

# Efficacy of Benson's Relaxation Technique on Reduction of Pain and Anxiety among Post Cesarean Mothers

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## ABSTRACT

**Background:** The pain after cesarean section is caused by tissue incision and post-caesarean mothers have experienced anxiety that is correlated with a higher-level post-operative pain, but the disproportionately caesarean section has a high prevalence of pain and anxiety Hence Benson's relaxation therapy is one of the most effective management in reducing post-operative pain and anxiety among post-caesarean mothers.

**Methods:** Pre-experimental study with one group pre-test, post-test design. A purposive sample of 50 post caesarean mothers was selected from OBG units of HSK hospital Bagalkot. Socio-demographic information was gathered using a structured socio-demographic profile and pain and anxiety were assessed using a numeric rating scale and generalized anxiety disorder-7 item scale respectively. Data were analyzed in terms of the objectives of the study.

**Results:** The difference between mean pre-test pain (6.54±2.03) and post-test (3.58±1.26) pain was statistical significance ( $t=12.85$ ,  $p<0.05$ ) similarly there was a statistical significance difference ( $t=21.54$ ,  $p<0.05$ ) between the mean pre-test anxiety scores (13.40±0.88) and mean post-test anxiety scores (10.24±1.11). A significant association was found between post-test pain levels with Type of family ( $p=0.03$ ,  $p<0.05$ ), Postoperative days ( $p=0.01$ ,  $p<0.05$ ). A significant association was found between post-test anxiety levels with their Residence (0.01,  $p<0.05$ ), Previous history of CS (0.01,  $p<0.05$ ).

**Conclusion:** The study proved that Benson's relaxation therapy intervention programme for the reduction of pain and anxiety among post-caesarean mothers was a very effective, scientific, logical, and cost-effective strategy.

**Key-words:** Assess effectiveness, Anxiety, Benson's Relaxation technique, OBG units, Pain, Post cesarean mothers

## INTRODUCTION

The birth of a child is a pivotal time in the life of a mother and her family. The health and well-being of a mother and child at birth largely determine the future health and wellness of the entire family. Globally the chances of safely giving birth to a live baby and its good health are better than ever <sup>[1]</sup>.

The name caesarean section is derived from the word "caeder" which means "to cut" in which the term "caesarean section" is redundant <sup>[2,3]</sup>. A caesarean section is often necessary when a vaginal delivery would put the baby or mother at risk. Reasons for this may include obstructed labour, twin pregnancy, high blood pressure in the mother, breech birth, or problems with the placenta or umbilical cord.<sup>[4,5]</sup> Caesarean delivery may be performed based upon the shape of the mother's pelvis or history of a previous C-section.<sup>[6]</sup> Pain is one of the major discomforts to the mother as well as she can't be able to feed properly to the baby, so to reduce the pain will go some medical remedies like drug therapy or alternative therapies like relaxation therapy or music

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therapy, so we selected Benson's Relaxation technique to reduce the pain and anxiety among post-C-section mothers.<sup>[7]</sup>

The post caesarean mothers have a higher level of experienced anxiety was correlated with a higher-level post-operative pain and with a less effective recovery process. Importantly, anxiety can be generated and enhanced by mere awareness of the inevitability of pain.<sup>[8,9]</sup> Benson's relaxation technique is a simple easy to learn and implement and does not require high cost and non-pharmacological treatment. It is one of the suitable ways for reducing the pain and anxiety of the post caesarean mothers. It will give the complete relaxation of body and mind for the post caesarean mothers.<sup>[10]</sup>

Benson's relaxation aims to reduce anxiety, decrease muscle tension and bone, as well as indirectly relieve pain and reduce tension related to the body's physiological. Several studies have shown that Benson's relaxation is effective in reducing post-operative pain.<sup>[11]</sup>

The best time to practice the relaxation response is in the morning for 10 to 20 minutes. Steps to elicit the relaxation response are first thing is sat quietly in a comfortable position. Close your eyes. Deeply relax all your muscles, beginning at your feet and progressing up to your face. Keep them relaxed, and breath through your nose. Become aware of your breathing. As you breathe out, say the word "one" silently to yourself, for example, breath in, and out, and say "one". Breathe easily and naturally and continue for 10 to 20 minutes. You may open your eyes to check the time, but do not use an alarm. When you finish, sit quietly for several minutes, then open your eyes slowly and also do not stand for a few minutes.<sup>[12]</sup>

Practising just once or twice daily can be enough to reduce the pain and anxiety of the post caesarean mothers. So, Benson's relaxation therapy is one of the easiest methods for reducing pain and anxiety for mothers.<sup>[12]</sup>

## MATERIALS AND METHODS

**Study Design and Participants-** The present study is a pre-experimental one-group pre-test, post-test without control group design without randomization. Data were collected for 25 days from 05/05/2021 to 30/05/2021 in OBG units of HSK hospital Bagalkot. In this study sample size is 50 post caesarean mothers with pain and anxiety admitted to OBG units of HSK hospital Bagalkot by using the purposive sampling technique.

**Exclusion Criteria-** The post caesarean mothers, who are not mentally fit to do the relaxation technique, Unable to co-operate throughout the study, sick at the time of the data collection, Unable to perform the intervention guided by the researcher.

**Inclusion criteria-** The post caesarean mothers, who have been screened for symptoms of OD pain and anxiety, have mild to moderate pain and anxiety are available at the time of data collection are willing to participate in the study, able to speak and understand the Kannada language.

## Instruments

**Socio-demographic Profile-** It consists of 16 items of socio-demographic information on the subjects such as Age, Religion, Family monthly income, Place of residence, educational status of mothers, Occupation of the mother, Type of family, Parity, Number of children, Indication for caesarean section, Gestational age, Number of postoperative days, Previous history of caesarean section, Blood pressure, attended any intervention previously, Source of information about Benson's relaxation therapy.

**Numeric Rating Scale-** Numeric rating scale (NRS) was used to assess the level of pain. It consisted of 11 points scale ranging from 0 to 10. The post-caesarean mothers were categorized into different categories based on their level of pain scores. The categorization of pain is as follows (Table 1).

**Table 1:** Post caesarean mothers categories based on their level of pain scores

Category of pain	Score
None (no pain)	0
Mild Pain (nagging, annoying, interfering, little with ADLs)	1 -3
Moderate Pain (interferes significantly with ADLs)	4 -6
Severe Pain (disabling; unable to perform ADLs)	7 -10

**Generalized Anxiety Disorder-7 (GAD-7)-** GAD-7 (Generalized Anxiety Disorder-7) scale was used to assess the anxiety among post-caesarean mothers. There are 7 items on the generalized anxiety disorder scale

scored 4-point Liker scale (Not at all sure=0, several days=1, Over half the days=2, nearly every day=3). The total score ranges from 0 to 21. The post-caesarean mothers were categorized into different categories based on their level of anxiety; mild anxiety or no clinical Significance (0-14) and a sign of significantly generalized anxiety (15-21).

**Data collection procedures-** In the present study, the data was collected by the researcher herself after obtaining formal administrative approval from the principal of Sajjalashri institute of nursing science Bagalkot and permission from the dean from HSK hospital Bagalkot and informed consent from the subjects.

**Phase I-** Pretest is conducted to assess the level of pain and anxiety among post-caesarean mothers.

**Phase II-** Benson's relaxation technique was administered for 30 to 35 minutes every day 2 sessions for 3 consecutive days for post-caesarean mothers.

**PHASE III-** After completion of intervention on the 4<sup>th</sup> day immediate post-intervention assessment (post-test) was done to assess the pain and anxiety among post-caesarean mothers using some tools.

**Statistical Analysis-** Statistical analysis in the present study was done with the help of SPSS 25. Descriptive statistics such as frequency percentage distribution and mean and standard deviation were used to describe the socio-demographic variables and outcome variables, inferential statistics such as 't' test and chi-square test were used to test hypothesis.

**Ethical clearance-** Ethical clearance was obtained from the institutional ethical committee of BVVS Sajjalashree Institute of Nursing Sciences, Bagalkot.

## RESULTS

**Socio-demographic characteristics of post caesarean mothers-** The percentage wise distribution of post caesarean mothers according to their age group highest percentage (56%) in the age group of 24-29 years, religion the highest percentage (58%) Hindu, monthly income the highest percentage (70%) are getting 10001-20000 Rs monthly income, Residence the highest percentage (56%) from urban area, education reveals

that highest percentage (42%) secondary education, occupation reveals that highest percentage (64%) are housewife, type of family reveals that, highest percentage (70%) are from joint family, parity reveals that, highest percentage (54%) parity 2, number of children reveals that highest percentage (52%) have other indication, gestational age reveals that, highest percentage (72%) were 38 weeks of gestational age, post operative days reveals that, highest percentage (50%) operative days are 3 days, previous history of caesarean section reveals that, highest percentage (66%) were under the previous history of caesarean section, blood pressure reveals that, highest percentage (97%) blood pressure was 120/80-140/90 mmhg, previous intervention regarding Benson's relaxation therapy revealed that highest percentage (98%) were not attended in previous intervention and regarding source of information about Benson's relaxation therapy reveals that, highest percentage (98%) not had information.

**Assessment of level of pre-test and post-test scores of pain among post-caesarean mothers-** Findings related to assessment of pre-test levels of pain among post-caesarean mothers reveal that almost the same percent of post-caesarean mothers had moderate pain (46%), severe pain (42%) and remaining (12%) of them had mild pain (Table 2).

**Table 2:** Assessment of pre-test levels of pain among post caesarean mothers

Level of pain	Range of scores	Frequency	Percentage (%)
None	0	0	0
Mild	1-3	6	12
Moderate	4-6	23	46
Sever	7-10	21	42
Total	10	50	100

**Assessment of pre-test and the post-test score of anxiety among post caesarean mothers-** Findings related to assessment of pre-test levels of anxiety among post-caesarean mothers reveal that (100%) of post caesarean mothers had a sign of significantly generalized anxiety and (0%) in mild anxiety shows in Table 3.



**Table 3:** Assessment of pre-test level of anxiety among post-caesarean mothers

Level of pain	Range of scores	Frequency	Percentage (%)
Mild Anxiety or No Clinical Significance	0-14	0	0
Sign of Significant Generalized anxiety	15-21	50	100
Total	21	50	100

**Effectiveness of Benson's relaxation therapy on pain and anxiety among post-caesarean mothers-** Findings show that the difference between the mean pre-test (6.54±2.03) and post-test (3.58±1.26) pain scores of post-caesarean mothers were found to be statistically significant at 0.05 level of significance (t=12.85, p>0.05). Similarly, the difference between the mean pre-test (13.40±0.88) and post-test (10.24±1.11) anxiety scores post caesarean mothers were found to be statistically significant at 0.05 level of significance (t=21.54, p>0.05) (Table 4).

**Table 4:** Significance of the difference between the pre-test and post-test pain and anxiety scores of post caesarean mothers

Variab les	Mean differenc e	Different ial SD	"t" value	"p" value (2- tailed)
Pain	2.96	1.63	12.85	0.000***
Anxiety	3.16	1.04	21.54	0.000***

\*\*\* p>0.005

**Association between the post-test score of pain among post caesarean mothers with their selected socio-demographic variables-** Findings reveal that a significant association was found between the level of pain and type of family (p= 0.03, p<0.05), and postoperative days (p= 0.01, p<0.05). No significant association was found between the level of pain among post caesarean mothers and their other socio-demographic variables like age, religion, family monthly income, residency,

educational status of the mother, occupation of mother, parity, number of children, indication for CS, gestational age, previous history of CS, BP, Previous Intervention, and source of information about BRT (Table 5).

**Table 5:** Association between the post-test pain level and selected socio-demographic variables of post caesarean mothers

S.No.	Socio-demographic variables	DF	Chi-square Value/ Fisher's exact test 'p'
1	Age	1	p=0.21
2	Religion	1	0.149
3	Family monthly income	1	p=0.82
4	Residence	1	0.41
5	Educational status of mother	1	2.71
6	Occupation of mother	1	5.25
7	Type of family	1	p=0.03*
8	Parity	1	p=0.21
9	Number of children	1	0.98
10	Indication for CS	1	5.84
11	Gestational age	1	0.29
12	Post operative days	1	p=0.01*
13	Previous history of CS	1	0.84
14	Blood pressure	1	p=0.62
15	Have u attended intervention previously?	1	p=1
16	Source of information about BRT	1	p=1

DF= difference of freedom

\*p<0.05 (Significant)

**Association between post-test score of anxiety among post-caesarean mothers with their selected socio-demographic variables-** Findings reveals that a significant association was not found between the

anxiety level of post-caesarean mothers with their socio-demographic variables (Table 6).

**Table 6:** Association between the post-test anxiety level and their socio-demographic variables

S. No	Socio-demographic variables	DF	Chi-square value/ Fisher's exact test 'p'
1	Age	1	$p=0.33$
2	Religion	1	0.38
3	Family monthly income	1	$p=0.22$
4	Residence	1	0.01
5	Educational status of mother	1	$p=0.18$
6	Occupation of mother	1	6.86
7	Type of family	1	0.39
8	Parity	1	0.25
9	Number of children	1	1.22
10	Indication for CS	1	7.32
11	Gestational age	1	4.78
12	Post operative days	1	1.74
13	Previous history of CS	1	0.01
14	Blood pressure	1	$p=1$
15	Have u attended intervention previously?	1	$p=1$
16	Source of information about BRT	1	$p=1$

DF= difference of freedom

\* $p<0.05$  (Significant)

## DISCUSSION

This was a quasi-experimental study conducted to assess the effectiveness of Benson's Relaxation Technique on pain and anxiety among 50 Post Caesarian Mothers attending OBG units of HSK Hospital, Bagalkot. The researcher found that the majority (56%) of post-caesarean mothers were in the age group of 24-29 years. The same findings were found in the study conducted by Qublan *et al.* [13] to determine the impact of age and

parity on the C section. Findings showed that the majority of the mothers (61%) were in the age group of 25 to 30 years.

With regard, the religion, in the present study majority (58%) of the mothers were Hindu and the majority (70%) of the mothers had 10001-20000 monthly income. Abbasijahromi *et al.* [14] conducted a study to compare the effect of aromatherapy using lavender and Damask raised essential oils on the level of anxiety and severity of pain following C-section and found that religion and spirituality significantly affect the pain levels.

The distribution of post-cesarean mothers according to their area of residence showed that the majority (56%) of them were from urban areas. Kang *et al.* [15] have conducted study on Rural-urban disparities in caesarean section rates in minority areas in China: evidence from electronic health records and found that majority of the subjects were from urban (48%) areas. Regarding their education, the majority (42%) of mothers had secondary education. According to the occupation, the majority (64%) of the mothers were housewives. Similar findings were found in the study conducted by Gilbert *et al.* [16] to know the influence of education level on the decision to undergo elective repeat caesarean section among women with a previous caesarean section and found that, compared with women, whose maximum education was a high school diploma, there was a higher rate of planned Caesarean section.

Regarding the type of family, the majority (70%) of the mothers were from a joint family, and most (70%) of mothers had 2 children. 72% of them were in the 38 weeks of gestational age, majority. A High (52%) number of mothers had other indications for caesarean section. The findings of the present study were supported by the study conducted by Dumont *et al.* [17] to assess the maternal indications for caesarean section. The findings showed that three-quarters of women from hospitals in Sub-Saharan Africa were delivered by caesarean section for maternal reasons. Such main reasons are protracted labour, abruption placenta, previous caesarean section, eclampsia, placenta praevia and malpresentation.

A similar study was Vaarasmaki and Raudaskoski [18], The findings showed that the rupture of the uterus in subsequent pregnancies is the most feared sequel to a caesarean section, with an occurrence OD 0.2 to 1.5%. Delivery by caesarean is indicated in case of a previous rupture of the uterus, hysterectomy through the vertical

incision and more than two previous caesarean sections. The distribution of the post-caesarean mothers according to their previous history of caesarean section showed that 66% of the mothers had a previous history. With a reference blood pressure of mothers, findings showed that the majority (92%) of them had blood pressure ranging between 120/80-140/90 mmHg. 98% of them had not attended previous relaxation intervention, and the majority (98%) of them had no information about Benson's relaxation therapy.

The findings of the present study are supported by the study conducted by Rerkasem *et al.* [19] to assess the blood pressure among post-caesarean mothers. Findings showed that the mother's blood pressure was ranging from 130/90 mmHg to 150 mmHg. In the present study, findings related to the comparison of the mean percentage of the pain scores in pre-test and post-test reveal a decrease of 14.8% after administration of Benson's Relaxation therapy. Thus, it is concluded that the administration of Benson's Relaxation therapy intervention has decreased the level of pain effectively among post-caesarean mothers. Similar findings related to the comparison of the mean percentage of the anxiety scores in pre-test and post-test reveals, a decrease of 7.6% after administration of Benson's Relaxation therapy. Thus, it is concluded that the administration of Benson's Relaxation therapy intervention has decreased the level of anxiety effectively among post-caesarean mothers.

The present study results were supported by a quasi-experimental study conducted by Radha *et al.* [20] to identify the effect of Benson's relaxation technique in reducing pain and stress among mothers with post caesarean section In Tamil Nādu. The study concluded that Benson's relaxation therapy was an effective and safe non-pharmacological method of reducing pain among post-caesarean mothers. A similar study was conducted by Dodiya *et al.* [21] to assess the effectiveness of Benson's relaxation therapy on the reduction of pain among post caesarean section mothers in Shree Mehta Sarvajanic Hospital at Una. The study concluded that Benson's relaxation therapy helps in the reduction of the level of pain among post-caesarean mothers.

In the present study, a statistically significant difference was found between pre and post-test pain scores ( $t=12.854$ ,  $p<0.05$ ). Similarly, a statistically significant

difference was found between pre and post-anxiety scores ( $t=21.54$ ,  $p<0.05$ ).

The findings of the present study are supported by the quasi-experimental study conducted by D'Souza and Miranda [22] to evaluate the effectiveness of Benson's relaxation therapy on postoperative pain in a selected hospital in Mangalore. The study concluded that Benson's relaxation therapy proved to be effective in the reduction of postoperative pain among mothers delivered by caesarean section. In the present study, there was a significant association found between pain levels of post-caesarean mothers with their type of family ( $p=0.03$ ,  $p<0.05$ ), and postoperative days ( $p=0.01$ ,  $p<0.05$ ).

The present study was supported by the quasi-experimental study conducted by Dodiya *et al.* [23] to assess the effectiveness of Benson's relaxation therapy on the reduction of pain among post-caesarean mothers at Una. Findings showed that pain level was significantly associated with the number of post-operative days. In the present study, it has shown that a significant association was found between the anxiety level of post-caesarean mothers with their residence ( $0.01$ ,  $p<0.05$ ), previous history of CS ( $0.01$ ,  $p<0.05$ ), occupation of the mother ( $C_2=6.86$ ,  $p<0.05$ ), indication for CS ( $C_2=7.32$ ,  $p<0.05$ ) and gestational age ( $C_2=4.78$ ,  $p<0.05$ ). The present study results are supported by a quasi-experimental study conducted by Solehati and Rustina [24] to identify the reduction of anxiety levels with Benson's relaxation technique among clients with post caesarean mothers in Cimahi. The findings showed that a significant association was found between the anxiety levels and gestational age of the younger mothers the age and more was the anxiety levels.

## CONCLUSIONS

The study is helpful to find the effectiveness of Benson's relaxation technique to reduce the level of pain and anxiety among post-caesarean mothers. Findings related to the comparison of mean percentage of the pain scores in pre-test and post-test reveals a decrease of 14.8% among post caesarean mothers after administration of Benson's Relaxation therapy and similar findings related to the comparison of mean percentage of the anxiety scores in pre-test and post-test reveals, a decrease of 7.6% among the post caesarean mothers after administration of Benson's Relaxation therapy. Thus, it is concluded that the administration of Benson's Relaxation

therapy intervention has decreased the level of pain and anxiety effectively among post-caesarean mothers.

Future researchers can investigate the effectiveness of similar relaxation techniques such as Benson's Relaxation therapy for reducing pain and other psychological problems among post-caesarean mothers to improve their overall quality of life.

#### CONTRIBUTION OF AUTHORS

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