

## Low-Frequency Noise: Experiences from a Low Frequency Noise perceiving population

**Kristina H. Erdélyi<sup>1</sup>, Anselm B. M. Fuermaier<sup>1</sup>, Lara Tucha<sup>2</sup>, Oliver Tucha<sup>1,2,3</sup>, Janneke Koerts<sup>1</sup>**

<sup>1</sup> University of Groningen, Faculty of Behavioral and Social Sciences, Department of Clinical and Developmental Neuropsychology, Groningen, The Netherlands

<sup>2</sup> University Medical Center Rostock, Department of Psychiatry and Psychotherapy, Rostock, Germany

<sup>3</sup> National University of Ireland, Department of Psychology, Maynooth, County Kildare, Ireland

Corresponding author's e-mail address: [k.h.erdelyi@rug.nl](mailto:k.h.erdelyi@rug.nl)

### ABSTRACT

Although Low-Frequency Noise (LFN) is associated with various complaints, there is still a lot unknown about this phenomenon. This research aims to provide an extensive description of 1) LFN perceptions, 2) LFN-related complaints, and 3) the characteristics of LFN complainants. In an explorational observational cross-sectional survey study, a sample of Dutch adults reporting to experience LFN (n=190) and a group not experiencing LFN (n=371) completed a comprehensive questionnaire. Descriptions of perceptions varied individually and were dependent on different circumstances, although some common patterns were observed. Complaints were wide-ranging and individual, with a reported high impact on daily living. Common complaints included sleeping difficulties, fatigue, or annoyance. Societal consequences were described regarding housing, work, and relationships. Attempts to stop or escape the perception were manifold but often unsuccessful. The LFN sample consisted of two-thirds females with an average age of 58 years and with the majority of individuals being highly educated (60%). Further, the LFN sample indicated more often work inability and working less often full-time, and lived less long in their dwellings compared to the comparison group. No further differences in occupational or marital status or living circumstances were found. Although this research supports some previous findings and identifies common patterns, it also highlights the individual nature of LFN-related experiences and the heterogeneity of this group. It is advised to pay attention to the complaints of affected individuals, to inform concerned authorities, and to conduct more systematic and multidisciplinary research using standardized and validated measuring instruments.

Keywords: Low-Frequency Noise, LFN, perceptions, complaints, demographic characteristics