of postnatal exercise score in the pre-test mean is (0.36)& standard deviation (0.48) and general knowledge regarding pelvic anatomy mean is (0.18)& standard deviation (0.38) and general knowledge regarding delivery, episiotomy, recovery factor of postnatal exercise. score in the pre-test mean is (0.24)& standard deviation (0.39) and general knowledge regarding pelvic floor exercise mean is (0.38)& standard deviation (0.48) and general knowledge of advantage of postnatal exercise in the pre-test mean is (0.24)& standard deviation (0.47)

Similarly in the general knowledge of postnatal period score in the post-test mean is (0.56)& standard deviation (0.496) and general knowledge regarding postnatal exercise mean is (0.68)& standard deviation (0.466) General knowledge regarding pelvic anatomy in the post-test mean is (0.74)& standard deviation (0.439) and General knowledge regarding delivery, episiotomy, recovery factor of postnatal exercise. in the post-test mean is (0.60)

& standard deviation (0.450) and general knowledge regarding pelvic floor exercise mean is (0.68) & standard deviation (0.532) and advantage of postnatal exercise is (0.66) & standard deviation (0.474)

Section III:- Description of comparison of knowledge regarding postnatal exercise among postnatal mother regarding postnatal exercise

Table 3: frequency and percentage of knowledge score pre and post test comparison of knowledge score of postnatal exercise among postnatal mother. n=50

Knowledge level	Poor Knowledge (Score 0-10)		Average Knowledge (Score 11-20)		Good Knowledge (Score 21-30)	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Pre-test	34	68	16	32	0	0
Post-test	1	2	25	50	24	48

The data presented in Table 3.1 and figure 11 show that in the pre-test majority of the respondents, 34(68%) had inadequate knowledge, 16 (32%) had moderately adequate knowledge. None of the respondents possessed adequate knowledge on postnatal exercise. The post-test majority of the respondents 1(2%) had inadequate knowledge 25 (50%) had moderately adequate knowledge, 24(48%) had adequate knowledge.

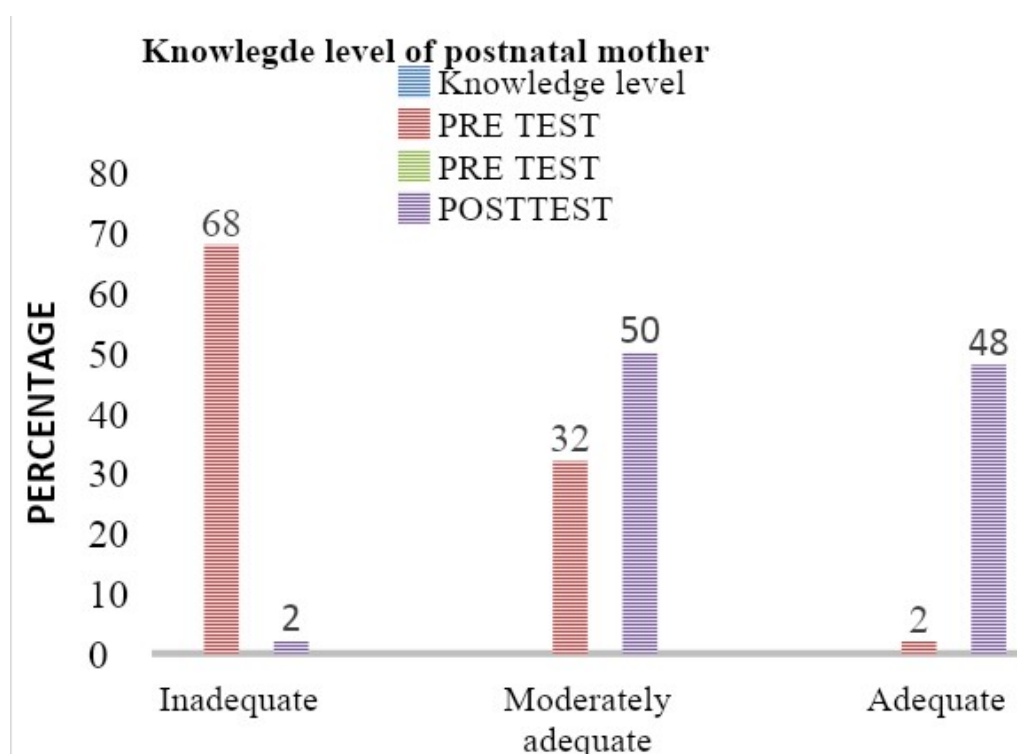


Figure3. percentage distribution of level of knowledge regarding postnatal exercise

In this section data presented shows that in pre-test out of 50 respondents 16 (32%) had scored between 11-20; 34(68%) had scored between 0-10 and none of respondents scored between 21-30. In the post-test, 1(2%) respondents had scored between 1-10 and, 25(50%) respondents had moderate adequate knowledge & 24(48%) had adequate knowledge

On comparing the pre-test scores with post-test scores, it was found that all the respondents scored higher in post-test than pre-test. This indicates that STP was effective in increasing knowledge of postnatal mothers regarding postnatal exercise.

Section IV:- Association of level of knowledge score of regarding postnatal exercise among postnatal mother with selected socio-demographic variable

TABLE 4.1: ASSOCIATION BETWEEN LEVEL OF KNOWLEDGE SCORES OF RESPONDENTS AND SELECTED SOCIO-DEMOGRAPHIC VARIABLE.

In this section description, the knowledge level regarding postnatal exercise among postnatal mother in mahatma Gandhi medical college and hospital. was done. In which description of pretest & posttest median, t-value, with selected socio demographic variable. & to determine the significance of the association, used T-test.

Table 4.1: Association of knowledge with selected demographic variable before administration of structured teaching programme.

Sr. No	Socio-Demographical Data Sample	Frequency 'F'	Pre Test Median	Post Test Median	T Test	Result
1	Age(Year)					
	18-20 years	19	10.00	20.68	0.000348	Sig
	21-25 years	18	10.11	20.38	0.00228	
	26-30 Year	7	10.28	20.71	0.000345	
	31-35years	6	8.66	19.83	0.000104	
2	Religion					
	Hindu	41	10.09	20.48	0.000348	Ns
	Muslim	7	9.57	20.00	0.000795	
	Christian	0	0	0	0	
	Others	2	8.0	22.00	0.000126	
3	Education					
	Illiterate	9	9.83	22.5	0.000369	Sig
	Primary	12	10.00	19.72	0.000190	
	Sec Secondary	14	10.00	19.92	0.000270	
	Graduate	15	10.45	20.81	0.000359	
4	Occupation					
	Housewife	32	10.22	21.27	0.000748	Ns
	Govt	6	10.33	20.66	0.000343	
	Private	9	9	17	0.000271	
	Health Professiona	3	11	18.66	0.000405	
5	Type Of Family					
	Nuclear	22	10.10	20.00	0.000348	Ns
	Joint	44	14.50	28.57	0.000746	
	Extended	0	00.	00.00	0.00000	
6	Residence					
	Rural Area	22	10.07	20.48	0.000346	Sig
	Urban Area	28	10,04	19.68	0.000298	
7	Source Of Information					
	Newspaper	12	9.66	19.33	0.000112	Sig
	T.V &Radio	35	10.00	19.85	0.000141	
	Health Personnel	2	11.5	19.05	0.000169	
	Family Member	1	10	24	00.000	

In this section description, the knowledge level regarding postnatal exercise among postnatal mother in mahatma Gandhi medical college and hospital. was done. In which description of pretest & posttest median, t-value, with selected socio demographic variable. & to determine the significance of the association, used T-test.

Following null hypothesis H_0 was stated against the research hypothesis H_1 . H_0 : There will be no significant association between the knowledge regarding postnatal exercise among postnatal mother of selected hospital of Jaipur with selected socio demographic variables as evident from a structured knowledge questionnaire at 0.0005 level of significance.

The findings of the study revealed that there was significant association between pre-test knowledge scores with selected socio demographic variables such as age ($t=0.348$), education ($t=-0.359$), residence ($t=0.298$), source of information ($t=0.141$), at 0.05 level of significance

Table 4.2: comparison of pre and post group on improving knowledge regarding postnatal exercise of postnatal mother N=50

	Observations	Obs. without missing data	Min	Max	Mean	SD	MD
pre-STP	50	50	4.000	15.000	9.940	2.084	
post-STP	50	50	9.000	26.000	20.480	2.735	10.54

According to table No. 4.2, which indicates that Mean & SD of Pre Vs Post on knowledge of mahatma gandhi medical college and hospital, Jaipur regarding knowledge regarding postnatal exercise of postnatal mother i.e.

Pre group are 9.940 ± 2.084 , Post are 2.084 ± 2.735 . As per the table the mean difference of pre Vs post group is (10.54) and the H_0 difference between mean is equal to 0 & H_a difference between mean is different from 0. The computed p-value is lower than significance level $\alpha=0.05$, the reject the null hypothesis H_0 while it is true is lower than 0.01%. Our Hypothesis is accepted.

DISCUSSION

The present study revealed that the mean score obtained from the women in pretest mean score is 9.940 with standard deviation 2.084 and posttest mean score 20.48 with standard deviation 2.735. and the calculated 't' value t-critical one tail- 22.15 and t-critical two tail-2.010. This is indicating that there is increase the knowledge of postnatal mother after giving structured teaching programme.

The analysis result revealed that the association of demographic variables with knowledge of women by using t-test that there is no significant association between knowledge with selected demographic variable except age, education, residence and source of information of postnatal exercise. Hence the research hypothesis stated that there is significant association between pretest knowledge and posttest knowledge.

P value < 0.0001 is less than 0.005. it shows we can reject null hypothesis. And there is significant effect of STP on our sample which further analyzing and significantly show the effect of STP across age, education, residence and source of information of postnatal exercise.

CONCLUSION

The study showed that structured teaching programme invented by the researcher was effective to increase the knowledge regarding post natal exercise among of the postnatal mother. So there is a need of providing proper information and education regarding postnatal exercise, that reduce the complication during postpartum period. So health care provider should provide health education to improve their knowledge regarding post natal care of mother during postnatal period. (H_0) is rejected and alternative hypothesis (H_1) is accepted that structured teaching programme on knowledge regarding post-natal exercise of with postnatal mother was effective.

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Conflict of Interest: None declared

Ethical Approval: The study was approved by the Institution Ethics Committee.

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