The Relationship Between Nurses Care For Women After Cesarean Section And Their Satisfaction of Care Provided

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Abstract

Background: The improvement of maternity care is a key health policy focus, in recognition that health and wellbeing have implications throughout life .Women satisfaction is a crucial predictor for maintaining and monitoring the quality of health care and can inform service development and delivery. **Aim of the study:** the aim of study was to evaluate nurses care for women after cesarean section and their satisfaction of care provided. **Design:** Correlational research design was used **Sample:** A convenience sample 150 of women post CS were recruited in this study. **Setting:** The study was handled at obstetrics ward and postpartum department at the Woman's Health hospital, Assiut University, Egypt. **Results:** Findings shows that the mean age of women was 29.18±5.82 year, more than half of the women were ambulated six hours after surgery and the majority of them (83.3%) were satisfied regarding hospital care. **Conclusion:** Nurse has an important role in care of women undergoing to caesarean sections and improve their satisfaction. **Recommendations:** In the future, for all nurses, educational training programs on ideal post-cesarean section care must be developed and implemented.

Keyword: Caesarean section (CS), women satisfactions &Nursing care

Introduction

Globally .In various countries there is evidence that planned or "elective" operations account for increasing percentage of all CS **(Corso et.al, 2017).**

Cesarean section (CS) was used in clinical practice to save both the mother and the baby's lives. For more than two decades, the rising rate of Caesarean sections has been a source of concern. Considering that the World Health Organization (WHO) stated in 1985 that "there is no explanation for any region having CS rates higher than 10-15%," According to the data, the maternal mortality rate is associated with caesarean delivery is 3-7 times more than that associated with vaginal delivery **(Splete, 2018).**

According to recent studies on caesarean deliveries in Egypt, the country ranks third in the world, after Brazil and the Dominican Republic, and first in the Middle East, after a 52 percent increase in caesarean deliveries according to the Demographic and Health Survey (DHS) **(El-Behary, 2018).**

Maternal deaths following caesarean sections in low- and middle-income countries are 100 times higher than in high-income countries, with up to a third of all babies dying, according to data from 12 million pregnancies. A new review, published in The Lancet, has considered 196 studies from 67 low- and middle-income countries. **(WHO, 2021).**

Despite the fact that C-sections are four times more dangerous than regular deliveries, the United Nations Population Fund (UNFPA) study found an increase in the number of caesarean deliveries in Egypt since 2005, with the most significant increase occurring between 2008 and 2014, when it more than doubled from 26.7 percent to 51.8 percent **(El-Behary, 2018).**

Clinical factors like hypertension, amniotic fluid problems, post-dated pregnancy, maternal distress, Rh-negative mother, psychological problem, and general diseases aggravating pregnancies including thalassemia, anemia, asthma, and urinary retention were among the maternal indications. Multiple pregnancies, a large infant, and fetal distress were among the factors. Prolonged or obstructed labor, CPD, failed induction, placenta praevia, and malpresentation, all of which affect both the mother and the fetus, were classified together as a combined cause **(Begum et. al, 2017).**

According to findings from a literature approximately 30,000,000 women, caesarean births may reduce a woman's chance of urine incontinence and pelvic organ prolapse, but they may also increase her chance of difficulties with future pregnancies. Without a medical reason, Caesarean deliveries put mothers and newborns at risk of short- and long-term health problems **(Sasaki et.al, 2018).**

It is associated with increased risk of blood transfusion, hysterectomy, maternal and child death uterine rupture, placenta accreta, and placenta previa. It also costs more and requires longer hospitalization than vaginal delivery **(Al Rifai, 2017).**

The nurse's role is critical before, during, and after a caesarean section. A nurse is a patient's touchstone during the caesarean delivery process, much like a primary care physician is the coordinator for a patient's health across many sites and specializations. Both having a baby and having surgery are stressful events for patients, and a nurse's ability to reassure and communicate with them has been shown to improve patient satisfaction and minimize stress **(Sung et al., 2021).**

Nurse role in supporting and educating post cesarean section women, not only as a health care provider but also as an administrator, care provider, educator, researcher and counselor **(AbuoShabana et al., 2016).**

Patient satisfaction is a subjective and complex concept involving physical, emotional, mental, social, and cultural factors .Patient satisfaction and experience of the quality of care is a difficult outcome to measure, mainly because it is a subjective multidimensional concept, based on patient expectations . Asking patients what they think about the care they have received is an important action to improve the quality of care and to ensure the local health services to meet patients' needs. Satisfaction is measured by parturient thorough evaluation and assessment of the experience after consuming a good service of care by health providers **(Demilew et al., 2021).**

A major component of quality of health care is patient satisfaction and research has identified a clear link between patient outcomes and patient satisfaction scores. During the last decade, patient satisfaction ratings have been highlighted as an important objective of health care: this ensures the quality of anesthesia care, improves and intensifies the nurse – patient relationship, and can also be a marketing tool in terms of customer orientation **(Makoko et al., 2018).**

Significance of study:

In Egypt, the past decade has witnessed a sharp increase in the prevalence of CS with the most recent Egypt Demographic and Health Survey (EDHS) documenting a CS rate of 52 percent, which suggests that cesarean delivery might be overused or used for inappropriate indication **(Abdel-Tawab et al., 2018).**

Assiut Woman's Health University Hospital is a big tertiary center in Upper Egypt with high flow of cases. The Cesarean section rate at Assiut Women's Health Hospital was 32% in 2008 and 38% in 2011 and 47.2 in 2014.It is estimated to perform 52 % CS / year . According to 2017 registry, 52 % CS were performed at this hospital **(Ibrahim et al., 2018).**

The delivery of a child, whether natural or by caesarean section, is one of the most significant and memorable events in a woman's life. It has long-term effects on their physical and emotional well-being, so nurses providing high-quality care must be aware of the impact on maternal satisfaction. Because of the nature of nursing abilities and practice, women may rate the quality of a hospital based on their satisfaction with nursing services **(Abdelat et al., 2019).**

Only a few small studies have looked into maternal satisfaction with the quality of caesarean section nursing practices in hospitals. Thus, the researcher is planning to evaluate the relationship between nurses care for women after cesarean section and their satisfaction of care provided at the Woman's Health University Hospital.

Aims of the study

The aim of the study was to evaluate the relationship between nurses care for women after cesarean section and their satisfaction of care provided .

Research question:

What is the relationship between nurses care for women after cesarean section and their satisfaction of care provided ?

Patients and Methods:

Research design: Correlational research design was used to this study.

Setting: The study was conducted at postpartum ward at the Woman's Health hospital, Assiut University, Egypt.

Subjects of the study: Subjects of present study were 150 women that were chosen according to power estimation

Sample size :A power calculation that in order to discover an effect size of 36% difference in hospital stay between independent groups, with a p-value < 0.05 and 80% power, confidence level 0.95, a sample size of 150 women for each group was ne required. This calculated by G Power 3.1 **(Hsieh et al., 1998).**

Sample: A purposive sample of 150 post Cesarean Section women was recruited for this study according the following inclusion criteria:

Inclusion criteria:

- Women from 20- 40 years old .
- Women undergoing cesarean section.
- Low risk pregnancy

Exclusion criteria:

Women that refuse to participate in the study.

Data collection tools:

This study's data was gathered using two tools:

Tool I: perioperative cesarean Section assessment tool:

This tool was developed by the researcher based on reviewing available related literatures and was used to collect data regarding outcomes.

This tool was include the following parts:

Part 1: women's personal data: questions such as age, level of education, occupation, indication for CS, time of admission and discharge .

Part 2: preoperative Data: questions such as present medical ,past and surgical histories, obstetric history ,smoking history , vital signs, obstetric history, investigations, patient advice and information about operation ,breast feeding , discuss Noting Per Oral (NPO) status (reduced fasting times),hemoglobin optimization , bowel preparation, ,medications.

Part 3: Intraopreative Data: like total fluid replacement (including blood transfusion), vital signs, urine output, active warming, and skin-to-skin contact, minimally invasive surgical procedure , type of anesthesia and analgesic medication **(Ituk et al.,2018).**

Part 4: Post-operative Data: Consisted of questions such as:

Time to begin oral fluid, time to mobilize, time to remove urinary catheter, IV fluid duration ,chewing gum consumption in the early postoperative period, pain intensity, analgesic medicine use, and antibiotic use, postoperative complications, postoperative length of stay.

Pain scale: pain scale is a tool that clinicians use to assess a patient's pain level. A person normally self-reports their pain on a carefully created scale, with the assistance of a doctor, parent, or guardian in some cases. Pain scales can be used during a hospital stay, a doctor's visit, physical activity, or following surgery.

NRS (numerical rating scales):

This is the most widely used pain scale. On a scale of 0 to 10, or 0 to 5, a person rates their pain. "No pain" is a zero, while "the worst conceivable pain" is a five or ten **(Weatherspoon, 2020).**
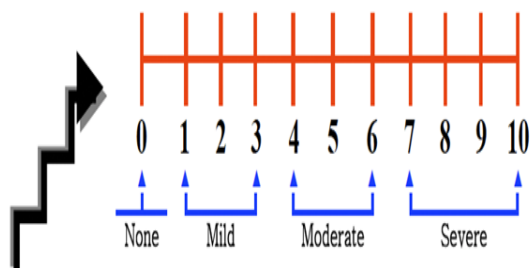
Jacques E. (2020): 10 Common Types of Pain Scales. Medically reviewed by Grant Hughes, MD on January 05, 2020.

Tool II: Patient's satisfaction tool:

This tool was developed by researcher based on reviewing related literature including existing satisfaction tools, tested of validity, piloted for internal consistency, reliability ,scored and utilized to assess women's satisfaction about quality of perioperative care services.

It is consist of six domains and 40 items:

1. Hospital admission procedure domain (has 4 sections) such as women satisfied about ease of overall.
2. Health care domain (has 10 sections) such as women satisfied about number of around made of doctor, physician services.
3. Information provision domain (has 13 sections such as women satisfied about information of breast feeding and pain management.
4. Staff personal treatment domain (has 5 sections) such as women satisfied about kindness of staff.
5. Food domain (has 3 sections) such as women satisfied about served food quality.
6. Hospital facilities (has 5 sections) such as women satisfied about cleanliness in the room.

Patient's satisfaction was measured by using four points Likert's scale;

Four point Likert's format range from strongly satisfied (4) to strongly dissatisfied (1), which helped in obtaining an ordinal measure of the strength of the satisfaction with each item. The tool score range from 40 to 160 .The score of ≤ 80 = dissatisfied, the range score > 80- 120 = satisfied, and the range score of > 120 – 160 = very satisfied **(Ahmed et.al, 2017).**

Content Validity and Reliability:

The study tool was evaluated using the content of validity. A panel of five experts in field of maternity and newborn health nursing rated each scale's item for its relevance to the construct of health care to create the Item-level Content Validity Index (I-CVI). The ratings were given on a four-point scale, with one being "not relevant" and four being "very relevant." The (I-CVI) for each item was calculated using the percentage of experts who gave a rating of 3 or 4, expressing the importance of an item The overall scale's content validity index (S-CVI) was determined by averaging the (I-CVI) replies from the five experts and dividing by the number of questions. In the case of (S –CVI), a score of.90 is regarded satisfactory.

Pilot study:

A pilot study was carried out on the first 10 % (15) women of the total sample to test the content validity, feasibility, clarity and objectively of the tool as well as estimate, the time needed for data collection. Data was analyzed manually following pilot study.

Phase 1: preparatory phase: It was concerned with construction and preparation of data collection tools. Managerial arrangement to carry out the study, where

the investigator prepared formal requests to the directors of the study settings. The purpose and the nature of the study were explained to gain their acceptance and support. This stage lasted around two months

Phase 2: Implementation phase: Data was collected by using a structured interviewing administrative questionnaire. The investigator explained all questionnaire items sufficiently, and observational checklist to check the performance of care introduced to women.

The current study's data was collected over six-month period, began in June 2020 and ended in December 2020, with the tools being filled and completed by the researcher three days a week from the start of the study.

Perioperative data was collected from this group by tool I .Every women was assessed a day before operation to gather all preoperative data, women's operative report was reviewed by researcher and the required information was recorded on data collection tool. After that women was followed up till she transferred to postpartum ward where women was daily be reassessed during morning shift till patient discharge. The woman's satisfaction will be assessed at discharge using satisfaction tool .

Patient education should include information on the procedure and what to expect during surgery, a pain management plan, and goals for early feeding and mobilization. Information should also be provided on breastfeeding, including lactation support services available, length of stay, and the criteria for discharge.

Follow up: Researcher follow up the women by phone two week after discharged, based discharge criteria (managing pain ,mobilization , breast feeding and no complication).

Ethical considerations:
1. The Faculty of Nursing's Ethical Committee approved the research proposal.
2. During the implementation of the research, there was no risk to the study subjects.
3. The study followed standard clinical research ethics guidelines.
4. The women were assumed that all information obtained would be confidential and would be used only for the purpose of study .
5. Study participants had the opportunity to refuse to participate or withdraw from the study at any time and for any reason.
6. Privacy of study subjects was considered during data gathering.
7. Written consent obtained from women or guidance who participated in the study, after explaining the nature and purpose the study.

Statistical design: The collected data was organized, categorized, coded, tabulated and analyzed using the Statistical Package for social sciences (SPSS) version 18. Data were presented and tables and charts using numbers, percentages, means, standard deviation. Chi-square test of significance was used in order to find an association between variables. Statistical significance difference was considered at P-value ≤0.05 and statistical significance was considered at P-value ≤0. 01. Ratability of the tool: for questionnaire 0.620, for satisfaction tool 0.986.

Result
Table (1): Distribution of studied women according to their personal characteristics:

Personal data	No (150)	%
Age: (years)		
< 25years	31	20.7
25-35 years	78	52.0
< 35 years	41	27.3
Mean ± SD	**29.18±5.82**	
Residence:		
Rural	59	39.3
Urban	91	60.7
Level of education:		
Illiterate	41	27.3
Read and write	24	16.0
Basic education	22	14.7
Secondary education	38	25.3
University	25	16.7
Work:		
Housewife	91	60.7
Employee	59	39.3

Table (2): Distribution of studied women according to obstetrics data:

Obstetric data	No (150)	%
Gravidity: (wks)		
Primigravida	13	8.7
Multigraviga	137	91.3
Parity:		
Primipara	19	12.7
Multipara	131	87.3
History of abortion:		
Yes	36	24.0
No	114	76.0
No. of still births:		
None	143	95.3
One	7	4.7
More than one	0	0.0
No. of Living children		
None	4	2.7
1-2	64	42.7
More than 2	82	54.7
Current CS indication:		
Contracted pelvis	53	35.4
Health problem of mother	38	25.3
Malpresentation or malposition	47	31.3
Previous 2 or more CS	5	3.3
Precious baby	1	0.7
Others	6	4.0

Table (3): Distribution of the studied women according to their preoperative care

Variables	No (150)	%
Vital signs:		
Blood pressure		
Done	150	100.0
Not done	0	0.0
Pulse		
Done	150	100.0
Not done	0	0.0
Temperature		
Done	150	100.0
Not done	0	0.0
Respiration		
Done	150	100.0
Not done	0	0.0
Investigations before CS		
CBC		
Done	150	100.0
Not done	0	0.0
Ultrasonography		
Done	150	100.0
Not done	0	0.0
Skin preparation		
Yes	150	100.0
No	0	0.0
Bowel preparation:	150	100
Yes	0	0.0
No		

Table (4): Distribution of studied women according to their intraoperative care:

Intraoperative data	No (150)	%
Total fluid replacement:		
< 2 liters	136	90.7
2 Or more	14	9.3
Mean±SD	**777.67±180.65**	
Type of anesthesia:		
Spinal	150	100.0
General	0	0.0
Monitor vital signs:		
Blood pressure		
Yes	150	100.0
No	0	0.0
Pulse(P)		
Yes	150	100.0
No	0	0.0
Temperature(Temp)		
Yes	150	100.0
No	0	0.0
Respiration(R)		
Yes	150	100.0
No	0	0.0
Monitor urine output:		
Yes	150	100.0
No	0	0.0
Neuraxial narcotics for CD		
Yes	150	100.0
No	0	0.0
Intraoperative complications:		
Yes	2	1.3
No	148	98.7
Skin to skin contact :		
Yes	0	0.0
No	150	100.0
Condition of neonate:		
Normal	145	96.7
Abnormal	5	3.3

Table (5): Distribution of studied women according to their postoperative care:

Postoperative data	No (150)	%
When IV line is removed:		
< 24 hrs after CS	127	84.7
24 -48 hrs after CS	23	15.3
When solid food is allowed		
Immediately after CS	1	0.7
Within 12 h after CS	116	77.3
24 h after CS	33	22.0
Urinary catheter removed:		
The day of CS	0	0.0
1rst day post-operative	138	92.0
2nd day post-operative	12	8.0
Encourage early ambulation:		
3 hrs after operation	20	13.3
6 hrs after operation	88	58.7
8 hrs after operation	42	28.0
Second post-operative day	0	0.0
Post-operative crystalloid intravenous fluids:		
Yes	150	100.0
No	0	0.0

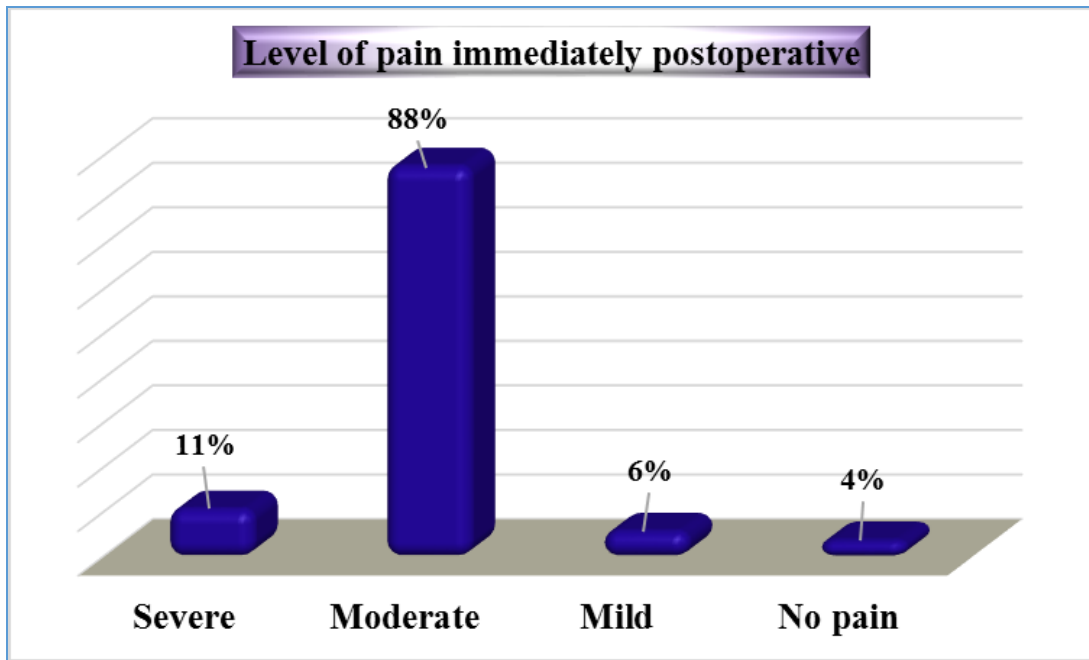| Postoperative data	No (150)	%
Use of analgesic drugs		
Yes	134	89.3
No	16	10.7
Use of antibiotics		
Yes	150	100.0
No	0	0.0

Figure (1): Distribution of studied women according to level of pain immediately postoperative:
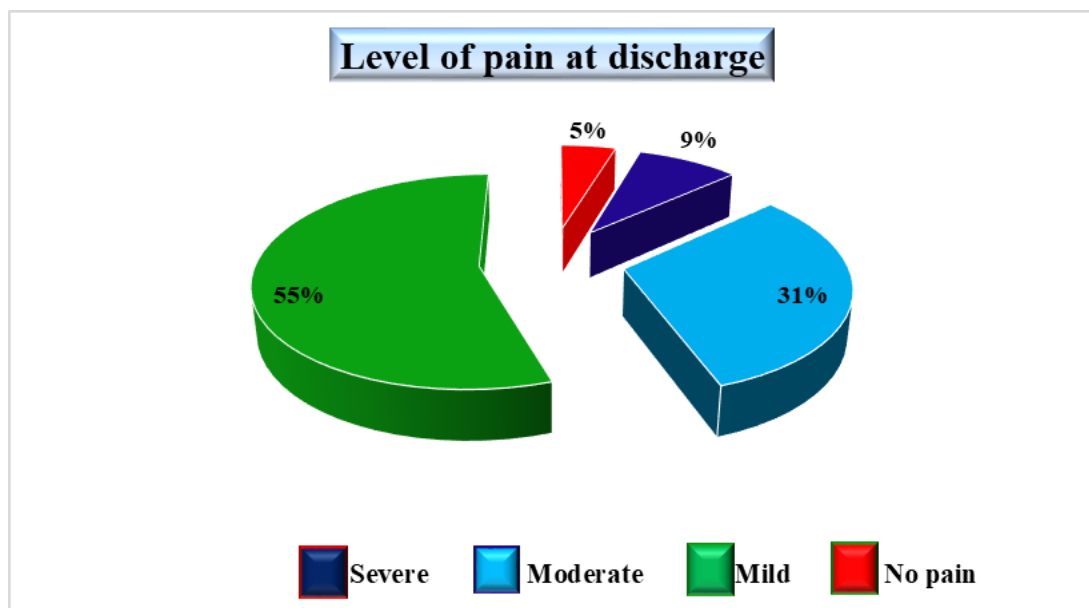
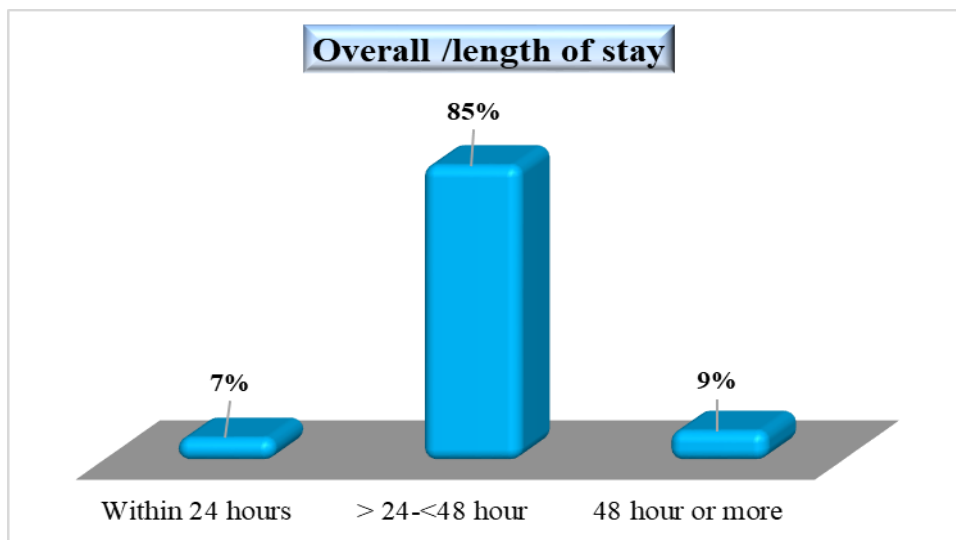**Figure (2): Distribution of studied women according to level of pain at discharge :**

Overall /length of stay

Figure (3): Distribution of studied women according to Overall /length of hospital stay (hours):

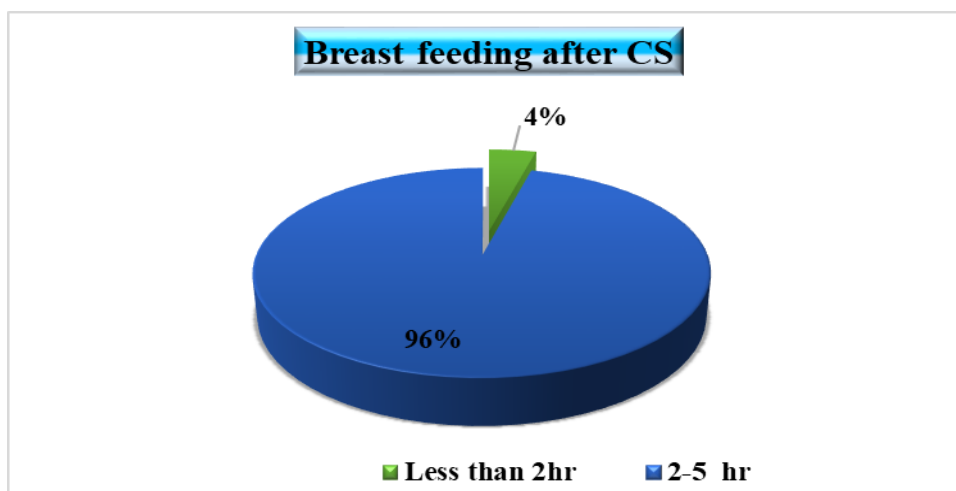**Breast feeding after CS**

- Less than 2hr   - 2-5 hr

Figure (4): Distribution of studied women according to initiation of breast-feeding after CS:

Table (5): Distribution of studied women according to women's Satisfaction:

Women' satisfaction	No (150)	%
• Dissatisfied	25	16.7
• Satisfied	125	83.3
• Very satisfied	0	0.0

Table (1):
As regards to women's age ,this table reveals that the mean age value of women was 29.18±5.82 year and more than half of the women (60.7%) was came from urban areas.

Table (2): This table shows distribution of studied women according to obstetrics data. As regards to women's number of gravidity, it was found that the majority of them (91.3%) were multigravida.

According to women's number of parity, indicate that the majority of them (87.3%) were multipara.

Concerning the women's history of abortion, shows that most of women (76%) had no history of abortion.

Table (3): This table illustrates the distribution of the studied women based on their intraoperative data.

In terms of monitoring vital signs, this table shows that vital signs of all women were monitored.

Table (4): This table shows that the majority of the women's urinary catheters were removed the first day after surgery (92%) and more than half of the women (58.7%) were ambulated six hours after operation.

Figure (1): Shows the majority of the women (88%) had moderate pain immediately postoperative.

Figure (2): This figure notes more than half of the women (55%) had mild pain at discharge.

Figure (3): Shows Overall /length of hospital stay (hours) of the women. The majority of the studied women (85%) were discharged between 24 -48 hours.

Figure (4): Shows the majority of the women (96%)**,** breast-feeding was started 2-5 hours post-operative.

Table (5): Shows most of the women (83.3%) were satisfied regarding provided care.

Discussion

Caesarean section is the birth of a fetus through an abdominal incision (laparotomy) and a uterine incision (uterotomy) **(Stjernholm, 2018).**

Patient satisfaction is defined as a subjective measurement from patient after health treatment by comparing patient's expectation and perceived services. Patient will be satisfied when services equal or more than patient's expectation. Patient satisfaction is one of important outcomes to indicate good achievement of health services **(Kurniati et al., 2017).**

This study aimed to evaluate to evaluate nurses care for women after cesarean section and their satisfaction of care provided.

In terms of caesarean section indications, the current study found that over a third of women had malpresentation and malposition and more than one third of women had contracted pelvic. This is in contrast to the findings of **(Pandya et al., 2015),** who conducted an analytical study of caesarean section indications in India, they found that more over half of the women had malpresentation and malposition .

According to when IV line removed after surgery. The current, study's findings revealed that most of women IV line was removed < 24 hrs postoperatively. This finding contrasts with study which was done by **(Pujic et al., 2018)**, who evaluated enhanced recovery after surgery protocols for cesarean delivery in Serbia, they found that most of women IV line was removed 24 -48 hrs after CS. This difference between the two studies may be related to many reasons such as difference in policies in each hospital.

Concerning when solid food can be eaten following a caesarean section, the current study discovered that the most of women began eating solid food within 12 hours of delivery. This result disagreement with **(Pujic et al.,2018)** , who studied survey of enhanced recovery after surgery protocols for cesarean delivery in Serbia ,they found that more than half of the women were started solid food within 24 hours after Cesarean delivery .This

The present study revealed that majority of women urinary catheter's were removed in 1rst day post-operative. This result was on the same line with

(Pujic et al.,2018), who looked into enhanced recovery after surgery protocols for caesarean deliveries in Serbia and discovered that majority of women the urinary catheter was removed in 1rst day post-operative. Also study by **(Palmer, 2017)**, who study folly's catheter removal in women experiencing cesarean birth, they found that folly's catheters were removed an average of 12 to 18 hours after birth.

The results of this study revealed more than half of women was ambulated 8 hours post operatively. This result in the same line with **(Ali et al., 2019)**, they discovered first ambulation for women was 6 hours after operation for elective caesarean section in Egypt.

Antibiotics were given to women in accordance with regulations to avoid infection, according to the current study. This finding was came in line with a study conducted by **(Smaill et al., 2014 & Saeed et al., 2017)** in which antibiotics were administered to all women undergoing caesarean section according to the guidelines.

The most of women in the current study felt moderate pain following surgery. This contrasts with the findings of **(Marfuah, 2019),** who looked at pain intensity in post-caesarean section women in a descriptive research. They discovered that most of women experienced minor pain following surgery in their study. This differences between findings may related to differences in health agencies.

Regards breastfeeding after caesarean section, the current study's findings revealed that most of women's breast feeding was started 2-.5 hours post surgery .This finding was consistent with study done by **(Gregson et al., 2016),** who investigated the effect of skin-to-skin contact following elective caesarean section on breastfeeding rates in British women and found, they found in their study that more of women breast feeding was started 2-5 hours post surgery.

The present study revealed that most of the women were stayed in hospital ranged from 24 to 48 hours postoperatively . This result was reinforced by **(Federspiel et al., 2020)**, who investigated the length of stay after an uncomplicated caesarean delivery: determinants, facility variance, and outcomes, they discovered that most of the women were stayed in hospital ranged from 24 hours to 48 hours postoperatively.

The majority of the women were satisfied with standard postoperative care, according to the findings of the current study. This results was supported by **(Mostafa, 2019),** who introduced better recovery after elective caesarean sections in Egypt and found that women were more satisfied in their study. Also **(Pravina et al., 2021),** who conducted a comparative study in India with or without enhanced recovery for

women after elective caesarean section; they found that women were also significantly satisfied with standard postoperative care. Also study was carried out by (**Ozkan et al., 2020**), who study satisfaction with maternal and birth services: a survey in Turkish public hospitals, they found more than half of women were satisfied with provided care.

Merits of the study:
- Studying the relationship between nurse's care for women after cesarean section and their satisfaction of care provided gave us chance to identify, solve and attain proper and ideal nursing care for better patient's satisfaction.
- Despite there were lack of studies done on the relationship between nurses care for women after cesarean section and their satisfaction of care provided, our study was done to explore that issues .

Limitations of the study:
Few numbers of cases were studied in post orientation period due to corona pandemic

Conclusion
Nurse has an important, critical role in care of women undergoing to caesarean sections and improve their satisfaction, based on the results of this study, it can be concluded that the majority of the women were satisfied with care provided.

Recommendations
- Apply modern nursing care guidelines for post C.S women to improve level of care.
- In the future, for all nurses, educational training programs on ideal post-cesarean section care must be developed and implemented.
- In recent decades, the importance of measuring satisfaction with health care has been recognized. Patients' views are being used by health care managers in assessing the quality of care, and by policy makers in making decisions about the organization and provision of health services.
- Plan is necessary to develop the quality of health education to get clients satisfaction.

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