

LONGITUDINAL STUDIES OF NOISE AND MENTAL HEALTH

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Background and Aims: Most studies of environmental noise exposure and mental health have been cross sectional and may be prone to selection bias. Studies of symptoms, clinical disorders and medication use suggest associations between aircraft and road traffic noise and anxiety disorders. There have been few longitudinal studies. This paper examines the results of current longitudinal studies adding further data from the 1958 Birth Cohort.

Methods: The UK 1958 Birth Cohort has followed a cohort of 18,000 born during one week in 1958. At age 45 they were interviewed with the Clinical Interview Schedule to measure common mental disorders. In these analyses occupational noise exposure during adulthood was examined in relation to depressive and anxiety symptoms at 45 years taking potential confounding factors into account.

Results: In the 1958 Birth Cohort occupational noise exposure was weakly prospectively associated with depressive symptoms in men but much of this may be explained by confounding factors. These findings are compared with previous studies including the Caerphilly Study where road traffic noise exposure was associated with a non-linear increase in anxiety symptoms (Stansfeld et al, 1996).

Conclusions: There is weak evidence for environmental noise influencing mental health in longitudinal studies. There is a need for further studies with good measurement of noise exposure, confounding and moderating factors, such as noise sensitivity and a greater reliance on standardised interview measured psychiatric disorders in order to answer the question of whether noise can be implicated in the causation of common mental disorders.

References

Stansfeld S, Gallacher J, Babisch W, Shipley M. Road traffic noise and psychiatric disorder. *BMJ* 1996; 313:266-267.