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Original Article

Survey of Traumatic Childbirth Experiences in Postpartum Mothers Using the City Birth Trauma Scale in Sorong Regency

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ABSTRACT

The mental health of postpartum mothers is influenced by traumatic childbirth experiences that can result in Post Traumatic Stress Disorder (PTSD). Individuals experiencing PTSD tend to be more sensitive. Poor mental health during the postpartum period can alter a woman's self-perception and disrupt family relationships. This research aims to conduct a Survey of Traumatic Childbirth Experiences in Postpartum Mothers Using the City Birth Trauma Scale in Sorong Regency. This is a quantitative survey research using the survey method to analyze risk factors for postpartum trauma incidents, employing the City Birth Trauma Scale 5 questionnaire by examining exposure or Odds Ratio (OR). Meanwhile, to test the validity and reliability of the Indonesian version of the City Birth Trauma Scale instrument, the Pearson Product-Moment Correlation and Cronbach's Alpha methods were used. The study was conducted in August-September 2023 at 2 Public Health Centers in Sorong Regency, Malawili Public Health Center, and Marian Public Health Center, with a sample of 70 postpartum mothers drawn using purposive sampling. The research results show that 24 respondents (100%) meet the diagnostic criteria for PTSD. Only 1 respondent (4%) does not meet the criteria for Non-Diagnostic PTSD. The conclusion of this research is that there is no significant relationship between the evaluated factors in the table and trauma symptoms, based on the analysis of the given P values and Odds Ratios (OR). Regular monitoring of postpartum mental health is necessary, especially for those experiencing early trauma symptoms.

Keywords: *Post Traumatic Stress Disorder (PTSD), Childbirth, Postpartum Mother, Survey, City Birth Trauma Scale*

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INTRODUCTION

The indicator for assessing health status is the Maternal Mortality Rate (MMR). According to the World Health Organization (WHO), maternal deaths worldwide are estimated at 289,000 per year, with 800 women dying every day due to complications. The WHO report (2014) indicates that 99% of maternal deaths due to childbirth-related issues occur in developing countries. About 80% of maternal deaths result from increased complications during pregnancy, childbirth, and the postpartum period. Medical providers annually attend to mothers with childbirth trauma around 60 times [1]

Childbirth trauma is an international public health issue, reported in various countries, including Japan [2], Turkey [3], and the United Kingdom [4]. Up to 45% of new mothers report experiencing traumatic childbirth [5]. In their meta-analysis, Yildiz, Ayers, and Phillips [6] reported an average prevalence of Post Traumatic Stress Disorder (PTSD) related to childbirth trauma in community samples as 4.0% and 18.5% in high-risk groups. Previous

mental health disorders and poor quality of service provider interactions are risk factors for childbirth trauma [7]. Women who are survivors of sexual abuse are at risk of experiencing trauma during childbirth [8].

Childbirth trauma has extensive ripple effects for mothers [9] that need to be acknowledged by childbirth educators. The minutes or hours in which a woman feels traumatized during childbirth can be likened to a pebble dropped into a pond, causing ripples that spread in the water. Some ripples from traumatic childbirth can impact mothers' breastfeeding experiences [10], their traumatic birth anniversaries [11], and subsequent births [10]

According to the WHO (1993), one in ten infants aged 6 to 9 months is cared for by a mother with a mental disorder. Similarly, Ayers and Pickering [12] found that 2.8% of mothers met diagnostic criteria for post-traumatic stress disorder six weeks after giving birth, decreasing to 1.5% after six months, whether through spontaneous delivery, cesarean section, or vacuum extraction. [13] explained that around 7.7% of women meet diagnostic criteria for post-traumatic stress disorder with mood and anxiety disorders after childbirth.

In terms of the Human Development Index (HDI), Indonesia ranked 110 out of 187 in 2015, showing an improvement from the previous year. In Papua, the maternal mortality rate reaches 489 per 100,000 live births, based on Ministry of Health data, No. 13, 2022. A survey conducted at one referral hospital in Sorong Regency reported the presence of mothers with childbirth complications every month. This condition poses a threat to health and also has the potential to result in maternal and infant mortality and morbidity [14]

The mental health of postpartum mothers is influenced by traumatic childbirth experiences that can lead to Post Traumatic Stress Disorder (PTSD). Someone experiencing PTSD becomes more sensitive. Poor mental health in the postpartum period can alter a woman's self-perception and disrupt family relationships [1516], If left unaddressed, PTSD can lead to ongoing stress to the point of insanity and suicide [17].

The concept of traumatic birth or childbirth can be assessed from the subjective evaluation of the mother regarding the childbirth process or using diagnostic criteria to determine traumatic events during childbirth [18]. The City Birth Trauma Scale is a 29-item questionnaire developed to measure PTSD related to childbirth according to DSM-5 criteria. The questionnaire was then developed for use in postpartum women and has good reliability (Cronbach's $\alpha = 0.92$), psychometric validity, and readability (Flesch reading score 64.17). [19]

Based on the background problem outlined above, the aim of this research is to conduct a Survey of Traumatic Childbirth Experiences in Postpartum Mothers Using the City Birth Trauma Scale in Sorong Regency.

METHOD

The research is a quantitative study with a survey method. The study duration is approximately 6 months, from June to December 2023, conducted at two Community Health Centers (Puskesmas) in Sorong Regency, namely Mariat Community Health Center and Malawili Community Health Center. The population in this study consists of all postpartum mothers who gave birth from June to October 2023 at the two Community Health Centers or hospitals in Sorong Regency. The sample in this study is postpartum mothers at 6 weeks who visited Mariat and Malawili Community Health Centers from August to September 2023, totaling 70 individuals, using purposive sampling technique. The data types in this study include primary data and secondary data obtained from interview results using a list of questions and questionnaire completion by respondents during attendance at integrated service posts or daily health services at Mariat and Malawili Community Health Centers in Sorong Regency. Secondary data are obtained from patients' medical record books. Data collection is carried out by directly obtaining data from respondents and then inputting the data into a master table. Data analysis uses SPSS Version 22 software, and the researcher employs frequency distribution analysis and percentage analysis for each variable to describe every research variable. Data analysis is conducted to test the validity and reliability of the Indonesian version of the City Birth Trauma Scale instrument using the Pearson Product-Moment Correlation and Cronbach's Alpha methods.

RESULTS

Validity and Reliability Test of the City Birth Trauma Scale (CBTS) in Bahasa Indonesia

1. Validity Test

This examination aimed to assess the authenticity of each item statement in the CBTS questionnaire in measuring its respective variable. Validity testing in this research was conducted by correlating the scores of each item statement directed to the respondents with the total score for all items. The correlation technique used to test the validity of the statement items in this research was the Pearson Product Moment correlation. If the correlation coefficient of each item statement being tested was greater than the R-value, it could be concluded that the item statement was a valid construct. With a sample size of 70 individuals, the R-value in this study was 0.232. The validity test results for the examined variables are presented in the following table:

Table 1. CBTS Questionnaire Validity Test Results

Question Item	Validity Coefficient	Correlation Coefficient	Remarks
Item 1 (Q3)	0.669	0.232	VALID
Item 2 (Q4)	0.188	0.232	NOT VALID
Item 3 (Q5)	0.522	0.232	VALID
Item 4 (Q6)	0.411	0.232	VALID
Item 5 (Q7)	0.465	0.232	VALID
Item 6 (Q8)	0.358	0.232	VALID
Item 7 (Q9)	0.676	0.232	VALID
Item 8 (Q10)	0.203	0.232	NOT VALID
Item 9 (Q11)	0.379	0.232	VALID
Item 10 (Q12)	0.703	0.232	VALID
Item 11 (Q13)	0.704	0.232	VALID
Item 12 (Q14)	0.593	0.232	VALID
Item 13 (Q15)	0.504	0.232	VALID
Item 14 (Q16)	0.514	0.232	VALID
Item 15 (Q17)	0.535	0.232	VALID
Item 16 (Q18)	0.266	0.232	VALID
Item 17 (Q19)	0.383	0.232	VALID
Item 18 (Q20)	0.363	0.232	VALID
Item 19 (Q21)	0.355	0.232	VALID
Item 20 (Q22)	0.440	0.232	VALID
Item 21 (Q23)	0.515	0.232	VALID
Item 22 (Q24)	0.587	0.232	VALID

Table 1 indicates the results of the validity coefficient test with corresponding correlation coefficients. Out of 20 questionnaire items, 18 were deemed valid, while 2 questions (Item 2 and Item 8) were considered not valid. Therefore, these invalid questions should be excluded or not used in the questionnaire.

2. Reliability Test

Reliability testing was conducted to determine whether the instrument used could produce consistent results over different time periods. The reliability test's indicator was the alpha Cronbach's value. Typically, a research instrument is considered reliable when it achieves a minimum value of 0.70. The results of the reliability test are presented in the following table:

Table 2. CBTS Questionnaire Reliability Test Results

Question Item	Validity Coefficient	Correlation Coefficient	Remarks
X	0.833	0.7	RELIABLE

The reliability coefficient for each questionnaire item being investigated was 0.833, which is greater than 0.70. This result indicates that the questionnaire items are reliable for measuring their respective variables.

Characteristics of Postpartum Mothers in Sorong District

The subjects in this study were 100 postpartum mothers, but only 70 respondents met the criteria and provided complete and accurate information to the researcher.

Table 3. Characteristics of Postpartum Mothers in Sorong District 2023

Characteristic	Number (n)	Percentage (%)
Age		
≤ 35 years	66	94,3%
> 35 years	4	5,7%
Delivery		
Vaginal	61	87.1%
Cesarean	9	12.9%
Occupation		
Working	17	24.3%
Not working	53	75.7%
Marital Status		
Not recorded	25	35.7%
Recorded	45	64.3%
Income		
≤ Rp 2.500.000.00	33	47.1%
> Rp 2.500.000.00	37	52.9%
Ethnicity		
Non-Papuan	45	64.3%
Papuan	25	35.7%
Number of Children		
≤ 2 children	45	64.3%
>2 children	25	35.7%
Traumatic Experience		
Yes	25	35.7%
No	45	64.3%

Table 3 shows the characteristics of respondents in this study. The majority of participants were aged ≤ 35 years, with 66 individuals (94.3%) falling into this age category. Only a few participants were over 35 years old, specifically 4 individuals (5.7%). In the context of the delivery process, most women gave birth vaginally, with 61 respondents (87.1%), while a small number opted for cesarean section, amounting to 9 respondents (12.9%). Regarding occupation, the majority of respondents, 53 individuals (75.7%), were not working, while 17 individuals (24.3%) were employed. Marital status was mostly recorded, with 45 respondents (64.3%), while 25 respondents (35.7%) had not recorded their marital status. Participants' income varied, with 37 respondents (52.9%) having an income above Rp 2,500,000.00, and 33 respondents (47.1%) having an income of Rp 2,500,000.00 or less. In terms of ethnicity, the majority of participants were from outside Papua, specifically 45 individuals (64.3%), generally from Java and Sulawesi, while 25 individuals (35.7%) were from Papua. Concerning the number of children, 45 respondents (64.3%) had two children or fewer, while 25 respondents (35.7%) had more than two children. When asked about traumatic experiences, 45 respondents (64.3%) reported no traumatic experiences, while 25 respondents (35.7%) admitted to having such experiences.

Risk Factors for Traumatic Birth in Puskesmas in Sorong District

In this section, factors related to the risk of maternal traumatic experience, including Ethnicity, Income, Civil Registration Status, Number of Children, Age, Delivery, and Occupation, will be explained as follows:

Table 4. Risk Factors for Maternal Traumatic Experience in Puskesmas in Sorong District 2023

Risk Factor	Trauma Symptoms				Total		P value	OR (CI 95%)
	Yes		No					
	n	%	n	%	n	%		
Ethnicity								
Non-Papuan	15	60 %	30	66.7 %	45	64.3 %	0,577	1.020 (0.37 - 2.83)
Papuan	10	40 %	15	33.3 %	25	35.7 %		
Income								
≤ Rp 2.500.000.00	13	52 %	20	44.4 %	33	47.1 %	0,544	1.354 (0.51 - 3.61)
> Rp 2.500.000.00	12	48 %	25	55.6 %	37	52.1 %		
Marital Status								
Recorded	9	36 %	16	35.6 %	25	35.7 %	0,970	1.020 (0.37 - 2.83)
Not recorded	16	64 %	29	64.4 %	45	64.3 %		
Number of Children								
≤ 2 children	18	72%	27	60 %	45	64.3 %	0,315	1.714 (0.59 - 4.94)
> 2 children	7	28 %	18	40 %	25	35.7 %		
Age								
≤ 35 years	23	92 %	43	95.6 %	66	94.4 %	0,613	0.535 (0.07 - 4.05)
> 35 years	2	8 %	2	4.4 %	4	5.7 %		
Delivery								
Vaginal	23	92 %	38	84.4 %	61	87.1 %	0,474	2.118 (0.41 - 11.08)
Cesarean	2	8 %	7	15.6 %	9	12.9 %		
Occupation								
Working	5	20 %	12	26.7 %	17	24.3 %	0,533	0.688 (0.21 - 2.24)
Not working	20	80 %	33	73.3 %	53	75.7 %		

From the interpretation of Table 4, it can be seen that there are several risk factors evaluated in relation to trauma symptoms. Firstly, in the context of ethnicity, individuals of Non-Papuan ethnicity had a trauma symptom rate of 60%, while those of non-Non-Papuan ethnicity had a rate of 66.7%. Although the difference is apparent, the P-value of 0.577 indicates that this difference is not statistically significant. Furthermore, the income factor shows that individuals with an income of ≤ Rp 2,500,000.00 had a trauma symptom rate of 52%, while those with an income of > Rp 2,500,000.00 had a rate of 48%. However, the statistical analysis results indicate that this difference is not significant, with a P-value of 0.544. Meanwhile, for the marital status factor, individuals who were not registered had a trauma symptom rate of 36%, while those who were registered had a rate of 64%. Although the difference is significant in numbers, the P-value of 0.970 indicates that this difference is not statistically significant. Similar analysis results were also found for the number of children factor; individuals with two or fewer children had a trauma symptom rate of 72%, while those with more than two children had a rate of 28%. Although this difference is striking, the P-value of 0.315 indicates that this difference is not statistically significant. The Odds Ratio (OR) of 1.714 indicates that there is no significant relationship between the number of children and trauma symptoms, with a 95% confidence interval from 0.59 to 4.94. Meanwhile, the analysis results for the age factor show that individuals aged ≤ 35 years had a trauma symptom rate of 92%, while those aged over 35 years had a rate of 8%. Although this difference is very large, the P-value of 0.613 indicates that this difference is not statistically significant. The OR of 0.535 indicates that there is no significant relationship between age and trauma symptoms, with a 95% confidence interval from 0.07 to 4.05. Similar to the analysis results for the type of delivery, vaginal delivery had a trauma symptom rate of 92%, while cesarean section had a rate of 8%. Although this difference is striking, the P-value of 0.474 indicates that this difference is not statistically significant. The OR of 2.118 indicates that there is no significant relationship between the type of delivery and trauma symptoms, with a 95% confidence interval from 0.41 to 11.08. And not much different from the analysis results for occupation, individuals who worked had a trauma symptom rate of 20%, while those who did not work had a rate of 80%. Although this difference is striking, the P-value of 0.533 indicates that this difference is not statistically significant. The

OR of 0.688 indicates that there is no significant relationship between occupation and trauma symptoms, with a 95% confidence interval from 0.21 to 2.24.

Therefore, the interpretation of the table above shows that there is no significant relationship between the evaluated factors in the table and trauma symptoms, based on the analysis of the P-value and Odds Ratio (OR) provided.

Table 5. Diagnostic Criteria for Maternal Traumatic Experience in Puskesmas in Sorong District 2023

Diagnostic Criteria	Number (n)	Percentage (%)
A. Traumatic Experience	24	100
B. Early Symptoms	23	96
C. Avoidance Symptoms	2	8
D. Cognitive and Mood	5	21
E. Hyperarousal	17	71
F. Dissociative PTSD	1	4
G. Delayed Onset PTSD	0	0
H. Duration > 1 month	1	4
I. Distress and Disability	12	50
J. Diagnostic PTSD	24	100
K. Non-Diagnostic PTSD	1	4
Total	24	100

Data analysis of diagnostic criteria for maternal traumatic experience in Sorong District showed that out of the total 24 (100%) respondents, 23 respondents (96%) reported early symptoms. While avoidance symptoms were reported by 2 respondents (8%). Meanwhile, 5 respondents (21%) reported cognitive and mood disturbances. It can be seen that 17 respondents (71%) experienced hyperarousal. Only one respondent (4%) reported Dissociative PTSD symptoms. While no respondents reported Delayed Onset PTSD. Only one respondent (4%) was known to report a duration of more than 1 month. It is known that a number of (50%) respondents reported distress and disability levels. All samples, 24 respondents (100%), met the diagnostic criteria for PTSD. And only 1 respondent (4%) did not meet the criteria for Non-Diagnostic PTSD.

DISCUSSION

Validation and Reliability Testing of the City Birth Trauma Scale (CBTS) in Bahasa Indonesia

Table above shows the results of the validity coefficient test with its calculated coefficients. Out of the 22 evaluated items, 20 questions were deemed valid, while 2 questions were considered invalid. The evaluated items include questions 1, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, and 24, all receiving valid assessments with their validity coefficients falling within the accepted range. These results indicate that these questions are effective in measuring the desired concept. On the other hand, items 2 and 8 were considered invalid based on their validity coefficients lower than the R-value (0.232), suggesting that these invalid questions should be excluded or not used in the questionnaire. The reliability values of statement items in the questionnaire for each variable under study are 0.833, exceeding 0.70. These results indicate that the questionnaire items are reliable for measuring their respective variables. This aligns with the study conducted by Webb R, Smith AM, Ayers S, Wright DB (2018), where the research shows that the City Birth Trauma Scale has good reliability ($\alpha = 0.94$) [20]

To validate this screening tool, researchers conducted a pilot study involving 950 women aged 18-46 who had given birth within the past 12 months and were provided with the questionnaire. The findings from the study indicate that CBTS has very high reliability (Cronbach's $\alpha = 0.92$) and good comprehensibility (with a Flesh Reading Ease score of 64.17). The scale proves to be reliable and valid for assessing PP-PTSD, correlating with DSM criteria subscales ($r = 0.30–0.62$) [21]

Prevalence of Traumatic Birth, Examining Risk Factors for Postpartum Trauma in Sorong District

Based on the research results, several risk factors related to trauma symptoms were identified. First, in the ethnic context, it was observed that individuals of non-Papuan ethnicity had a trauma symptom rate of 60%, while those not of non-Papuan ethnicity had a rate of 66.7%. Although there was a difference, the P-value of 0.577 indicates that this

difference is not statistically significant. Additionally, for income factor, individuals with income ≤ Rp 2,500,000.00 had a trauma symptom rate of 52%, while those with income > Rp 2,500,000.00 had a rate of 48%. However, statistical analysis shows that this difference is not significant with a P-value of 0.544. The civil registration status also showed a significant difference, where individuals not registered had a trauma symptom rate of 36%, while those registered had a rate of 64%. Despite the noticeable difference, the P-value of 0.970 indicates that this difference is not statistically significant. Similar results were found for the number of children, where individuals with ≤ 2 children had a trauma symptom rate of 72%, while those with more than 2 children had a rate of 28%. Although this difference is striking, the P-value of 0.315 indicates that this difference is not statistically significant. The Odds Ratio (OR) of 1.714 suggests no significant relationship between the number of children and trauma symptoms, with a 95% confidence interval from 0.59 to 4.94. Meanwhile, for age factor, individuals aged ≤ 35 had a trauma symptom rate of 92%, while those over 35 had a rate of 8%. Although this difference is substantial, the P-value of 0.613 indicates that it is not statistically significant. The OR of 0.535 suggests no significant relationship between age and trauma symptoms, with a 95% confidence interval from 0.07 to 4.05. The analysis of the type of delivery shows that vaginal delivery has a trauma symptom rate of 92%, while cesarean section has a rate of 8%. Despite this notable difference, the P-value of 0.474 indicates that this difference is not statistically significant. The OR of 2.118 suggests no significant relationship between the type of delivery and trauma symptoms, with a 95% confidence interval from 0.41 to 11.08. Lastly, the analysis of the occupation factor shows that working individuals have a trauma symptom rate of 20%, while non-working individuals have a rate of 80%. Although this difference is substantial, the P-value of 0.533 indicates that this difference is not statistically significant. The OR of 0.688 suggests no significant relationship between occupation and trauma symptoms, with a 95% confidence interval from 0.21 to 2.24.

This research contrasts with the study by Yakupova et al. [22], which used the City Birth Trauma Scale to measure postpartum PTSD. The research indicates a statistically significant difference in the severity of postpartum PTSD symptoms depending on the women's socioeconomic status ($F = 10.235$, $p < 0.001$). The group with low socioeconomic status experienced higher average postpartum PTSD symptoms. According to [23], in the cesarean section group, the level of postpartum depression is higher in women with low family income. Even Imişiragić et al. [24] states that mothers with low income often choose to live with their extended families. Meanwhile, Zambaldi et al. [25] show that postpartum mothers living in extended families and with low income make women vulnerable to trauma.

The researchers assume that the differences in this study compared to previous research indicate that money is not always everything. High income cannot be considered a guarantee that a mother will be free from postpartum PTSD.

The researchers' assumption aligns with the study by Slesman et al. [26], stating that income does not have an influence on life satisfaction in terms of stress levels [26]. There are people who feel very satisfied with their lives at every income level, but there is no individual who feels very dissatisfied with life after reaching a certain income level. Thus, the level of severe life dissatisfaction decreases with higher income, but higher income does not lead to an increase in life satisfaction [27].

This research also produces different findings from the study conducted by Liu et al. [28] in China, where it was found that women of non-Han ethnicity have a higher tendency to experience Postpartum Post-Traumatic Stress Disorder (PP-PTSD) symptoms compared to Han women. As stated by Huang et al. [29], China is one of the largest multi-ethnic countries in the world, with 55 ethnic minorities accounting for about 8.5% of the total population. Unlike the Han ethnicity, non-Han ethnic groups (minorities) often face greater social and economic pressures, and they struggle to access advanced medical resources.

On the other hand, Paul [30] shows a connection between ethnicity and the emergence of post-traumatic stress symptoms. Specifically, the findings indicate that mothers who identify as Hispanic have a lower likelihood of experiencing avoidance symptoms. There is a tendency for mothers who identify as Caucasian to be more likely to experience these symptoms, although not

statistically significant [30]. This relationship implies that the development of post-traumatic stress symptoms can be influenced by cultural factors. However, it is important to note that the population studied in this research at health centers mostly comes from the Hispanic ethnicity. Therefore, those who identify as Hispanic may have greater social support, proven as a crucial protective factor in facing the risk of PTSD. Greater social support has also proven effective in improving postpartum mental health [31]

Similar to China, Indonesia has many ethnic groups, with the largest being the Javanese, dominating with a proportion of 40.05% of the total population of Indonesia, followed by the Sundanese occupying the second position with 15.50%. Other ethnic groups have proportions below five percent of the total population of Indonesia (BPS. 2015). Nevertheless, the principles of health as a human right must be realized without regard to differences in ethnicity, race, or religion, in accordance with the aspirations of the Indonesian nation as stated in Pancasila and Article 28 H paragraph (1) of the 1945 Indonesian Constitution. This article asserts that every individual has the right to live a prosperous life physically and mentally, have a place to live, and obtain a good and healthy living environment, as well as the right to receive health services. Therefore, all Indonesian citizens have the right to access the best possible health care, which must be implemented with non-discriminatory, participatory, protective, and sustainable principles.

Therefore, the researchers assume that differences in ethnicity or tribe do not always pose a risk of PTSD in postpartum mothers. These differences are influenced by many factors, including the assurance of non-discriminatory health access, culture, and social support.

This research contradicts previous findings by Thiel et al. [33], stating that the childbirth process can be a significant cause of stress leading to dissociative responses and trauma. This finding also highlights the potential effectiveness of using dissociation screening after childbirth to identify individuals at high risk of experiencing CB-PTSD. Imişiragić et al. [24] also notes that emergency cesarean sections, especially when normal delivery has been planned, can increase CityBiTS scores. Another study by Ertan et al. [34] shows significant differences between groups, especially for mothers undergoing emergency cesarean sections, who have the highest scores on CBTS, while mothers delivering vaginally without instruments have the lowest scores. Furthermore, research by Pheto [35] shows that mothers who perceive their childbirth as a traumatic event tend to experience intrusion and avoidance symptoms.

Describe the Level of Traumatic Birth Symptoms in Postpartum Mothers in Sorong District

Based on the research results, it is shown that out of a total of 24 respondents, 23 respondents (96%) experienced early symptoms of traumatic experiences in Sorong District. Only 2 respondents (8%) reported avoidance symptoms. Five respondents (21%) reported cognitive and mood disturbances. Seventeen respondents (71%) experienced hyperarousal. Only one respondent (4%) reported dissociative PTSD symptoms. No respondents reported delayed PTSD onset. One respondent (4%) reported a duration of more than 1 month. Fifty percent of respondents reported distress and disability. All samples, 24 respondents (100%), met the diagnostic criteria for PTSD. Only one respondent (4%) did not meet the Non-Diagnostic PTSD criteria.

a. Traumatic Experience

The high percentage (96%) of traumatic experiences meeting the diagnostic criteria for PTSD indicates the severity of the problem in this study population. This is consistent with previous findings that associate traumatic experiences with PTSD symptoms. Although only one case did not meet the diagnostic criteria for PTSD, this may indicate individual variations in response to traumatic experiences. This research aligns with findings among participants, where 45.7% had clinically significant depression symptoms and 15% met all diagnostic criteria for PTSD [22].

b. Early Symptoms

There were 23 cases (96%) with early symptoms that may indicate the presence of PTSD. The high percentage of early symptoms (96%) reflects significant psychological impact on this study population. This is consistent with literature linking early symptoms with the potential development of PTSD.

c. Avoidance Symptoms, Cognitive and Mood Disturbances

There were 2 cases (8%) with avoidance symptoms. There were 5 cases (21%) with cognitive and mood disturbances associated with PTSD.

This study states that exposure to traumatic events and post-relocation stressors has no relationship with cortisol and DHEA levels. However, the levels of both hormones are related to individual PTSD symptoms in different ways. When both cortisol and DHEA levels are low, it is associated with increased avoidance behavior. High cortisol levels, especially, are associated with symptoms from the cognition and mood cluster of PTSD, while high DHEA levels are specifically associated with symptoms from the anxiety and reactivity cluster of PTSD. These findings help explain the variation in findings in the literature regarding the HPA axis activity in PTSD [36].

d. Hyperarousal

There were 17 cases (71%) with hyperarousal symptoms. Excessive anxiety experienced by sufferers causes them to feel constantly threatened or in danger. Sufferers often experience unstable emotional turmoil, such as sudden aggression, easy irritability, explosive anger, restlessness, difficulty concentrating, easily startled, panic, and insomnia accompanied by nightmares. If ongoing trauma symptoms are not addressed, the sufferer will experience deep and prolonged depression, a sense of bleakness that will follow them throughout their lives. The sufferer will feel narrow thoughts or feelings, feel worthless or powerless, and have difficulty thinking logically. Thus, the time needed to treat the sufferer in such acute depression stages will be longer [37]

The presence of avoidance, cognitive and mood disturbances, and hyperarousal symptoms reflects variation in the manifestation of PTSD. Comparing these percentages can provide further insight into the dominant symptom types in this study population.

e. Dissociative PTSD and Delayed PTSD Onset

There was only 1 case (4%) with dissociative symptoms consistent with PTSD. No cases indicated delayed PTSD onset.

The low presence of dissociative symptoms and the absence of cases with delayed PTSD onset may provide additional information about clinical characteristics in this population.

f. Duration > 1 Month and Distress and Disability

There was only 1 case (4%) with a duration of PTSD symptoms exceeding 1 month. There were 12 cases (50%) experiencing distress and disability as a result of PTSD.

Although there was only one case with a duration of symptoms exceeding 1 month, the high percentage of distress and disability (50%) indicates the long-term impact of traumatic experiences on psychological well-being and social functioning.

CONCLUSION

Based on the research findings, the conclusion indicates that the validity coefficient test on the City Birth Trauma Scale (CBTS) questionnaire reveals that out of 22 evaluated questions, 20 are considered valid, while 2 questions are deemed invalid (questions 2 and 8). The invalid questions should be removed or not used in the questionnaire. Furthermore, the reliability value of statement items in the questionnaire for each research variable is 0.833, exceeding the threshold of 0.70. This suggests that the questionnaire's questions can be relied upon to measure the respective variables.

Regarding respondent characteristics, the majority of participants (94.3%) are aged ≤ 35 years, most give birth vaginally (87.1%), a significant portion are unemployed (75.7%), and a majority are married (64.3%). Participants' income varies, with 52.9% having an income above Rp 2,500,000.00. Ethnically, the majority of participants are from outside Papua (64.3%). Risk factor analysis shows no significant relationship between ethnicity, income, civil registration status, number of children, age, type of delivery, occupation, and trauma symptoms.

The analysis of diagnostic criteria for traumatic experiences in mothers in Sorong Regency indicates that out of 24 respondents, 96% reported early PTSD symptoms, with the majority experiencing hyperarousal (71%). Only 8% reported avoidance symptoms, and

21% reported poor cognition and mood. About 4% reported dissociative PTSD symptoms, while none reported delayed onset PTSD. Only 4% reported symptom duration of more than 1 month. About 50% reported distress and disability levels. All samples (100%) met the diagnostic criteria for PTSD.

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CONFLICTS OF INTEREST

The authors declare that there is no conflict of interest.

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