

Abstract

Childhood traumatic stress affects at least 20% of the population. Traumatic stress can be defined as any sudden event associated with the loss or threat of loss of resources such as property or even social relationships. The person experiencing traumatic stress has both a physiological and psychological response. Interestingly, the consequences of traumatic stress can be observed even in the next generation. Literature suggests that childhood trauma is associated with a higher risk of premature birth and low birth weight. However, there is a lack of longitudinal studies investigating the relationship between maternal traumatic stress and the development of biological and temperamental traits.

The studies aimed to examine the link between maternal childhood traumatic stress and the development of biological and psychological traits in the first year of life.

The study sample consisted of 103 dyads (mother and infant). The healthy women were recruited when their infants were five months old. The data were collected twice when the children were five and twelve months old. Women who did not smoke cigarettes or drink alcohol during pregnancy and breastfeeding were included in the study. They had a single pregnancy without any complications. Their children were born on time with an appropriate weight for the gestational age and were breastfed for at least five months.

The maternal traumatic childhood stress was estimated using the Early Life Stress Questionnaire. Then, the sample was divided into two groups: women with high and low levels of childhood trauma based on median ($Me=2$). The infant's temperament was assessed based on the Polish adaptation of the Revised Infant Behavior Questionnaire. Biological development was estimated using anthropometric measurements such as body length, weight, and head circumference at ages 5 and 12 months. Additionally, data about birth outcomes were collected from Health Records. The statistical models were run using Statistica 12 software and the R statistical environment.

In the first paper, we wanted to test the relationship between maternal childhood trauma and infant's standardized measurements of body length, weight, and head circumference, and maternal social and biological factors using St. Nicolaus models that are based on correlation. The analyses have indicated a significant and direct association between maternal childhood trauma, infant's body weight, and head circumference.

In the second paper, we found a significant relationship association between maternal childhood trauma and body size parameters at the age of 5 and 12 months using MANCOVA models. Univariate analyses have investigated that infants of mothers with high childhood trauma characterized higher body weight and bigger head circumference than their peers whose mothers experienced low traumatic stress. There was no relationship between maternal trauma and birth size parameters.

The last paper tested the link between maternal childhood trauma and an infant's temperamental factors, such as surgency/ extraversion, negative affectivity, and orienting regulation. The MANCOVA models found no significant relation between maternal trauma and any of the temperamental factors.

Higher size parameters observed among children with higher maternal childhood trauma might be an adaptation to a challenging environmental condition. Lack of effect in the case of temperamental factors might reflect on the lower vulnerability of psychological development than biological.