



12th ICBEN Congress on  
Noise as a Public Health Problem

## Exploring perception of vibrations from rail: an interview study

Laura Maclachlan<sup>1</sup>, Eja Pedersen<sup>2</sup>, Kerstin Persson Waye<sup>1</sup>

<sup>1</sup> Gothenburg University, Department of Public Health and Community Medicine, Gothenburg, Sweden

<sup>2</sup> Lund University, Department of Architecture and the Built Environment, Lund, Sweden

Corresponding author's e-mail address: [laura.maclachlan@amm.gu.se](mailto:laura.maclachlan@amm.gu.se)

### ABSTRACT

Little is known about the way in which people perceive vibrations from rail traffic. A qualitative interview study based on a Grounded Theory approach was conducted with residents living next to railways in west Sweden to understand the way in which vibrations from rail are described and perceived. Initial results are based on seven interviews. Vibrations were categorised in terms of physical sensations, observed effects and resulting emotional response. The word “shaking” was consistently used to describe the effect of vibrations on the house with “rattling” and “clinking” of porcelain. Individuals compared the feeling of vibrations to “small earthquakes” or “a massage mattress”. Emerging themes included acclimatisation to vibrations from the railway; worry of damage to property and therefore reduced saleability, as well as well-being of family members. Safety in general was an important theme and included worries over trains catching fire or coming off the line. Direct concerns over health did not emerge; however, underlying worry regarding well-being and safety may contribute to low-level longer-term stress, which can have negative health consequences and reduce the possibility of psychosocial restoration.