# PERCEIVED BIRTH TRAUMA IN MACEDONIAN WOMEN

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# ABSTRACT

Although the childbearing is perceived as a normal and happy event, new research shows that psychological birth trauma is, however, a universal and not so rare phenomenon.

Traumatic birth experiences can cause postnatal mental health disturbances, fear of childbirth in subsequent pregnancies and disruption to mother-infant bonding, leading to possible impaired child development.

The purpose of this research was to evaluate collected data from several obstetric clinics, as well as from primary paediatric settings related to 'Birth Trauma' in order to review women with symptoms of post-traumatic stress disorder (PTSD) following childbirth.

The study is prospective, starting from January 2021 and ending in December 2022. The psychological instrument used in this research is the Intersect Questionnaire, composed of 59 questions grouped in 8 parts.

The obtained results from our study confirmed that birth trauma is not a rare phenomenon in our country. Symptoms correlated with PTSD were present as follows: unpleasant memories (2.7%), anxiety (38.54%), panic (6.47%), trying not to remember the delivery (4.04%), self-accusation (2.16%), negative emotions (1.89%), alienation (4.31%), irritation/aggression (1.89%), self-destruction (1.89%), impulsiveness (4.31%), problems with concentration (3.23%), and sleeping problems (21.88%). These results are alarming. It is imperative to better understand this vulnerable period in a woman's life.

As a general conclusion, we must highlight the importance of perceived birth trauma in women, phenomena which has been confirmed worldwide and which must be overcome as quickly and as successfully as possible.

Keywords: birth trauma, women, PTSD, babies

# **INTRODUCTION**

Although the childbearing is perceived as a normal and happy event, new research shows that the psychological effects of birth trauma are, however, universal and regular phenomena. In contemporary medicine the phenomenon has gradually garnered the attention around the world.

Traumatic birth experiences can cause postnatal mental health disturbance, fear of childbirth in subsequent pregnancies and disruption to mother-infant bonding, leading to impaired child development. Some women may develop classical postnatal Post Traumatic Stress Disorder (PTSD), which is a particularly undesirable outcome. The influences could extend greatly, these includes the mother's health, mother-infant relationship, as well as the relationship with the partner. The medical staff also have an important role in the birthing process [1-4]. Prevalence of PTSD after childbirth has been estimated to be around 3% for women meeting full diagnostic criteria and up to 9% for sub-threshold symptoms [5]. This can occur even in response to deliveries considered to be medically straightforward. In a previous article, I evaluated the meaning, causes, symptomatology as well as methods for interventions in this complex manifestation related to childbirth [6]

The purpose of this research was to evaluate collected data from several obstetric clinics as well as from primary paediatric settings related to 'Birth Trauma' in order to review women with symptoms of PTSD following childbirth.

Trauma during pregnancy is commonly viewed as benign for the foetus should the delivery occur normally. Nevertheless, birth trauma is a well-recognised phenomenon which may result in ongoing physical and perinatal mental health difficulties for women. This may impact their attachment to their children, their parenting capabilities, and their self-identity as mothers. It is well known that the postpartum period represents a major transition in the lives of many women, a time when women are at increased risk for the emergence of psychopathology, including depression and PTSD.

The study is prospective, starting from 2021 and ending in December 2022. The psychological instrument used in this research is the Intersect Questionnaire. The original Intersect Questionnaire was obtained from the Centre for Maternal and Child Health Research at City University, London, and the main approach is the descriptive and phenomenological approach. First, the questionnaire was translated into the Macedonian and Albanian languages. It was disseminated to 6 obstetric clinics in North Macedonia, as well as in several primary paediatric settings responsible for the follow up of new born babies in the first three months after delivery.

The questionnaire is composed of 59 questions grouped in 8 parts: I - questions related to general information and agreement for the participation, II - questions related to the childbirth and the baby, III - devoted to the emotional balance of the mother, IV- questions related to the delivery itself, V - questions related especially to the emotions, VI - questions related to previous traumatic events, VII - related to the whole health issues, VIII - related to some personal characteristics of examinees.

The questionnaire was disseminated in printed form and filled in with pencil by women

directly. With the help of a software engineer, we constructed a digital database, in which all answers are input directly. Statistics are available directly from the software.

#### RESULTS

We obtained 371 filled out questionnaires, in which 100% women confirmed they were over 16 years of age and agreed to participate. All the babies were born in the period of 6-12 weeks before filling out the questionnaire (99.46%).

The group of questions related to demographic data shows following information:

-The mean age of mothers was 29.99 years  $\pm 4.96$  (min 17 y. max 49 y.).

-Ethnic majority (Macedonian) were at 214 (57.68%), minorities (Albanian, Turk, and Roma) were 38 (10.24%), not sure about ethnicity were 74 (19.95%) and no answer was obtained from 45 (12.13%) participants.

- 330 (88.95%) of women lived in their native country. 177 (47,71%) lived in big cities, in small cities 127 (34.23%) and in villages 43 (11.59%) participants. No answer for living place was obtained from 24 (6.47%) of the participants.

-Educational levels were as follows: primary school finished 16 (4.24%); secondary school 139 (37.47%), higher education had 194 (52.29%), and no answer was obtained from 22 (5.93%).

-The economic status is as follows: Income below average 20 (5.39%), average in 272 (73.32%), above average in 51 (13.75%) and no answer from 28 (7.55%) of the participants.

- 325 (87.60%) were married, living together with a partner, 21 (5.66%), divorced, 2 (0.54%), and widow 1 (0.27%) participants.

-The number of children in the family was over one in 169 (45.55%) of the participants. 47 (12.67%) confirmed previous abortions.

Table 1 shows general data related to the delivery.

Only in 29 cases (7.82%) were minor complications for mothers present at the moment of filling out the questionnaire, and only in 28 (7.55%) were the minor complications for babies still present. No serious complications for both (mothers and babies) were confirmed. The perception about trauma during delivery was ranged in the scale from 0 to 10. Results

are presented on Figure 1 (the trauma is ranged starting from 1, being minimal, to maximum 10).

One baby	344 women	92.72%
Twins	18	4.85%
More than two babies	7	1.89%
Duration of gestation	360 women	37.62 weeks (± 3.73) From min. 30 to max.42
Vaginal delivery	186	50.13%
Urgent Caesarean section	85	22.87%
Planned Caesarean section	99	26.68%
Minor complications for the mother	82	22.10%
Major complications for the mother	10	2.70%
No complications for the mother	273	73.58%
Minor complications for the child	82	22.10%
Major complications for the child	10	2.70%
No complications for the child	273	73.58%

Table 1. General data related to the delivery

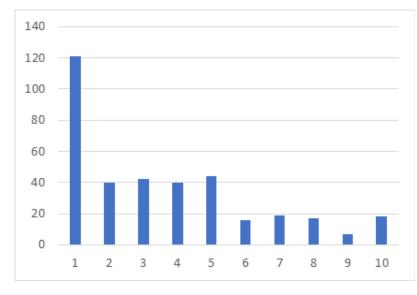


Fig.1. Perceived range of trauma during delivery

To the question 'Do you think that yourself or your baby will be seriously traumatised during delivery?' 327 (88.14%) answered with 'no', 'yes' was 40 (10.78%) and no answer was obtained from 4 (1.08%) of the examinees. Regarding the fear of possible death (mother/baby) only 34 (9.16%) of the mothers answered positively. The following group of questions are related to some unpleasant memories at delivery which cannot be controlled and could be symptoms of PTSD.

Symptoms started before delivery for 66 (17.79%), in the first 6 months after delivery for 96 (25.88%), after 6 months in 7 (1.89%) women and 150 (40.43%) confirmed no symptoms.

Symptom	Neither	Once	2-4 time	Over 5 time
Repeated unpleasant memories of the delivery	251 (67.65%)	65 (17.52%)	34 (9.16%)	10 (2.70%)
Anxiety related to delivery	254 (68.46%)	63 (16.98%)	32 (8.63%)	10 (2.70%)
Trying not to remember delivery	303 (81.67%)	28 (7.55%)	28 (7.55%)	15 (4.04%)
Do not remember details of delivery	274 (73.85%)	48 (12.94%)	24 (6.47%)	13 (3.50%)
Accuses self/others for delivery events	314 (84.64%)	26 (7.01%)	10 (2.70%)	8 (2.16%)
Negative emotions related to delivery (fear, anger, shame)	280 (75.47%)	43 (11.59%)	23 (6.20%)	7 (1.89%)
No interest for usual activities	250 (67.39%)	61 (16.44%)	37 (9.97%)	7 (1.89%)
Alienated by other people	268 (72.24%)	43 (11.59%)	31 (8.36%)	16 (4.31%)
Feel irritated/aggressive	280 (75.47%)	51 (13.75%)	21 (5.66%)	7 (1.89%)
Self-destructive	319 (85.98%)	19 (5.12%)	13 (3.50%)	7 (1.89%)
Feel anxious/nervous	195 (52.56%)	98 (26.42%)	51 (13.75%)	15 (4.04%)
Impulsiveness	226 (60.92%)	67 (18.06%)	48 (12.94%)	16 (4.31%)
Problems with concentration	240 (64.69%)	68 (18.33%)	38 (10.24%)	12 (3.23%)
Sleeping problems	243 (65.50%)	61 (16.44%)	34 (9.16%)	17 (4.58%)
Feels absent or as if in some dream	265 (71.43%)	65 (17.52%)	19 (5.12%)	9 (2.43%)
Feels as if things are not real	271 (73.32%)	51 (13.75%	15 (4.04%)	10 (2.70%)

 Table 2. Symptoms associated with possible PTSD

Symptom duration was as follows: less than one month 92 (24.80%), 1-3 months in 49 (13.21%), more than 3 months in 22 (5.93%).

In only 28 (7.55%) of women did these symptoms provoke anxiety, in 167 (45.01%) of the women these symptoms did not provoke any anxiety, but in 95 (25.61%) anxiety was provoked only sometimes. Additionally, most women (212 – 57.14%) did not cease their usual daily activities, only 19 (5.12%) were inhibited and 64 (17.25%) of the participants answered 'sometimes'. However, no symptoms were related to drug, alcohol or illness.

The labour passed without any support in 324 (87.33%), while only in 15 (4.04%) the partner was present for support, and in 13 (3.51%) by some friends.

However, some women could even laugh and could see the funny side of things: 217 (58.49%) answered as they could, not so much 91 (24.53%), not enough 26 (7.01%) and not at all - 18 (4.85%).

To the question 'Do the things that used to provide you pleasure still provide that pleasure?' 223 (60.11%) answered 'As much as they have always have', 'A little less than usual' answered 100 (26.95%); 'Definitely less than usual' answered 12 (3.23%) and 'They almost don't bring me any satisfaction' answered 10 (2.70%).

To the question: 'I blamed myself unnecessarily when some things went "wrong"', 105 (28.30%) answered negatively, but 122 (32.88%) answered yes, sometimes.

Question	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
I went through the birth unscathed	7 (1.89%)	19 (5.12%)	52 (14.02%)	102 (27.49%)	174 (46.90%)
Labour took too long	67 (18.06%)	156 (42.05%)	65 (17.52%)	42 (11.32%)	26 (7.01%)
The medical staff was encouraging	15 (4.04%)	47 (12.67%)	43 (11.59%)	121 (32.61%)	125 (33.69%)
Felt anxious during labour	43 (11.59%)	130 (35.04%)	61 (18.06%)	67 (18.06%)	49 (13.21%)
Out of control during labour	40 (10.78%)	143 (38.54%)	71 (19.14%)	60 (16.17%)	38 (10.24%)
I was not upset at all	35 (9.43%)	117 (31.54%)	82 (22.10%)	61 (16.44%)	49 (13.21%)
The delivery room was clean and hygienic	3 (0.81%)	12 (3.23%)	23 (6.20%)	133 (35.85%)	180 (48.52%)

**Table 3.** Graduation of unpleasant symptoms

Anxiety without reason was registered in 143 (38.54%) and not at all in 109 (29.38%) of examinees. Panic befell frequently in 24 (6.47%) and sometimes in 107 (28.84%), while not at all in 121 (32.61%) of the women. Additionally, sleep problems were confirmed in 185 (21.88%), and a negative answer was obtained from 224 (60.38%) of the examinees.

Some traumatic experiences in the previous period (like serious illness in the family, physical abuse, sexual abuse, war, child abuse, natural catastrophe etc.) was confirmed in 167 (45%) of examinees. However, 316 (85.18%) women answered negatively to the question related to some psychological problems in the past, and not sure were 24 (6.47%); only 12 (3.23%) confirmed similar problems in the past. Only 7 (1.89%) confirmed current psychological problems but no one needed medical/pharmacological help.

### DISCUSSION

Our evaluated sample was made up of 371 women, referred in the post-natal period for psychological assessment regarding a traumatic birth experience. A descriptive phenomenological approach was adopted in this study, based on 59 questions. Precisely, we used a questionnaire named Intersect obtained from the City Centre for Maternal and Child Health, London. This questionnaire was translated into the two main languages used in North Macedonia - Macedonian and Albanian.

All investigated women were aged over 17 years and willingly. The latter was the main condition for inclusion in the study.

As known, pregnancy is a period of psychological and identity reorganisation, during which a mother's ambivalent state of mind is as necessary, as it is structuring the mind for the child to come.

A majority (92.72%) of women in our study bore a single baby. The average duration of gestation was 37.62 ( $\pm$  3.73) weeks, which is considered normal. It is interesting to note that normal vaginal delivery was present in 50.13%, while Caesarean sections were chosen by the other half of the women. The Caesarean section was the dominant method for delivery, especially in private obstetric settings. No serious complications for mothers or babies were reported.

Trauma during pregnancy is commonly viewed as benign for the foetus when the delivery occurs normally. This study revisits that point of view: 88.14% of women think that they and the baby were not seriously traumatised. The perceived range of trauma during delivery was noted as minimal in 32.61% of examinees, but there are some women who rated the delivery as more traumatic (more than range of 5). These results confirmed that birth trauma is a seemingly common event in our women's population.

Symptoms associated with possible PTSD in mothers were: unpleasant memories (2.7%), anxiety (38.54%), panic (6.47%), traying do not remember delivery (4.04%), self-accusation (2.16%), negative emotions (1.89%), alienation (4.31%), irritation/aggression (1.89%), self-destruction (1.89%), impulsiveness (4.31%), problems with concentration (3.23%), and sleeping problems (21.88%).

Generally, symptoms started before delivery in 17.79% and for 25.88% these started in the first six months after delivery. Additionally, the majority of women (57.14%) continued with usual daily activity after delivery. Previous traumatic problems were confirmed in 45%, but psychological/psychiatric history was confirmed in only 3.23% of examinees.

46.90% of women went through the delivery practically unscathed, but the labour was considered too long in 11.32%, and only 10.24% fell out of control during labour. Additionally, the majority of women confirmed that the medical staff was encouraging, and delivery room was hygienic and clean.

As explained before, birth trauma is a well-recognised phenomenon which may result in ongoing physical and perinatal mental health difficulties for women. This may impact their attachment to their children, their parenting capabilities, and their self-identity as mothers.

Women who have suffered birth trauma may be at risk of increased fear and anxiety around their child's health and their parenting abilities. Some women may experience this as feeling less emotional attachment to their infant. Women who experience birth trauma should be offered support during early parenting. However, mother-infant relationships often improve after the first year.

Still, the postpartum period represents a major transition in the lives of many women, a time when women are at increased risk for the emergence of psychopathology including depression and PTSD. The study of Molloy E et al. (2021) aimed to better understand the contributions of clinically significant postpartum depression, PTSD, and comorbid PTSD/depression on mother-infant bonding and observed maternal parenting behaviours (i.e., behavioural sensitivity, negative affect, positive affect) at 6 months postpartum.

It is known that women with previous mental health disorders were more prone to experiencing birth as a traumatic event. Other risk factors included obstetric emergencies and neonatal complications. In our study, previous experience with traumatic events were confirmed in 45% of the examinees.

In our study, post-traumatic stress disorder and post-traumatic stress symptoms following birth occur amongst a small proportion of women, but these can still lead to poor maternal mental health, impairment in mother-infant bonding and relationship stress. In this context, follow up is necessary and some psychological intervention must be available.

In a study of Williamson E. et al. (2021) the prevalence of PTSD after childbirth has been estimated to be around 3% for women meeting full diagnostic criteria and up to 9% for sub-threshold symptoms. Zhang K. et al. (2020) showed deep insight into Chinese women's unique experience of psychological birth trauma. The author highlighted how the social and health system could prevent psychological harm during birth and promote maternal health by measures of pain management, thoughtful attention, adequate caring, and prenatal preparation.

The association between maternal trauma and foetal brain lesions lacks sufficient investigation in many cases. For clarifying both medical and legal issues, prospective studies are needed (Leroy-Malherbe V. et al., 2006).

Findings in a study by Muzik M. et al. (2017) show that when there is a history of child abuse and/or current PTSD, clinically significant maternal depression was the most salient factor during infancy that was associated with parenting impairment.

A population-based observational study (Wen Q et al., 2018) confirmed that instrumental vaginal delivery is associated with birth trauma to infant and obstetric trauma to mother. As Caesarean delivery rates have increased over the past decades, the rate of instrumental vaginal delivery declined. In our study, we showed that natural vaginal delivery is present in half of deliveries in our population, but the Caesarean section is increasingly chosen, especially in private obstetric settings. The ability to predict birth trauma (BT) based on the currently recognized risk factors is limited, and there is little information regarding the short-term neonatal outcomes following BT (Linder N. et al., 2013). A retrospective, cohort, case-control study of all cases of BT in a single tertiary centre showed that instrumental delivery appears to be responsible for most cases of neonatal BT.

Women with previous mental health disorders were more prone to experiencing birth as a traumatic event. Other risk factors included obstetric emergencies and neonatal complications (Simpson M. et al., 2016). As shown in our study, 45% of the examinees confirmed a previous experience of traumatic events. However, risk factors for birth trauma need to be addressed prior to birth. Consideration needs to be given to quality provider interactions and education for maternity care on the value of positive interactions with women. Still, further research is required into the benefits of early identification of the risk factors for birth trauma.

By comparison, in a study related to Iranian women, the findings indicated that the prevalence of traumatic birth experiences and post-partum PTSD were relatively high. The findings also indicated that obstetric and perinatal variables were independently the most significant contributing factors to women's post-partum PTSD. It seems that better perinatal care and supportive childbirth might help to reduce the burden of post-partum PTSD among this population (Modarres M. et al., 2012).

In a recent study of Chan SJ. et al. (2020) it was suggested that childbirth is an independent stressor capable of evoking PTSD in mothers. Analysis reveals the importance of antepartum and birth-related risk factors above and beyond child outcomes.

Childbirth-related post-traumatic stress disorder (CB-PTSD) occurs in 3-7% of all pregnancies and about 35% of women after preterm birth meet the criteria for acute stress reaction. (Sommerlad S. et al., 2021). Known risk factors are trait anxiety and pain intensity, whereas a planned delivery mode, medical support, and a positive childbirth experience are protective factors.

Unexpected changes to the birth experience due to the COVID-19 pandemic may have small but persistent effects on depressive and PTSD symptoms. (Liu CH, et al., 2021).

Yildiz PD. et al. (2017) pointed out that PTSD is prevalent during pregnancy and after birth and may increase postpartum if not identified and treated. Assessment and treatment in maternity services is recommended. In this context, after completion of this educational activity, the obstetrician/gynaecologist should be better able to compare and contrast the effects of different types of disasters (hurricanes, earthquakes, chemical spills) on pregnant and postpartum women in order to prepare for patient care in the aftermath of such disasters. They should also differentiate between birth outcomes likely to be affected by disaster, in order to identify patients likely to be at high risk. All this and they should also assess the extent to which pregnant and postpartum women are a uniquely vulnerable population after disasters, and assist in organizing care under such circumstances.

Although depression following childbirth is well recognized, much less is known about comorbid postpartum psychiatric conditions. Some women can experience posttraumatic stress related to the childbirth experience, accompanied by symptoms of depression. (Dekel S, et al., 2020). Still, in our study, depression in the postpartum period was not so frequent.

Kjerulff KH, et al. (2021) investigated risk factors for childbirth-related post-traumatic stress disorder (CR-PTSD) measured 1-month after the first childbirth, and the association between CR-PTSD and maternal-infant bonding. In this prospective cohort study, the authors found that CR-PTSD was consistently associated with lower levels of maternal-infant bonding over the course of the first year after first childbirth.

As a proposition, focus on women's mental health during pregnancy must be necessary in order to avoid the negative effects of impaired bonding on the infant. Depressive symptoms could be concurrent with fear of birth and, therefore, it is important to determine both fear of birth and depressive symptoms in screening procedures during pregnancy. Caregivers who meet women during pregnancy need to acknowledge prenatal attachment and thereby influence adaptation to motherhood (Hildingsson I. et al., 2022). Although several studies have investigated the longstanding effects of maternal postpartum depression (PPD) on children's physical and neurodevelopment, no conclusive evidence has elucidated a relationship between maternal PPD and all four domains of child development

- physical, neuromotor, language and general cognitive ability (Aoyagi SS. et al., 2019). Moreover, confounding factors, specifically, household income, parental education, breastfeeding, bonding/attachment, and paternal mental health may be associated with maternal mental health and a child's neurodevelopment. This should be carefully considered.

Roos A. et al. (2022) showed that prenatal exposure to maternal depression increases the risk for the onset of emotional and behavioural disorders in children. The authors investigated the effects of exposure to prenatal depression on white matter microstructural integrity in the new-born's brain.

### CONCLUSIONS

The presented results from our study confirmed that birth trauma is not a rare phenomenon in our country. Symptoms correlated with PTSD were present as follows: unpleasant memories (2.7%), anxiety (38.54%), panic (6.47%), traying not remember the delivery (4.04%), self-accusation (2.16%), negative emotions (1.89%), alienation (4.31%), irritation/aggression (1.89%), self-destruction (1.89%), impulsiveness (4.31%), problems with concentration (3.23%), and sleeping problems (21.88%). These call for a better understanding of this vulnerable period of a woman's life.

As a general conclusion we must highlight the importance of birth trauma in women, a phenomenon which has been conformed worldwide, and which should be overcome as quickly and successfully as possible.

Acknowledgement to all paediatricians which help us in collecting data for this research:

Dr. Nadzakova, Dr. Stomnaroska, Dr. Poplazarevska, Dr. Kalajdzieva-Zip, Dr. Delevska, Dr. Rajcanoska, Dr. Smugrevska, Dr. Paskalov, Dr. Tonevski, Dr. Kolevski and Dr. Georgievski.

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#### Резиме

## ПЕРЦИПИРАНА РОДИЛНА ТРАУМА КАЈ МАКЕДОНСКИТЕ ЖЕНИ

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Иако раѓањето дете се смета како сосема нормален и среќен момент, новите истражувања покажаа дека психичкатаа траума при породувањето претставува универзален и не редок феномен.

Травматските искуства при породувањето може да предизвикаат растројства на менталното здравје, страв од раѓање во следните бремености, како и раскинување на врската мајка – дете, што може да доведе до растројство во детскиот развиток.

Целта на ова истражување беше да се евалуираат собраните податоци добиени од неколку породилишта, како и од примарните педијатриски установи поврзани со породилна траума за да се ревидираат, особено жените што манифестираат симптоми на посттравматско стресно растројство (ПТСД) по породувањето.

Студијата беше проспективна, започна во јануари 2021 година и заврши во декември 2022 година. Психолошкиот инструмент користен во ова истражување е наречен Интерсект-прашалник, составен од 59 прашања групирани во 8 дела.

Добиените резултати од нашата студија потврдуваат дека породилната траума не е редок феномен и во нашата земја. Симптомите што корелираат со ПТСД се прикажани последователно: непријатни сеќавања (2,7 %), анксиозност (38,54 %), паника (6,47 %), обиди да не се помни породувањето (4,04 %), самообвинување (2,16 %), негативни емоции (1,89 %), оттуѓеност (4,31 %), иритираност/агресивност (1,89%), само-деструктивност (1,89%), импулсивност (4,31%), проблеми со концентрацијата (3,23 %) и проблеми со сонот (21,88 %). Овие резултати алармираат за подобро разбирање на овој вулнерабилен период во женскиот живот.

Како генерален заклучок треба да се нагласи важноста на породилната траума кај жените, феномен што е потврден во светот, кој треба да се надмине што е можно побрзо и поуспешно.

Клучни зборови: породилна траума, жени, ПТСД, бебиња