BIOPSYCHOSOCIAL AND ENVIRONMENTALDETERMINANTS OF AUTISM IN CHILDREN UNDER FIVE IN TANGERANG, BANTEN

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ABSTRACT

Background: Autism is a developmental disorder characterized by troubles with social interaction and communication, and by restricted and repetitive behavior. Autism is caused by a combination of genetic and environmental factors. Risk factors include certain infections during pregnancy such as rubella as well as valproic acid, alcohol, or cocaine use during pregnancy. The controversy surrounding other proposed environmental causes, such as a certain vaccine, has been disproven. This study aimed to determine the biopsychosocial and environmental determinants of autism in children under five in Tangerang, Banten.

Subjects and Method: This was an analytic observational with a cross-sectional design. This study was conducted at several special schools for children with special need children in Tangerang, Banten. A sample of 200 children under five, consisting 50 children with autism and 150 children without autism was selected for this study by fixed disease sampling. The dependent variable was the incidence of autism. The independent variables were maternal age, stress in the gestation period, maternal education, family income (with under or over Minimum Wage Limit/ MWL), and exposure to chemicals. The data on autism was collected by M-CHAT questionnaire. Stress during pregnancy was measure by Depression Anxiety Stress Scale (DASS). Other data were taken from mother and child logbook. The data were analyzed by logistic regression analysis in Stata 13.

Results: The risk of autism in children under five increase with maternal age $\geq$ 35 years (b= 4.60; 95% CI= 1.03 - 20.55; p<0.046), stress in gestational period (b= 9.88; 95% CI= 2.19 to 44.65; p< 0.003), exposure to chemical (b= 11.85; 95% CI= 2.73 to 51.38; p<0.001). The risk of autism decrease with family income $\geq$ MWL (b= 0.06; 95% CI= 0.15 to 0.26; p<0.001), and maternal education $\geq$ high school (b= 0.15; 95% CI= 0.003 to 0.076; p<0.001).

Conclusion: The risk of autism in children under five increases with maternal age $\geq$35 years, stress in gestational age, and exposure to chemical, but decreases with high family income and high maternal education.

Keywords: autism, biopsychosocial factor, environmental factor

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