Annoyance reactions due to noise and vibrations caused by different train types in Sweden: results from the EpiVib Study

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ABSTRACT

The few existing exposure-response relationships describing the association between exposure to vibrations from rail traffic and annoyance were not always able to distinguish between the different types of trains. However, indications were found that exposure to vibrations caused by freight trains are stronger related to annoyance than exposure to vibrations caused by passenger trains. Although the results of the studies looking into the difference in exposure-response functions describing the association between exposure to noise from trains and annoyance between the different train types are not consistent, there are also concerns that vibrations from freight trains may be more annoying than noise from passenger trains.

This paper reports on a study investigating annoyance reactions due to vibrations and noise from different types of trains. To this end, we used data from the Swedish EpiVib project, collected by means of a survey carried out in 2017 among more than 7,200 people aged 18-80 years living in the Västa Götaland, Värmland and Örebro regions in Sweden close to the railway track.

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