

## Post-traumatic Stress Disorder in Women in Post-Natal Period

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### Abstract

**Objective:** To assess and evaluate the presence of post-traumatic stress disorder and its associated factors affecting the women in post-natal period.

**Material and Methods:** Data was collected through a cross-sectional survey from February 2023-July, 2023 at the Department of obstetrics and gynaecology, Ghurki Trust Teaching Hospital Lahore and 101 women fulfilling various diagnostic criteria for post-traumatic stress disorder in post-natal period were included in the study. PTSD symptoms were assessed using the “City Birth Trauma Scale” (CBTS) questionnaire including various stratification of events. SPSS 27.0 software was used for data analysis.

**Results:** The results showed the possible outcome of several factors such as mode of delivery, family system, support and terms with partner or any previous psychiatric illness/PTSD or PTSD following child birth. Women with partner support had a significantly lower incidence of distress & impairment symptoms (33.3%) compared to those without support (81.8%) as  $p < .05$ .

**Conclusion:** Our study depicted statistically significant link between PTSD criteria for distress and impairment and partner support and good terms with partner. Given that, partner support ought to be more than what is provided to lower the incidence of PTSD in women following child birth.

**Keywords:** Child birth, Diagnostic and Statistical Manual of Mental Disorders, Diagnostic and Statistical Manual of Mental Disorders (DSM-5), Partner support, Post-natal period, Post-traumatic stress disorder (PTSD)

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### Introduction

Post-traumatic stress disorder is a mental health condition triggered by shocking or horrible events, often resulting in depressive symptoms. It is common in women following childbirth, as it can be distressing or traumatic for first-time mothers or those with pregnancies with poor outcome. This can negatively impact the woman's relationship with her spouse, family dynamics, parent-child interactions, and child's development. The well-being and mental state of both

parents are crucial for a child's development and the overall well-being of the family.<sup>1-3</sup> Partners fully involved and prepared for childbirth experience less emotional breakdown postpartum. Women with complicated childbirth may experience mental health issues, increasing the risk of post-partum depression and psychosis. Risk factors for developing PTSD include negative experiences, bad obstetrical history, psychological difficulties during pregnancy, previous psychiatric problems, PTSD history, and bad partner relationships.<sup>4,5</sup> Despite the evidence, PTSD is still an area of very little research all around the world especially in an under developed country like Pakistan, and is not routinely screened for. Affected women are therefore rarely identified and treated for PTSD following child birth. Research in this area has typically adapted questionnaires developed for use in other groups, such as military veterans, which may not apply to women after birth. It is also important to examine which symptoms are predictive of distress, impaired functioning, and

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the need for treatment. The City Birth Trauma Scale takes into account such factors and is used for the evaluation of PTSD following child birth in our study of women in post-natal period up to 1 year excluding first forty days. This scale has questions asking about the intrusion, mood, avoidance, negative cognition and hyperarousal and diagnostic criteria is based on these questions according to the DSM-5 so we tend to find correlation between various symptoms, social support and PTSD following child birth.<sup>6</sup>

## Material and Method

A cross-sectional survey, using non-probability consecutive sampling technique, was conducted from February 1<sup>st</sup>, 2023-July 31<sup>st</sup>, 2023 at the Department of Obstetrics and Gynaecology, Ghurki Trust Teaching Hospital Lahore after the ethical approval from the Institutional Review Board LMDC. One hundred and one women following child birth were included in the study keeping in account 4-6% women developing post-traumatic stress disorder following childbirth in a study done in 2021. All participants included were briefed and they verbally consented to be part of this study. Married women of reproductive age group in the post-natal period from 6 weeks to 1 year with alive and healthy babies and no history of Neonatal intensive care unit (NICU) admission were included in this study. Women in post-natal periods of less than 6 weeks or more than 1 year or NICU admission of their baby for more than 4 hours were excluded. Women participating were asked about their sociodemographic details; age, parity, mode of delivery, family system, partner support and terms with partner, any previous history of PTSD/psychiatric illness, and residential address followed by the questions in the City Birth Trauma Scale questionnaire which is a self-reported tool.<sup>6</sup> It has 31 items which are based on either Yes/No answer options or a Likert-type scale (0=not at all, to 3=5 or more times). Two Out of these, 29 questions being asked correspond to diagnostic criteria for PTSD according to DSM-5 (PTSD subscales) which is based on 8 criteria and score ranges from 0-69. The participants fulfilling the diagnostic criteria A i.e. Stressor criterion (fulfilled if women responded yes to Q1 or Q2) or diagnostic criterion H i.e. Exclusion criterion (if women score 1 or more on Q29 in CBTS questionnaire then exclude them from diagnostic PTSD) were excluded from the study group and a total of 101 participants were included in the study who fulfilled the requirements for inclusion and

diagnostic criteria of the City Birth Trauma Scale. The rest of the diagnostic criteria according to the questions in the City Birth Trauma Scale were criteria of Re-experiencing symptoms, Avoidance symptoms, Negative cognitions and mood, Hyperarousal, Duration (of symptoms), Distress and impairment, PTSD with dissociative symptoms and PTSD with delayed onset. Sociodemographic details were used for descriptive statistics and we drew multiple comparisons between biopsychosocial factors and PTSD subscales to find the associations of statistical significance using the Chi-square test of independence. The level of significance was set at 5%. Analysis was performed using SPSS 27.0 software.

## Result

A total of 101 women were included in our study with a mean age of  $28.30 \pm 4.58$  ranging from 20-42 years as shown in Table 1 with other details. In Table 2, the data provides an overview of the subscales of post-traumatic stress disorder (PTSD) in the study sample, particularly focusing on various symptoms and exhibiting their frequency. These subscales constitute the diagnostic criteria for PTSD in women in the post-natal period. Re-experiencing symptoms were reported by 60.4% out of all the women with spontaneous vaginal delivery (52.5 %) and 66.7% women out of all those women with a lower-segment Caesarean section (47.5%) ( $p > .05$ ). Women with partner support had 61.1% incidence of re-experiencing symptoms, while those without had an 81.8% incidence ( $p > .05$ ). Women with 'good' terms with their partner showed a 62.5% incidence of re-experiencing symptoms, while those with 'poor' terms had an 80.0% incidence. Women with a previous psychiatric illness history had a 50.0% incidence of re-experiencing symptoms, similar to those without a previous history (50.0%) ( $p > .05$ ). Women from a joint family system had a 65.3% incidence of re-experiencing symptoms, compared to 57.7% in the nuclear family system. The analysis suggested no significant associations between the mode of delivery, partner support, terms with the partner, previous psychiatric history, or family system with re-experiencing symptoms. The result follows a similar pattern of analysis for avoidance symptoms, Negative cognition and mood, and Hyperarousal assessing its association with various demographic factors ( $p > .05$ ). Women with partner support had a significantly lower incidence of distress & impairment symptoms (33.3%) compared to those without

support (81.8%) ( $p < .05$ ). Women with 'good' terms with their partner showed a lower incidence of distress & impairment symptoms (35.4%) compared to those with 'poor' terms (100%) as  $p < .05$ . No significant associations were observed for PTSD with dissociative symptoms for the provided demographic factors. Out of all the 101 women, majority (72.3%) had early onset PTSD after childbirth while very less percentage of women (3%) developed delayed onset PTSD and this includes 47.5% of the women who developed PTSD after child birth and 26.7 % women who had experienced some trauma prior to child birth but symptoms appeared after child birth.

**Table 1:** Demographic Characteristics.

Parameters	Categories	N	%	Mean±SD (Range)
Age (years)				28.30±4.58 (20-42)
Mode Of Delivery	Spontaneous vaginal delivery	53	52.5	
	Lower-segment Caesarean section	48	47.5	
Partner Support	Yes	90	89.1	
	No	11	10.9	
Terms With Partner	Poor	5	5.0	
	Good	96	95.0	
Previous History Of Psychiatric Illness	Yes	2	2.0	
	No	99	98.0	
Family System	Joint	75	74.3	
	Nuclear	26	25.7	

**Table 3:** Association between demographic profile and Diagnostic criteria of PTSD

Categories	Re-experiencing symptoms		p-value	
	Yes	No		
<b>Mode Of Delivery</b>	Spontaneous vaginal delivery	32(60.4%)	21(38.6%)	.512
	Lower-segment Caesarean section	32(66.7%)	16(33.3%)	
<b>Partner Support</b>	Yes	55(61.1%)	35(38.9%)	.320
	No	9(81.8%)	2(18.2%)	
<b>Terms With Partner</b>	Poor	4(80.0%)	1(20.0%)	.428
	Good	60(62.5%)	36(37.5%)	
<b>Previous History Of Psychiatric Illness</b>	Yes	1(50.0%)	1(50.0%)	1.000
	No	63(63.6%)	36(36.4%)	
<b>Family System</b>	Joint	49(65.3%)	26(34.7%)	.490
	Nuclear	15(57.7%)	11(42.3%)	
<b>Avoidance symptoms</b>				
<b>Mode Of Delivery</b>		<b>Yes</b>	<b>No</b>	
	Spontaneous vaginal delivery	21(39.6%)	32(60.4%)	
Lower-segment Caesarean section	16(33.3%)	32(66.7%)		

**Table 2:** Post-traumatic stress disorder subscales.

Subscales	N	%
<b>Re-experiencing Symptoms</b>		
Yes	64	63.4
No	37	36.6
<b>Avoidance symptoms</b>		
Yes	37	36.6
No	64	63.4
<b>Negative cognitions &amp; mood</b>		
Yes	44	43.6
No	57	56.4
<b>Hyperarousal</b>		
Yes	71	70.3
No	30	29.7
<b>Distress &amp; impairment</b>		
Yes	39	38.6
No	62	61.4
<b>PTSD with dissociative symptoms</b>		
Yes	80	79.2
No	21	20.8
<b>Duration</b>		
Prior to birth	27	26.7
After Birth	48	47.5
<b>PTSD Onset</b>		
Early Onset	73	72.3
Delayed Onset	3	3.0

## Discussion

Post-traumatic stress disorder is a mental health condition resulting from shocking events, often causing depressive symptoms and mixed emotions, particularly

<b>Partner Support</b>	Yes	32 (35.6%)	58 (64.4%)	.525
	No	5 (45.5%)	6 (54.5%)	
<b>Terms With Partner</b>	Poor	2 (40.0%)	3 (60.0%)	1.000
	Good	35 (36.5%)	61 (63.5%)	
<b>Previous History Of Psychiatric Illness</b>	Yes	1 (50.0%)	1 (50.0%)	1.000
	No	36 (36.4%)	63 (63.6%)	
<b>Family System</b>	Joint	29 (38.7%)	46 (61.3%)	.637
	Nuclear	8 (30.8%)	18 (69.2%)	
<b>Negative cognitions &amp; mood</b>				
		<b>Yes</b>	<b>No</b>	
<b>Mode Of Delivery</b>	Spontaneous vaginal delivery	20 (37.75%)	33 (62.3%)	.214
	Lower-segment Caesarean section	24 (50.0%)	24 (50.0%)	
<b>Partner Support</b>	Yes	36(40.0%)	54 (60.0%)	.054
	No	8 (72.7%)	3 (27.3%)	
<b>Terms With Partner</b>	Poor	4 (80.0%)	1 (20.0%)	.164
	Good	40 (41.7%)	56 (58.3%)	
<b>Previous History Of Psychiatric Illness</b>	Yes	2 (100%)	-	.187
	No	42 (42.4%)	57 (57.6%)	
<b>Family System</b>	Joint	35 (46.7%)	40 (53.3%)	.286
	Nuclear	9(34.6%)	17 (65.4%)	
<b>Hyperarousal</b>				
		<b>Yes</b>	<b>No</b>	
<b>Mode Of Delivery</b>	Spontaneous vaginal delivery	36 (67.9%)	17 (32.1%)	.583
	Lower-segment Caesarean section	35 (72.9%)	13 (27.1%)	
<b>Partner Support</b>	Yes	62 (68.9%)	28 (31.1%)	.499
	No	9 (81.9%)	2 (18.2%)	
<b>Terms With Partner</b>	Poor	5(100%)	-	.318
	Good	66 (68.8%)	30 (31.3%)	
<b>Previous History Of Psychiatric Illness</b>	Yes	2 (100%)	-	.353
	No	69 (69.7%)	30 (30.3%)	
<b>Family System</b>	Joint	52 (69.3%)	23 (30.7%)	.719
	Nuclear	19 (73.1%)	7 (26.9%)	
<b>Distress &amp; impairment</b>				
		<b>Yes</b>	<b>No</b>	
<b>Mode Of Delivery</b>	Spontaneous vaginal delivery	18 (34.0%)	35 (65.0%)	.313
	Lower-segment Caesarean section	21 (43.8%)	27 (56.3%)	
<b>Partner Support</b>	Yes	30 (33.3%)	60 (66.7%)	**.003
	No	9 (81.8%)	2 (18.2%)	
<b>Terms With Partner</b>	Poor	5 (100%)	-	**.007
	Good	34 (35.4%)	62 (64.6%)	
<b>Previous History Of Psychiatric Illness</b>	Yes	2 (100%)	-	.147
	No	37 (37.4%)	62 (62.6%)	
<b>Family System</b>	Joint	28 (37.3%)	47 (62.7%)	.649
	Nuclear	11 (42.3%)	15 (57.7%)	

		PTSD with dissociative symptoms		
		Yes	No	
<b>Mode Of Delivery</b>	Spontaneous vaginal delivery	40 (75.5%)	13 (24.5%)	.331
	Lower-segment Caesarean section	40 (83.3%)	8 (16.7%)	
<b>Partner Support</b>	Yes	73 (81.1%)	17 (18.9%)	.233
	No	7 (63.6%)	4 (36.4%)	
<b>Terms With Partner</b>	Poor	4 (80%)	1 (20%)	1.000
	Good	76 (79.2)	20 (20.8%)	
<b>Previous History of Psychiatric Illness</b>	Yes	2 (100%)	-	1.000
	No	78 (78.8%)	21 (21.2%)	
<b>Family System</b>	Joint	61 (81.3%)	14 (18.7%)	.371
	Nuclear	19 (73.1%)	7 (26.9%)	

\*\* statistically significant at a 5% level of significance

in first-time mothers or those with pregnancy risks, leading to a disturbed state of life.<sup>12</sup> The study explores the lack of routine post-partum screening and proper diagnosis for women during childbirth, focusing on symptoms that meet PTSD subscales using the City Birth Trauma Scale (CBTS) questionnaire. It aims to identify biopsychosocial and sociodemographic details that affect women's quality of life and prevent normal symptoms from being overemphasized or considered normal physiological phenomena.<sup>6</sup> In a study, it was found out that 2-9% women develop PTSD following childbirth due to traumatic birth experiences by new mothers and prevalence of 17% postpartum depression. Women with high-risk pregnancies might have increased risk of developing PTSD after child birth including bad obstetrical history, psychological difficulties in pregnancy (particularly depression or bipolar disorder in early pregnancy), trauma related to mode of delivery or history of mental health problems.<sup>5,7</sup> In our study, only 2% of percent of women had pre-existing psychiatric illness/PTSD. They had all the PTSD symptoms in post-natal period too which would make the treatment to be prolonged and difficult, however, the correlation was found to be statistically insignificant with all the PTSD subscales. According to the criteria F (duration) for PTSD mentioned in CBTS, there were 47.5% women who had new onset PTSD following child birth out of all the women who fulfilled any single criteria for PTSD while 26.7% women were found out to be having symptoms/PTSD criteria fulfilled prior to the child birth but PTSD symptoms were not manifested in them in full swing until the birth of their babies. This indicates that the prior history of any sort of trauma or abuse may aggravate the PTSD symptoms and affect the responses to a new triggering event i.e. child birth.

Out of 101 women, 72.3% women had early onset PTSD while only 3% women developed delayed onset PTSD i.e more than 6 months after birth including the women who had PTSD prior to birth but it became evident only after their child birth. The apparent incidence of PTSD in women beyond 6 months post-partum is less than what has been summarized for first 6 months due to lack of enough knowledge on former, indicating the need of more care and support which is often unavailable to the women in Post-natal period at homes and their workplaces, in case of working women due to a lot stigma being associated with seeking help and coping with stress.<sup>7</sup> The study found that PTSD can result from birth complications and mode of delivery. Of 52.5% of women who had spontaneous vaginal deliveries and 47.5% who had caesarean sections, the mode of delivery did not significantly affect PTSD subscales. However, some studies suggest that instrumental vaginal or emergency caesarean sections are associated with PTSD more than normal vaginal or elective caesarean sections. Some studies found no relationship between mode of delivery and stress symptoms.<sup>8,9</sup>

Other sociodemographic factors studied in relation to the development of PTSD following child birth are partner support, terms with partner (good/poor) and family system in which the women were residing (joint/nuclear). In our study, 89.1% women who filled the questionnaires had partner support and 95% women were on good terms with their partners yet a large number of women had re-experiencing (63.4%), hyperarousal (70.3%) and dissociative symptoms (79.2%) while relatively lower number of women experienced avoidance symptoms (36.6%), negative cognitions and mood (43.6%) and distress and impairment (38.6%). In contrast to our findings, where women had experienced

various stress symptoms, none of the sociodemographic factors had any significant association with PTSD symptoms subscales but distress and impairment. Although, majority of women (61.4%) didn't experience distress and impairment following childbirth, it is significantly associated with partner support ( $p=0.003$ ) and terms with partner ( $p=0.007$ ) which are seemingly interconnected yet two different factors. Partner support is crucial for a healthy pregnancy and the positive birth experience.<sup>10</sup> More the support a woman has for child birth, less is the incidence for distress and impairment after child birth and vice versa. Maladaptive stress coping in post-natal period can impair normal functionality.<sup>9</sup> Another systemic review found that the partner support was one of the protective factors against PTSD after child birth and woman who were satisfied with it tend to had less negative experiences.<sup>10</sup> This helped in prevention of long-term adverse effects on child, maternal reluctance to breastfeeding, impaired mother-baby bond, mental health problems in mother and distress in couple's relationship associated with PTSD.<sup>11,12</sup> Depression and stress negatively impact couple relationships and parent-child bond development. Social support from family and friends is crucial. Joint family systems (74.3%) have good support, but cultural norms and bias increase stress symptoms, while nuclear families are not stress-free. A longitudinal course showed that women with PTSD had perceived poor social support, one of the risk factors for development of PTSD but we didn't find this correlation significant.<sup>13,14</sup> Sociodemographic parameters indirectly impact stress-related symptoms leading to PTSD after childbirth, with a strong association between distress and impairment symptoms and partner support. However, more research is needed to generalize results to a larger population.

The study has limitations due to its clinical setting and lack of specific questionnaires for identifying stress symptoms in ante-natal and post-natal periods. Additionally, some women may feel vulnerable due to social and cultural stereotyping. Further research should involve larger sample sizes and use the study population as a reference. This could help develop policies supporting women's post-natal needs with therapeutic approaches.

## Conclusion

Social support, particularly partner support, is crucial for women during pregnancy and post-natal periods. Prenatal counselling, awareness campaigns, and flexible working hours are essential. Couple counselling and

support unit development at secondary and tertiary healthcare levels can help prevent, screen, diagnose, and limit factors leading to post-traumatic stress disorder.

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#### **Authors Contribution**

**AS:** Conceptualization of Project  
**MA, IR:** Data Collection  
**RA, HA, MA:** Literature Search  
**MA, MMFK:** Statistical Analysis  
**AS:** Drafting, Revision  
**MA:** Writing of Manuscript