

Research Article

## The Prevalence and Associated Factors of Postpartum Post-Traumatic Stress Disorder in a Population of Moroccan Women

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### Abstract

Postpartum post-traumatic stress disorder prevalence varies from 0.8 to 5.6%, and its development is linked to several obstetrical, social, psychiatric and subjective distress factors. The objective of the study was to measure its prevalence in the Moroccan population and identify the related factors. We conducted a descriptive study of 302 women. We found a prevalence of 28.57% of postpartum post-traumatic stress disorder. The related factors were being single, history of psychiatric treatment or depression or anxiety disorder, prenatal depression or anxiety, previous fear of childbirth or previous traumatic event. No correlation was found between obstetrical and subjective distress factors and postpartum post-traumatic stress disorder. The results contrasted with those found in western countries. It

showed the importance of cultural factors and social aspects in the appearance of such a disorder. It also showed the importance of detecting this disorder in post natal visits.

**Keywords:** Postpartum; Post-Traumatic Stress Disorder; Women; Mental

**Abbreviations:** PTSD: post-traumatic stress disorder

### 1. Introduction

The birth of a child is generally seen as a positive life event for the mother, but for some women, childbirth is experienced as a psychologically traumatic event resulting with a postpartum post-traumatic stress

disorder (postpartum PTSD). According to the latest studies, the prevalence of PTSD varies from 0.8 to 5.6% in postpartum, and its development is linked to several obstetrical, social, psychiatric and subjective distress factors [1]. To our knowledge, this is the first study in North Africa that objective was to measure the prevalence of PTSD in postpartum and to determine its associated factors. The aim was to evaluate the importance of this condition and to act on the factors associated with it in order to improve the mental state of postpartum women and therefore, improve the quality of mother-infant interaction as well as their quality of life.

## **2. Patients and Methods**

We carried out a descriptive study involving 302 women in the postpartum period (less than 6 months after childbirth). The study was carried out in primary care centers after patients' informed consent. An oral questionnaire was administered on site and subdivided in three parts. The first part included the socio-demographic characteristics of parturients, the consumption of toxic, the personal obstetric and neonatal history, the psychiatric personal and family history (based on DSM-5). The 2nd part was aimed at the assessment of pain during childbirth according to the visual analogue scale: VAS. The 3rd part was about the current postpartum PTSD using the "Perinatal Post-Traumatic Stress Disorder Questionnaire (PPQ)" which includes 14 items. The 14 items are rated on a 5-point scale ranging from 1: "No at all" to 5: "very often, more than a month". We considered a parturient to have postpartum PTSD when the score is greater than or equal to 19 [2].

Statistical analysis included descriptive analysis and bivariate analysis using the student test to compare two means and the chi-square test for comparing percentages. The software used was SPSS 22. The significance level was set at 5%.

## **3. Results**

The average age of parturients was 31 +/- 2.5 years. The majority of parturients were married (91.43%). The women interviewed were in 40% of cases between 4 and 8 weeks of postpartum. Almost a quarter (20%) of the women had claimed an unplanned and unwanted pregnancy. Of the 71.43% who gave birth vaginally, 60% had episiotomy and 12% had an instrumental delivery using forceps or vacuum cups. Women who delivered through an emergency Caesarean represented 8% of the sample. More than 10% of parturients (11.43%) declared having a history of psychiatric pathologies. Only 5.79% of women with this history were taking psychiatric treatment. The psychiatric family history was positive for 20.81% of patients. During postpartum, 22.86% showed signs of postpartum depression, 28.57% had generalized anxiety disorder, while 2.86% complained of obsessive-compulsive disorder. The majority of parturients (62.86%) had a high pain score, between 8/10 and 10/10 according to VAS.

**According to the Perinatal Post-Traumatic Stress Disorder Questionnaire (PPQ), the prevalence of postpartum post traumatic stress disorder in our study was 28.57%.**

The bivariate analysis showed that postpartum PTSD was significantly correlated to being a single mother ( $p=0.028$ ), a positive history of psychiatric treatment ( $p=0.021$ ), anxiety disorders in postpartum ( $p=0.021$ ), postpartum depression ( $p=0.003$ ), prenatal depression during the current pregnancy ( $p=0.015$ ), a previous fear of childbirth ( $p=0.000$ ), a previous traumatic event ( $p=0.000$ ). A neither planned nor wanted pregnancy was slightly significantly correlated to PTSD in postpartum ( $p=0.064$ ). A link has been found between the number of weeks after childbirth and the prevalence of PTSD: the lower the number of weeks, the higher the

prevalence of PTSD. The correlation was significant (p=0.022) (Table 1).

<b>Related factor</b>	<b>Pearson indicator</b>	<b>p-value</b>
Marital status	0,372	0.028
Number of weeks of post partum	0,387	0.022
Non desired and non planified pregnancy	0,316	0.064
History of psychiatric medication	0,389	0.021
History of anxiety disorder	0,389	0.021
History of depression	0,484	0.003
Pre-natal depression	0,409	0.015
Previous fear of childbirth	0,559	0
Previous traumatic event	0,559	0
Depression during pregnancy	0,343	0.015
Anxiety disorder during pregnancy	0,440	0.008

**Table 1:** Associated factors to postpartum post-traumatic stress disorder and their respective Pearson indicator in a Moroccan sample (N= 302).

Meanwhile, no significant correlation was found between postpartum PTSD and preterm birth(p=0.854), instrumental childbirth(p=0.134), use of episiotomy (p=0.346), emergency Caesarean section (p=0.217), use of intravenous oxytocin during labor (p=0.831), long estimated labor (p=0.538), negative experience of interactions with the staff during childbirth (p=0.115), poor sense of control during labor and childbirth (p=0.637), and pain during childbirth according to VAS (p=0.791).

**4. Discussion**

In DSM-5, post-traumatic stress disorder is defined according to 8 criteria that include exposure to a traumatic or stressful event, intrusive symptoms, avoidance of trauma-related stimuli, negative thoughts and feelings and trauma-related arousal and reactivity, for a duration of more that one month [3]. Postpartum post traumatic stress disorder is a special condition that follows the perception of childbirth as a traumatic event.

Unlike post natal depression that is defined separately in

the DSM-5, postpartum PTSD is not specified in this version. However, postpartum PTSD is characterized by special risk factors, mechanisms, attributes and outcomes that make it different [2]. Childbirth can be perceived as a psychological trauma as a result of many factors that can be either objective or subjective. Four categories of risk factors have been identified : obstetric, psychiatric, social and factors related to subjective distress during delivery. The diagnosis of postpartum PTSD can use two tools: the PTSD checklist for DSM-5 (PCL-5) that is based on the DSM-5 criteria and the Perinatal post-traumatic disorder questionnaire (PPQ) that is a specific diagnosis tool for postpartum PTSD that contains 14 items.

The prevalence of postpartum PTSD in our sample is clearly higher than that of many other studies conducted in western countries (Table 2 ). Our number was closer to the ones found in Iran, and Tunisia (respectively 17% and 47.5%) [4, 5]. This can be explained by the difficulties public health structures face in middle-low

income countries. The deficiency in infrastructure and human resources can cause overwork on the nursing staff and therefore negatively affect the conduct of any type of care, including childbirth.

Study	Country	Sample size	Prevalence
Our study, 2019	Morocco	302	28,5%
Dennis et al., 2009 [6]	France	36 studies	1.3% à 6%
Soderquist et al., 1997 [7]	Sweden	1640	1,7%
Ayers S., Pickering, 2001 [8]	United Kingdom	289	1,7%
Soet JE et al., 2003 [1]	United States	1423	2,5%
Creedy DK et al., 2000 [9]	Australia	499	5,6%
AO Adewuya et al., 2006 [10]	Nigeria	876	5,9%
Zaers et. al. 2008 [11]	Switzerland	60	6%
Modarres et al., 2009 [12]	Iran	400	20%
N.Hannachi et al, 2014 [5]	Tunisia/France	164 (both french and tunisian)	47,5% in tunisian women

**Table 2:** Comparison between prevalences of postpartum post-traumatic stress disorder in different countries.

According to our study, all single women had postpartum post-traumatic stress disorder. This may be explained by the lack of social support, especially marital support among single mothers. Also, it can be explained by the cultural environment that negatively judges single mothers, and considers sexual relationships out of wedlock as a taboo. Furthermore, the same result was found in other western countries like the United States [1], Sweden [7], France [13]. Based on our study, we observed that the prevalence of postpartum PTSD decreases in parallel with the increase in the number of weeks of postpartum. Other researchers [8, 14, 15] also shared the same result. This can be explained by the fact that parturients after one or two months of postpartum, still remember every detail of their childbirth, whether it was well or badly experienced.

According to our study, a significant correlation was found between taking psychiatric treatment, having a history of anxiety or depression, pre-natal depression and postpartum PTSD. This can be explained by the

initial presence of a psychological vulnerability which facilitates and predisposes the patient to subsequently develop PTSD. According to Polachek [16] and Borjesson K [17], a history of psychiatric treatment, as well as personality disorders, can lead to the development of postpartum PTSD. While for Séjourné [18], Robertson [19], and White [20], a history of depression is among the main risk factors found for postpartum PTSD. A history of psychological care is a risk factor for postpartum PTSD. Anxious personality is proven to be a risk factor for postpartum PTSD according to Keogh [21]. According to our study, a significant correlation was found between previous fear of childbirth, the presence of a previous traumatic event, and postpartum PTSD. This correlation can be explained by the negative ideas that the fear of childbirth illustrates in the memory of parturients and that childbirth can be an update of previous trauma. This can subsequently be attributed to the poor course of the delivery and the development of postpartum PTSD. According to Czarnocka [22], Polachek [16], and Fones [23], postpartum PTSD is associated with previous fear,

whether it is fear of pain during childbirth or fear of complications for her or the baby during childbirth.

According to our study, no correlation was found between obstetric factors and subjective distress factors during childbirth on one side and postpartum PTSD on the other side. Unlike our study, several studies [1, 7, 15, 18, 24] had confirmed the association between pre-term childbirth, instrumental childbirth, emergency Caesarean and postpartum PTSD. A long estimated duration of labor, a negative experience of interactions with the staff during childbirth and pain during childbirth were identified as related factors to postpartum PTSD both in western countries [1, 15, 18] and middle eastern countries [4, 16]. Does this mean North African women are more resilient? Are they better at coping with painful experiences? Are they more prepared to childbirth than others? Is family based social support a protective factor for these women? In a French-Tunisian cross-cultural study [5], women using coping strategies like better reinterpretation and expression of feelings presented with less symptoms of PTSD two months after delivery. Modarres et al. suggest following a study in Iran that family-based support existing in Muslim cultures helps women to a large extent in the absence of official supporting services.

## **5. Conclusion**

This study shows the important rate of postpartum PTSD in our population. Efforts should be made to detect it and treat it. Its prevention requires a good social and psychological care. It will be appropriate to draw on our social heritage to highlight the main coping and social support strategies specific to our populations and to develop them into a structured care system.

## **Conflicts of Interest**

None.

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