



EFFECTIVENESS OF WEB-BASED NURSING INTERVENTION ON POSTPARTUM BLUES, PARENTING STRESS AND POSTNATAL OUTCOME AMONG POST CAESAREAN SECTION MOTHERS IN SELECTED HOSPITALS AT COIMBATORE

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ABSTRACT

Context: Postpartum blue and parental stress often experienced by a mother in puerperium. It could affect the health of the mother and the baby. **Aim:** The present study aimed to investigate the effectiveness of web-based nursing interventions on postpartum blue, parental stress and postnatal outcome. **Methods:** A pre-experimental one group pretest and posttest design was adopted. Purposive sampling technique was used to select 10 samples. The tools used for the study were background variable, Likert Am I Blue? Assessment scale, parental stress scale and biological parameters. Web-based interventions were given for the period of 6 weeks in 3 session/week with a duration of 30 min. **Findings:** The study result indicate the area wise comparison of mean, SD and mean % of pretest score shows that, The mean score (46.8±1.04) which is 78% of total score on the area of postpartum blue. The mean score (61.9±1.88) which is 69% of total score was on the areas of Parenting stress and mean score (6.7±1.24) which is 34% of total score was on the areas of Postnatal outcomes. However, the area wise posttest scores shows that the highest mean percentage (62%) was observed for Postnatal outcomes. More or less similar lowest mean score (27.2±1.05, 47.0±1.94) was found on postpartum blue and parenting stress, which is 45% and 52 % of total score. It shows that the highest percentage of difference was on the postnatal outcomes (62%). The lowest percentage of difference was found on the postpartum blue (45%) and parenting stress (52%). There is a significant association between the posttest score with the demographic variables of type of marriage ($\chi^2=6.24$) and the previous history of abortion ($\chi^2=4.32$) of the mother. **Conclusion:** The results revealed that the Web-based Nursing Intervention on postpartum blue, parenting stress and postnatal outcomes was found highly effective among post caesarean section mothers

Keywords: Postpartum Blues, Parenting Stress, Post-natal Outcome, Web-based Nursing Intervention .

INTRODUCTION

The puerperium, also known as the postpartum period, is the six-week period following childbirth. It's a critical time for both maternal and infant health, marked by significant physical, hormonal, and psychological changes. During this period the reproductive organs and maternal physiology return toward the pre-pregnant state. One of the important changes during this period is Postpartum blues.

Postpartum blues, often referred to as "baby blues" or "maternity blues," are a common and transient mood disturbance experienced by a significant majority of new mothers (ranging from 50% to 85%) after childbirth. The risk of experiencing depression can also

increase, since pregnant women experience anxiety or depression without realizing it, mothers experience events that make themselves depressed during pregnancy, mothers lack family and social support have history of depression.

The days and weeks following childbirth, the postnatal period, is a critical phase in the lives of mothers and newborn babies. This period is a critical, yet often neglected period in a new parent's life according to WHO. Most maternal and newborn death occur in this period. Therefore, proper parent and newborn management and care are vital. As many as 30-75 percent of women can experience the baby blues after giving birth and one in seven women can experience postpartum depression.

According to one particular study, the three predisposing factors most often found in women who developed postpartum blues were higher levels of depressive symptoms during pregnancy, at least one previous episode of diagnosed depression, and a history of premenstrual depression or other menstrual-related mood changes (O'Hara MW, Wisner KL, 2014).

Other studies have also proposed that elevated monoamine oxidase levels or decreased serotonergic activity in the immediate postpartum period are also significant risk factors or etiological characteristics that could predispose a woman to the development of postpartum blues (Sacher J, Wilson, et al, 2010, Doornbos B, Fekkes D, et al, 2008).

Postpartum depression and parenting distress are the most common psychological disturbances and growing scientific evidence suggests that both mothers and fathers are involved in this developmental crisis. The first month after partum represents a critical phase of parent's life and it could be considered a developmental crisis characterized by anxiety, stress and mood alterations that could have important repercussions on the child psycho-physical development (Maria Stella Epifanio, et al, 2015).

Ongoing randomized, controlled trial is to determine whether receiving standardized messages (text or email) from a postpartum nurse four times/week for 6 months after delivery will decrease symptoms of postpartum depression and parenting stress. Enrolled women will be randomized to one of three groups. Baseline data will be collected during the postpartum hospitalization, and follow-up will occur by email at 3 weeks, 3 months and 6 months postpartum (Deborah E. McCarter, 2018). Hitherto paucity of nursing literatures abounded on interventions like web-based nursing intervention on postpartum blues and parenting stress among post caesarean section mothers. Therefore, the present study aimed to investigate the effectiveness of web-based intervention on postpartum blue, parental stress and postnatal outcome.

METHODS

The study was approved by the institutional human ethical committee after obtaining written consent from the postnatal mothers who fulfilled the inclusion criteria such as primi mothers in the age group of 20-35 years with postpartum blue and parental stress where recruited and enrolled in the study. The total sample size was 10. Purposive sampling technique was used to recruit the subject. The background variables age, education, type of marriage, type of family, family history of postpartum blues, complications during pregnancy, previous history of abortion, support system, mode of cesarean section, marital disharmony and employment status of mother. The postpartum blue is assessed by Am I Blue assessment scale, parental stress assessed by parental stress scale and postnatal outcome assessed by biological parameters. Immediately after the pretest, the subject received web-based nursing intervention for the period of 6 weeks in 3 sessions/week with a duration of 30 min. Posttest was conducted using the same assessment scale. Descriptive, parametric, and non-parametric statistical methods were used to analyze and interpret the data. The data were expressed as frequency, percentage distribution, mean, SD. Paired "t" test was used for estimating the effectiveness of web-based nursing intervention. Chi-square test was used to associate the posttest level of postpartum blues, parental stress and postnatal outcome with selected background variables. A probability of 0.05 or less was taken as statistically significant.

RESULT AND DISCUSSION

Table 1. Frequency and Percentage distribution of post caesarean section mothers according to their demographic variables. (N = 10)

S. No	Demographic variables	Post cesarean section mothers	
		Frequency (N)	Percentage (%)
1.	Age in Years		
	a. 21 - 25 Years	5	50
	b. 25.1 - 30 Years	2	20
	c. 30.1 – 35 years	3	30
2.	Educational status		
	a. Schooling & Below	5	50
	b. Undergraduate	4	40

	c. Postgraduate and above	1	10
3.	Type of marriage		
	a. Consanguineous marriage	4	40
	b. Non consanguineous marriage	6	60
4.	Type of family		
	a. Nuclear family	5	50
	b. Joint family	3	30
	c. Extended family	2	20
5.	Family History of Postpartum Blue		
	a. Present	7	70
	b. Absent	3	30
6.	Complications during pregnancy		
	a. Present	3	30
	b. Absent	7	70
7.	Previous history of abortion		
	a. Present	4	40
	b. Absent	6	60
8.	Support System Available or Not?		
	a. Present	6	60
	b. Absent	4	40
9.	Mode of caesarean section		
	a. Elective	7	70
	b. Emergency	3	30
10.	Marital Disharmony?		
	a. Present	2	20
	b. Absent	8	80
11.	Employment status of the mother		
	a. Home maker	3	30
	b. Self-employee	3	30
	c. Private employee	2	20
	d. Government employee	2	20

Table 1 depicts the frequency and percentage distribution of the demographic variables such as age, education, type of marriage, type of family, Family History of Postpartum Blue, complication during pregnancy, Previous history of abortion, Support System Available or Not, Mode of caesarean section, Marital Disharmony and Employment status of the mother

Table 2 Frequency and percentage distribution of pre and posttest scores of postpartum blues among post caesarean section mothers. (N= 10)

Level of postpartum blue among post caesarean section mother	Pretest score		Posttest score	
	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)
Mild	-	-	4	40
Moderate	2	20	6	60
Severe	8	80	-	-

Frequency and percentage distribution of pre and posttest scores on postpartum blue among post caesarean section mother in experimental arm II depicts that, in pretest most (80%) of them were severe postpartum blue and only 20% of them were moderate postpartum blue, whereas in posttest most (60%) of them were moderate postpartum blue and 40% of them were mild postpartum blue. It seems that web-based nursing intervention on postpartum blue was effective among post caesarean section mother

Table 3 Frequency and percentage distribution of pre and posttest scores of parenting stress among post caesarean section. (N= 10)

Level of parenting stress	Pretest score		Posttest score	
	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)
Low stress	-	-	-	-
Moderate stress	6	60	9	90
High stress	4	40	1	10

Frequency and percentage distribution of pre and posttest scores on parenting stress among post caesarean section mother in experimental arm II depicts that, in pretest most (60%) of them were high stress and only 40% of them were moderate stress, whereas in posttest most (90%) of them were moderate stress and only 10% of them were high stress. It seems that web-based nursing intervention on parenting stress was effective among post caesarean section mother

Table 4 Frequency and percentage distribution of pre and posttest scores of postnatal outcomes among post caesarean section mothers. (N= 10)

Level of postnatal outcomes	Pretest score		Posttest score	
	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)
Poor	4	40	-	-
Fair	6	60	6	60
Good	-	-	4	40

Frequency and percentage distribution of pre and posttest scores on postnatal outcomes among post caesarean section mother in experimental arm II depicts that, in pretest most (60%) of them were fair postnatal outcomes and only 40% of them were poor postnatal outcomes, whereas in posttest most (60%) of them were fair postnatal outcomes and 40% of them were good postnatal outcomes. It seems that web-based nursing intervention on postnatal outcomes was effective among post caesarean section mother

Table 5. Area wise comparison of mean, SD, and mean percentage of post caesarean section mother pre and posttest of postpartum blues, parenting stress and postnatal outcome scores

S. No	Areas	Max. scores	Pretest score			Posttest score			Diff. in Mean (%)
			Mean	SD	Mean (%)	Mean	SD	Mean (%)	
1.	Postpartum blue	60	46.8	1.04	78	27.2	1.05	45	33
2.	Parenting stress	90	61.9	1.88	69	47.0	1.94	52	17
3.	Postnatal outcomes	20	6.7	1.24	34	12.3	1.03	62	28

Area wise comparison of mean, SD and mean % of pretest score shows that, The mean score (46.8±1.04) which is 78% of total score on the area of postpartum blue. The mean score (61.9±1.88) which is 69% of total score was on the areas of Parenting stress and mean score (6.7±1.24) which is 34% of total score was on the areas of Postnatal outcomes.

However, the area wise posttest scores shows that the highest mean percentage (62%) was observed for Postnatal outcomes. More or less similar lowest mean score (27.2±1.05, 47.0±1.94) was found on postpartum blue and parenting stress, which is 45% and 52 % of total score.

Further, difference in mean percentage to assess the effectiveness of web-based nursing intervention on postpartum blue, parenting stress and postnatal outcomes among post caesarean section mothers shows that the highest percentage of difference was on the postnatal outcomes (62%). The lowest percentage of difference was found on the postpartum blue (45%) and parenting stress (52%). It seems that web-based nursing intervention on postpartum blue, parenting stress and postnatal outcomes was found highly effective among post caesarean section mothers.

Table 6. Chi Square value of Association between posttest scores and demographic variables of the post caesarean section mothers

Sl.No.	Variables	DF	χ^2	Level of Significant
1	Age (in year)	2	0.81	Not Significant
2	Educational status	1	1.98	Not Significant
3	Type of marriage	2	6.24	Significant
4	Type of family	1	0.81	Not Significant
5	Family History of Postpartum Blue	1	0.19	Not Significant
6	Complication during pregnancy	1	0.32	Not Significant
7	Previous history of abortion	1	4.32	Significant
8	Support System Available or Not	2	0.36	Not Significant
9	Mode of caesarean section	1	0.21	Not Significant
10	Marital Disharmony	1	0.19	Not Significant
11	Employment status of the mother	2	0.19	Not Significant

χ^2 Value with $P < 0.05$

Association between posttest score and demographic variables of post caesarean section mothers reveals that there is no significant association between Postpartum blue, parenting stress and postnatal outcomes scores when compared to the age, education, type of family, family history of postpartum blue, complication during pregnancy, support system available or not, mode of caesarean section and marital disharmony, so reject the research hypothesis in these variables. Whereas there is a significant association with type of marriage, previous history of abortion and employment status of the mother, so reject the research hypothesis in these aspects of demographic variables. Hence it can be concluded that there is a significant association between the posttest score with the demographic variables of type of marriage, previous history of abortion and employment status of the mother.

CONCLUSION

Based on the findings of the study, the following conclusion were drawn. The Web-based Nursing Intervention is highly significant to reduce the level of postpartum blue, parental stress and improve the postnatal outcome of the post cesarean section mothers.

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