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Evaluation of The Quality of Life of Iraqi Patients Who Underwent Cesarean Section in Iraq

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Abstract: Background C-sections are probably among the world's most common surgical procedures, where these surgical operations are frequently employed in high-risk pregnancy scenarios, with both motives to save lives for mothers and infants. AimThis study is currently evaluating the quality of life for women who underwent cesarean section. Methods 77 Pregnant women who underwent cesarean delivery in several hospitals in Iraq were recruited during the one-year follow-up period from January 2023 to January 2024. All pregnant women completed quality of life questionnaires during pregnancy as well as after delivery in terms of physical, psychological, social, and emotional functions. Results Our results showed women with age (36 - 40) years was the most group included in our study, with 32% of total patients, primiparous cases were 61.04% and multiparous cases were 38.96%, and C-section duration was 52.15 ± 12.66 min. Adverse factors included length of stay in hospital > 4 days had 25.97%, non-exclusive breastfeeding of 67.53%, 30 cases of patients had complications in women, where most items wound infection (8 cases), death (5 cases), chronic pain (6 cases), and excessive bleeding (4 cases). In terms of post-cesarean health quality of life, we found physical function (65.4 ± 13.5), psychological function (61.3 ± 8.4), and global health (61.7 ± 14.2). Conclusion In this study, cesarean negatively affected the QOL of primiparas.

Keywords: Pregnancy; Ceasarean Section; WHOQOL-BREF; Quality of Life Questionnaire.

INTRODUCTION

With declining maternal mortality rates and improved pregnancy outcomes in recent decades, maternity care in developed countries is now concerned not only with the identification and management of risk factors affecting pregnancy outcomes but also with more comprehensive lifestyles (P. Betrán *et al.*, 2016). This broadened view also included the improvement of quality of life (QOL) as one of the goals of prenatal and postnatal care (P. Betrán *et al.*, 2016). Therefore, many studies have focused on the various effects of pregnancy and delivery outcomes on maternal QOL (H. WHO. 2015).

The recommendations of the World Health Organization (WHO) state that a reasonable rate of cesarean delivery should not exceed approximately 5 to 15% of total deliveries (S.-Z. Zhou *et al.*, 2009; Z. Kavosi *et al.*, 2015; K. Huang, F *et al.*, 2012). Rates higher than 15% would be considered inappropriate as well as unnecessary and do not lead to better health outcomes (A.-K. K *et al.*, 2015). The following is the most representative case in both developed and developing countries, and even more so in developing countries, and it has been going up and up, almost beyond the WHO recommendations, without any concomitant decrease in maternal mortality or morbidity rates (J.-M. Triviño-Juárez *et al.*, 2017; M. Papamarkou, P *et al.*, 2017; S. Petrou, S *et al.*, 2017). The same has plagued Iraq in recent decades (Torkan, B *et al.*, 2009). Another research in 2014 in the USA showed cesarean rates in 6 teaching hospitals ranging from 14.9 to 39.2 percent, and two private hospitals in the USA also showed rates of 87.4 and 78.5 percent.

They affirmed that mothers who give birth by cesarean section are more likely to be at risk for many maternal morbidities such as hysterectomy, hemorrhage, infection, thrombosis, and postpartum depression than mothers who give birth vaginally (Kohler, S *et al.*, 2018). In addition, findings from other studies indicate that symptoms such as fatigue, headaches, and sleep deprivation, and problems such as anemia, urinary tract infections, and other conditions that require treatment in the first 8 weeks after delivery are more common in cases of cesarean section (CS) than those related to vaginal delivery (VD) (Mousavi, S. A *et al.*, 2013).

Now that the rates of cesarean deliveries are rising worldwide, the focus is on the long-term effects of this surgical intervention on the quality of life (QoL) of the mother (Li, W.-Y *et al.*, 2014). The unique postpartum challenges that an individual mother faces are pain management, recovery time, breastfeeding difficulties, and complications such

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as infection or wound healing, especially for women who have undergone cesarean delivery. In addition, feelings of disappointment, anxiety, or even postpartum depression from a surgical birth are expected to have a significant psychological impact on a mother, affecting her overall well-being (Yang, S.-N *et al.*, 2011).

PATIENTS AND METHODS

In this study of pregnant women, cesarean negatively affected the QOL of primiparas .
We conducted a cross-sectional study during follow - up in January 2023 to January 2024 In several hospitals in Iraq. A total of 77 pregnant women underwent to cesarean delivery. Inclusion criteria included gestational age greater than 27 weeks, smoking and non-smoking women, obese women, and women aged 17-36 years. Exclusion criteria were women younger than 17 years or older than 36 years, women with comorbidities (diabetes, heart disease, thyroid disease, and other diseases), women who had undergone previous surgeries, and women with psychological and mental illnesses.

Furthermore, the WHOQOL-BREF questionnaire was administered in which all questionnaires were assigned to the participants giving the WHOQOL-BREF scores for Quality of Life after caesarean delivery.

During the third trimester and the first postpartum visit, women had to complete an interview form on personal (age, education level, employment status, and family income) and obstetric information (parity, pregnancy desirability, infant birth weight, infant feeding practices, pregnancy complications, mode of delivery), as well as morbidities during postpartum including sore and cracked nipples, breast engorgement and infection, feeling very tired and tense and overwhelmed, and low sexual desire.

In the third trimester and 8 weeks after delivery, the participants filled out the WHOQOL-BREF questionnaire. The WHOQOL-BREF is a shortened form of the WHOQOL-100 instrument developed by the World Health Organization. It has 26 questions, 2 of which are based on the person's overall perception of quality of life and health, and 24 deal with four subscales: Physical, Psychological, Social Relationships, and Environment. Items are rated on a 5-point Likert scale Raw subscale scores and then scaled from 0 to 100. The higher the score, the better the quality of life.

The GHQ28 is routinely employed in the screening of different groups, inclusive of women, in the ante- and postnatal periods. The GHQ consists of 28 questions covering four areas: somatic symptoms, anxiety and insomnia, social dysfunction, and severe depression. Each area contains seven items, with a scoring range of 0-3, according to a 4-point Likert scale.

Statistical procedures were carried out using SPSS 22.0. Univariate regression analyses were performed to study the relationship between QOL scores and other variables. Multiple regression analyses were used to study the applicability of the QOL score with respect to delivery mode.

RESULTS

This study presented a total of 77 patients who participated in the quality-of-life questionnaire. We have shown the women (26 – 33) years had 43%, obesity of 44.16%, and smokers got 20.78%.

Table 1: Demographic characteristics of pregnant women Frequency.

Variables	FREQUENCY	Percentage, %
Age, {years}		
17 – 25	15.58	12%
26 – 33	55.84	43%
> 33	28.57	22%
Body mass index, {kg/m2}		
Underweight, < 18.5	8	10.39%
Normal weight 18.5 – 24.9	15	19.48%
Overweight, 25.0 – 29.9	20	25.97%
Obesity, ≥ 30	34	44.16%
Current smoking		
Yes	16	20.78%
No	61	79.22%
Education status		
Primary	7	9.09%
Secondary	19	24.68%
Undergraduate/Postgraduate	51	66.23%
Family income, $		
< 560	29%	37.66%
560 – 900	36%	46.75%
> 900	12%	15.58%

In **Table 2**, our outcomes showed gestational age of (27 – 40) weeks got 19% of women, where primiparous had 47 cases, and multiparous had 30

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cases, general anesthesia is the most used in caesarean section, C-section duration was 52.15 ± 12.66 min, length of stays in hospitals > 4 days included 25.97%, and mother re-hospitalization in early postpartum included 9.09%.

Table 2: Surgical outcomes of patients who underwent to C-sections.

Variables	**Frequency**	**Percentage, %**
Gestational age, weeks		
27 – 30	24.68	19%
31 – 35	33.77	26%
36 - 40	41.56	32%
Parity		
Primiparous	47	61.04%
Multiparous	30	38.96%
C-section duration, min	52.15 ± 12.66	
Anesthesia used		
General	65	84.42%
Epidural	12	15.58%
No. of frequency with bleeding		
Yes	17	22.08%
No	60	77.92%
Length of stays in hospitals, days		
2 – 4 days	57	74.03%
> 4 days	20	25.97%
Mother re-hospitalization in early postpartum		
Yes	7	9.09%
No	70	90.91%
Blood loss, mL	814.57 ± 34.28	
Postpartum psychological state		
GHQ28<24	54	70.13%
GHQ28≥24	23	29.87%
Infant feeding method		
Exclusive breastfeeding	25	32.47%
Nonexclusive Breastfeeding	52	67.53%
Postoperative pain, VAS scores		
1st day	6.7 ± 1.0	
1st week	5.3 ± 0.5	
1st month	4.2 ± 0.6	
After 2 months	4.01 ± 0.2	
Patients' satisfaction status		
Very satisfied	33	42.86%
Satisfied	14	18.18%
Neutral	12	15.58%
Un – satisfied	18	23.38%

Based on the outcomes of **Table 3,** our study enrolled post-operative complications in both women and infants. For women, the total post-operative complications got 30 cases, where the most domains were wound infection (8 cases), death (5 cases), chronic pain (6 cases), and excessive bleeding (4 cases), while infants were found to 37 cases of post-operative complications, where the most domains included respiratory distress with 12 cases and low Apgar scores with 9 cases.

Table 3: Postoperative complications.

Complications	Frequency	Percentage
For women		
Immediate complications		
Excessive bleeding	4	5.19%
Wound infection	8	10.39%
Blood clots	3	3.90%
Death	5	6.49%
Total	20	25.97%
Long-term complications		
Adhesions	0	0.00%
Chronic pain	6	7.79%
Uterine rupture	4	5.19%
Total	10	12.99%
For Infants		
Immediate complications		
Respiratory distress	12	15.58%
Low Apgar scores	9	11.69%
Death	6	7.79%
Total	27	35.06%
Long-term complications		
Increased risk of asthma or allergies	11	14.29%

Furthermore, our study conducted a WHOQOL-BREF questionnaire over all women. We found the two domains, Physical Function, and psychological Function, had a negative impact on patients, with 65.4 ± 13.5 and 61.3 ± 8.4 scores after caesarean section.

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Table 4: Evaluation of general health quality of life in patients during and after the ceaserean section.

	WHOQOL-BREF	
Items	**During Pregnancy**	**After Pregnancy**
Physical Function	59.4 ± 11.2	65.4 ± 13.5
Psychological Function	62.8 ± 10.6	61.3 ± 8.4
Social and Emotional Functions	64.3 ± 13.2	61.2 ± 10.1
Environmental Function	66.3 ± 12.2	60.3 ± 8.8
Global	65.5 ± 14.6	61.7 ± 14.2

DISCUSSION

According to the information provided through our current study, the physical and psychological domain scores, as well as the overall score on women's quality of life, were affected negatively by cesarean delivery in primiparous women. One study revealed that the average time to become fully physically fit was greater than 5 weeks, and full physical recovery was achieved 6 weeks after the cesarean operation.

However, in our study, women had higher dissatisfaction rates in the postnatal period for their sexual lives and body appearances. A systematic review has indicated an almost consistent range of postpartum sexual problems (22%-86%).

Other studies have shown that at two and eight weeks postpartum, women with Caesarean deliveries scored lower on the QOL psychological domain. A study in the U.S. indicated that at two months postpartum, women scored significantly worse on vitality and mental health subscales of the Short Form Health Survey (SF-36). However, a review showed no evidence suggesting that Caesarean delivery put women at an increased risk for postpartum depression.

Figured out that the early postpartum stage again revealed repeated hospitalization in women with cesarean sections. A comparative study on the sleep and fatigue levels of mothers in early postpartum stages has shown even high total sleep time, and hospitalization was found more in women who underwent caesarean surgery. Also, older mothers have higher family incomes and experience more pregnancy complications.

These results are consistent with those of an Egyptian study. The present research yields new insight into this relationship, differentiating between modes of delivery and quality of life and including parity as a contributory factor. The relatively high cesarean rate (53%) in government hospitals should also be considered.

CONCLUSION

This study indicated the cesarean section affected the overall health of patients in both spheres of physical and psychological functions with an adverse overall score of quality of life for primiparas. Moreover, the findings showed that the complication percentage among women decreased postoperatively by 25.97% in short-term complications and 12.99% in long-term complications .

Further research with a larger sample size should be conducted for the effect of cesarean delivery on the QOL of primiparas and multiparas in the early postpartum period.

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