Effectiveness of Postnatal Care by Using Comphrensive Postnatal Nursing Stratergy (CPNS) Module

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Abstract: *Postnatal period is commonly neglected part of health care where Postnatal Complications are common due to lack of early and timely systemic postnatal interventions that are the main cause for maternal morbidity and mortality in India and all over the world. Many researchers have been done to prove the systemic postnatal care improves outcomes of postnatal care, and reduce incidence of postnatal complications and promote early discharge. There are many research done on standards nursing care protocol to evaluate the quality care, the investigator has selected only satisfaction of comprehensive postnatal aspects of maternal health to find satisfaction of postnatal mother. The main objectives of the study to determine satisfaction after implementation of CPNS by the nurses in the study group and to compare the satisfaction of postnatal nursing problems among postnatal mothers in the control group and in study group, find the association of selected demographic variables of nurses and satisfaction of Postnatal Nursing Problems in the study and control group ,About 174 ,out of that 86 sample in study group and 88 sample of control group were selected conveniently from total of 24 maternity centers of Bangalore Bruhat Mahanagar pallikae, postnatal mothers are chosen as per staff inspection committee norms ratio of 1:5 i.e. that is sample of one nurse: five postnatal mothers were selected, therefore for 86 nurses 430 postnatal mothers chosen for study group, 88 nurses for 440 postnatal mothers in control group were included as per inclusive criteria. Sample selection done by non-probability convenient sampling as per inclusive criteria were chosen and postnatal mothers after delivery. An Non-equivalent control group post-test only design were selected for the study with the study and control group that had only post test conducted for both groups with intervention as implementation of comprehensive postnatal nursing care strategies is done only for the study group, data collection using interview schedules prepared on selected demographic variables of postnatal mother and nurses, assess the satisfaction of comprehensive postnatal nursing care among the postnatal mothers. The collected data analyzed by using descriptive and inferential statistics, Demographic variables analyzed using frequency and percentage. The Chi-square test was performed to assess the significance of proportion of postnatal mothers according their demographic characteristics in between the study and control group. The t-test for comparison of means of two independent population was carried out to find out the significant difference between satisfaction level in study and control group, it was found to be significant (t=50.63, p<0.001). So null hypothesis was rejected and the research hypothesis was accepted. It implied that the satisfaction level among postnatal mothers administered with CPNS by nurses was resulted to significantly more than the postnatal mothers administered with normal nursing routine. So, it is concluded that the CPNS intervention was effective in improving the satisfaction level among postnatal mothers.*

Keywords: CPNS- Compressive postnatal nursing strategy, Postnatal Complications, Systemic postnatal interventions, Maternal health, Non-equivalent control group post-test only design

1. Introduction

The ever happiest moment in every mother's life is "childbirth" and the mother enjoys presence of "healthy new born". Puerperium is the period following the body tissues especially the pelvic organ revert back approximately to prepregnant state both anatomically and physiologically by within six weeks(DC. Dutta 2016). In this study investigator has adapted the WHO guidelines (2013) and modified it as teaching module taken only slice of parental care that is comprehensive postnatal nursing strategies under expert guidance, this CPNS module is taken as training and reinforcement tool to educate the nurses to follow the strategies of CPNS and assess the outcome of postnatal nursing problems, Ministry of health and family welfare Government of India (2013) have published and reported strategic approach on reproductive maternal newborn and adolescent health in India.

2. Need of the Study

Globally 287,000 maternal deaths have occurred in the year 2010, MMR was 210 per 100,000 live births, sub-Saharan Africa 56% and southern Asia 29% accounted for 85% of maternal deaths in 2010, and at country level India accounted for 19% (56000 in numbers) of all global maternal deaths. Recommendations given by WHO on postnatal care has to be followed in every health settings on postnatal care, since as per the Latest Sample Registration report (2010) about MMR given by Registrar-General of India on MMR in Kerala 66, Tamilnadu 90 Maharashtra 87, Andhra 110 and Karnataka 144 found to decline in south India in comparing north India. On comparing all states in south, Karnataka state needs more attention than other states. There is need for further research to screen the implementation of nursing care at all levels find satisfaction, therefore the researcher was interested to investigate the satisfaction of CPNS and to prove after implementation of CPNS leads to high level of satisfaction among postnatal mother than the postnatal mothers who availed routine care.

Statement of Proble

A study to assess the satisfaction level after implementation of comprehensive postnatal nursing strategies by the nurses among postnatal mothers in the selected hospitals at Bengaluru, Karnataka", Bangalore.

Study Objectives
1) To assess the satisfaction level after implementation of CPNS among the postnatal mothers in control and study group.
2) To compare the satisfaction level after implementation of CPNS among the postnatal mothers in control and study group
3) To find the association of satisfaction level and selected demographic variables of postnatal mothers after implementation of CPNS by nurses in the study and control group

Hypotheses
1) There will be significant difference in the satisfaction of CPNS Implementation by nurses among postnatal mother in study group than the postnatal mother who availed routine postnatal nursing care in control group.
2) There will be association with satisfaction level of CPNS implementation among postnatal mothers with their selected demographic variables in study and control group.

3. Research Methodology

Research approach: A quantitative approach was considered to be most appropriate for the study

Research design: To achieve the objective of the study the research design selected was 'quasi experimental Non-equivalent control group post-test only design.

Variables:

Independent: CPNS-implementation of comprehensive postnatal nursing care strategies

Dependent: satisfaction of postnatal nursing care

Extraneous variables:
a) Nurse: age, education, type of family, monthly income, designation, and professional experience,
b) Postnatal mother: Age, education, Gravida, Care taker, previous delivery experience, source of information and co-morbidity conditions.

Setting of the study: the present study was conducted in twenty four maternity hospitals of Bruhat Bangalore Mahanagar palike in Bangalore

Population: postnatal mothers and nurses in maternity hospitals of Bruhat Bangalore Mahanagar palike in Bangalore

Sample size: About 174, out of that 86 sample in study group and 88 sample of control group were selected conveniently from total of 24 maternity centres, postnatal mothers are chosen as per staff inspection committee norms ratio of 1:5 i.e. that is sample of one nurse: five postnatal mothers were selected, therefore for 86 nurses 430 postnatal mothers chosen for study group, 88 nurses for 440 postnatal mothers in control group were included as per inclusive criteria

Sampling technique: Sample selection done by non-probability convenient sampling as per inclusive criteria were chosen and postnatal mothers after delivery

Inclusive criteria: Nurses who are
1) Willing to participate in the study
2) Working only in the postnatal ward.
3) Working in the BBMP hospitals.
4) Experienced in the field of midwifery more than two years

Postnatal mothers who
1) Are willing to participate in the study.
2) Can read and write in Kannada, and English.
3) With normal pregnancy and also mother with co-morbidity conditions like Gestational diabetes, PIH and anemia undergone normal delivery are chosen.

Exclusive criteria: **Nurses who are:**
1) Not willing to participate
2) Working other than postnatal ward
3) Has no experience in field of midwifery

Postnatal mothers who:
1) Are not willing to participate
2) Are with medical illness example cardiac thoracic diseases, and bronchial Asthma
3) Postnatal Mother with psychiatric illness
4) Postnatal mother undergone caesarean section

Description of tool

Part I: Background variables of postnatal mother: Age, education, Gravida, caretaker, source of information and co morbidity conditions, a verbal response is obtained from the postnatal mothers under gone normal delivery.

Part II: Background variables of Nurse: Age, type of family, course, monthly income, designation and professional experience in postnatal ward. A verbal response is obtained from the nurses who participated in the study.

Part III: Interview schedule to assess satisfaction of CPNS in postnatal mother:

Scoring and interpretation: The total items in this tool are 14, interview schedule to assess the satisfaction of CPNS in postnatal mother are measured as satisfaction score. The maximum score is 70, minimum score is 14

Table 1: Scoring and interpretation of satisfaction of CPNS score

S. No	Satisfaction score	Percentage
1.	Highly satisfied -70	>75 %
2.	Moderate satisfaction 28-42	50-75%
3.	low satisfaction 14-28	< 50%

Data collection process: After obtaining permission to conduct research from Institutional Ethics Committee, Head of the department OBG, from Directorate of BBMP hospitals to collect the data from nurses and conduct the training and reinforcement sessions and collect the data from the postnatal mother at BBMP hospitals.

1. Getting data from the nurse: the list of available nurses working in BBMP hospitals are obtained from the register, study group nurses in morning shift and intermediate and evening shift are identified per day three nurses are met per setting. the nurses who fulfilled the inclusive criteria also who gave the informed consent after adequate explanations about the risk and benefits of the study are approached, the data collection focused on collecting the demographic data by interview schedule from the nurse in their shift.

2. Getting information from the mother: The investigator introduced self to the group, the purposes of the study and their right to participate or withdraw from the study was explained to the postnatal mothers for obtaining the written informed consent. Such consenting postnatal mothers who fulfilled the inclusion criteria were enrolled for the study. The available postnatal mothers as per admission to ward are enrolled, strict privacy is maintained on collection of data from each postnatal mother Ethical principles were adhered to throughout the study. data on demographic variables are collected on first postnatal day for about 15 minutes, On fifth postnatal natal day post-test was conducted, about 15-30 minutes was taken to conduct the interview to administer the tool to get response about satisfaction of CPNS from the postnatal mother,.

4. Data Analysis and Interpretation

Findings on Demographic variables of postnatal mothers in study and control group:

The majority of postnatal mothers 215 (50%) were in age group between 18-23years,149 (34.7%)had done PUC study group and 244 (56.7%) of them were primi, 175 (40.7%) of them had care takers and source of information were parents, 250(58.1%) of them had no medical illness but co-morbidity conditions found are 79(18.4%) had anemia, 68(15.8%) pregnancy induced hypertension and 38(7.7%) of them had gestational diabetes

In control group majority of postnatal mothers 220 (60%) were in the age between 18-23years,54(12.3%)had done primary school education, 250(56.8%) were primi,172(39.5%) of them were parents as care takers, Source of information as media 140(31.8%), 266(60.5%) were not having no medical illness, comorbidity conditions found were 30(6.8%) gestational diabetes, 70(15.9%) pregnancy induced hypertension 74(16.8%) were anemic in

control group. The Chi-square results was found to be remain not significant ($p>0.05$).

The findings show that the sample of postnatal mothers observed in study and control group were homogeneous in their demographic characteristics as per the requisite of base line characteristics of study and control study.

Findings on Description of demographic characteristics of nurses in both study and control group. (Table 11, Figure 10 to 15)

In study group majority of the nurses 25 (29%) were in the age between 26-30yrs, 36 (41.8%) were BSc nurses, 51(59.3%) belong to nuclear family, 37(43.0%) earn rupees 10000-15000, 47(54.7%) hold designation of nurse senior, 47(54.7%) had 2-5yrs experience in postnatal ward.

In control group majority of nurses 26 (29.5%) were in the age between 36-40 years, 40 (45.45%) were BSc nurses, 53 (60.2%) belong to nuclear family ,37 (42.0%) earn10000-15000rupees,44 (50%) hold designation of nurse senior,44 (50.3%) 2-5yrs experience in postnatal ward ,Chi-square results was found to be remain not significant ($p>0.05$).

Findings show that the sample of nurses observed in study and control group were homogeneous in their demographic characteristics as per the requisite of base line characteristics of study and control study.

Findings on comparison of satisfaction level in between study and control group

Table 2: Distribution of post natal mothers according to satisfaction level of CPNS implementation in between the groups:
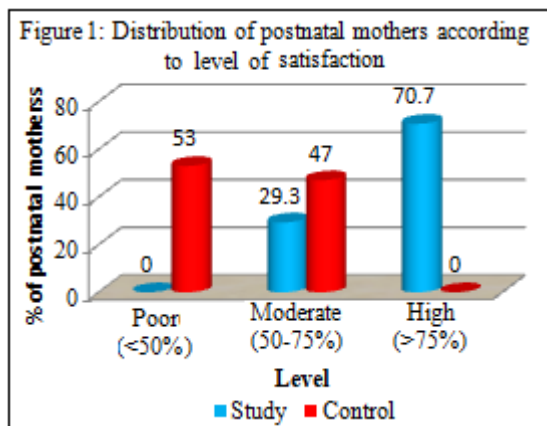
S.N	Level of satisfaction	Study		Control	
		No.	%	No.	%
1	Poor(<50%)	-	-	233	53
2	Moderate (50-75%)	126	29.3	207	47
3	High (>75%)	304	70.7	-	-
	Over all	430	100	440	100

In study group majority of postnatal mothers 304(70.7%) had high level satisfaction of CPNS implementation and least 126(29.3%) had moderate level of satisfaction and none of them had poor satisfaction of CPNS in study group.

S.N	Demographic characters	Categories	Sample (430)		Satisfaction level				Chi-square value
					Moderate		High		
			No.	%	No.	%	No.	%	
1	Age in years	18-23 years	215	50.0	80	63.5	155	51.0	8.047, df=3, S, p<0.05
		24-28 years	164	38.1	30	23.8	114	37.5	
		29-33 years	39	9.1	10	7.9	29	37.5	
		34-38 years	12	2.8	6	4.8	6	2.0	
2	Education	Primary school	58	13.5	21	16.7	37	12.2	1.889, df=1, NS, p>0.05
		Higher secondary	118	27.4	31	24.6	87	28.6	
		PUC	149	34.7	44	34.9	105	34.5	
		Graduate	105	24.4	30	23.8	75	24.7	
3	Gravida	Primi gravid	244	56.7	74	58.7	170	55.9	7.127, df=2, NS, p<0.05
		Multi gravid	177	41.2	46	36.5	131	43.1	
		Grand gravida	9	2.1	6	4.8	3	1.0	
4	Care taker	Parents	175	40.7	41	32.5	134	44.1	8.170,

		Mother in-law	67	15.6	28	22.2	39	12.8	df=3, S, p<0.05
		Relatives	157	36.5	47	37.3	110	36.2	
		Friends	31	7.2	10	7.9	21	6.9	
5	Source of information regarding postnatal care	Parents	69	16.0	30	23.8	39	12.3	13.245, df=3, S, p<0.05
		Relatives	110	25.6	23	18.3	87	28.6	
		Friends	110	25.6	26	20.6	84	27.6	
		Media	141	32.8	47	37.3	94	30.9	
6	Medical illness during antenatal period	Gestational diabetes	38	7.7	9	7.1	24	7.9	1.131, df=3, NS, p>0.05
		Pregnancy Induced hypertension	68	15.8	19	15.1	49	16.1	
		Anemia	79	18.4	27	21.1	52	17.1	
		None	250	58.1	71	56.3	179	58.9	

In control group majority of postnatal mothers 233(53%) had poor level of satisfaction of routine care least 207(47%) had moderate level of satisfaction of routine care in control group and none of them had high level of satisfaction of routine care.

Further, it was observed that a majority of postnatal mothers was highly satisfied in study groups on the other hand Majority was poorly satisfied with postnatal nursing care in control group. Findings of the study was supported by Jipi Varghese, (2012) conducted study to evaluate the level of satisfaction perceived by postnatal mothers following nursing care in postnatal wards.

Findings on Association between satisfaction levels with selected demographic variables of postnatal mothers in study group

To find the Association between satisfactions levels with selected demographic variables of postnatal mothers in study group

Table-23: Association between satisfaction levels with selected demographic variables of postnatal mothers in study group:

Note: S-significant (p<0.05); NS-Not significant (p>0.05).

Findings reveal that the association of age group with moderate level and high level of satisfaction found to be significant with chi-square value 8.047, df=3 and p<0.05.

Findings reveal that the association of education with moderate level and high level of satisfaction found to be non-significant with chi-square value 1.889, df=1 and p>0.05

Findings reveal that the association of Gravida with moderate level and high level of satisfaction found to be non-significant with chi-square value 7.127, df=2 and p>0.05

Findings reveal that the association of caretakers with moderate level and high level of satisfaction found to be significant with chi-square value 8.170, df=3 and p<0.05.

Findings reveal that the association of source of information with moderate level and high level of satisfaction found to be significant with chi-square value 13.245, df=3 and p<0.05.

Findings reveal that the association of medical illness in pregnancy with moderate level and high level of satisfaction found to be non-significant with chi-square value 1.131, df=3 and p>0.05.

In control group: To find the Association between satisfactions levels with selected demographic variables of postnatal mothers in control group.

Table 24: Association between satisfaction levels with selected demographic variables of postnatal mothers in control group

S.no	Demographic characters	Categories	Sample (440)		Satisfaction level				Chi-square value
					Poor		Moderate		
			No. (440)	%	No.	%	No.	%	
1	Age in years	18-23 years	220	50.0	113	48.5	107	51.7	1.174, df=3, NS, p>0.05
		24-28 years	166	37.7	91	39.1	75	36.2	
		29-33 years	38	8.6	19	8.2	19	9.2	
		34-38 years	16	3.6	10	4.3	6	2.9	
2	Education	Primary school	54	12.3	26	11.2	28	13.5	1.006, df=1, NS, p>0.05
		Higher secondary	124	28.2	69	29.6	55	26.6	
		PUC	149	33.9	77	33.0	72	34.8	
		Graduate	113	25.7	61	26.2	52	25.1	
3	Gravida	Primi gravid	250	56.8	131	56.2	119	57.5	0.536, df=2, NS p>0.05
		Multi gravid	179	40.7	95	40.8	84	40.6	
		Grand gravida	11	2.5	7	3.0	4	1.9	
4	Care taker	Parents	172	39.1	89	38.2	83	40.1	0.559, df=3, NS, p>0.05
		Mother in-law	69	15.7	35	15.0	34	16.4	
		Relatives	165	37.5	91	39.1	74	35.7	

5	Source of information regarding postnatal care	Friends	34	7.7	18	7.7	16	7.7	
		Parents	68	15.5	32	13.7	36	17.4	2.014, df=3, NS p>0.05
		Relatives	114	25.9	60	25.4	54	26.1	
		Friends	118	26.8	61	26.2	57	27.5	
		Media	140	31.8	80	34.3	60	29.0	
6	Medical illness during antenatal period	Gestational diabetes	30	6.8	16	6.9	14	6.8	0.98, df=3, NS, p>0.05
		Pregnancy Induced hypertension	70	15.9	37	15.9	34	15.9	
		Anemia	74	16.8	38	16.3	36	17.4	
		None	266	60.5	142	60.9	124	59.9	

Note: S-significant (p<0.05);   NS-Not significant (p>0.05).

Findings reveal that the association of age group with poor level and moderate level of satisfaction found to be non-significant with chi-square value 1.174, df=3 and p>0.05 in control group.

Findings reveal that the association of education with moderate level and high level of satisfaction found to be non-significant with chi-square value 1.006, df=2 and p>0.05

Findings reveal that the association of Gravida with poor level and moderate level of satisfaction found to be non-significant with chi-square value 0.536, df=2 and p>0.05

Findings reveal that the association of caretakers with poor level and moderate level of satisfaction found to be significant with chi-square value 0.559, df=3 and p>0.05.

Findings reveal that the association of source of information with poor level and moderate level of satisfaction found to be non-significant with chi-square value 2.014, df=3 and p>0.05.

Findings reveal that the association of medical illness in pregnancy with poor level and moderate level of satisfaction found to be non-significant with chi-square value 0.98, df=3 and p>0.05 in control group.

The results showed the association between satisfaction level and selected demographic variables in study group and control group respectively.

The Chi-Square test was carried out and it was found to be significantly associated (p<0.05) with the demographic variables of postnatal mothers such as age in years, Gravida, type of caretaker and source of information in study group, whereas in control group the same demographic variables were found to Not significant (p>0.05)

5. Conclusion

The study concluded that CPNS implementation by the nurses are found to increase the satisfaction level among the postnatal mothers, since from the findings it is clear that reinforcement of existing standard nursing practices with regular evaluation of nursing care is essential to prevent the potential complications, further strict adherence to systematic nursing practices reduces the potential maternal mortality rate.

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