Nursing Section

Effect of Benson's Relaxation Therapy on Post Caesarean Section Pain and Stress: A Pilot Study

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ABSTRACT

Introduction: Many mothers face some discomfort after caesarean section like pain, mood changes, postpartum depression and stress. Non pharmacological methods can be utilised to relieve these discomforts as they are simple to use, inexpensive and do not have any side effects. Benson's Relaxation Therapy (BRT) is a form of breathing exercise to be done by postcaesarean section mothers, breathing in and out in sitting position with closed eyes, Saying to oneself the word "one" while breathing out.

Aim: To evaluate the effect of BRT on level of pain and stress among postcaesarean section mothers.

Materials and Methods: Quantitative research approach with quasi experimental: pre test post-test control group design was used. By using convenient sampling technique, total 10 samples {experimental group (5) and control group (5)} were recruited. The intervention was given to the experimental group twice a day for three consecutive days. BRT was not done in control group. Post interventional pain and stress was assessed on 3rd day by using numerical pain rating scale for pain assessment and Modified Hung's postpartum stress scale for stress assessment. Data were collected by using SPSS version 20. The t-test was used to analyse the data. The p-value less than 0.05 was considered as significant.

Results: The study showed that BRT was effective in reducing pain level in experimental as well as in reducing stress level. The mean pain score for experimental group reduced from 7 to 2.2 while in control group it was 7.60 at pre-intervention and 4.6 at follow-up. The mean stress score for the experimental group reduced from 90.60 to 57.60 while in control group it was 92.00 at pre-intervention and 75.20 at follow-up.

Conclusion: This study reflected the positive effect of BRT in reducing pain and stress level among postcaesarean section mothers.

INTRODUCTION

During pregnancy body experiences different anatomical and physiological changes [1]. There are different ways of delivery. Caesarean section is a surgical intervention to deliver baby when normal delivery can increase the risk to mother as well as the baby.

As per recommendation of World Health Organisation (WHO), caesarean delivery should be between 10-15% of all the deliveries. In India, caesarean section rates have been increasing from 10% to 30%, according to a recent analysis of NFHS 1992-93 to 2015-16 [2].

Worldwide, number of babies getting delivered via caesarean section has nearly doubled in recent years [3]. Post caesarean pain affects the body similar to traumatic stress causing rise in pulse, blood pressure and tightess of muscles [4].

Numerous non pharmacological methods are available which ease these discomforts. These are distraction, foot massage, relaxation exercises, deep breathing, guided imagery, acupressure, therapeutic touch, music and repositioning [5].

Benson's Relaxation Therapy (BRT) is a non pharmacological technique which causes relaxation of the body through breathing awareness. It is defined as an ability of the body to secrete some kind of chemicals and send brain signals that can relax muscles and organs and increase blood flow to the brain. There are several methods to elicit the relaxation response such as yoga, prayer, progressive muscle relaxation, energy healing, acupuncture, massage, breathing techniques and meditation [6]. Relaxation is one of the non pharmacological methods to reduce pain level. It can help in reducing anxiety, decrease muscle tension and indirectly lessen pain. Several studies demonstrated that relaxation is found to be effective in reducing pain level in various conditions [5,7].

Study conducted by Solehati T and Rustina Y on effectiveness of BRT in reducing pain intensity in women after caesarean section showed that BRT can reduce pain level [7]. The present study was conducted to evaluate the impact of BRT on level of pain and stress among postcaesarean section mothers. There is a need to assess the level of postcaesarean stress among mothers and the effectiveness of BRT on them.

MATERIALS AND METHODS

The research approach used for this study was quantitative approach. Quasi experimental: pre test, post-test control group design was selected. The present study was conducted in the month of October 2019. Ten postcaesarean section females from selected hospitals of Anand district were included in this pilot study. A non probability convenient sampling technique used to select samples: five samples in each group (test group and control group).

Permission was obtained from CHARUSAT Institutional Ethical Committee, Ethical Clearance Reference Number: IEC/CHARUSAT/01 Charotar University of Science and Technology, Gujarat, India.

Inclusion criteria: The inclusion criteria for this study were postcaesarean section mothers, who have undergone caesarean section within 2 days, who were either primigravida or multigravida, under the age group 18-32 years.

Exclusion criteria: Postcaesarean section mothers, whose newborn had any congenital disorder or had a still birth or neonate died within few hours of delivery were included; who were diagnosed to have any psychological illness, taking any other non pharmacological therapy for postcaesarean section pain and stress relief, diagnosed to have any postnatal complication or respiratory disorder were also included.

The samples which fulfill inclusion criteria of study and want to participate in research gave their informed consent and were randomly allocated to experimental and control group (N=5).

Data collection proforma consisted of socio demographic variables such as age, education, occupation, monthly family income, type of family and maternal variables such as parity, mode of previous delivery, indication and type of caesarean section, postnatal day.

Numerical pain rating scale: This scale used to assess the pain level of postcaesarean section women. It ranges from 0-9, where '0' represents no pain and '9' represents worst pain. Scoring criteria for this is 0=No pain, 1-3=Mild pain, 4-6=Moderate pain, 7-9=Severe pain, 10=Worst possible pain [8].

Modified Hung postpartum scale: This scale used to assess the stress level of postcaesarean section women [9],

Scoring criteria: 0=No stress

1-74=Mild stress

75-97=Moderate stress

98-160=Severe stress

Preintervention assessment of pain and stress level done for both groups. Participants in experimental group were asked to sit in comfortable position with closed eyes, Breathing in and out slowly through the nose while relaxing the body. Saying to oneself the word "one" while breathing out (The BRT). It was done twice a day for a duration of 10 minutes, conducted for three consecutive days. BRT was not administered in control group. Post-test conducted on third day after intervention to in both the groups without intervention with the help of the same tool.

STATISTICAL ANALYSIS

The collected data were organised and analysed by using, SPSS version 20. The p-value of <0.05 was considered as statistically significant. Findings related to demographic and maternal variables of postcaesarean section mothers of both experimental and control group were stated in terms of frequency and percentage. The t-test was done to compare the effect of BRT on level of pain and stress in experimental and control group.

RESULTS

The data presented in [Table/Fig-1] depicts that that majority of women in the experimental group belonged to age group of 23 to 27 years and 28 to 32 years 2 (40%) in each while in control group most participants belonged to 18 to 22 years and 28 to 32 years {2 (40%) in each}. A total of 4 (80%) participants in experimental and 3 (60%) participants in control group had height between 141-150 cm. Majority of participants in experimental group 3 (60%) had weight between 51-60 kg while in control group most participants had weight of ≤50 kg and between 51-60 kg that is 2 (40%) respectively. A total of 4 (80%) participants from control group and 1 (20%) from experimental group were primipara.

A total of 2 (40%) participants in experimental group had previous delivery through caesarean section. Foetal malpresentation was the indication for present caesarean section in both experimental group 4 (80%) and control group 2 (40%). A total of 2 (40%) participants from experimental group and 3 (60%) participants from control group had emergency caesarean section. Majority 3 (60%) of participants were in 1st postnatal day in both experimental group and control group.

The t-test was used to identify the efficacy of BRT on pain and stress level. It showed that BRT was effective in reducing pain and stress level as the p-value was less than 0.05 in both experimental and control group. But pain and stress reduced in interventional group more than control group. It may be due to small sample size [Table/Fig-2].

Sr. No.	Demographic and maternal variable	Experimental group		Control group	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
1.	**Age**				
	18 to 22 years	1	20	2	40
	23 to 27 years	2	40	1	20
	28 to 32 years	2	40	2	40
2.	**Educational status**				
	No formal education	0	-	2	40
	Primary education	3	60	0	-
	Secondary and/or Higher secondary education	1	20	2	40
	Graduation and/or above	1	20	1	20
3.	**Types of family**				
	Nuclear family	2	40	3	60
	Joint family	3	60	2	40
4.	**Occupation**				
	Housewife	5	100	5	100
	Related to medical profession	0	-	0	-
	Related to non-medical profession	0	-	0	-
5.	**Monthly income in Rs**				
	≤5000	3	60	2	40
	5001-10000	1	20	2	40
	10001-20000	1	20	1	20
	≥20001	0	-	0	-
6.	**Place of residency**				
	Rural area	5	100	2	40
	Urban area	0	-	3	60
7.	**Height**				
	<140 cm	0	-	0	-
	141-150 cm	4	80	3	60
	151-160 cm	1	20	2	40
	>161 cm	0	-	0	-
8.	**Weight**				
	≤50 kg	2	40	2	40
	51-60 kg	3	60	2	40
	61-70 kg	0	-	0	-
	71-80 kg	0	-	1	20
	≥81 kg	0	-	0	-
9.	**Type of diet**				
	Vegetarian	4	80	2	40
	Non vegetarian/Mixed	1	20	3	60
10.	**Number of deliveries including present delivery**				
	1	1	20	4	80
	2	2	40	1	20
	3	2	40	0	-
	≥4	0	-	0	-
11.	**Mode of immediate previous delivery**				
	Not applicable	1	20	4	80
	Normal vaginal delivery with episiotomy with or without use of forceps and vaccum	1	20	1	20
	Normal vaginal delivery without episiotomy	1	20	0	-
	Cesarean section	2	40	0	-
12.	**Indication of present delivery**				
	Meconium aspiration syndrome	1	20	1	20

	Foetal distress	0	-	0	-	
	Foetal malpresentation	4	80	2	40	
	Any other (Specify)	0	-	2	40	
13.	Type of cesarean section in present delivery					
	Emergency caesarean section	2	40	3	60	
	Elective caesarean section	3	60	2	40	
14.	Postnatal day					
	1	3	60	3	60	
	2	2	40	2	40	

[Table/Fig-1]: Socio-demographic profile of the study participants.

Group		Mean	Std deviation	t	p value
Experimental group	Pre test pain	7	1.22	7.236	0.002
	Post-test pain	2.20	0.84		
	Pre test stress	90.60	6.84	9.083	0.001
	Post-test stress	57.60	9.07		
Control group	Pre test pain	7.60	0.55	6.708	0.003
	Post-test pain	4.60	0.55		
	Pre test stress	92	8.28	15.73	<0.001
	Post-test stress	75.20	8.67		

[Table/Fig-2]: Comparison of Benson Relaxation Therapy (BRT) on level of pain and stress in experimental and control group.

DISCUSSION

The present pilot study involved the effect of Benson relaxation therapy on pain and stress. Similar study was conducted by Priya et al., to assess the effectiveness of BRT on reduction of pain in postcaesarean section mothers [10]. Another study was done by Sindhumol et al., on 38 postcaesarean section women and findings showed that after intervention (BRT), there was a statistically significant reduction in pain perception at 95% Confidence Interval (CI) (p<0.005) [5]. Same project conducted by Paramban et al., to identify the efficiency of BRT in reducing stress level in women, where mean score before intervention was 26.33 and post-stress mean score was 17.1 with t-value 7.21 which was statistically significant at 0.01 level [11]. One more study conducted by Nuri et al., to identify effect of BRT on pain, where finding of studies showed that the difference in the average pain intensity after treatment between the intervention group and the control group was -1.125 with a significance value of 0.039 (p<0.005) that means there was statistical difference between pre-test and pre test [12].

The present study was conducted only on 10 postcaesarean section mothers (5 experimental and 5 control). Finding of this study showed that majority of participants experienced moderate to severe kind of pain and stress in pre test and mild to moderate level of pain and stress in post-test. Previous studies have also found that many women after caesarean section experience severe kind of pain [6,8,11]. BRT was effective in reducing pain level as the p-value was less than 0.05 in both experimental and control group. But Pain and stress reduced in interventional group more than control group. The difference may be either credited to the utilisation of different instruments for data collection and also sample size. In this current study, sample size is less as it is pilot study. So, this study can be conducted on a large scale to identify the efficacy of this intervention.

Limitation(s)

The present study was pilot study with just 10 postcaesarean mothers. The study was limited to postcaesarean section women of selected hospitals of Central Gujarat. Further studies are needed to be done in larger numbers and at multiple centres to assess the effectiveness of BRT in post caesarean stress in women.

CONCLUSION(S)

The findings of this study concluded that there was reduction in the level of pain and stress in the experimental group after intervention compared to control group. Thus, one has to understand about the benefit of this intervention in reducing pain and stress among postcaesarean section mothers. Consequently, it will improve the quality of life physically and mentally. BRT is a Non pharmacological approach which is simple, effective and a nonexpensive method to reduce pain and stress level. Therefore, similar studies can be done on larger scale to know the efficacy of BRT on pain and stress.

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