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Assessment of Women Knowledge Toward Cesarean Section Complications in Baghdad Teaching Hospital 2022

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Abstract

Background The increasing rate of births through caesarean sections (CS) had become a source of concern in many countries. Maternal beliefs may influence the mode of delivery. Knowledge of pregnant women regarding CS and its complications is an important tool to assess their choice for birth modality.

Objective To assess women knowledge toward complications of CS and to find out the relationship between level of knowledge and their demographic characteristics.

Methods A cross sectional study with analytic elements was conducted in Baghdad Teaching Hospital, Medical City Complex in 2022 on women visited Gynecology and Obstetrics Consultation Outpatient Clinics and Ward for different reasons.

Results The study included 400 women, 67.5% (270) aged <35 years. The majority 78% (312) of study participants were with poor level of knowledge. Most women did not know about (weakness of bowel movement after delivery as a complication of CS), and (placenta progressing and adhesion in the next pregnancy) (260; 56.0%) and (252; 63.0%) respectively.

Conclusion Two third of the patients had low knowledge level regarding complications of CS. knowledge was better in those who were older than 35 years, highly educated and had a job.

Keywords Cesarean section, knowledge, pregnant women, wound infection

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List of abbreviations: CS = Caesarean section, PHCC = Primary health care centers, WHO = World Health Organization

Introduction

The increasing rate of births through caesarean sections (CS) had become a source of concern in many countries. Maternal beliefs may influence the mode of delivery [(1)]. However, many evidence suggests a high risk of poor outcomes (such as psychological or social well-being, maternal, perinatal and neonatal morbidity) associated with unnecessary sections [(2)]. Furthermore, some complications of CS are not immediately seen after delivery, and studies had shown that the hospitalization rate within the first 30 days after birth is two times more likely with a CS than with a normal vaginal delivery [(3)].

As a standard, patient's education, improving pregnant women's knowledge and perception towards CS are essential for a good outcome, patients' decision making, and managing medico-legal conditions. Good clients' knowledge and attitude towards surgery had been shown to have a positive effect on the clients' outcome [(4)]. Women perception about

modes of birth have been found to influence the choice of mode of birth by pregnant women. Therefore, it is essential to study these issues. Knowledge and attitudes of women about modes of delivery are different among them, depending on many factors such as culture, belief, educational levels, socioeconomic status in addition to health care system [5,6]. The main complication of CS is illustrated in the table (1) below [7]:

Table 1. Main complication of cesarean section

Early complications	Late complications
Infections (most common) Endometritis, wound infection, abscess	Cesarean scar defect (most common)
Subfascial hematoma	Abdominal wall endometriosis
Bladder flap hematoma (>4 cm)	Morbidly adherent placenta (Placenta accreta, increta, and percreta)
Uterine dehiscence	Cesarean scar ectopic pregnancy
Uterine rupture	Cesarean scar retained products of conception

Improvement of mothers' knowledge and attitude toward normal vaginal birth is considered as an important strategy to control increasing rate of CS on maternal demand [8]. Maternal perceptions about delivery through CS attributed to delayed presentation of women when needing emergency obstetric care. This increases the risks of complications and affect the achievement of the sustainable development goal target of reducing neonatal mortality to end new-born deaths [9,10].

This study objectives were to assess women knowledge toward complications of CS in Baghdad Teaching Hospital and to find out the relationship between level of knowledge and their demographic characteristics such as (age, education, and multipara-CS).

Methods

Study design, setting and duration

A cross sectional descriptive study with analytic components, was conducted in Baghdad Teaching Hospital, Medical City Complex from the period extended from January - June 2022.

Sample size and sampling technique

A convenient sample of 400 married women at reproductive age was recruited to the study, aged 15-45 years and currently married and accepted to participate in the study.

Tool of the study

A structured questionnaire validated by panel of experts at Department of Family and Community Medicine, College of Medicine, University of Baghdad utilizing information obtained from previous related studies [2,4-6].

The questionnaire consisted of two domains:

First appendix containing the demographic characteristics (studied variables and obstetric characteristics) of women including their age, residency, education, job, parity, and their gestational age of current pregnancy, previous CS.

The second appendix included information about women's knowledge towards CS main complications (bleeding, infection, delayed breast feeding and thromboembolism).

Data collection method

The information was obtained by direct interview with the women using the structured questionnaire at the morning through 4 days/week for two consecutive months (from January to June 2022).

Studied variables

- Age: less than 35 years, and equal or more than 35 years [2]
- Education: illiterate, primary, secondary, college, and higher education [4]
- Early post-operative bleeding: Post procedural hemorrhage of skin and subcutaneous tissue following CS procedure in the first two weeks [4]
- Late post-operative bleeding: Post procedural hemorrhage of skin and subcutaneous tissue following C/S procedure in 15-40 days [11]
- Thromboembolism: A disorder that includes deep vein thrombosis and pulmonary embolism [11]
- Delayed breast feeding: A temporarily delay the large increase in milk production usually seen between 3 to 5 days following birth [11].
- Uterus rupture: It is spontaneous tearing of the uterus that may result in the fetus being expelled into the peritoneal cavity [12,13]

Ethical considerations

A verbal consent was taken from all the women who decided to participate in the study. None of the participants were interviewed in front of any of the relatives, thus; a complete confidentiality was ensured.

Administrative approval

Data collection was started after obtaining the official approval from the Scientific Committee of College of Medicine, University of Baghdad, Iraqi Ministry of Health and Medical City Health Directorate

Scoring

The knowledge part of questions had 3 levels of scores, 0, 1, and 2; 0 for incorrect answer, 1 for uncertain and 2 for correct answer, representing poor, fair and good level of knowledge respectively.

A total score of <50% considered as poor, 50-75% was considered as fair, while >75% was considered as good knowledge.

Calculating and analysis the score of the scale

The score of each participated woman was calculated by application of the following equation:

Overall knowledge score for each participant = (total score (summation of the scores of all items))/(highest possible score)×100

After that, the level of knowledge for each participated woman was divided into 3 levels:

- Poor knowledge: those who achieved <50% score.
- Average knowledge: those who achieved 50-75% score.
- Good knowledge: those who achieved >75% score.

Statistical analysis

Data were introduced into Microsoft excel sheet 2019 and loaded into SPSS (Statistical Package for Social Sciences) version (24). Parametric data are presented as mean and standard deviation. Categorical data presented as numbers and percentages. Chi- square test and Fisher exact test was used. P-value <0.05 was considered significant.

Results

The study sample were 400 women, 67.5% of them of age less than 35, 35.3% of them had primary education, 68.3% were housewives, 55% had 3-5 children and45.7% of them had 1-3 CS. Their sociodemographic features detailed in table (2).

Table 2. Sociodemographic distribution of study sample

Variable		N.	%
Age group	<35	270	67.5
	≥35	130	32.5
Education	Illiterate	100	25.0
	Primary	141	35.3
	Secondary	120	30.0
	College	37	9.3
	Higher education	2	0.5
Occupation	Housewife	273	68.3
	Employer	95	23.8
	Self employed	32	8.0
Residency	Urban	331	82.8
	Rural	69	17.2
Parity	<3	120	30
	3-5	219	55
	>5	61	15
Number of CS	0	178	44.5
	1-3	179	45.7
	>3	43	10.8

N=400

The overall knowledge score with mean of (10±6), minimum score was 0, and maximum achieved score by participants were 28 (which also the highest possible score).

Figure (1) illustrates the distribution of overall level of knowledge among study participants whereas the overwhelming majority with poor level of knowledge corresponding to 78% (312) of study participants.

In table (3), the scale of knowledge of participated women regarding CS complications is illustrated. It shows that most women did not know about weakness of bowel movement after delivery as a complication of CS, and placenta progressing and adhesion in the next pregnancy 260 (56.0%), 252 (63.0%) respectively.

There was a significant association (p <0.001) between age and overall level of knowledge as the highest proportion of good knowledge 63.3% (19) among women ≥35 years, and highest level of poor knowledge 71.2% (222) among women younger than 35 years. A significant association was found between women overall knowledge level and their levels of education, women's occupation and with parity. As all illustrated in table (4).

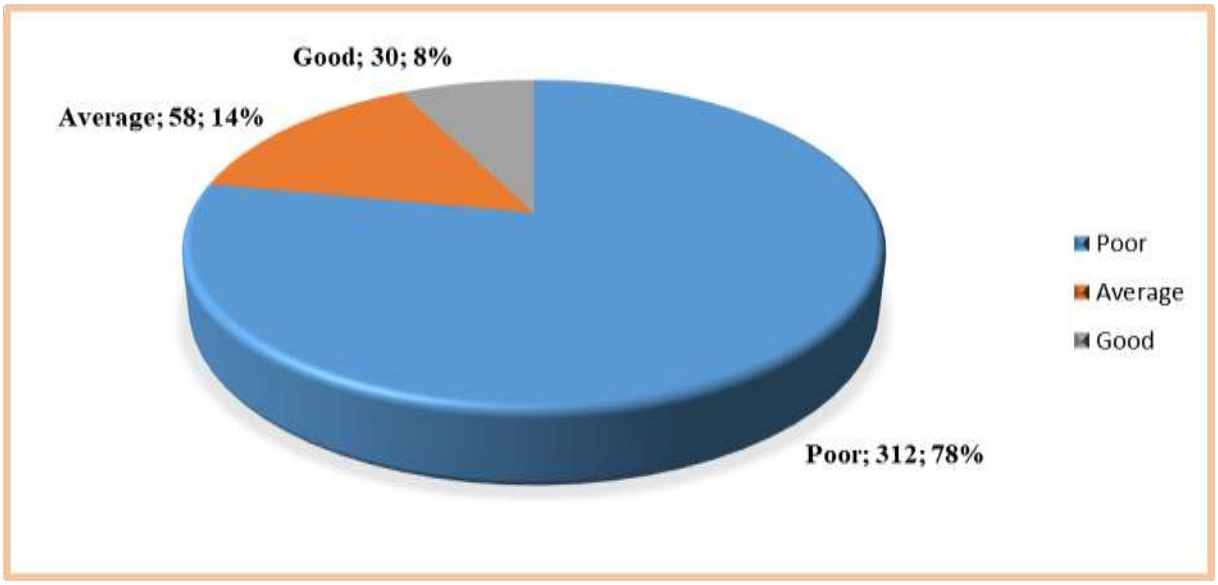

Figure 1. Distribution of overall level of knowledge among study participants (n=400)

Table 3. Women knowledge regarding cesarean section complications

Items	Scale					
	Don't know		Uncertain		know	
	N.	%	N.	%	N.	%
Delayed wound healing and wound infection after the operation	158	39.5	216	54.0	26	6.5
Early post-partum hemorrhage	110	27.5	251	62.7	39	9.8
Late post-partum hemorrhage	232	58.0	120	30.0	48	12.0
Bladder injury	225	56.3	145	36.2	30	7.5
Respiratory tract infection as a result of Anesthesia	111	27.8	244	61.0	45	11.3
Paralytic ileus	260	65.0	114	28.5	26	6.5
Abdominal pannus	167	41.8	174	43.4	59	14.8
Urinary tract infection	143	35.8	219	54.8	38	9.4
Thromboembolism	184	46.0	175	43.7	41	10.3
Endometritis	225	56.2	145	36.3	30	7.5
Placenta progressing and adhesion in the next pregnancy	252	63.0	116	29.0	32	8.0
Uterus rupture	258	64.5	106	26.5	36	9.0
Delayed breast feeding	111	27.2	185	46.3	104	26.0
Cesarean section cost	56	14	170	42.5	174	44.5

N=400

Table 4. Distribution of Overall Knowledge level in relation to Sociodemographic characteristics of study participants

Variable		Total (400)	Overall, Knowledge level						P value
			Poor		Average		Good		
			N.	%	N.	%	N.	%	
Age group	<35	270	222	71.2	37	63.8	11	36.7	<0.001*
	≥35	130	90	28.8	21	36.2	19	63.3	
Education	Illiterate	100	90	28.8	8	13.8	2	6.7	<0.001*
	Primary	141	121	38.8	18	31.0	2	6.7	
	Secondary	120	95	30.4	22	37.9	3	10.0	
	College	37	6	1.9	9	15.5	22	73.3	
	Higher education	2	0	0.0	1	1.7	1	3.3	
Occupation	Housewife	273	240	76.9	29	50.0	4	13.3	<0.001*
	Employer	95	59	18.9	22	37.9	14	46.7	
	Self employed	32	13	4.2	7	12.1	12	40.0	
Residency	Urban	331	255	81.7	47	81.0	29	96.7	0.092*
	Rural	69	57	18.2	11	18.9	1	3.3	
Parity	<3	120	93	29.8	11	19.0	16	53.3	0.008*
	3-5	219	170	54.5	40	69.0	9	30.0	
	>5	61	49	15.7	7	12.1	5	16.7	
Previous Cesarean Section	0	178	143	45.8	20	34.5	15	50.0	0.089**
	1-3	179	131	42.0	35	60.3	13	43.3	
	>3	43	38	12.2	3	5.2	2	6.7	

*Chi-square is significant at p < 0.05, **Fisher-exact test is significant at p < 0.05

Discussion

One of the most frequently performed operations for women is CS, in the past decade it was estimated that one third of all births done by caesarean section in USA [13].

In the current study that included 400 women, more than half of them were aged below 35 years and those with primary education level were the majority that agreed with Saoji et al. [14] and Razzaq et al. [15], Ghasvari et al. [16], which could be related to society nature where a significant number of females get marry and give birth when they are younger in age, in which all are countries that known of poor attention to female education as well as poverty, which could explain the distribution of low proportion of women with high education level between participants. Those mothers with 3-5 parity constituted more than half of participant, which is consistent with Al Sulamy et al. [17], those with 2-3 parity had the highest proportion of participant.

In the current study, pregnant with no previous CS or with previous (2-3) CS were forming the overwhelming majority that agreed with KojoPrah et al. study [18]. In this study, those participants who were younger than 35 years old and women with <3 parities were forming the majority that might explain this high proportion of ≤3 previous CS.

The study demonstrated that nearly two third of participants had a poor knowledge regarding CS complications, which is not different from Razzaq et al. [15] who found a higher acceptable level of knowledge, as well as the finding of Ghasvari et al. [16] who found that only one third of participants had good knowledge of the complications. Low or no knowledge regarding CS were found in 65.1% and this may be related to high proportion of participants had poor education and the low socioeconomic state was also a cause of low awareness in Arabic society, however, the economic status of participants was not mentioned.

By using a scaling list to evaluate knowledge of participants, more than half of the studied sample didn't know about the following complication: “weakness of bowel movement after delivery, placenta progressing and adhesion in the next pregnancy and uterus explosion in the next deliveries” and uncertain regarding “early bleeding after the operation, respiratory tract infection as a result of anaesthesia”.

The finding of the current study agreed with Saleh et al. [19] regarding “placenta progressing and adhesion in the next pregnancy, uterus explosion in the next deliveries and early bleeding after the operation" but differs in the other items regarding participants knowledge.

There was a statistical association between demographic data and overall knowledge level show an increased awareness of CS complication in participants who were older than 35 years, which was different from the studies of Ghasvari et al. [16] and Saleh et al. [19], which showed non statistically significant association between age and level of knowledge. The finding of this study might be explained by what stated in Rydahl et al. study [20] in which, women equal or over 35 years were more likely to be multiparous, and to have comorbid illnesses or pregnancy-related compared to those under 35 years. Those with such risk factors are more to deliver by CS according to their doctor advice, which is mostly decided few months before the date of delivery. CS gives the chance for the patients to know more about the producer, in addition to the information's from their peers or family member which could explained current study findings.

In the current study, low education level had been significantly associated with poor knowledge regarding operation complications, which was agreed with Ghasvari et al. [16] and Razzaq et al. [15] studies, but Saleh et al. [19] who observed no association. The reason behind this finding is that higher education level mothers can easily get access to information regarding the procedure even without need of medical consultation unlike low educated mothers, in addition low educational level had impact on chose delivery method, most of those with good education often chose elective Caesarean section delivery [21,22], this is may be due to patient differences or physician bias, physicians should be aware of this disparity and should attempt to provide unbiased informed consent for all women regardless of their level of education. Furthermore, poorly educated mothers frequently experience the following negative effects: social exclusion, unhealthy lifestyle choices, maltreatment, stress, and depression. Young mothers are also more likely to drop out of school or get a lower level of education [23].

The study also demonstrated that women with <3 parity had been significantly associated with increase knowledge level which disagreed with KojoPrah et al. [18] study that found the increase in parity is associated with increase knowledge about CS. According to Iraqi culture, educated women are preferring fewer pregnancies and small family sizes, moreover, they are searching for their information and adopting their knowledge from reliable sources like health care providers which might explain our finding.

In conclusion, two thirds of the patients had low knowledge level regarding complications of CS, especially complications like “weakness of bowel movement after delivery”, “placenta progressing and adhesion in the next pregnancy”, and “uterus explosion in the next deliveries” while "delay breast feeding" was the most known complication for participants. Knowledge was better in those who were 35 years or older, highly educated and had a job especially women with less than three parities.

The authors recommend put more emphasis on increase women awareness about CS complications by conducting group discussion at primary health care centers (PHCC) for pregnant women attending for ANC, using mass media, booklets, and brochures. Also, guidelines and indications of caesarean section according to World Health Organization (WHO) should be clarified and announced for the patients and need to be followed by obstetricians.

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Author contribution
Dr. Abood: data collection, statistical analysis, writing the manuscript. Dr. Alsafi: study design, literature review, final revision.

Conflict of interest
None.

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