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A Retrospective Study to Identify the Factors Associated with Caesarean Section and Problem of the Mothers after Caesarean Section Admitted in a Selected Hospital

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Abstract | **Original Research Article**

Background of the study: Caesarean section also known as C-section or caesarean delivery, is the surgical by which one or more babies are delivered through an incision in the mother's abdomen. It is often performed because vaginal delivery would put the mother or child at risk [1]. Reasons for the operation include obstructed labor, twin pregnancy, high blood pressure in the mother, breech birth, shoulder presentation, and problems with the placenta or umbilical cord [2]. Caesarean delivery rates have been increasing which leads to a rise the problems experienced. After caesarean deliveries important problems for the mother and baby may be seen. The most common problems in the mothers after caesarean delivery are; bleeding, infection, fatigue, sleep disorders, breast problems, self-care issues, and sense of inadequacy in care of the new born [3]. The postpartum (or postnatal) period begins after childbirth and is typically considered to last for six weeks. There are three distinct phases of the postnatal period; the acute phase, lasting for six to twelve hours after birth; the sub-acute phase, lasting six weeks; and the delayed phase, lasting up to six months. During the delayed phase, some changes to the genitourinary system take much longer to resolve and may result in conditions such as urinary incontinence. The World Health Organization (WHO) describes the postnatal period as the most critical and yet the most neglected phase in the lives of mothers and babies; most maternal and new born deaths occur during this period [4]. Hence the investigator felt the need to conduct **"A RETROSPECTIVE STUDY TO IDENTIFY THE FACTORS ASSOCIATED WITH CAESEREAN SECTION AND PROBLEMS OF THE MOTHER AFTER CAESEREAN SECTION ADMITTED IN A SELECTED HOSPITAL."**

STUDY OBJECTIVES:

1. To determine the factors affecting caesarean section.
2. To determine the complications after caesarean section.
3. To find out the association between factors associated with caesarean section and post caesarean section problems with selected socio-demographic variables of mothers.

Methods: The steps were undertaken to conduct the study include research approach, research design, setting of the study, Population, Sample and sampling technique, sample size, method of data collection, development of tool, ethical consideration, validity, pilot study and plan for data analysis. ***Results:*** The analysis and interpretation of data collected from the 60 postnatal mothers who undergone caesarean section delivery in HSK hospital, Bagalkot. Structured questionnaires are used to identify the factors associated with caesarean section and problems of the mother after caesarean section. Data was collected from postnatal ward of HSK hospital, Bagalkot. Analysis was done with the help of descriptive and inferential statistics.

HYPOTHESIS:

- **H_1:** There will be significant positive correlation between the factors affecting caesarean section and caesarean section delivery.

- **H_2:** There will be significant association between the complications occurring after the caesarean section and caesarean section deliveries.
- **H_0:** There will be no significant relation between the factors affecting the caesarean section and complications after the caesarean section.

Keywords: Caesarean section, Postnatal complications, Maternal factors, Retrospective study.

INTRODUCTION

A mother is the female parent of a child. A woman may be considered a mother by virtue of having given birth, by raising a child who may or may not be her biological offspring, or by supplying her ovum for fertilisation in the case of gestational surrogacy. A biological mother is the female genetic contributor to the creation of the infant, through sexual intercourse or egg donation [5].

A retrospective cohort study, also called a historic cohort study, is a longitudinal cohort study used in medical and psychological research. A cohort of individuals that share a common exposure factor is compared with another group of equivalent individuals not exposed to that factor, to determine the factor's influence on the incidence of a condition such as disease or death. Retrospective cohort studies have existed for approximately as long as prospective cohort studies.[6] The retrospective cohort study compares groups of individuals who are alike in many ways but differ by a certain characteristic (for example, female nurses who smoke and ones who do not smoke) in terms of a particular outcome (such as lung cancer) [7].

Caesarean section also known as C-section or caesarean delivery, is the surgical by which one or more babies are delivered through an incision in the mother's abdomen. It is often performed because vaginal delivery would put the mother or child at risk.[8] Reasons for the operation include obstructed labour, twin pregnancy, high blood pressure in the mother, breech birth, shoulder presentation, and problems with the placenta or umbilical cord [8,9].

A C-section typically takes 45 minutes to an hour. It may be done with a spinal block, where the woman is awake, or under general anaesthesia [8]. A urinary catheter is used to drain the bladder, and the skin of the abdomen is then cleaned with an antiseptic [8]. An incision of about 15 cm (6 inches) is then typically made through the mother's lower abdomen. The uterus is then opened with a second incision and the baby delivered. The incisions are then stitched closed A woman can typically begin breastfeeding as soon as she is out of the operating room and awake. Often, several days are required in the hospital to recover sufficiently to return home [8]. C-sections result in a small overall increase in poor outcomes in low-risk pregnancies [9]. They also typically take longer to heal from, about six weeks, than vaginal birth [8]. The increased risks include breathing problems in the baby and amniotic fluid embolism and postpartum bleeding in the mother [9]. Established guidelines recommend that caesarean sections not be used before 39 weeks of pregnancy without a medical reason. The method of delivery does not appear to have an effect on subsequent sexual function [9].

METHODOLOGY

Methodology is a structured approach to solving a research problem by systematically collecting, analysing and interpreting the data.it outlines the techniques and procedures used to conduct research and provides framework for researchers to follow in order to produce valid and reliable results.

The steps were undertaken to conduct the study include research approach, research design, setting of the study, Population, Sample and sampling technique, sample size, method of data collection, development of tool, ethical consideration, validity, pilot study and plan for data analysis.

Setting of the study:

Research setting refers to a specific location in which the data collection for study takes place.

The present study was conducted in S Nijalingappa Medical College and H.S.K Hospital & Research Centre, Navanagar, Bagalkot.

Data collection: In the present study researcher has selected 60 mothers who all are admitted in HSK hospital Navanagar Bagalkot.

Variables under the study: Variables is a content that has a measurable changing attributes variables are qualities or characteristics of persons, things, or situation that change or vary.

Dependant variable: In the present study it refers to problems experienced by mothers after caesarean section.

Independent variable: In the present study it refers to factors affecting caesarean section.

RESULT

Analysis is a research technique for systematic, objective and quantitative description of content of research procured through various means of research

investigations. The analysis and interpretation of data involve the objective material in the possession of researcher and his subjective reaction to the problem.

This chapter deals with the analysis and interpretation of data collected from the 60 postnatal mothers who undergone caesarean section delivery in HSK hospital, Bagalkot. Structured questionnaires are used to identify the factors associated with caesarean section and problems of the mother after caesarean section. Data was collected from postnatal ward of HSK hospital, Bagalkot. Analysis was done with the help of descriptive and inferential statistics.

Table1: Description of socio-demographic variables

Sl No	Sociodemographic Variables		Frequency	Percentage
1	AGE	Less than 25	21	35%
		26-30	28	46.66%
		31-40	10	16.66%
		Above 40	1	1.66%
2	PLACE OF RESIDENCE	Rural	42	70%
		Urban	18	30%
3	CASTE	Muslim	52	86.66%
		Hindu	7	11.66%
		Christian	1	1.66%
		Others	0	0%
4	MOTHER EDUCATION	Illiterate	6	10%
		Primary school	15	25%
		Secondary school	16	26.66%
		Preparatory school	6	10%
		Diploma	9	15%
		Degree & above	8	13.33%
5	MOTHER OCCUPATION	House wife	44	73.33%
		Government employ	2	3.33%
		NGO	11	18.33%
		Self	3	5%
6	TYPE OF FAMILY	Nuclear	34	56.66%
		Joint	26	43.33%
7	GRAVIDA	Primigravida	25	41.66%
		Multigravida	35	58.33%
8	MULTIPLE PREGNANCY	Yes	22	36.66%
		No	38	63.33%
9	PARITY	Nulliparous	14	23.33%
		Multiparous	46	76.66%
10	GESTATIONAL AGE	Preterm	11	18.33%
		Term	43	71.66%
		Post term	6	10%
11	HISTORY OF PIH	Yes	10	16.66%
		No	50	83.33%
12	HISTORY OF GDM	Yes	6	10%
		No	54	90%
13	SOURCE OF INFORMATION	Family members	24	40%
		Doctors	35	58.30%
		Social media	1	1.66%
		Books	0	0%

Table 2: Description of factors associated with caesarean section

Sl No	Factors Associated with Caeserean Section	Frequency	Percentage
1	Contracted pelvis distoration	14	23.33%
2	Hydroaminos	4	6.66%
3	Oligohydramnios	5	8.33%
4	Health issues of mother	12	20%
5	Hydrocephalus	4	6.66%

6	Malpresentation	8	13.3%
7	Premature rupture of amniotic membrane	1	1.66%
8	Grand multipara	4	6.66%
9	Abnormal heart rate of mother	3	5%
10	Fetal distress	12	20%
11	Developmental problems of baby	6	10%
12	Multiple pregnancy	5	8.33%
13	Maternal infection	4	6.66%
14	Uterine fibroid near cervix	0	0%
15	Mother is too weak due to severe illness	0	0%
16	Prolonged labour	4	6.66%
17	Obstructed labour	6	10%
18	Macro baby	6	10%
19	Previous caesarean section	15	25%
20	Mothers desire for caesarean section	13	21.66%
21	Placenta previa	2	3.33%
22	Abruption placenta	0	0%
23	Rupture of uterus	0	0%
24	Anxiety of normal labour	1	1.66%

Table 3: Description of complication after caesarean section

Sl No	Complications after Caeserean Section	Frequency	Percentage
1	Anaemia	41	68.33%
2	PPH	28	46.66%
3	Infection	14	23.33%
4	Pain around the wound	38	63.33%
5	Abdominal pain	37	61.66%
6	Ongoing back pain	55	91.66%
7	Uterine rupture	0	0%
8	Shock	3	5%
9	Thromboembolism	2	3.335
10	Rupture of uterine scar	3	5%
11	Injuries to bowel or bladder	1	1.66%
12	Intestinal obstruction	3	5%
13	Deep vein thrombosis	5	8.33%
14	Problem with future vaginal delivery	0	0%

Table 4: Association between sociodemographic variables and factors affecting caesarean section

SI NO	Socio Demographic variable	Chi sq value	Degree of freedom	Table value	P-value	Significance
1	Age	0.022	1	3.84	0.88	Not significant
2	Place of residence	0.874	1	3.84	0.349	Not significant
3	Caste	0.116	1	3.84	0.732	Not significant
4	Mother education	0.623	1	3.84	0.429	Not significant
5	Mother occupation	0.007	1	3.84	0.932	Not significant
6	Type of family	0.002	1	3.84	0.957	Not significant
7	Gravida	0.008	1	3.84	0.927	Not significant
8	Multiple pregnancy	1.155	1	3.84	0.282	Not significant
9	Parity	0.160	1	3.84	0.688	Not significant
10	Gestational age	0.003	1	3.84	0.951	Not significant
11	History of PIH	0.918	1	3.84	0.337	Not significant
12	History of GDM	0.121	1	3.84	0.727	Not significant
13	Source of information	1.797	1	3.84	1.799	Not significant

Table 5: Association between socio-demographic variables and complication after caesarean section

SI NO	Socio-demographic variable	Chi sq value	Degree of freedom	Table value	P value	Significance
1	Age	3.684	1	3.84	0.549	Not significant
2	Place of residence	0.039	1	3.84	0.841	Not significant
3	Caste	2.150	1	3.84	0.142	Not significant
4	Mother education	0.362	1	3.84	0.547	Not significant
5	Mother occupation	0.028	1	3.84	0.866	Not significant
6	Type of family	0.431	1	3.84	0.511	Not significant
7	Gravida	0.266	1	3.84	0.605	Not significant
8	Multiple pregnancy	0.160	1	3.84	0.688	Not significant
9	Parity	0.028	1	3.84	0.866	Not significant
10	Gestational age	0.010	1	3.84	0.918	Not significant
11	History of PIH	0.913	1	3.84	0.339	Not significant
12	History of GDM	4.565	1	3.84	0.326	Significant
13	Source of information	0.062	1	3.84	0.803	Not significant

DISCUSSION

This chapter discusses the major findings of the study and reviews then in relation to findings from the results of other studies.

The caesarean section deliveries are more common now a days comparing to older days and there were a lots of problems associated with the caesarean section deliveries. The present study was designed to identify the factors associated with caesarean section and problems after caesarean section among the postnatal mothers under the age group between 20yrs to 40yrs. The present study was conducted in S Nijalingappa Medical College and H.S.K Hospital & Research Centre, Navanagar, Bagalkot. A total of 60 postnatal mothers were selected by disproportional random sampling technique and inclusion and exclusion criteria, which were previously mentioned, and the data were collected from them directly.

The study findings have been organized and discussed under the following sections.

Section I: Description of socio-demographic variables

Percentage wise distribution of mothers according to their age, highest 46.66% were in 26 to 30 age group, 35% were less than 25 years of age, 16.6 % were in 31 to 40 age group and the lowest 1.6% were above the age group of 40.

Percentage wise distribution of mothers according to their place of residence, 70% were staying in rural area and 30% were staying in urban area.

Percentage wise distribution of mothers according to their caste, the highest 86.6% is Muslim, 11.65% is Hindu and lowest 1.66% is Christian and no one is from any other caste.

Percentage wise distribution of mothers according to their educational status, the highest 26.6% were having secondary school education, 25% were having primary school education, 15% were having diploma, 13.3% were having education of degree & above and lowest 10% were having preparatory school education, 10% were illiterate.

Percentage wise distribution of mothers according to their occupation, highest 73.3% mothers were housewife, 18.3% mother were nongovernment employees, 5% mothers were self-employed and the lowest 3.3% were government employees.

Percentage wise distribution of mothers according to the type of family, 57% mothers' lives in nuclear family and 43% mothers lives in joint family.

Percentage wise distribution of mothers according to their number of pregnancies, 58% mothers were multigravida and 42% mothers were primi gravida.

Percentage wise distribution of mothers according to the number of childrens they carry, 63% womens not having multiple pregnancy and 37% having multiple pregnancy.

Percentage wise distribution of antenatal mothers according to their parity ,77% mothers were multiparous and 23% mothers were nulliparous.

Percentage wise distribution of mothers according to their gestational age, the highest 71.6% mothers were full term, 18.3% mothers were preterm and lowest 10% mothers were post term.

Percentage wise distribution of mothers according to their history of pregnancy induced hypertension, 83% mothers is not having history of PIH and 17% mothers is having the history of PIH.

Percentage wise distribution of mothers according to their history of gestational diabetes mellitus, 90% mothers is not having history of GDM and 10 % mothers is having history of GDM.

Percentage wise distribution of antenatal mothers according to the source of information about the caesarean section, the highest 58% mothers got information from doctors, 40% mothers got information from their family members, lowest 1.6% mothers got information from social media and nobody got information from books.

Section II: Description of factors associated with caesarean section

Percentage wise distribution of factors affecting caesarean section, in that the highest 25% mothers done caesarean section due to previous history of caesarean section delivery , 23.3% mothers due to contracted pelvis, 21.66% mothers due to their desire for caesarean section , 20% mothers due to foetal distress , 20% due to health issues of mother, 13.3% due to malpresentation of baby, 10% due to developmental problems in baby, 10% due to obstructed labour, 10 % due to macro baby, 8.3% due to oligohydramnios , 8.3% due to multiple pregnancy, 6.6% due to hydramnios , 6.6% due to hydrocephalus, 6.6% due to grand multipara, 6.6% due to maternal infection, 6.6% due to prolonged labour, 5% due to abnormal heartrate for mother, 3.3% due to placenta previa and the lowest 1.6% is due to premature rupture of amniotic membrane and 1.6% due to anxiety of normal labour. No one selected postnatal mothers done caesarean section due to uterine fibroid near cervix, mother is too weak due to severe illness, abruptio placenta and rupture of uterus.

Section III: Description of complications after caesarean section

Percentage wise distribution of postnatal mothers based on the complications after caesarean section, the highest 91.6% mothers having ongoing backpain, 68.3% mothers having anaemia, 63.3% mothers having pain around the wound, 61.6% mothers having abdominal pain, 46.6% mothers having postpartum haemorrhage, 23.3% mothers having infection, 8.3% mothers having deep vein thrombosis, 5% mothers having shock, 5% mothers having rupture of uterine scar, 5% mothers having intestinal obstruction, 3.3% mothers having thromboembolism and lowest 1.6% mothers having injuries to bowel and bladder. There is no complications like uterine rupture and problem with future vaginal delivery for selected postnatal mothers.

Section IV: Association between sociodemographic variables and factors affecting caesarean section

The chi square test is used to find out the association between the factors affecting caesarean section of postnatal mothers admitted in H.S.K Hospital, Bagalkot with their sociodemographic variables by using 2x2 contingency table.

The chi square value is lesser than table value for sociodemographic variables like; age [0.022], place of residence [0.874], caste[0.116], mother education[0.623], mother occupation [0.007], type of family [0.002], gravida [0.008], multiple pregnancy [1.155], parity [0.160], gestational age[0.003], history of PIH[0.918], history of GDM[0.121], source of information[1.797]. The chi square table value is 3.84.

Hence the Chi square calculated values are lesser than the Chi square table value. This indicates that there was no significant association found between the above said selected socio-demographic variables with factors associated with caesarean section.

Section V: Association between socio-demographic variables and complication after caesarean section

The chi square test is used to find out the association between the complications after caesarean section of postnatal mothers admitted in H.S.K Hospital, Bagalkot with their sociodemographic variables by using 2x2 contingency table.

The chi square value is lesser than the table value for socio-demographic variables like age [3.684], place of residence [0.039], caste [2.150], mother education [0.362], mother occupation [0.028], type of family [0.431], gravida [0.266], multiple pregnancy [0.160], parity [0.028], gestational age [0.010], history of PIH [0.913], source of information [0.062]. The chi square table value is **3.84.**

Hence the Chi square calculated values are lesser than the Chi square table value. This indicates that there was no significant association found between the above said selected socio-demographic variables with the complications after caesarean section.

The chi square value is greater than the table value for the socio-demographic variable history of GDM [4.565]. p value is 0.326.

Hence the Chi square calculated value is greater than the Chi square table value. This indicates that there was significant association found between the above said selected socio-demographic variable with factors associated with caesarean section.

CONCLUSION

This chapter presents the conclusions drawn, implications, limitations, suggestions and recommendations.

The main focus of this study was to identify the factors associated with caesarean section and the complications after the caesarean section among

postnatal mothers in S Nijalingappa Medical College and H.S.K Hospital & Research Centre Navanagar, Bagalkot.

On the basis the findings of this study following conclusions were drawn. The study conclusions are the researcher's attempts to show what knowledge the researcher has gained during the study and also an attempt to generalize the findings.

The conclusion drawn from the study are as follows:

- Majority of 46.6 % mothers were under the age group of 26 to 30.
- Majority of 70% mothers were belonging to rural area.
- Majority of 86.6% mothers were belongs to Muslim caste.
- Majority of 26.6% mothers were having secondary school education.
- Majority of 73.3% mothers were housewife.
- Majority of 56.6% mothers were living in nuclear family.
- Majority of 58.3% mothers were multigravida.
- Majority of 63.3% mothers don't have multiple pregnancy.
- Majority of 76.6% mothers were multiparous.
- Majority of 71.6% mothers were at full term.
- Majority of 83.3% of mothers don't have the history of PIH.
- Majority of 90% mothers don't have the history of GDM.
- Majority of 58.3% mothers got information about caesarean section from doctors.

Contribution of Authors:
Research concept: Dr Dileep Natekar, Ms Arati Honawada
Research design- Ms Arati Honawada
Supervision- Ms Arati Honawada
Materials- All researchers
Data collection- All researchers
Data analysis and interpretation- All researchers
Literature search- All researchers
Writing article- All researchers
Critical review- Ms Arati Honawada
Article editing- Ms Arati Honawada
Final approval- Ms Arati Honawada

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