J Nur Today

RESEARCH ARTICLE

www.jolnt.com

e-ISSN 2456-1630

Efficiency of Nurse Tailored Experiment on Stress among Caesarean Mothers Admitted in Government Head Quarters Hospital at Erode – A Patient Centered Experiments

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Greentree Group

Received: 17.08.2016

Edited : 25.08.2016

Accepted: 30.08.2016

Published: 15.09.2016

ABSTRACT

Context: All women would like to be mothers. All those caesarean mothers feel lack of support from the parents and care giver. This leads to heavy stress from their whole activity.

Objectives: To examine the efficiency of nurse tailored experiment on stress among caesarean mothers.

Methods: True Experimental – A patient centered Intervention was adopted for the present study in Government Head Quarters Hospital at Erode. Estimated sample size was 30 caesarean mothers out of which 15 mothers in experimental arm and 15 mothers in control arm. Purposive sampling technique was adhered. Hung Postpartum Stress Scale was used to assess the stress pattern. Nurse tailored experiment comprises of neonatal care for maternal role attainment, emotional support (from husband and family) for the lack of social support and maternal care for body changes.

Result/ Findings: The Unpaired't' test value in experimental and control arm on Maternal role attainment (2.32), Lack of social support (7.01) and Negative body changes (8.54) had respectively. When compared with table value the calculated value was highly significant in experimental arm as compared to control arm. This shows that nurse tailored experiment was more effective on stress among caesarean mothers. Significant association was found between level of stress and age of the caesarean mother in control arm, weight of the baby significantly associated with stress in experimental arm.

Conclusion: Nurse tailored experiment was highly effective in reducing the postpartum stress level among caesarean mothers. Patient centered intervention focused on maternal role attainment.

KEYWORDS

Stress, Caesarean, Mother

INTRODUCTION

Every woman feels that becoming a mother is the most gifted position, a woman could ever achieve at life time. Child birth is a universally celebrated event, an occasion for dancing, fireworks flowers and gifts. Child birth is being a joyous event, at the same time it is a time of pain fear and stress. Stress is a part of human life and we are never completely free from stress. Stress in one area can lead to stress in another. Many things in our life can be stressful, such as period of development, marriage and child birth (Robin, M., 2002). A growing number of children around the world are being born by surgical delivery or caesarean section concerns over rising rates of cesareans have focused on the risk of death and medical complications associated with surgical delivery.

Research indicates that women who deliver by cesarean section have more negative perceptions of their birth experience, their selves and their infants, exhibit poorer parenting behaviors and may be at higher risk for postpartum mood disturbance

compared to women delivering infants vaginally (National Institute for Health and Care Excellence, 2011). Caesarean delivery was associated with high postpartum depression, anxiety and stress levels. Psychological stress and distress tended to persist in the women from the third trimester of pregnancy to 4-6 months postpartum. It tended to occur in the context of caesarean delivery, maternal sleep problems, child's health and sleep problems and stressful life events (Clout, D., &Brown ,R ., 2015).

Maternal employment, cesarean birth and infant difficultness were used to test the mediating effect of perceived stress and the stress-buffering role of health practices on maternal identity. One hundred seventy-three mothers returned a parenting survey that focused on: stressors, perceived stress, health practices, maternal identity and a demographic profile. Work status and infant difficultness were related to perceived stress. Neither had direct effects on maternal identity, but were related to it through the mediating effects of perceived stress. While health practices did not show buffering effects between stressors and perceived stress, these did contribute additively to the prediction of stress perception. Also, health practices contributed additively to the prediction of identity. Notable among the health practices predicting identity were self-actualizing expression, nutrition, interpersonal support and stress management. These findings support a stress process model of parenting in which effects of stressors on maternal identity are mediated by perception of stress and health practices contribute positively and directly to maternal identity (Lorraine.O, 2016).

Nursing experiment can be tailored to address the items on the Hung Postpartum Stress Scale that postpartum women indicate to be the most stressful. Additional research is recommended using confirmatory factor analysis to determine the stability of the factor structure identified in the studies regardless of high or low risk postpartum women (Hung, Chich Hsiu, 2013). Many literatures shows paucity of research work in nurse tailored experiment on postpartum stress among caesarean mothers. Still research gap exists with nurse tailored experiments for stress in caesarean mothers. The novelty of this research work is based on the intensity of the stress level and need for nurse tailored experiments among caesarean mothers.

MATERIALS AND METHODS

The research design selected for the present study was True experimental design- A patient centered intervention with experimental and control arm. The

total sample size was 30 caesarean mothers out of which 15 participants were in experimental arm and 15 participants were in control arm. Purposive sampling technique was used to select the caesarean mothers admitted in Government Head Quarters Hospital at Erode. Inclusion criteria comprise of primi caesarean mothers with age between 20 and 30 above, who were living with husband. Participants excluded were mothers with postpartum psychosis, mother with HIV, baby sick in NICU and baby with congenital deformity.

Instrument consists of demographic profile of caesarean mothers like maternal age, education, occupation, type of family, religion, residence, care and support received during antenatal period. Demographic profile of the baby comprises of gender and weight of the baby. Hung postpartum stress scale was used to assess the stress level. The scale consists of 3 aspects like maternity role attainment, lack of social support and body changes.

Prior to the collection of data, permission was obtained from the Medical Officer, Government Head Quarters Hospital, at Erode. After getting approval from Institutional review board of Dhanvantri Institute of Medical Education and Research, pretest was conducted using Hung Postpartum Stress Scale. Immediately after the pretest, based on the high intensity of stress level on maternal role attainment, lack of social support and negative body changes, nurse tailored experiment was administered. Patient centered intervention comprises of the following

For Maternal Role Attainment- Neonatal Care like Baby Bath, Dressing, Diapering and Breast Feeding were administered. For Lack of Social Support- Seeking emotional Support from Husband and Family Members, Demonstrating feeding formula brands were intervened. For Negative Body Changes- Care of mother comprises of menstrual hygiene, postnatal exercise, sleep pattern and choosing contraceptive methods were administered. Experiment was given from 1st post operative day, throughout the day, during the day time for consecutive 7 days. On the 7th day, posttest was conducted by using the same instrument. Subject's right to withdraw / withhold the information was ensured before data collection. Informed consent form was translated into Tamil language. After clarifying the doubts, signature was obtained from the caesarean mothers. Written Informed consent was obtained from each participants related to the study purpose, type of data, nature of commitments, participations and procedure. Confidentiality of the data was

ensured throughout the study. Risk benefit ratio was calculated. Descriptive, inferential and nonparametric statistical analytic method was used to analyze and interpret the data. The data was expressed as frequency, percentage distribution, mean ± SE. Paired' test was used for estimating the efficiency of nurse tailored experiment in experimental and control arm. Unpaired t test was used to compare the efficiency of nurse tailored experiment between experimental and control arms. Chi square test was used to associate the stress with selected demographic profile. A probability of 0.05 or less was taken as statistically significant. SPSS package 17 version was used for analysing the data.

Table 1 Comparison of mean, standard error pre and posttest scores on level of stress among experimental and control arm

Areas	Max scores	Experimental arm Pretest		Control arm Pretest	
		Mean	SE	Mean	SE
Hung postpartum Stress scale	**30**				
Maternal role attainment	10	20.4	0.56	18.8	0.38
Lack of social support	11	16.7	0.48	15.6	0.38
Negative body changes.	9	14.7	0.40	13.7	0.31

Comparison of mean, SE pretest scores of experimental and control arm reveals that, Maternal role attainment (20.4 ± 0.56), (18.8 ± 0.38), Lack of social support (16.7 ±0.48), (15.6 ±0.38) and Negative body changes (14.7 ±0.40), (13.7 ±0.31) respectively (Table-1).

Table 2 Comparison of Mean and standard Error of level of stress among experimental and control arm posttest scores

Areas	Max scores	Experimental arm Posttest		Control arm Posttest	
		Mean	SE	Mean	SE
Hung postpartum Stress scale	**30**				
Maternal role attainment	10	9.76	0.55	15.8	0.42
Lack of social support	11	8	0.43	12.6	0.38
Negative body changes	9	9.3	0.51	10.7	0.31

Table 3 Paired't' test value of pre and posttest scores on stress level in experimental and control arm

Areas	Experimental arm			Control arm		
	Paired t test	Table value	Level of significance	Paired t test	Table value	Level of significance
Maternal role attainment	5.36	2.14	P<0.05Significant	16.29	2. 14	P<0.05Significant
Lack of social support	5.55	2. 14	P<0.05Significant	13.48	2. 14	P<0.05Significant
Negative body changes	6.81	2. 14	P<0.05Significant	8.41	2. 14	P<0.05Significant

Paired‘t’ test was calculated to analyze the effectiveness between pre and posttest scores of experimental and control arm on level of stress among caesarean mothers. The paired‘t’ test value in experimental and control arm on maternal role attainment (5.36, 16.29), Lack of social support (5.55, 13.48) and Negative body changes (6.81, 8.41) had respectively. When compared with table value the calculated value was highly significant in experimental arm as compared to control arm. This shows that nurse tailored experiment was more effective on stress reduction among caesarean mothers. (Table-3)

Table 4 Unpaired‘t’ test value of posttest scores on level of stress in experimental and control arm **Areas**

Posttest scores of stress in experimental and control arms	Unpaired ‘t’ test	Table value	Level of Significant
Maternal role attainment	2.32	2.08	P<0.05 Significant
Lack of social support	7.01	2.08	P<0.05 Significant
Negative body changes	8.54	2.08	P<0.05 Significant

Comparison of mean, SE posttest scores of experimental and control arm reveals that, Maternal role attainment (9.76 ± 0.55), (15.8 ± 0.42), Lack of social support (8 ±0.43), (12.6 ±0.38) and Negative body changes (9.3 ±0.51), (10.7 ±0.31) respectively. In experimental arm, maternal role attainment posttest mean scores of stress level had decreased when compared with pretest mean scores. Whereas control arm revealed only mild reduction of stress level in posttest mean scores when compared with pretest mean scores. (Table-2)

Unpaired‘t’ test was calculated to analyze the effectiveness between experimental and control arm posttest scores on level of stress among caesarean mothers. The Unpaired‘t’ test value in experimental and control arm on Maternal role attainment (2.32), Lack of social support (7.01) and Negative body changes (8.54) had respectively. When compared with table value the calculated value was highly significant in experimental arm as compared to control arm. This shows that nurse tailored experiment was more effective on stress among caesarean mothers. (Table-4).

Table 5 Association between posttest stress scores and selected demographic profile among experimental and control arm of caesarean mothers

DEMOGRAPHIC PROFILE			**EXPERIMENTAL ARM**			**CONTROL ARM**		
Caesarean Mother		**df**	**Chi – Square**	**Table Value**	**Level of Significant**	**Chi – Square**	**Table Value**	**Level Of Significant**
1.	Age	2	2.63	5.99	P>0.05Not significant	3.63	5.99	**P<0.05Significant** *
2.	Education	2	1.15	5.99	P>0.05Not significant	1.15	5.99	P>0.05Not significant
3.	Occupation	2	0.93	5.99	P>0.05Not significant	0.53	5.99	P>0.05Not significant
4.	Type of family	1	1.37	3.84	P>0.05Not significant	1.37	3.84	P>0.05Not significant
5.	Religion	2	1.73	5.99	P>0.05Not significant	1.36	5.99	P>0.05Not significant
6.	Residence	1	0.83	3.84	P>0.05Not significant	1.83	3.84	P>0.05Not significant
7.	Care and support during antenatal period	2	1.63	5.99	P>0.05Not significant	0.67	5.99	P>0.05Not significant
Baby		**df**	**Chi – Square**	**Table Value**	**Level of Significant**	**Chi – Square**	**Table Value**	**Level of Significant**
8.	Gender	1	0.88	3.84	P>0.05Not significant	1.06	3.84	P>0.05Not significant
9.	Weight of the baby	1	7.46	3.84	**P<0.05 Significant***	4.15	3.84	P>0.05Not significant

Chi square was calculated to find out the association between experimental arm posttest scores of the stress among caesarean mothers and baby with their selected demographic profile. It reveals that significant association was found between level of stress and weight of the baby ($p<0.05$). There was no significant association found between stress level and caesarean mother's age, education, occupation, type of family, religion, residence, care and support during antenatal period. Likewise no significant association found between stress level and baby's gender ($p>0.05$) (Table-5).

Chi square was calculated to find out the association between control arm posttest scores of the stress among caesarean mothers and baby with their selected demographic profile. It reveals that significant association was found between level of stress and age ($p<0.05$). There was no significant association found between stress level and caesarean mother's education, occupation, type of family, religion, residence, care and support during antenatal period. Likewise no significant association found between stress level and baby's gender, weight of the baby ($p>0.05$) (Table-5).

DISCUSSION

In experimental arm, maternal role attainment posttest mean scores of stress level had decreased when compared with pretest mean scores. Whereas control arm revealed only mild reduction of stress level in posttest mean scores when compared with pretest mean scores. When compared with table value the calculated value was highly significant in experimental arm as compared to control arm. This shows that nurse tailored experiment was more effective on stress among caesarean mothers (Paired't' test & Unpaired't' test). This finding was partly supported by the research report of Deborah etal (2006) who examined early program outcomes to indicate reduced premature birth rates for both groups compared with national data on adolescent mothers and fewer days of infant hospitalization during the first 6 weeks postpartum for the EIP participants. Public health nurse care (both traditional and intensive) significantly improved perinatal outcomes; the intensive intervention significantly reduced the number of infant hospitalization days.

These study findings were consistent with the research report of Smilkstein's, (2013) who conducted a longitudinal study with data collected at the first, the third and the fifth weeks of the postpartum period. Five hundred and twenty six postpartum women were included in the study using stratified sampling from clinics and hospitals in Kaohsiung City in the southern part of

Taiwan. The Hung Postpartum Stress Scale (HPSS), Smilkstein's Social Support Scale, and the Chinese Health Questionnaire were used to obtain information about the women's postpartum stress, social support, and health status at each time point. Data were analyzed with factor analysis, repeated measures MANOVA, and multiple logistic regressions.

From the findings of the study it can be concluded that nurse tailored experiment-Patient centered intervention was highly statistically significant on reduction of stress level on maternal role attainment among caesarean mothers.

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