

Non auditory effects of noise

Maternal exposure to occupational noise in relation to congenital malformations - preliminary results from the NordSOUND study.

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Background

The research project NordSOUND makes use of high-quality health register data to comprehensively study health impacts due to environmental and occupational noise. The linkage of several countries data is crucial for rare outcomes.

This presentation evaluates whether occupational noise during the mothers' pregnancy is associated with the risk of congenital malformations. The full analyses will include Copenhagen, Helsinki, Gothenburg, Stockholm and Oslo. Here we present preliminary results from the Copenhagen cohort (2005-2016).

Methods

The sample includes over 110 000 live single births. Data sources were national registers. We assessed the mothers' occupational exposures using a validated noise job-exposure matrix. Residential noise pollution were modelled. Logistic regression analyses adjusted for maternal age, parity, marital status, smoking, individual and area-level socioeconomic status, road, rail and air traffic noise, NO₂ as well as green and blue areas were performed.

Results

No associations were observed between occupational noise during pregnancy and congenital malformations. Future analyses will include all Nordic countries, and more extensive analyses of confounders related to work participation.

Conclusion

These preliminary results do not support the hypothesis that exposure to occupational noise during pregnancy is associated with congenital malformations.

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