

Supplementary Materials

The Role of Maternal Alcohol Intake During Pregnancy in early-life Child Neurodevelopment:

Results of The Italian PHIME Cohort

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Study population

Eligibility criteria

The pregnant women eligible for recruitment were permanent residents of the study areas for at least 2 years, were at least 18 years of age, and had no absence from the study area for more than 6 weeks during pregnancy, no history of drug abuse, no serious health problems or complications of pregnancy, and no twin gestation

Criteria for exclusion from follow-up

We excluded from further follow-up any preterm births (<37 weeks of gestational age), babies with congenital malformations or severe perinatal problems, and those with severe health problems that presented in the following months and potentially compromised their neurological development

Power's Calculation

We estimated the sample size required to obtain a statistically significant result in the case of a moderate association with a relatively low level of exposure to mercury (THg). Assuming that the prevalence of a measurable neurodevelopmental delay is 10% among children whose mother's hair has a THg level of $\geq 4.0 \mu\text{g/g}$ (n_1) and 5% among children whose mother's hair has a THg level of $< 4.0 \mu\text{g/g}$ (n_2), and that the n_2/n_1 ratio = 1, $\alpha = 0.05$, and $\beta = 0.10$, the sample size needed to estimate a risk ratio of 2.0 is $n_1 = 621$, $n_2 = 621$. Given the personnel and time available, we estimated we would be able to enroll approximately 1700 mother-child pairs in the whole Mediterranean cohort during the study period (750 from Italy (NAC-II), 350 from Slovenia, 200 from Croatia, and 400 from Greece)¹⁻⁴

Results

Sub-group analyses

Sub-group analyses show some alcohol intake heterogeneity. In particular, the median (25th percentile - 75th percentile) of weekly alcohol intake was: 0.6 (0.1-1.9) drinks for mothers with a university education level, 0.4 (0-1.3) drinks for mothers with a high school diploma and 0.4 (0-1.2) drinks for mothers with an elementary/middle school diploma (p-value of the Kruskal-Wallis test=0.05). Furthermore, the median (25th percentile - 75th percentile) alcohol intake by smoking status during pregnancy was the following: 0.7 (0.1-2.2) drinks for ex-smokers, 0.6 (0-2.0) drinks for smokers, 0.2 (0-1.2) drinks for non-smokers (p-value of the Kruskal-Wallis test=0.01).

References

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