



# Maternal and birth predictors of eating disorders in Northern Finland Birth Cohort 1986

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**Introduction:** Eating disorders (EDs) imply a collection of conditions that are marked by abnormal eating patterns or dietary behaviors that affect a person's ability to function psychologically, socially, and physically.

**Aims:** The study aims to identify the longitudinal effects of maternal and birth predictors on the development of EDs in offspring.

**Methods:** The study utilizes a prospective, nationwide sample consisting of 9,362 pregnant women and 9,479 live-born babies in the Northern Finland Birth Cohort population of 1986. The ICD-10 diagnoses of EDs were collected from nationwide registers and followed up until 2020. The ED symptoms were defined using DSM-5 criteria from the follow-up questionnaires collected at the age of 15 to 16 years.

Logistic regression and multinomial regression models were employed to identify the predictors of EDs.

**Results:** A total of 73 cases of EDs were identified among females, of which 31 were anorexia nervosa and 22 were bulimia nervosa. Of the 277 cases with ED symptoms among females, 67 cases had the restrictive type, 111 cases had the binge eating type, and 99 cases had the purging type of behavior.

Factors such as small head circumference (<32 cm) (adjusted odds ratio [AOR]=7.45, 95% CI 1.52–36.5) and large birth length ( $\geq 54$  cm) (AOR=2.68, 95% CI

1.01–5.34) were significantly associated with any ED diagnosis. Maternal age of 27–35 years (AOR = 3.34, 95% CI 1.23–9.06) was associated with a restrictive type of ED symptoms. High birth length (AOR=2.54, 95% CI 1.00–6.15), any pregnancy complication (AOR=1.87, 95% CI 1.03–3.37), and abnormal fetal growth (AOR=2.13, 95% CI 1.02–5.05) were statistically significantly associated with binge-eating symptoms. Maternal smoking (AOR=1.83, 95% CI 1.07–3.13) was associated with purging-type ED symptoms.

**Discussion:** Our findings support that eating disorders have neurodevelopmental origins shaped by early growth and environmental exposures. These results highlight the need for addressing modifiable risk factors during the maternal and birth periods to mitigate the occurrence of ED in offspring.