



## The Effect of Instructional Guidelines on Women with Cesarean Section Regarding Postoperative care

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### **Abstract:**

Post-operative period is the most critical time after end of cesarean section on women care lead to decreasing side effect of surgery and help women to better self-care. **Aim of study:** To evaluate the effect of instructional guidelines on women with cesarean section regarding postoperative care. **Design:** Quasi experimental design was used. **Setting:** The study was conducted at postpartum unit at Obstetrics and Gynecology department in El shorouk general hospital. **Sampling:** A purposive sample one hundred women according to inclusion and exclusion criteria. **Tools:** Three tools were used to collect data structured interviewing questionnaire include women's demographic data and knowledge, Women's practice observational checklist and women's satisfaction. **Results:** There was a highly statistically significant correlation between women's total knowledge and their total practice. There was a highly statistically significant correlation between women's total knowledge and their satisfaction level with care. There was a highly statistically significant correlation between women's total practice and their satisfaction level. **Conclusion:** Highly significance improvement in knowledge and practice of women after implementing the instructional guidelines. Moreover, the women were satisfied after implement of instruction guideline. **Recommendation:** Instructional booklet should be popular about postoperative care of cesarean section to improve knowledge and practice for women.

**Keywords:** Instructional guidelines, Woman with cesarean section, Postoperative care.

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### **Introduction**

Caesarean section (CS) is the delivery of a fetus through a surgical incision into the uterine wall after 28 weeks of gestation. CS was reported sporadically throughout medical history and was only rendered safe for both mother and fetus during the 20<sup>th</sup> Century. CS is the most commonly performed major obstetric operation in the world. (Nouraei Motlagh et al., 2020).

Postoperative care includes assessment of vital signs continuously, lower limb exercise to reduce hypotension reduction. the incidence of intraoperative and postoperative nausea and vomiting. Antiemetic agents are effective for the prevention of postoperative



nausea and vomiting, Breathing exercise and skin contact between women and baby to start breast feeding .(Zarei et al., 2020).

Instructional guidelines are managing for scheduled and unscheduled cesarean section to improve quality of care, safety ,and health outcome .Guidelines are preventing early complication. Instructional guidelines are specific include postoperative anesthesia , sham feeding ,nausea and vomiting prevention analgesia , nutritional care, glucose control ,early mobilization ,urinary drainage ,thromboembolism prophylaxis, and discharge counseling (Akasheh and Amarin., 2017).

Nursing role is the main factor in preventing and treating complication by the scientific approaches, those is nursing process. A woman after CS needs continues assessment during hospitalization to find any problem and correct any problem. The systematic and rational nature of the nursing process can be considered as a good approach for complete assessment and diagnosis of woman's problems (Roshangar et al., 2020).

I. **Significant of the study** : Cesarean section rate varies worldwide, from country to country and within a country. The National CS rate of Great Britain and American has been reported as 23.8% and 32.8% respectively. In Nigeria, CS rates ranging from 12.2% to 34.5% were reported in some tertiary health facilities. (Abd Elatay et al., 2021).

Cesarean deliveries rates occurred for all births not only in Egypt but also in the world wide cesarean section become global phenomena despite cesarean section is 4 times more dangerous than normal vaginal ,caesarean section deliveries become a part of the culture in some countries. The most critical period the time after end of cesarean section .(WHO, 2018).

World Health Organization recommended incidence of severe morbidity for women giving birth has been reported 12 per 100,000 and women have postoperative cesarean section complications about ( 0.1– 0.9 % ) per million . mortality rate 82.3 % per million after cesarean section , 10 % required special care postoperatively and 3.5% were transferred to an intensive care unit. (WHO, 2020).



According to the Ministry of Health and Population (MOHP) in Egypt caesarean delivery become up to 52 percent of total annual births .Doubling from 27 .6% to 59.8% of total births between 2008 and 2019. Egypt reached the third place in caesarean section after Brazil and Dominican republic in the world and first in The Middle East. ( Abuadas etal ,2019).So, the aim of current study evaluation the effect of instructional guiedlines on women with cesarean section regarding postoperative care.

**Aim of the study aimed to evaluate the effect of instructional guidelines on women with cesarean section regarding postoperative care through the following objective :-**Assessing women's knowledge regarding postoperative care of cesarean section.-Assessing women's practice regarding postoperative care of cesarean section. -Applying the developed instructional guidelines regarding postoperative care of cesarean section care.-Evaluating the effectiveness of instructional guidelines regarding postoperative care of cesarean section and women satisfaction.

**Research Hypothesis:-**The women's knowledge and practice will be improved and lead to a positive effect on postoperative care after implement this instructional guidelines. -Women's satisfaction will be increased after receiving this instructional guidelines.

**Research Design** A quasi-experimental research design is defined as an empirical intervention study to estimate the casual impact of an intervention on target population (Nelson.,2019) ( one group pre and posttest) was used to conduct this study

**Setting:** The study was conducted at postpartum unit at Obstetrics and Gynecology postoperative department in El shorouk general hospital in El shorouk city, Cairo.

**Sample:** A purposive sample was selected according to inclusion and exclusion criteria.

**Sample criteria:Inclusion criteria:** Age range of 18 – 35 years.- Postoperative cesarean section women free from any medical or obstetric complications before and after cesarean section.-primiparous postpartum women.

**Exclusion criteria:**Normal vaginal delivery women.-Postoperative cesarean section women who have medical or obstetric complications.



**Sample size:** The sample size was (100) of cesarean section women calculated as 10 % from total annual rate (1000) according to the statistical records of cesarean section women who attended the postoperative unit and accepted to participate in study at obstetrics and gynecology department at El shrouk hospital (2019-2020).(El shrouk statistics)

**Tools for data collection:** Three tools were used to collect data sample to achieve the aim of study. **I Tool: Structured Interviewing Questionnaire:** The tool was developed by the investigator after reviewing the related national and international literature. This tool was written in a simple Arabic language to suit the understanding level of the study subject. This tool entails two parts as the following:

**Part I: Demographic data of the studied women** This part was used to assess demographic data of women under study such as age, marital status, educational level, place of residence, occupational status, working hours and source of information (Perry et al., 2017; Jacob., 2018 and Lowdermilk et al., 2019).

**Part II: Knowledge assessment questionnaire.** This part was used for assessing women's knowledge about postoperative cesarean section care (pre and posttest). The questionnaire consisted of 13 closed ended questions in form of Multiple Choice Question (MCQ) to assess women's knowledge about postoperative care of cesarean section.

**Scoring system:** A scoring system was followed to assess women's knowledge about postoperative cesarean section care. The Questionnaire was consisted of (13) questions, the total scores of the questionnaire were (26) grades, the complete correct answer was scored as (2) point, the incomplete correct answer was scored as (1) point and the incorrect answer was scored as (0) point. These scores were summed and were converted into a percent score.

- **Satisfactory** knowledge if score  $\geq 60\%$ .

- **Unsatisfactory** knowledge if score  $< 60\%$ .

**2<sup>nd</sup> Tool:** Observational checklist to assess women's self-care and practices related to postoperative care such as care of the perineum, breast care, leg exercise, breathing exercise, walking exercise (pretest and posttest) (Perry et al., 2017; Urden et al., 2017; Norwitz et al., 2019 and Lowdermilk et al., 2019)

**Scoring system:** The checklist consisted of 46 steps divided as Breathing Exercise (6 steps), Breast care (11 steps), Foot exercise (5 steps), Care of the perineum (13 steps) and Walking exercise (11 steps). Each checklist was assigned a score according to sub-items.

The total score of women's practices were (46) marks, each item was evaluated as "done" was taken (1) score and "not done" was taken (0) score. These scores were summed up and were converted into a percentage score. **Adequate practice** if score  $\geq 60\%$   
**Inadequate practice** if score  $< 60\%$

**3<sup>d</sup> Tool: Women's satisfaction about postoperative care of cesarean section.** The tool was used to assess women's satisfaction about postoperative care of cesarean section (posttest). (Aiston, 2017; Azam., 2018 and; Carmona, et al., 2020)



**Scoring system:** The tool consisted of (11) statements. Each item was evaluated as Yes was scored as (2) points, sometimes as (1) point and No was scored as (0) point.

**-Supportive material:**

**Instructional Guidelines for women with cesarean section regarding postoperative care** was designed by the investigator based on current national and international related literatures using books, articles and scientific magazines. This was written in simple Arabic language. The Instructional Guidelines contained knowledge and practice about postoperative care of cesarean section.

**Validity and Reliability:**

**Validity:** The developed tool was formulated and submitted to three experts in Maternal and Newborn Health Nursing expertise to assess the content validity. Needed modifications were done. Experts' opinions elicited regarding the format, layout, consistency, accuracy and relevancy of the tools.

**Reliability:** Cronbach's Alpha was used to determine the internal reliability of the tool.: Tool I : Knowledge Assessment Questionnaire :0.863. Tool II : Observational Checklist :0.764. Tool III : Women Satisfaction Sheet :0.821

**Ethical Considerations** An official permission to conduct the proposed study was obtained from the Scientific Research Ethics Committee. Participation in the study is voluntary and subjects were given complete full information about the study and their role before signing the informed consent. The ethical considerations included explaining the purpose and nature of the study, stating the possibility to withdraw at any time, confidentiality of the information where it was not to be accessed by any other party without taking permission of the participants.

**Pilot Study** Carried out on (10) women who represent (10%) of women under the study. In order to test the applicability of the constructed tools and the clarity of the included questions related to women's knowledge and practice regarding postoperative cesarean section care. The pilot has also served to estimate the time needed for each subject to fill in the questions. According to the results of the pilot, some corrections and omissions of items were performed so the pilot women were included in the main study sample.

**Field work** The collection of data and application of Instructional Guidelines lasted over a period of six months; The current study started in December 2020 and ending in June 2021, through the following phases:

**Assessment phase:** The investigator visited the postoperative unit at Obstetrics and Gynecology department in El Shorouk general hospital three days in Sunday, Monday and Tuesday at morning shift (8a.m-2p.m) to collect data. The investigator obtained women's oral consent for participating



in this study after explaining the aim of the study. The investigator starting the interviewing process by filling demographic data and professional data which took about 20 minutes then the questioner for knowledge was filled by The investigator which take 20-30 minutes pretest, while the checklist for assessing women's' practice was filled by the researcher in 45-60 minutes pretest. All information collected through data collection tools were interpreted for identifying individualized teaching needs. The investigator set up instructions guide lines covering all objectives. These objectives were categorized into general and specific objectives. The instructions resources and facilities were allocated (printed material and location of session that best serve the learners). The investigator determined the time table of sessions, teaching methods, media used and learner's activities. After data collection, the appointment for starting instructions sessions was detected and scheduled with the women.

**Implementation phase** -The teaching sessions were conducted in the rooms at postpartum unit at Obstetrics and Gynecology department in El shorouk general hospital. The rooms were conditioned, quiet, had adequate lighting, well ventilated and furnished, and had adequate spacing for the place for implementing educational instructions activities. Total number of the sessions of 1 instruction was ( 6) sessions. Each day of the instruction guideline was divided into six sessions, the duration of each session was 45-60 minutes for theoretical session pre and posttest and 70-100 minutes for practical session pre and posttest, and a break for 30 minutes was arranged between each session for 3 days per week. These sessions were conducted for small group; each group number didn't exceed two women. The booklet was given for every woman. Implementation of educational instructions lasted over a period of 6 months for all women. Each session started by greeting the women, assessing women motivation for learning, getting feedback about what was given through the previous session, taking into consideration using simple language to suit the educational level of the women.

**2-Instructional guidelines included 6 sessions:**

**a- Theoretical part included three sessions**

**b- Practical part included three sessions**

**Theoretical part included:** At the beginning of the session, an orientation of educational instructions and purpose took place. The importance and benefit of educational instructions were explained to the women to motivate the studied women to follow instructions and take socio demographic data for 20 minutes. The investigator emphasized the importance of adherence to each step of educational instructions, and the rationale for and the benefit of engaging in each new behavior was explained. The researcher encouraged the studied women to express readiness for changing the performance. Motivation, problem solving and reinforcement techniques were used to enhanced active participation of the studied women in the educational sessions. The first session included questions from number 1 to number 4 for 15-20 minutes. The second teaching session included questions from number 5 to number 9 for 15-20 minutes. The third teaching session included last questions from number 10 to number 13 for 15-20 minutes.

**Practical part included .Three sessions for practical part:**The first practical session included breathing exercise, foot exercise and. walking exercise. The first session take time from 30-40

minutes started with breathing exercise after that foot exercise at the end walking exercise .The second practical session included breast care. The one session take time from 20-30 minutes .The third practical session included perineum care .the one session take time from 20-30 minutes.

**Evaluation phase**The evaluation phase emphasized on determining the effect of the instructional guidelines on women’s knowledge and practices regarding postoperative cesarean section care by comparing results pre and immediately post using the previously mentioned tools.

**Administrative item :**After explanation of the study aim and objectives, an official permission was obtained from the Dean of faculty of nursing and the general manager of Elshrouk general hospital asking for cooperation and permission to conduct the study.An official permission to conduct the study obtained from the director of El shorouk general hospital. The researcher met the hospital director and explained the purpose and the methods of the data collection. Permission for data collection and implementation of instructional guidelines was obtained from Dean of Faculty of Nursing and Hospitals Administrative Personnel

**Statistical Analysis :**The statistical analysis of data was done by using the computer software of Microsoft Excel Program and Statistical Package for Social Science (SPSS) version 25 (SPSS Inc., Chicago, IL, USA). Data were presented using descriptive statistics in the form of frequencies and percentage for categorical data, the arithmetic mean (x<sub>2</sub>) and standard deviation (SD) for quantitative data. Baseline differences between the group at pre- and post- were assessed using an independent T. test for continuous variables, and R- test to the correlation between the study variables.

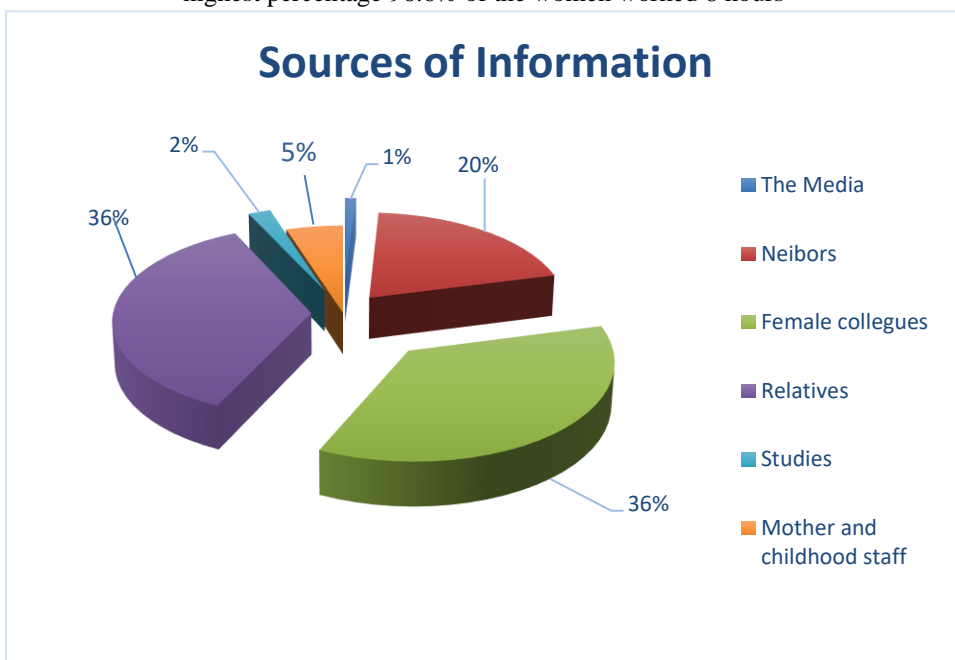
## Result

**Table (1)** Distribution of the demographic characteristics of the studied women with cesarean section regarding postoperative care (n=100)

Demographic characteristics		No.	%
Age	.18 – 23	23	23.0
	24 – 29	50	50.0
	30 – 35	27	27.0
	Mean ± SD	26.8 ± 2.71	
Education level	Can't read or write	13	13.0
	Primary	26	26.0
	Preparatory	24	24.0
	Diploma	14	14.0
	Institute	19	19.0

	University	4	4.0
Occupational status	Working	89	89.0
	Not working	11	11.0
Place of residence	Rural	8	8.0
	Urban	92	92.0
Marital Status	Married	89	89.0
	Divorced	9	9.0
	Widow	2	2.0
Number of working hours (n=89)	8 hr.	86	96.6
	12 hr.	3	3.4

**Table (1):** shows that mean age of the studied women ( $26.8 \pm 2.7$ ). regarding residence, 92% of the studied women were live in urban areas. 26% of the studied women had primary education level. 89% of the studied women was married, and working, the highest percentage 96.6% of the women worked 8 hours



**Figure (1)** Distribution women's sources of information about cesarean section (n=100)

**Figure (1)** shows that more than one third 36% of the studied women acquire their knowledge from female colleagues, and relatives, less than one quarter 20% of the studied women acquire their knowledge from neighbors. While, only of the studied women acquire their knowledge from media, and studies 1%, &2% respectively, only 5% of the studied women acquire knowledge from mother and child hood staff.



**Table (2)** Distribution of the studied women's knowledge regarding post-operative care of cesarean section care pre and post instruction (n= 100)

Items	Pre instructional						Post instructional						X <sup>2</sup>	P-value
	Correct		Incomplete correct		Incorrect		Correct		Incomplete correct		Incorrect or don't know			
	N	%	N	%	N	%	N	%	N	%	N	%		
Definition of cesarean section	5	5.0	72	72.0	23	23.0	55	55.0	41	41.0	4	4.0	16.1	.000**
Benefits of cesarean section for women	6	6.0	74	74.0	20	20.0	60	60.0	35	35.0	5	5.0	14.3	.000**
Dealing with women upon recovery from anesthesia	4	4.0	81	81.0	15	15.0	42	42.0	52	52.0	6	6.0	16	.000**
Importance of relieving the pain of a cesarean section wound	7	7.0	80	80.0	13	13.0	39	39.0	55	55.0	6	6.0	12.1	.000**
Benefits of breathing exercises immediately after recovery from anesthesia	6	6.0	72	72.0	22	22.0	38	38.0	55	55.0	7	7.0	17.6	.000**
Purpose of removing urinary catheter in the first day after a cesarean section	5	5.0	67	67.0	28	28.0	27	27.0	68	68.0	5	5.0	18.7	.000**
Importance of walking and foot exercise after a cesarean section	3	3.0	86	86.0	11	11.0	42	42.0	54	54.0	4	4.0	14.8	.000**
Care for a cesarean section wound.	5	5.0	77	77.0	18	18.0	61	61.0	31	31.0	8	8.0	16.3	.000**

(\*) statistically significant at P-value ≤0.05

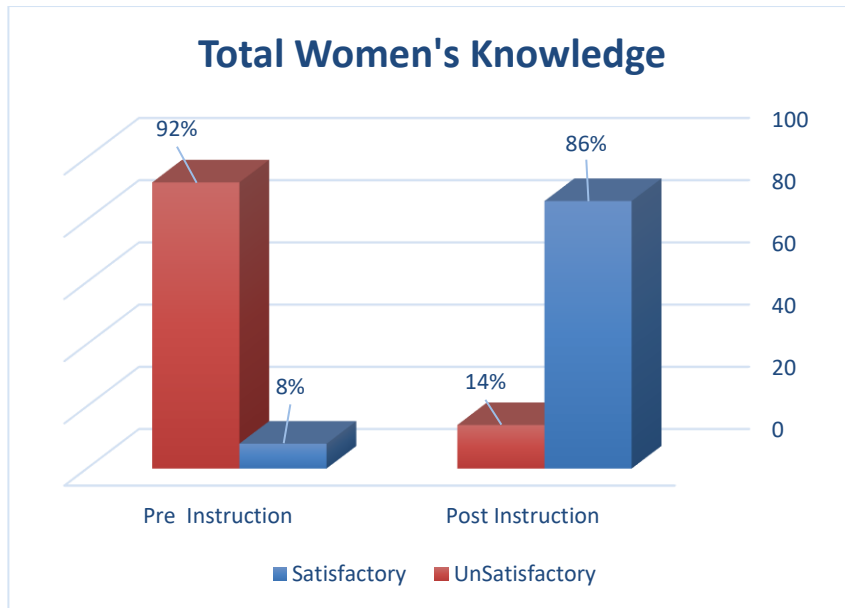
(\*\*) highly statistically significant at P-value ≤0.001

**Table (2)** reveals that there was highly statistically significant improvement in women's knowledge regarding post-operative health care after implementation of instruction. In the pre instructional phase, minority of the women had correct answers regarding information about Benefits of cesarean section for women (6%) while reach 60% in the post instructional phase.

**Table (3)** Distribution of the studied women's knowledge regarding post-operative care of cesarean section pre and post instruction (n= 100)

Items	Pre instruction						Post instruction						X <sup>2</sup>	P-value
	Complete Correct		Incomplete Correct		Don't know		Complete correct		correct Incomplete		Don't know			
	N	%	N	%	N	%	N	%	N	%	N	%		
Information about early bleeding.	7	7.0	79	79.0	14	14.0	72	72.0	22	22.0	6	6.0	17.2	.000**
Correct behavior when early bleeding occurs.	8	8.0	58	58.0	34	34.0	65	65.0	26	26.0	9	9.0	18.9	.000**
Correct way of sleeping on the back.	4	4.0	81	81.0	15	15.0	59	59.0	32	32.0	9	9.0	11.2	.000**
Benefits of breastfeeding for the mother.	3	3.0	42	42.0	55	55.0	60	60.0	33	33.0	7	7.0	12.8	.000**
Appropriate breastfeeding positions after cesarean section. a	2	2.0	37	37.0	61	61.0	58	58.0	35	35.0	7	7.0	17.6	.000**

(\*) statistically significant at P-value  $\leq 0.05$  (\*\*) highly statistically significant at P-value  $\leq 0.00$  **Table (3)** In the pre instructional phase, minority of the studied women had incorrect or don't no knowledge regarding early bleeding and correct behavior (7% and 6%, respectively), when early bleeding occurs while improved and reach 72% and 65% in the post instructional phase respectively.



**Figure (2)** Distribution of the studied women's total knowledge regarding cesarean section postoperative care (n= 100) **Figure (2)**: indicated that, there is a highly statistically significant improvement in the post instructional phase compared with the pre instructional. Majority (92%) of the studied women had poor total knowledge regarding post-operative care in pre instructional . While, majority 86% of the studied women had good total knowledge regarding post-operative care in post instructional **Table (4)** Distribution of the studied women regarding total practice with postoperative of cesarean section care pre and post instruction (n= 100)

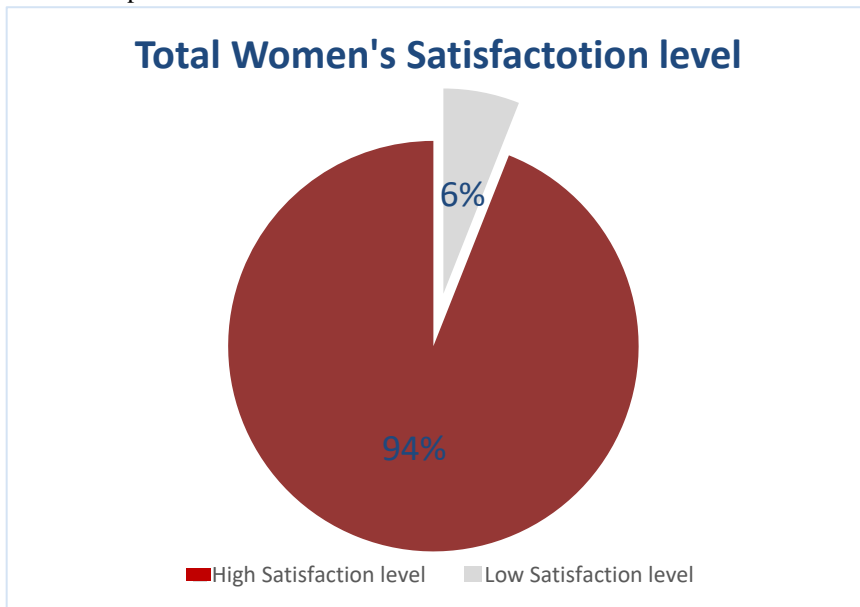
Total practice	Pre-instruction		Post-instruction		X <sup>2</sup>	P-value
	No.	%	No.	%		
Adequate practice	8	8.0	96	96.0	43.8	.000**
Inadequate practice	92	92.0	4	4.0		

(\*) statistically significant at P-value  $\leq 0.05$  (\*\*) highly statistically significant at P-value  $\leq 0.001$

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**Table (4)** illustrate that 92 of the studied women had inadequate of total practice scores regarding post-operative care in pre instruction. While, 96 of the studied women had adequate of total practice scores regarding post-operative care in post instruction phase



**Figure (3)** Number and percentage distribution of the studied women regarding their satisfaction level (n= 100)

**Figure (3)** shows that majority (94%) of the participants had high level of satisfaction while only 6 % of them had low satisfaction level

**Table (5)** The relation between the demographic characteristics of the studied women and their total knowledge (n=100)

Items	Satisfactory knowledge		Unsatisfactory knowledge		Total		X <sup>2</sup>	P-Value
	N	%	N	%	N	%		
<b>Age</b>							12.7	.000**
18 – 23	3	3.0	20	20.0	23	23.0		
24 – 29	2	2.0	48	48.0	50	50.0		
30 – 35	2	2.0	25	25.0	27	27.0		
<b>Education level</b>							3.56	.089
Don't read or write	2	2.0	11	11.0	13	13.0		
Primary	1	1.0	25	25.0	26	26.0		
Preparatory	2	2.0	22	22.0	24	24.0		
Diploma	0	0.0	14	14.0	14	14.0		
Institute	0	0.0	19	19.0	19	19.0		
University	2	2.0	2	2.0	4	4.0		
<b>Occupational status</b>							8.59	.024*
Working	5	5.0	84	84.0	89	89.0		
Not working	2	2.0	9	9.0	11	11.0		
<b>Place of residence</b>							14.9	.000**
Rural	3	3.0	5	5.0	8	8.0		
Urban	4	4.0	88	88.0	92	92.0		

**Table (5):** shows that there is a highly statistically significant relation between women's total knowledge and their ages and place of residence, also, there is a statistically significant relation between women's total knowledge and their occupational status, while there is no statistically significant relation between women's total knowledge and their ages and place of residence.

**Table (6)** The relation between the demographic characteristics of the studied women and their total practice (n=100)

Items	Adequate knowledge		Inadequate knowledge		Total		X <sup>2</sup>	P-Value
	N	%	N	%	N	%		
<b>Age</b>							11.1	.000**
18 – 23	2	2.0	21	21.0	23	23.0		
24 – 29	3	3.0	47	47.0	50	50.0		
30 – 35	3	3.0	24	24.0	27	27.0		
<b>Education level</b>							2.18	.126
Don't read or write	2	2.0	11	11.0	13	13.0		
Primary	1	1.0	25	25.0	26	26.0		
Preparatory	0	0.0	24	24.0	24	24.0		
Diploma	1	1.0	13	13.0	14	14.0		

Institute	2	2.0	17	17.0	19	19.0		
University	2	2.0	2	2.0	4	4.0		
<b>Occupational status</b>							6.47	.038*
Working	6	6.0	83	83.0	89	89.0		
Not working	2	2.0	9	9.0	11	11.0		
<b>Place of residence</b>							16.1	.000**
Rural	3	3.0	5	5.0	8	8.0		
Urban	5	5.0	87	87.0	92	92.0		

**Table (6):** shows that there is a highly statistically significant relation between women's total practice and their ages and place of residence, also, there is a statistically significant relation between women's total practice and their occupational status, while there is no statistically significant relation between women's total practice and their ages and place of residence.

**Table (7)** The correlation between the studied women's total knowledge and total practice

Items		Total knowledge
Total practice	R	.987
	P-Value	.000**

(\*\*) highly statistically significant at P-value  $\leq 0.001$

**Table (7)** shows that there is a highly statistically significant positive correlation between the studied women's total knowledge and total practice.

## II. Discussion

Regarding demographic characteristics of women with cesarean section, the current study showed that half of women had ages from 24:29 years. Majority of women were live in urban areas, more than one quarter of women had primary education level. Additionally, majority of women was married, and working, the highest percentage of the studied women worked 8 hours.

Caesarean section, known as C-section, or caesarean section, is the surgical procedure by which a baby is delivered through an incision in the mother's abdomen, often performed because vaginal delivery would put the baby or mother at risk. Cesarean deliveries are generally avoided before 39 weeks of pregnancy so the child has proper time to develop in the womb. Sometimes, however, complications arise and a cesarean delivery must be performed prior to 39 weeks (Loomis, et al., 2021).

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The current study aimed to assess the effect of instructional guidelines on woman with cesarean section regarding postoperative care through; assessing women's knowledge regarding postoperative cesarean section care, assessing women's practice regarding postoperative cesarean section care, applying the designed international guidelines regarding postoperative cesarean section care, and evaluating the effectiveness of instructional guidelines regarding postoperative cesarean section.

Regarding women's sources of information about cesarean section, the current study showed that more than 36% of women acquire their knowledge from female colleagues, and relatives, 20% of women acquire their knowledge from neighbors. While, minority of women acquire their knowledge from media, and studies

This result is supported with **Mohammed, et al., (2020)** who conducted a study entitled "Enhanced Recovery Program after Cesarean Section in Sulaimani Maternity Teaching Hospital" in Egypt and found that more than one third of women received their information from female colleagues, relatives, and neighbors. In constant with **Wang, et al., (2020)** who conducted a study entitled "Impact of intraoperative infusion and postoperative PCIA of dexmedetomidine on early breastfeeding after elective cesarean section" in India and found that more than one third of women received their information from media.

Regarding women's total knowledge with postoperative of cesarean section, the current study illustrated that all of women had poor total knowledge regarding post-operative care in pre instruction. From the investigator point of view, this result may be due to women had inadequate information about knowledge with post cesarean section before implement instruction.

Regarding women's total practice with post cesarean section healthcare, the current study illustrate that all of women had inadequate of total practice scores regarding post-operative care in pre instruction. From the researcher point of view, this result may be due to instructional guidelines increase and enhance performance of women about post cesarean section healthcare.

This result is accordance with **Abdallah, & Rafeek., (2018)** who conducted a study entitled "Risk factors of surgical site infection of cesarean section and role of skin cleansing and prophylactic antibiotic" in Egypt and found that majority of women had inadequate of total practice scores regarding post-operative care. Conversely, this result is in disagreement with **Yang, & Sun., (2017)** who conducted a study entitled "Comparison of maternal and fetal complications in elective and emergency cesarean section" and found that one third of women had inadequate of total practice scores regarding post-operative care in pre instruction.

Regarding women's satisfaction of cesarean section post-operative care, the current study shows that there was highly statistically significant improvement in women's satisfaction with post-operative care after implementation of instruction in all items. From the researcher point of view, this result may be due to instructional guidelines were very important for women to increase level of satisfaction for women after cesarean section.

This result is supported with **Wondie, et al., (2019)** who conducted a study entitled "Cesarean section among women who gave birth in Dessie town hospitals, Northeast Ethiopia" in Northeast Ethiopia and found that there was highly statistically significant improvement in women's satisfaction. Conversely, this result is in disagreement with **Kallianidis, et al., (2018)** who conducted a study entitled "Maternal mortality after cesarean section in the Netherlands" in European and found that more than half of women had low level of satisfaction post cesarean section healthcare.

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Regarding correlation between women's total knowledge and total practices, the current study showed that there is a highly statistically significant correlation between women's total knowledge and their total practices..

### **III. Conclusion**

The current study concluded that highly significance improvement in knowledge and practice of studied women after implementing the instruction guidelines. Moreover the studied women were satisfied after implementing of instruction guidelines, which support the research hypothesis.

### **IV. Recommendation**

-Apply educational program for improving postoperative cesarean section care for women-Instructional booklet should be popular about postoperative cesarean section care to improve knowledge and practice for women..-Replicate this study by using large samples of the women and include more than one hospital with different regions in Egypt. Future Recommendations:Providing sufficient training for staff nurses that working in postoperative unit with women of cesarean section..Periodic assessment for any women will have cesarean section regarding post-operative care of cesarean section of knowledge and practice.

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