



ORIGINAL ARTICLE

A Comparative Study to Assess the Perceived Stress of Mothers who have Undergone Caesarean Section and Normal Delivery at St. John's Medical College Hospital, Bangalore

Lissy KJ

Corresponding author:

Dr. Lissy KJ, Nursing Tutor, Department of Obstetrics and Gynecological Nursing, St. Johns College of Nursing, Bangalore, Karnataka. E-mail: sr.elsyjose@gmail.com

Received date: Januar 15, 2022; **Accepted date:** March 23, 2022; **Published date:** July 31, 2022

Abstract

Background: Child birth is a universally celebrated event, an occasion for dancing, fireworks flowers and gifts. It is a joyous event, at the same time it is a time of pain, fear and stress. Every woman feels that being a mother is the most gifted position, through her life time. Pregnancy is a crisis in the human life and it is an important turning point of anatomical physiological and psychological changes in women's life. Stress is a part of human life, and we are never completely free from it. All women in labour, experience varieties of stress irrespective of their mode of delivery. Emergency caesarean section may cause more emotional stress to the women than normal delivery. Primi gravida mothers are more likely to face emotional stress, because it cause the beginning of major life change to the women. Even for the most recognized mothers, pain reduce the ability to cope and may make her short tempered and quick to criticize things around her.

Researchers found that, certain variables can influence labour stress, such as nulliparity, low level of formal education, absence of antenatal education and unexpected pregnancy. Thus it reveals that all women in labour, experience stress. Finding from review of literature, personal experiences of the investigator and discussion with experts have motivated the investigator to take up a study to compare the perceived stress of mothers who have undergone caesarean section and normal delivery.

Objectives of the study:

- To assess the perceived stress of mothers who have undergone caesarean section and normal delivery.
- To compare the perceived stress of mothers who have undergone caesarean section with normal delivery.
- To determine the relationship between perceived stresses of mothers who have undergone caesarean section and selected base line variables.
- To determine the relationship between the perceived stress of mothers with normal delivery and selected base line variables.

Methods: The research design selected for the study was comparative descriptive research. The setting selected was Obstetric ward of SJMCH, Bangalore. The 100 mothers who have undergone caesarean section (50) and normal delivery (50) at SJMCH, within 24- 48 hours of child birth were selected for the study by purposive sampling technique. Modified "Perceived Stress Scale" was used to assess the perceived stress of mothers with caesarean section and normal delivery. The data was analyzed in terms of objectives of the study using descriptive and inferential statistics.

Results: The findings of the study show that mothers with LSCS experienced more stress than mothers with vaginal delivery with a total mean score of 118.06 ± 19.91 and 108.8 ± 19.17 respectively and it shows, significant difference between stress among mothers with LSCS and FTND at $P < 0.05$ level of significance. Mothers with caesarean section experienced more emotional stress with mean score of 64.86 than the mothers with normal delivery with the mean score of 56.4. The mean score of physical stress of mothers with LSCS is 40.98 and mothers with FTND is 42.28. The mothers with LSCS and FTND had experienced financial stress with the mean score of 12.22 and 10.12 respectively. There is a significant difference in financial stress of mothers with caesarean section and normal delivery, at $P < .05(0.033)$ level of significances and emotional stress at $P = .001$ level.

Conclusion: The finding of the study clearly point out that the perceived stress level among mothers with caesarean section and normal delivery differ. Caesarean section mothers experienced more emotional stress and financial stress than mothers with normal delivery. Mothers from both group experienced almost equal amount of physical stress. It reveal that every mother is going through some amount of stress irrespective of mode of delivery and it is our duty to provide maximum support during the labor process.

Keywords: Perceived stress; Caesarean section, Normal delivery

Introduction

Pregnancy and child birth is a journey towards motherhood. Every woman enters in to labour with a certain amount of tension and anxiety. These experiences may vary from woman to woman. Therefore, individual care during labour and delivery is essential. During pregnancy, psychological transformation occurs in a woman's life. If the pregnant woman is unable to cope up with the present condition, pregnancy and child birth may cause extreme traumatic stress. Child birth is a moment of joy; at the same time, it is a time of pain and stress. Stress is a part of human life, and we are never completely free from stress. Many situations in our life can be stressful, such as period of development, marriage, child birth etc. Stress in one area can lead to stress in another¹.

Problem statement

A comparative study to assess the perceived stress of mothers who have undergone caesarean section and normal delivery at St. Johns Medical College Hospital, Bangalore.

Objectives of the study

- To asses the perceived stress of mothers who have undergone caesarean section and normal delivery.
- To compare the perceived stress of mothers who have undergone caesarean section with normal delivery.
- To determine the relationship between perceived

stress of mothers who have undergone caesarean section and selected base line variables.

- To determine the relationship between the perceived stress of mothers with vaginal delivery and selected base line variables.

Methodology

Research approach

Comparative descriptive research approach.

Design: Comparative descriptive design.

Sample

A sample is a small portion of a population selected to assess the perceived stress of women who have undergone caesarean section and normal delivery and analyze it. The process of sampling makes it possible to draw valid inferences or generalization. The sample in this study was comprised of women who had undergone caesarean section and normal delivery at St. John's Medical College Hospital.

Sampling technique

Purposive sampling technique was used to draw the samples for the study.

Sample

Hundred postnatal mothers were selected from OBG ward of St. John's Medical College Hospital, Bangalore, of which 50 mothers had normal delivery and 50 mothers had caesarean section.

Tool

In the present study, the tool that was used by the principle investigator to assess the perceived stress of mothers was Cheryl Anderson's "Child birth trauma index", a five point Likert scale.

Data collection procedure

Formal permission was obtained from the authorities of St. John's National Academy of Health Sciences. Data collection was carried out from 07-09-2009 to 20-11-2009. A total of 100 (50 LSCS -Lower Segmental Caesarean section + 50 FTND-Full-term Normal Delivery) mothers were recruited for the study. Postnatal mothers within 24 to 48 hours of delivery were selected based on inclusion criteria through purposive sampling technique. The investigator first introduced herself to the participant and they were assured of confidentiality and anonymity of the information. Written informed consent was obtained after explaining the need for the study. A structured interview was conducted using Perceived stress scale by Cheryl Anderson's "Child birth trauma index" which was modified by the investigator to assess the stress of mothers who have undergone LSCS and FTND. About 2-3 mothers were interviewed per day and the time taken per subject was 20-25 minutes.

Section 1: Demographic data

This included seven variables seeking information about the mothers such as age of the mother, parity, education, occupation, monthly income, area of residence and religion.

Section II: Modified Perceived stress scale

The modified Perceived stress scale by Cheryl Andersons- "Child birth trauma index" consisted of 40 items and was scored using five point Likert scale². This tool was used to determine the stress of mothers who had undergone LSCS and FTND. The stress level scoring followed in the study was -1-Never, 2-Seldom, 3-Sometimes, 4 Frequently, 5-Always. A maximum score of 200 and minimum score of 40 could be obtained.

Based on the mother's response, the level of stress was categorized as follows:

- Below 20% - No stress
- 21-50% - Mild Stress
- 51-75% - Moderate Stress
- 76-100% - Severe Stress

Results

Section I: Distribution of baseline variables

The distribution of mothers according to their age showed that 54% of the mothers with LSCS were < 25 years and 46% were >25 years of age, whereas 74% of the mothers with FTND were in the age group of <25 years and only 26% were in the age group of >25 years.

In relation to parity of the participants, 78% of the mothers belonging to LSCS group and 64% of mothers belonging to FTND group were primi mothers. The multi mothers who had undergone LSCS were only 22% and FTND were 36%.

Regarding the educational status, 44% of mothers from LSCS group and 40% of FTND group mothers had completed their high school education and 10% mothers from LSCS group and 28% of mothers who had FTND had completed their pre-university education. In LSCS group, 6% were illiterates whereas no illiterate subjects were present in FTND group. 40% of LSCS mothers and 32% FTND mothers were graduates. It was evident from the data that 88% of mothers from LSCS group and 86% of mothers from FTND group were homemakers and others were skilled workers.

Distribution of mothers according to their religion shows that majority, i.e, 62% of the LSCS women and 74% of the FTND women belonged to Hindu religion. 24% of LSCS women and 16% of FTND women were Christians and only 14% of LSCS women and 10% of FTND women were Muslims.

The data presented in study shows that 70% of the LSCS mothers and 68% of the mothers in FTND group were residing in urban area and 30% of LSCS mothers and 32% of FTND mothers were from rural areas.

The data regarding income revealed that majority of subjects, 40% in LSCS group and 46% in FTND group had a monthly family income of Rs. < 5000/month. Around 30% of mothers from LSCS group and 36% of mothers from FTND group had a monthly family income of Rs. 5001-10000/- and 30% of LSCS mothers and 18% FTND mothers had family income of more than Rs.10000/month.

Section II: Distribution of stress levels of mothers who have undergone LSCS and FTND

In this study, majority of mothers (74%) who had undergone LSCS experienced moderate levels of stress, 22% of them experienced mild stress and only 4% of

mothers experienced severe stress. Among the women belonging to FTND group, 68% experienced moderate levels of stress, 32% of them had mild stress and none of them experienced severe stress.

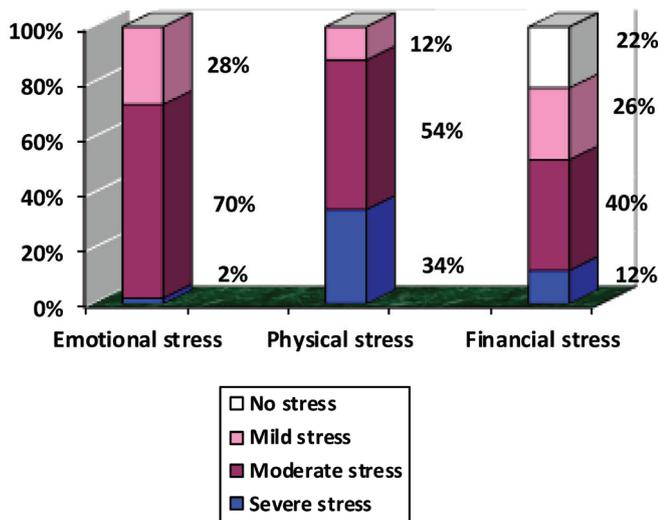


Figure 1: Stress experienced by mothers with LSCS in different domains

Figure 1 reveals the stress levels of LSCS mothers under different domains. Majority of the mothers (70%, 54%, 40%) experienced moderate levels of emotional, physical and financial stresses respectively. 22% of these mothers did not experience any financial stress. Only 2% experienced severe emotional stress. n=50

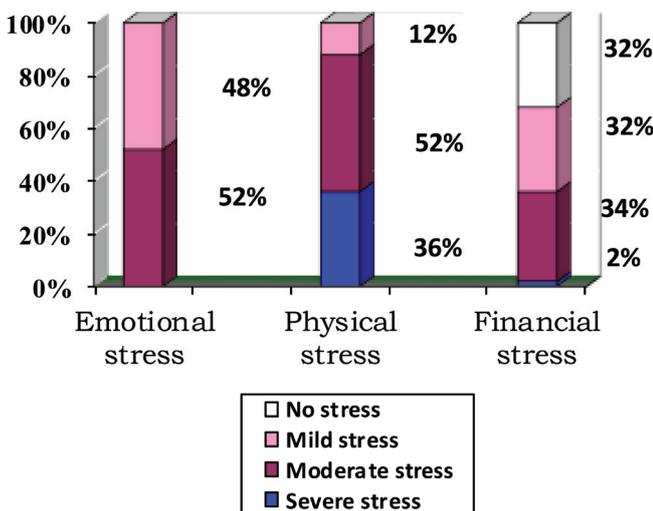


Figure 2: Stress experienced by mothers with FTND in different domains

Figure 2 reveals that majority of mothers (52%, 52%, 34%) in FTND group experienced moderate levels of emotional, physical and financial stresses respectively, and 48% of mothers experienced mild emotional stress, 12% of them had mild physical stress and 32% of mothers experienced mild financial stress. None of them experienced severe emotional stress.

Section III: Comparison of stress among mothers who have undergone LSCS and FTND n=100

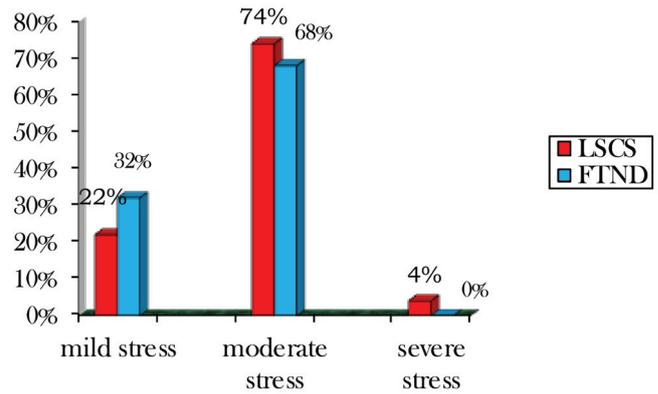


Figure 3: Comparison of stress levels among mothers who have undergone LSCS and FTND

The above figure (Figure 3) depicts the comparison of stress levels of mothers who have undergone LSCS and FTND. It reveals that 74% of mothers in the LSCS group experienced moderate levels of stress, 22% of mothers had mild stress and 4% of them experienced severe stress. 68% of FTND mothers experienced moderate levels of stress and 32% of them had mild stress and none of the mothers experienced severe stress.

The study results revealed that LSCS mothers experienced more stress than FTND mothers with a mean score of 118.06±19.91 and 108.8±19.17 respectively. There was a significant difference in stress levels of mothers in both the groups with p< 0.05. Mothers in LSCS group experienced emotional stress with a mean score of 64.86±11.19, whereas mothers in FTND group had a mean score of 56.4±12.99. The difference in emotional stress of mothers with LSCS and FTND was highly significant with a p value of 0.001. The mean score of physical stress observed in LSCS mothers was 40.98±8.44 and mothers with FTND had a mean score of 42.28±8.61. The mothers with LSCS and FTND had experienced financial stress with a mean score of 12.22±5.25 and 10.12±4.42 respectively. There was a significant difference in financial stress levels of mothers in both LSCS and FTND groups at 0.05 level

Findings of the Study

Findings related to demographic variables

Among 100 postnatal mothers, majority (64%) were in the age group of <25 years and 36% were in the age group of >25 years. 78% of mothers with LSCS and 64% of mothers with FTND were primi mothers. Majority of them (68%) were Hindus and 68% completed their high school education. About 43% of the women reported a monthly family income of Rs <5000 and 70% of

caesarean section mothers and 68% of normal delivery mothers were from urban areas.

Findings related to perceived stress of mothers who have undergone LSCS and FTND

Every woman in the study experienced some amount of stress. About 70% of women with LSCS experienced moderate levels of emotional stress, 54% of them experienced physical stress and 40% of them reported financial stress. Among mothers with normal delivery, 52% experienced emotional stress, 52% had physical stress and 34% of them reported financial stress. Mothers with LSCS (36%) and FTND (34%) experienced severe levels of physical stress. There is a significant difference in stress levels between caesarean section and normal delivery group mothers at a level of significance of $p < 0.05$.

The present study revealed that there was a significant difference in emotional stress levels at $p 0.001$ level of significance and in financial stress levels at $p < 0.05$ level of significance. There was no significant difference in physical stress levels between both the groups. The total scores of stress among mothers who had undergone LSCS and FTND showed a significant difference in stress levels at a level of significance of $p < 0.05$.

Findings related to association of perceived stress with baseline variables

There was a significant association between stress scores and baseline variables, parity at $p < 0.05$ ($p 0.025$) level of significance. There was no significant association between stress scores and variables such as age, education, occupation, religion, place of residence and income.

Discussion

The present study was designed to assess the perceived stress of mothers who have undergone caesarean section and normal delivery at St. John's Medical College Hospital, Bangalore. The data findings have been organized in the discussion based on the study objectives.

Section I: Demographic variables of mothers who have undergone LSCS and FTND

The mean age of the present study sample was 24.57 ± 3.8 years with 64% in the age group of < 25 years. In the present study, the majority of mothers belonging to caesarean section group (78%) as well as normal delivery group (64%) were primi mothers. Multi para mothers belonging to LSCS and normal delivery groups were 22% and 36% respectively. Regarding the educational

status of the mothers, majority of mothers from both the groups (LSCS 38%, FTND 30%) completed their high school education. Among the mothers who had undergone normal delivery, majority (30%) had completed high school education, 28% completed PUC education. In the LSCS group, 88% were homemakers while 86% were homemakers in FTND group. A study conducted in Mangalore expressed that majority of the subjects were housewives. The present study also strongly supports this finding. Distribution of mothers according to their religion showed that 80% of the women belonged to Hindu religion³.

The data presented in this study showed that 64% of mothers were residing in urban areas and only 36% were from rural areas. The study conducted in AIIMS, Delhi also reported that 88% of the mothers were from urban area and only 12% were from rural area. The present data reveals that majority of the subjects (43%) had a monthly family income of Rs. < 5000 ⁴.

Section II: Levels of stress in mothers who have undergone LSCS and FTND

The total stress experienced by the mothers with LSCS was 74% and FTND was 68%. The mean scores of stress among mothers who had undergone LSCS and FTND were 118.06 ± 19.91 and 108.8 ± 19.17 respectively and this shows a significant difference in stress levels among mothers with LSCS and FTND at a level of significance of $p < 0.05$.

The present study revealed that LSCS mothers experienced more emotional stress with a mean score of 64.86 ± 11.19 , whereas mothers with FTND had the mean score of 56.4 ± 12.99 . There was highly significant difference in emotional stress levels at $p = 0.001$. The mean physical stress of LSCS mothers was 40.98 ± 8.44 and FTND was 42.28 ± 8.61 . The mothers with LSCS and FTND had experienced financial stress with a mean score of 12.22 ± 5.25 and 10.12 ± 4.42 respectively and there was a significant difference in financial stress levels of mothers belonging to LSCS and FTND groups at $p < 0.05$ level. The research hypothesis, H_1 - was accepted because there was a significant relationship found between stress levels observed among mothers who have undergone caesarean section and normal delivery.

Section III: Association of stress with the selected baseline variables

In the present study, there was an association between stress and parity, at $p < 0.05$ ($.025$) level of significance. The research hypothesis, H_2 was rejected as there was no

association found between stress and baseline variables like educational status, income per month, place of residence, age, occupation, and religion. However, there was an association between stress and parity.

Conclusion

In the present study, all the mothers irrespective of mode of delivery perceived child birth as a 'stressful event'⁵. However, mothers with LSCS experienced more stress than mothers who had undergone normal delivery. All of them experienced moderate amounts of emotional, physical and financial stress.

Nursing Implications

The present study result show the need for perinatal teaching and guidance to all the expectant mothers to cope with the stress and pain during labour process. Nurses play a great role in imparting knowledge, guidance and support to the women during pregnancy and child birth. The study findings will help to practice labour supporting measures in the field of nursing education, nursing practice, nursing administration and nursing research.

Nursing Education

Maternal and child health nursing is one of the important subjects of the curriculum. The future nurses should play a major role in the preventive and promotive aspect of maternal and child health. The obstetrics and gynecology ward and labour room are the important areas where the midwife can give constant support and education to the mother. If the health personnel in the obstetrics unit provide proper knowledge, guidance and support, it will help the mother to take the child birth experience positively.

Nursing Administration

The nurse administrator has the responsibility of maintaining and improving the quality of nursing care provided in their institution. They should set up some follow up and community based maternity service and provide separate program for high risk pregnant women and their family members to cope with stressful situations.

Nursing Research

Nursing research helps in providing evidence based practice and thus improving the quality of nursing care. There is need for extensive studies to understand the various stress factors affecting the women during labour.

Nursing Practice

The findings of this study may provide a framework for the development of guidelines for clinical nursing interventions. Nurses may influence the women's perception of child birth by providing them with relevant information. Pregnant women should be equipped with adequate knowledge regarding labour and delivery.

Recommendations

1. The study can be replicated in a large sample to validate the findings and make generalizations.
2. Similar study can be conducted to assess the effectiveness of nursing measures in reduction of stress during labour process.
3. A comparative study can be conducted to assess the difference in the perceived stress levels of the mothers with and without partner support during labour process.

Conflict of interest

None.

References

1. Gillian W. Emotional processing and child birth. 2003; available from [http://www.emotional processing.org.uk/various %20articles/childbirth.htm](http://www.emotionalprocessing.org.uk/various%20articles/childbirth.htm).
2. Anderson C. Child birth trauma Index Nursing. 2008; available from <http://www.angelfire.com/moon2/jkluchar1995>.
3. Rodrigues C N .A study on effectiveness of massage on pain reduction during labour. City college; Mangalore: 2009. (un published data)
4. Anitha VM, Deepika D. Indian women `s choice regarding elective caesarean section. J Obstet Gynecol Ind 2003;53(5):458-460.
5. Beck CT. Posttraumatic stress disorder due to child birth: The aftermath. Nurs Res 2004;53(4):216-24.
6. Waldenstrom U. Child birth experiences; A study of 295 new mothers. Birth 2006;23(3):144-53.
7. Pang MV, Leung TN, Lau TK. Impact of first child birth on changes in women `s performance for mode of delivery. Birth 2008;35(2):121-8.
8. Schindl M, Birner P, Joura E. Elective caesarean section versus spontaneous delivery. A comparative study of birth experience. Acta Obstet Gynecol Scand 2003;82(9):834-40.

9. Fawcett J, Pollico N, Jully A. Women`s perception of caesarean section and vaginal delivery. RES Nurs Health 2004;15(6):439-46.
10. Lucita M. Maternal stress and maternal and foetal outcome- A comparative study. Indian Journal of Nursing of Midwifery 2003;53(5):458-60.
11. Jayasvati K, Kanchanatawan B. Happiness and related factors on pregnant women. J Med Assoc Thai 2005;88(40):220-5.