

A Study to Assess the Effectiveness of Structured Teaching Programme on Prevention and Management of Health Problems During Puerperium in Terms of Knowledge and Practice Among Postnatal Mothers in Sanjay Gandhi Memorial Hospital, Delhi

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Abstract

Background: Aim: A study to assess the effectiveness of structured teaching programme on prevention and management of health problems during puerperium in terms of knowledge and practice among postnatal mothers in sanjay gandhi memorial hospital, Delhi. **Material and Methods:** The present study is based on the quantitative experimental approach to assess the effectiveness of Structured Teaching Programme on “prevention and management of health problems during puerperium” in terms of knowledge and practice among postnatal mothers in Sanjay Gandhi Memorial Hospital, Delhi. One group pre-test and post-test design (pre-experimental design) used to assess the effectiveness of Structured Teaching Programme on “prevention and management of health problems during puerperium” in terms of knowledge and practice among postnatal mothers. 60 postnatal mothers who delivered vaginally with or without episiotomy were included in this study. **Results:** The mean post-test knowledge score of postnatal mother on prevention and management of health problems during puerperium (20.13) is higher than the mean pre-test knowledge score (7.91). The median for the pre-test is 7 and median for the post-test is 20 which is fairly close to the mean of pre-test mean 7.91 and post-test mean 20.13 respectively, indicating a fairly normal probability curve, which means all the measures of central tendency coincide at the centre of the distribution to a greater extent. The standard deviation of post-test knowledge score (2.71) are more homogenous than the standard deviation of pre-test knowledge score (4.49). **Conclusion:** Structured teaching programme was found to be effective in improving the knowledge and practice on prevention and management of health problems during puerperium in postnatal mothers.

Keywords: Structured teaching programme, Health problems, Puerperium, Postnatal.

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Introduction

Puerperium is the period following child birth during which the body tissues, especially the pelvic organ revert back approximately to the pre-pregnant state both anatomically and physiologically. Involution is the process whereby the pelvic reproductive organs, particularly the uterus, return to their pre-pregnant size and position. This period also has been referred to as the recovery, postpartum, postnatal or post delivery period, or the puerperium.^[1] The World Health Organization (WHO) describes the puerperium as the most critical and yet the most neglected phase in the lives of mothers and babies; most deaths occur during the puerperium. It is the time after birth, a time in which the mother's body, including hormone levels and uterus size, returns to a non-pregnant state. Being a mother is a new

role, a new job, with a new person in life and new responsibilities.^[2] Postpartum minor discomforts may occur resulting from all systems adaptation. Common postpartum minor discomfort includes fatigue, after pain, backache, swelling, laceration or episiotomy pain, irregular vaginal bleeding, haemorrhoids, stress incontinence, urinary retention, breast engorgement, cracked nipple, retracted and flat nipple, postpartum blues and postpartum depression. Immediate and effective care during and after birth for these problems can make the differences in postpartum adaptation.^[3-5]

Subjects and Methods

The present study is based on the quantitative experimental approach to assess the effectiveness of Structured Teaching

Programme on “prevention and management of health problems during puerperium” in terms of knowledge and practice among postnatal mothers in Sanjay Gandhi Memorial Hospital, Delhi. One group pre-test and post-test design (pre-experimental design) used to assess the effectiveness of Structured Teaching Programme on “prevention and management of health problems during puerperium” in terms of knowledge and practice among postnatal mothers. 60 postnatal mothers who delivered vaginally with or without episiotomy were included in this study.

Inclusion Criteria

Postnatal mothers who delivered vaginally with or without episiotomy in Sanjay Gandhi Memorial Hospital, Delhi.

Postnatal mothers who are willing to participate in the study.

Mothers who are fully conscious.

Exclusion Criteria

Postnatal mothers who are not willing to participate in the study.

Postnatal mothers who delivered by Lower segment caesarean section

Methodology

The sample included 60 postnatal mothers who were available during the period of data collection and were selected by purposive sampling. The purpose of the study was explained to the group and confidentiality of the responses was assured. Consent was taken from the respondents who were willing to participate in the study. Pre-test was conducted by using structured knowledge interview and practice rating scale on 4th January 2021 to 13th January 2021. It took 30 minutes to complete the knowledge and practice rating scale for each mother. Structured Teaching Programme on prevention and management of health problems during puerperium was given. Structured teaching programme was given with the help of charts, flash cards and pamphlet which took 40-45 minutes. Post test was conducted by using structured knowledge interview and practice rating scale from 11th January 2021 to 20th January 2021 on Whatsapp video call.

Results

Table 1 shows that the Frequency and percentage distribution representing the socio-demographic characteristics of postnatal mothers. Out of 60 postnatal mothers 28(46.67%) were in the age group of 18-23 years, 18(30%) were in the age group of 24-29 years, 13(21.67%) were in the age group 30-35 years and 1(1.66%) were in the age group of 36 years and above. With regard to educational qualification, out of 60 postnatal mothers 8(13%) were having no basic education, 11(18%) were educated up to primary, 34(57%) were educated up to secondary, and 7(12%) did graduation or above. Majority of postnatal

mother were housewife 59(98%) and 1(2%) were working. Out of 60 postnatal mother 3(5%) were having family monthly income up to Rs. 5000, 36(60%) were having between Rs. 5001-10000, and 21(35%) were having between Rs. 10001- 15000. With regard to parity 20(33%) mothers were primipara and 40(67%) mothers were multipara. Majority of mothers had vaginal delivery with episiotomy i.e. 47(78%) and 13(22%) had vaginal delivery without episiotomy. Majority of mother stayed for 25-48 hours in the hospital i.e. 21(35%), 19(32%) stayed for 12-24 hours, 14(23%) stayed for 49-72 hours and 6(10%) stayed for more than 72 hours in the hospital. Majority of mother i.e. 45(75%) had planned the pregnancy and 15(25%) had unplanned pregnancy. With regard to sex of new-born 26(43%) were male and 34(57%) were female. Majority of postnatal mothers did not attend any educational programme during antenatal period i.e. 49(82%).

The data given in the table 2 shows that the mean post-test knowledge score of postnatal mother on prevention and management of health problems during puerperium (20.13) is higher than the mean pre-test knowledge score (7.91). The table further shows that the median for the pre-test is 7 and for post-test is 20 which is fairly close to the mean of pre-test mean 7.91 and post-test mean 20.13 respectively, indicating a fairly normal probability curve, which means all the measures of central tendency coincide at the centre of the distribution to a greater extent. The standard deviation of post-test knowledge score (2.71) are more homogenous than the standard deviation of pre-test knowledge score (4.49). [Table 2]

The data presented in the table no. 5 indicates that lowest pre-test percentage mean score was in the area of postnatal exercise. There was gain of 39.67% in the area of hygiene, 41.67% in the area of nutrition, 21.25% in the area of danger signs, 43.33% in the area of postnatal exercise, 34.17% in the area of breast care, 37.92% in the area of perineal care and 63.33% in the area of management of health problems. [Table 3]

The data given in the table 7 shows that the mean post-test practice score of postnatal mothers on prevention and management of health problems during puerperium (23.10) is higher than the mean pre-test practice score (9.15). The table further shows that the median for the pre-test is 8.5 and for post-test is 22 which is higher than the pre-test median. The standard deviation of post-test practice score (4.81) are more heterogeneous than the standard deviation of pre-test practice score (4.48). [Table 4]

The data presented in the above table no. 12 shows that there is a strong positive correlation between post-test knowledge score and post-test practice score on prevention and management of health problems during puerperium among postnatal mothers. [Table 5]

Table 1: The Frequency and percentage distribution representing the socio-demographic characteristics of postnatal mothers.

CHARACTERISTICS	FREQUENCY(f)	PERCENTAGE (%)
Age (in years)		
18-23years	28	46.67%
24-29years	18	30%
30-35years	13	21.67%
36years and above	01	1.66%
Education		
No basic education	8	13%
Up to primary	11	18%
Up to secondary	34	57%
Graduate or above	07	12%
Occupation		
Working	01	2%
Housewife	59	98%
Family monthly income		
UptoRs.5000	03	5%
Rs.5001-Rs.10000	36	60%
Rs.10001-Rs.15000	21	35%
AboveRs.15000	0	0%
Parity		
Primipara	20	33%
Multipara	40	67%
Type of delivery		
Vaginal delivery with episiotomy	47	78%
Vaginal delivery without episiotomy	13	22%
Length of stay within hospital in hours		
12-24hours	19	32%
25-48hours	21	35%
49-72hours	14	23%
Morethan72hours	06	10%
Pregnancy		
Planned	45	75%
Unplanned	15	25%
Sex of new-born		
Male	26	43%
Female	34	57%
Any educational programme attended during antenatal period:		
Yes	11	18%
No	49	82%

Table 2: Mean, median and standard deviation of pre-test and post-test knowledge score of postnatal mothers

TEST	MEAN	MEDIAN	STANDARAD DEVIATION
Pre-test	7.91	7	4.49
Post-test	20.13	20	2.71

Table 3: Mean score and mean percentage of pre-test and post-test knowledge score of postnatal mothers

AREA	MAX SCORE	PRE-TEST		POST-TEST		GAININSCORE	
		MEAN SCORE	MEAN %	MEAN SCORE	MEAN %	MEAN SCORE	MEAN %
Hygiene	5	2.12	42.33%	4.10	82.00%	1.98	39.67%
Nutrition	7	1.80	25.71%	4.72	67.38%	2.92	41.67%
Danger Signs	4	2.35	58.75%	3.20	80.00%	0.85	21.25%
Postnatal Exercise	4	0.17	4.17%	1.90	47.50%	1.73	43.33%
Breast Care	2	0.20	10.00%	0.88	44.17%	0.68	34.17%
Perineal Care	4	1.03	25.83%	2.55	63.75%	1.52	37.92%
Management of Health Problems	4	0.25	6.25%	2.78	69.58%	2.53	63.33%

Table 4: Findings related to the evaluation of structured teaching programme on prevention and management of health problems during puerperium in terms of practice of postnatal mothers

TEST	MEAN	MEDIAN	STANDARD DEVIATION
Pre-test	9.15	8.5	4.48
Post-test	23.10	22	4.81

Table 5: Karl Pearson coefficient of correlation between post-test knowledge score and post-test practice score on prevention and management of health problems during puerperium

VARIABLES	POST-TESTMEAN	POST-TESTSD	“r”VALUE
Knowledgescore	20.13	2.71	0.61*
Practicescore	23.10	4.81	

*significant at 0.05, level of significance at df (58) “r” = 0.25

Discussion

Keeping these objectives in mind, the present study was an attempt to assess the effectiveness of Structured Teaching Programme on “prevention and management of health problems during puerperium” in terms of knowledge and practice among postnatal mothers in Sanjay Gandhi Memorial Hospital, Delhi. In this present study most of the postnatal mothers 28 (46.67%) were in the age group of 18-23 years, 34 (57%) were educated up to secondary, 59(98%) were housewife, 36(60%) were having family monthly income of Rs 5001- Rs 10000, 40(67%) were multipara, 47(78%) had vaginal delivery with episiotomy, 21(35%) stayed for 25-48 hours in the hospital, 45(75%) had history of planned pregnancy, 34 (57%) were female new born and 49 (82%) had not attended educational programme during antenatal period. Findings related to knowledge of postnatal mothers on prevention and management of health problems during puerperium. In this present study maximum sample 49 (82%) were having poor knowledge followed by 10 (17%) were having fair knowledge in the pre-test. The mean post-test knowledge scores of postnatal mothers on prevention and management of health problems during puerperium (20.13) is higher than the mean pre-test knowledge scores (7.91) suggesting that there was significant increase in the level of knowledge after administration of structured teaching programme.

This study is consistent with the study done by Timilsina Sandhya (2015) on knowledge on postnatal care among postnatal mothers in postnatal and gynaecological ward of Western Regional Hospital, Pokhara, Nepal. A descriptive research design was used in this study. Non probability purposive sampling technique was used to select the postnatal mothers. One hundred ninety-six postnatal mothers were interviewed face to face using structured questionnaires. Most of the respondents 79(40.31%) belongs to 22-25 age groups and the mean age was 24.12 years. Majority of the respondents 182(92.86%) were Hindu. All the respondents were literate. Out of 196, 146(74.48%) of the respondents, got information from friends and family. Most of the respondents 123(62.76%) had average level of knowledge on postnatal care. Highest knowledge was in the area of danger sign of mothers and new-born and the lowest in the areas of family planning. The overall mean percentage was 64.34. There was significant association of level of knowledge with selected demographic variables; occupation ($\chi^2 = 5.008$) and education level ($\chi^2 = 48.75$). Mothers had moderate level of knowledge about postnatal care. Highest knowledge was present in danger sign and lowest in family planning. Awareness program is required to improve maternal knowledge on postnatal care.^[2] This study is also consistent

with the study done by Maharjan Muna (2017). A descriptive cross sectional study design was adopted for the study on knowledge regarding postnatal care among postnatal mother. Non probability purposive sampling technique was used to select the postnatal mothers. Fifty-seven postnatal mothers were interviewed face to face using structured interview schedule in Gynaecological/Obstetrical Ward of National Medical College Teaching Hospital, Birgunj. Data were collected using pre-tested structured interview schedule in Bhojpuri version. The obtained data were analysed by descriptive statistics (frequency and percentage) and inferential statistics (chi-square). Among 57 postnatal mother half of the postnatal mothers, 30 (52.63%) had average level of knowledge regarding postnatal care. Highest knowledge was in the area of breastfeeding and lowest in the areas of family planning. There is still lack of knowledge among mothers regarding postnatal period, postnatal exercise, timing of first bath after birth of baby. There were statistically significant association between religion and knowledge of postnatal mothers (p-value 0.006). Similarly, there was no any statistical significant association of knowledge with others socio demographic variables. Different types of awareness program are required to improve maternal knowledge on postnatal care.^[8]

Findings related to practice of postnatal mothers on prevention and management of health problems during puerperium in this present study maximum sample 46 (77%) were having poor practice followed by 12 (20%) were having fair practice in the pre-test. The mean post-test practice scores of postnatal mothers on prevention and management of health problems during puerperium (23.1) is higher than the mean pre-test practices scores (9.15) suggesting that there was significant increase in the level of practice after administration of structure teaching programme. This study is consistent with the study done by Sarkar Jharna (2019). A study for assessment of knowledge and practice regarding postnatal exercises among mothers admitted in postnatal ward in Gauhati Medical College and Hospital (GMCH). 100 mothers admitted in the postnatal ward of GMCH during the period of 01.01.2013 to 20.01.2013 were assessed using the “Health Belief Model” designed by Hochbaum (1958) and modified by Rosenstock (1974). A structured interview schedule was developed to assess the knowledge and practice regarding postnatal exercises among them. Half of the mothers (52%) had moderately adequate knowledge, 28% mothers had inadequate knowledge and lowest (20%) mothers had adequate knowledge regarding postnatal exercises. Similarly, 53% mothers had moderately adequate practice of postnatal exercises and 47% of mothers had inadequate practice of postnatal exercises. Significant association

between knowledge score with education and occupation of mothers; and between practice score with age, parity, education, occupation of mothers and source of information on postnatal exercises were observed. It had been observed that there was inadequate knowledge and practice of postnatal exercises among postpartum mothers. Therefore, health awareness programme on postnatal exercises should be conducted by the health personnel to improve the knowledge and practice among the mothers.^[9]

Findings related to the correlation between knowledge and practice score The present study showed that there was positive correlation (0.61) between post-test knowledge scores and post-test practice scores of postnatal mothers. This shows that there is direct relationship between knowledge and practice on prevention and management of health problems during puerperium i.e. when knowledge increases practice also increases. This study is consistent with the study done by Rani Kamlesh (2018). A descriptive, quantitative and cross sectional study to assess the knowledge and practice of postnatal mothers on prevention of infections in early puerperium was conducted among 80 postpartum mothers who attended postnatal OPD at Govt. Civil hospital, Gidherbaha, Muktsar and Kamboj hospital. Purposive sampling technique was used to select the study participants. Participants were assessed using tools which consisted of demographic variables, knowledge questionnaire and practice checklist regarding prevention of puerperal infection. The study revealed that half of the mothers had good knowledge towards prevention of infection in early puerperium. The mean % of knowledge score was highest i.e.74.7% in 'personal hygiene' area and lowest i.e. 47.6% in the area of rest and exercise. Overall knowledge score was 65.8% in postnatal mothers. 94% of the subjects had unsatisfactory practice regarding prevention of infection. A strong positive correlation ($r = +0.88$) was found between scores of knowledge and practice score. The conclusions drawn from the study when knowledge increases practice also increases.^[10] Findings related to association between knowledge and practice score and selected factors with regard to the association of selected factors the present study shows that knowledge of postnatal mothers on prevention and management of health problems during puerperium were dependent on selected variables like education (20.25), family monthly income (9.58) and type of delivery (6.56).

With regard to the association of selected factors the present study shows that practice of postnatal mothers on prevention and management of health problems during puerperium were dependent on selected variable like education (11.99). This study is consistent with the study done by Subramani R (2016). A study to assess the knowledge and practice on selected aspects of postnatal care among primi mothers in Aravindan hospital, Coimbatore, one group pre-test post-test experimental design was adapted in the study. Sample size was 35. Non-probability convenient sampling techniques were used to select the sample. Education was given about various aspects of postnatal care i.e. diet, personal hygiene, postnatal exercise and breast feeding. The finding of the

study revealed that there is as improvement in the post-test knowledge and practice scores. Positive correlation was seen between knowledge and practice scores. The paired 't' test was used to evaluate the effectiveness of instruction module by comparing the pre-test and post test scores of knowledge and practice in each aspect separately. It was found that the 't' value was statistically significant at $P=0.05$ level. The finding of the study revealed that there was a significant difference between pre-test and post-test knowledge and practice scores. In association of demographic variable independent 't' test was used to evaluate the significant association between the selected demographic variables with the knowledge score in the pre-test and post-test. In the post-test there was a significant association between sources of information with the level of knowledge on postnatal care. There is a significant association between age, education, sources of information regarding postnatal care and area of residence with the level of practice scores in the post test.^[11] Findings related to effectiveness of structured teaching programme on prevention and management of health problems during puerperium Findings of the present study revealed that there was deficit knowledge and practice of postnatal mothers as denotes by the pre-test knowledge mean score (7.91) and after administration of structured teaching programme, the increased knowledge score mean was 20.13. Pre-test and post-test practice score mean was 9.15 and 23.1 respectively. It shows that the structured teaching program was effective. This study is consistent with the study done by Heba Talla El Ashmawy Shabaan (2018). A study to see the effect of health teaching on post-partum minor discomfort in postpartum unit at Maternity University Hospital, Cairo Governorate. Quasi experimental (pre and post-test one group) design was selected for this study. A convenience sample of 150 subjects was selected according to certain criteria. Semi structured Interviewing sheet, maternal knowledge regarding postpartum minor discomforts follows up tool. Subjects age ranged from 20 to 40 years with 44% completed secondary school education, 9.3% reached high level of education, and also, the study conveyed a level of improvement regarding breast engorgement, after pain, urinary retention, constipation and episiotomy pain. Sixty-four point seven of subjects mention that they weren't aware of expected minor discomforts during postpartum period before health teaching was given. After the teaching, only 0.7% of subjects were not aware of postpartum minor discomforts. Teaching helped to improve the women's knowledge regarding postpartum discomforts. The investigator concluded that the structured teaching programme was a good method of conveying information to postnatal mothers and it is very effective in order to improve knowledge and practice.^[12]

Conclusion

Structured teaching programme was found to be effective in improving the knowledge and practice on prevention and management of health problems during puerperium in

postnatal mothers.

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