Vietnam Journal of Community Medicine, Vol. 65, English version, 2024, 93-97

ANXIETY IN POST-CAESAREAN MOTHERS AT VINMEC TIMES CITY INTERNATIONAL GENERAL HOSPITAL IN 2024 AND RELATED FACTORS

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Received: 02/11/2024
Revised: 08/11/2024; Accepted: 13/11/2024

ABSTRACT

Objectives: This study aims to describe the anxiety status of post-caesarean mothers at Vinmec Times City International Hospital, Hanoi, in 2024, and analyze related factors.

Methods: A cross-sectional descriptive study was conducted with 302 post-caesarean mothers. Data were collected from February to April 2024 through interviews using a structured questionnaire that included demographic information and the DASS-21 scale to assess anxiety levels.

Results: The rate of anxiety among post-caesarean mothers was 27.2%, ranging from mild to very severe levels. Factors such as first-time childbirth, family pressure, sleep disorders, and the child's health status showed significant associations with maternal anxiety levels.

Conclusion: Post-caesarean anxiety is an issue requiring attention and support within the hospital. Appropriate psychological interventions, especially for mothers facing social pressure or having children with health complications, are essential to safeguard maternal mental health and promote optimal child development.

Keywords: DASS-21, anxiety, post-caesarean mothers, Vinmec.

1. INTRODUCTION

Anxiety is a natural human response experienced in people of all ages and genders. Especially women who have undergone or are currently undergoing pregnancy and childbirth, particularly those who have had caesarean section. Even while in many cases caesarean section is safe and necessary for mothers, it can induce mental health conditions in which anxiety is a serious concern. By going through a major surgery, the burden of taking care of a newborn can be stressed out for the mothers which can lead to life-long anxiety if their feelings were not adequately managed. Some of the symptoms that women can experience are sorrowful, worrying, anger, despair, desperation, tiredness, insomniac, cephalgia and impaired digestion, etc, which put their life under pressure and negatively affect them taking care of their children[1, 2].

A research conducted in Shahid Beheshti Medical University with over 300 mothers, the results revealed that 58% of post-ceasarean mothers and their anxiety scale which were mild, moderate and severe were 36.33%, 19.33% and 2.33% respectively. Furthermore, the prevalence of anxiety among women who have undergone or are undergoing pregnancy were significantly increased. [3] Another study conducted in Wales (the United Kingdom), 11.8% of expectant mothers undergo an elective caesarean section (ELCS), accounting for 92 000 births per annum, while 21.7% of them had anxiety within one week after giving birth and 25.3% reported having anxiety in 10 week after giving birth. Additionally, women undergoing ELCS experience prolonged anxiety postpartum[4, 5].

In Vinmec Times CIty International Hospital, we have performed many C-sections each year. With the significant development of ceasarean deliveries and the variety of expecting mothers' ages, conditions, health and social background created a high-risk group for

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anxiety after giving birth. Postpartum anxiety adversely impacts not just maternal health but also the well-being of children and the overall quality of family life. However, specific researches on anxiety conditions among post-ceasarean mothers currently remain limited, especially in large private hospitals, for example Vinmec Times City international hospital. For these reasons, we have performed a study on anxiety in post-caesarean mothers in Vinmec Times City International Hospital in 2024 and related factors.

2. RESEARCH METHODS

2.1. Study design

The study was designed as a cross-sectional study.

2.2. Place and duration of the study

- Place of the study: Vinmec Times City International Hospital.

- Duration of the study: From 02/2024 to 8/2024.

- Data collection duration: From 2/2024 to 4/2024.

2.3. Subjects

Post-caesarean mothers at Vinmec Times City International Hospital during the study.

- The criteria for selecting research subjects:

+ Maternals from 18 and above

+ Maternals indicated for cesarean section

+ Maternals volunteered and accept participated in the study

- The exclusion criteria for research subjects:

+ Maternals who were in critical condition

+ Maternals who were unable to answer the interview.

2.4. Sample size, choosing the samples

The study includes 302 post-caesarean at Vinmec Times City International Hospital, selected using convenience sampling methods.

2.5. Data collections method

Data collection: Our study used a direct interview method with a well-designed questionnaire with a clear structure. In order to protect participants' identity, the questionnaire was anonymous, we did not require participants' personal information and create conditions for them to provide information truthfully and objectively. The questionnaire had 2 main parts: Main information of the study's subjects which included age, gender, education level, occupation and related demographic information.

DASS-21 scale (Depression, Anxiety and Stress Scale - 21 Items) which was translated into Vietnamese and used in Vietnam.

2.6. Data processing and analysis

Quantitative data were systematically verified, cleaned, coded, and entered into Epidata 3.1 software, followed by statistical analysis using STATA 16.0. Data analysis employed advanced medical statistical algorithms within STATA 16.0. Descriptive variables were evaluated through fundamental statistical tests, presenting results as frequencies (n) and proportions (%). Associations between anxiety status and selected factors were analyzed through hypothesis testing and univariate regression models. The odds ratio (OR) was calculated and reported with a 95% confidence interval. A p-value threshold of <0.05 was set to establish statistical significance within the simple linear regression.

2.7. Research ethics

The study's aim, research implementation content were comprehensively explained to the participants and they were all "informed consent to participate" in the study. The study guaranteed privacy and respects the rights of participants. All personal information of research subjects is kept confidential. Data and information collected are used solely for research purposes and not for any other purpose. The research was conducted only after obtaining approval from the appraisal council of Thang Long University and the consent of Vinmec Times City International Hospital.

3. RESULTS

The results showed that the demographics factors among 302 post-caesarean mothers included they were mostly from 31 to 35 years old and lived in the urban area. Regarding educational attainment, 84.4% had college or university degrees, while 10.3% had postgraduate qualifications. 78.5% of the participants had health insurance cards. The average monthly family income was primarily above 20 million VND. Most of the mothers had one child, with only 1.7% giving birth to twins. Among the participants, 64.2% were having their second or subsequent childbirth, and 97.7% had natural pregnancies. In terms of newborn gender, 67.9% were male and 29.8% were female. All infants had weights ranging from 2,000 to 4,000 grams. Concerning gestational age, 97.7% of the infants were born between 37 and 40 weeks. Additionally, 2% of the infants were diagnosed with abnormalities.

Table 1. Maternal's mentally features

Mentally disorders	Frequencies (n)	Percentage (%)
Historic records of mentally disorders		
Yes	0	0.0
No	302	100
Pressure to give birth to male offsprings		
Yes	115	38.1
No	187	61.9

Comment: 100% of the participants did not have mentally disorders, 38.1% of the participants were under pressure to give birth to male offsprings.

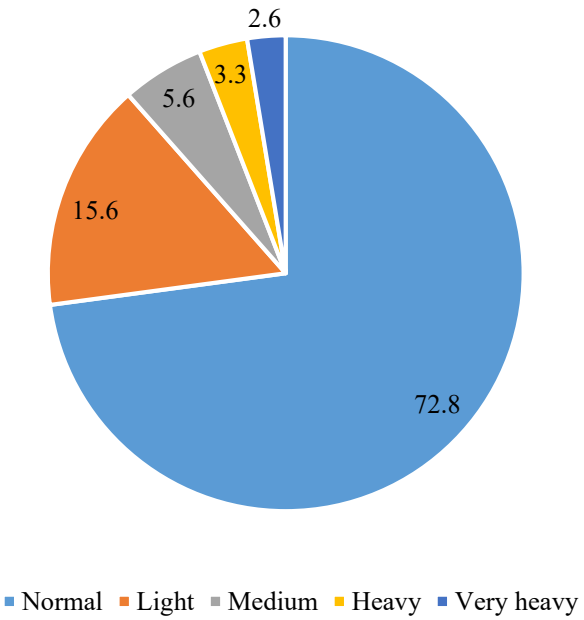

Figure 1. Post-caesarean anxiety scale

Comment: The rates of mild, moderate, severe, and very severe anxiety were 15.6%, 5.6%, 3.3%, and 2.6%, respectively.

Table 2. The relations between demographic factors and anxiety conditions in post-caesarean mothers

Factors		Anxiety conditions				OR (95% CI)	p
		Yes		No			
		n	%	n	%		
Age	<30 years old	29	29.0	71	71.0	1.1 (0.8-1.6)	0.7 *
	From 30 and above	53	26.2	149	73.8		
Occupation	Civil servant	33	16,9	162	83.1	1	<0,001 **
	Private/freelance	43	47.8	47	52.2	0.4 (0.2-0.5)	
	Housewife	6	35,3	11	64.7	0.5 (0.2-0.9)	
Educational level	Have not graduated highschool	6	46.2	7	53.8	1.7 (0.9-3.2)	0.1*
	Have graduated highschool	76	26.3	213	73.7		
Health insurance	No	26	40.0	39	60.0	1.69 (1.2-2.5)	0.01*
	Yes	56	23.6	181	76.4		
Average income	<20 million	11	37.9	18	62.1	1.4 (0.8-2.4)	0.2*
	From 20 million and above	71	26.0	202	74.0		

**: Chi-Squared **: Fisher's Exact Test*

Comment: There was a statistically significant difference in the anxiety status rate between occupational groups and health insurance status ($p<0.05$).

Table 3. Some factors relating to anxiety conditions of post-caesarean women

Factors		Anxiety conditions				OR (95% CI)	p
		Yes		No			
		n	%	n	%		
Parity	First time	44	40.7	64	59.3	2.1 (1.4-3.0)	<0.001 *
	More than twice	38	19.6	156	80.4		
Abnormal diagnosis of the newborn	Yes	4	66.7	2	33.3	2.5 (1.4-4.6)	0.04 *
	No	78	26.4	218	73.6		
Current living situation	Living with husband	54	42.2	74	57.8	2.6 (1.8-3.9)	<0.001 *
	Living with husband and husband's family	28	16.1	146	83.9		
Stress	Yes	0	0	18	100	-	<0.001 **
	No	64	22.5	220	77.5		
Sleep disorders	Yes	57	29.1	50	77.9	4.2 (2.8-6.2)	<0.001 *
	No	25	52.9	170	46.7		

**: Chi-Squared **: Fisher's Exact Test*

Comment: There was a statistically significant difference in the anxiety prevalence across groups based on parity, abnormal diagnosis of the newborn, current living situation, stress, and sleep disorders (p<0.05).

4. DISCUSSION

The rate of anxiety of post-caesareance mothers at Vinmec International Hospital was 27.2%, which is relatively low compared to many other studies; however, it still underscored the necessity of addressing anxiety among women after cesarean deliveries. The level of anxiety at Vinmec might be influenced by factors related to the modern healthcare conditions and the professional psychological support services provided by the hospital. In comparison, a study conducted at hospitals of Shahid Beheshti University of Medical Sciences (Iran) reported rates of mild, moderate, and severe anxiety at 36.33%, 19.33%, and 2.33%, [3] respectively, which were higher than those observed at Vinmec. This could be attributed to differences in healthcare systems and socioeconomic conditions. In Iran, the level of development of healthcare and psychological services might not be uniform or of sufficient quality to provide comprehensive support for postpartum women, which was resulting in higher anxiety rates. Furthermore, a study conducted at the Neonatal Center of the National Children's Hospital (Vietnam) indicated that the anxiety rate among mothers with premature infants was significantly higher, reaching up to 56%.[6] This indicated that not only C-section but also the maternals' afterbirth health conditions substantially contributed to their anxiety conditions. Premature birth, with its associated health risks and the need for special care for the infant, increased psychological stress for mothers.

The study indicated that postpartum anxiety among women is influenced by social and cultural factors. Moreover, Health insurance played a crucial role in reducing postpartum anxiety, as mothers without Health insurance were 1.8 times more likely to experience higher levels of anxiety. Health insurance alleviates the financial burden of medical fees, particularly in cases of cesarean delivery, while also providing mental reassurance. Additionally, demographic factors such as high educational level and family economic status did not demonstrate a consistent relationship with anxiety levels. However, the study notes that these factors might be influenced by the research sample, which primarily consists of women with higher educational levels and better economic conditions. Another significant factor was that first-time childbirth might increase the risk of anxiety due to a lack of experience and family pressure. Additionally, cultural pressures such as the desire for male offspring, were also common contributors to anxiety but might not exert a strong influence after adjusting for other factors such as family support and marital relationship. The health issues of newborns were also a significant concern, as mothers with infants facing health problems encountered substantial

psychological pressure and treatment costs that might significantly increase their risk of anxiety. Factors related to cohabitation, particularly living with a husband, had a complex impact on maternal anxiety. Some studies suggest that a husband's presence might exacerbate psychological pressure if not accompanied by effective support, which was reflected through the quality of the marital relationship after the arrival of a child[7]. In terms of physical health, sleeping disorder was one of the most significant factor affecting anxiety, with lack of sleep or insomnia closely linked to anxiety symptoms, including obsessive-compulsive disorder. In general, the interconnection between economic, social, and cultural factors with postpartum anxiety is complex, highlighting the need for additional studies to better understand their influence.

5. CONCLUSIONS

The results of the study showed that the prevalence of anxiety among post-caesarean in Vinmec Times City International Hospital in 2024 accounted for 27.2% with the anxiety scale was from mild to very severe. Some factors such as first time childbirth, pressure from their family and sleeping disorder had significant relations with the participants' anxiety conditions. Our study emphasized the necessity of psychological support for post-caesareance mother, particularly in cases where social pressures and newborn health concerns might induce stress. This support was essential for ensuring the mental well-being of the mothers and fostering the comprehensive development of their infants.

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