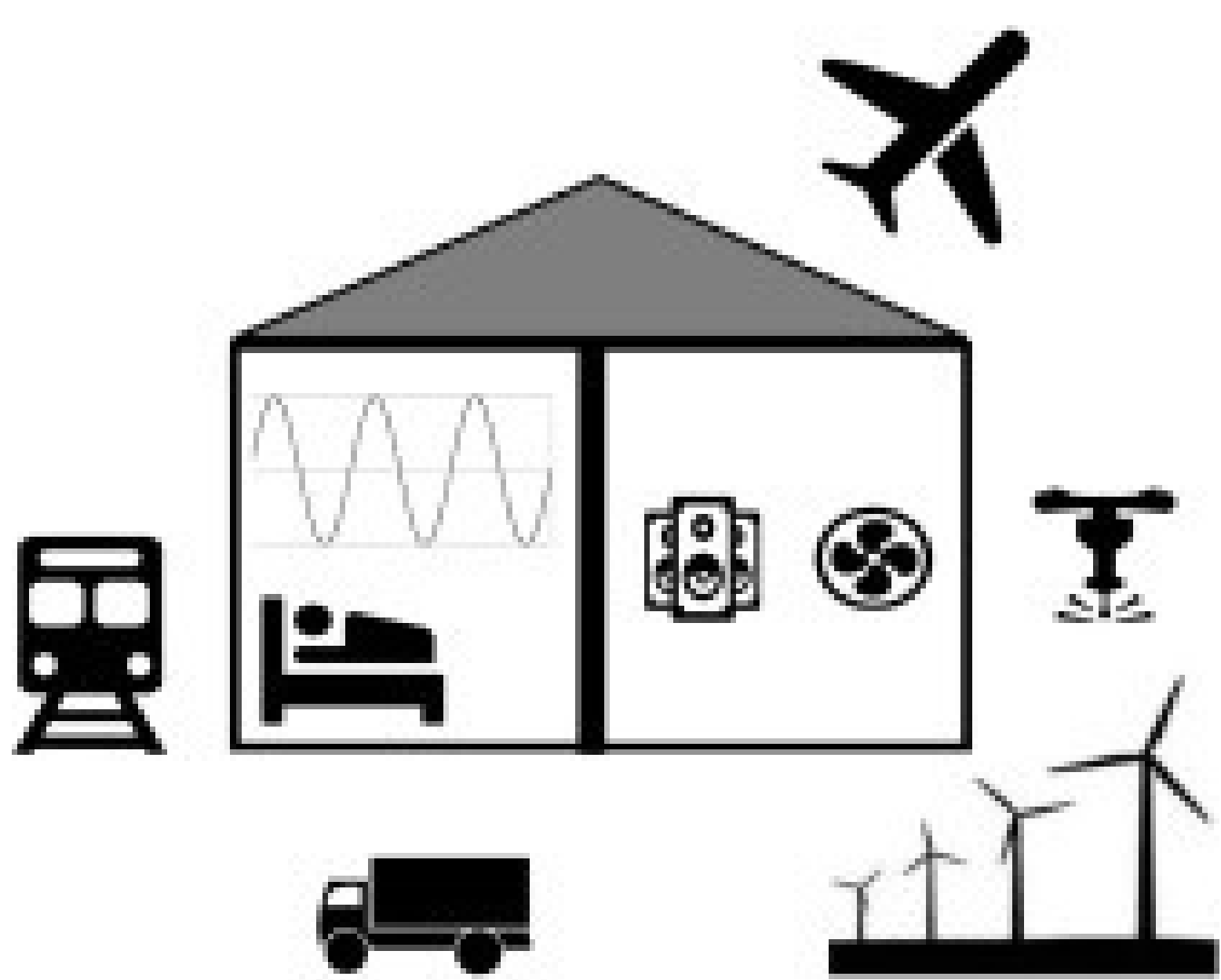


Exploring the effects of exposure to infrasound

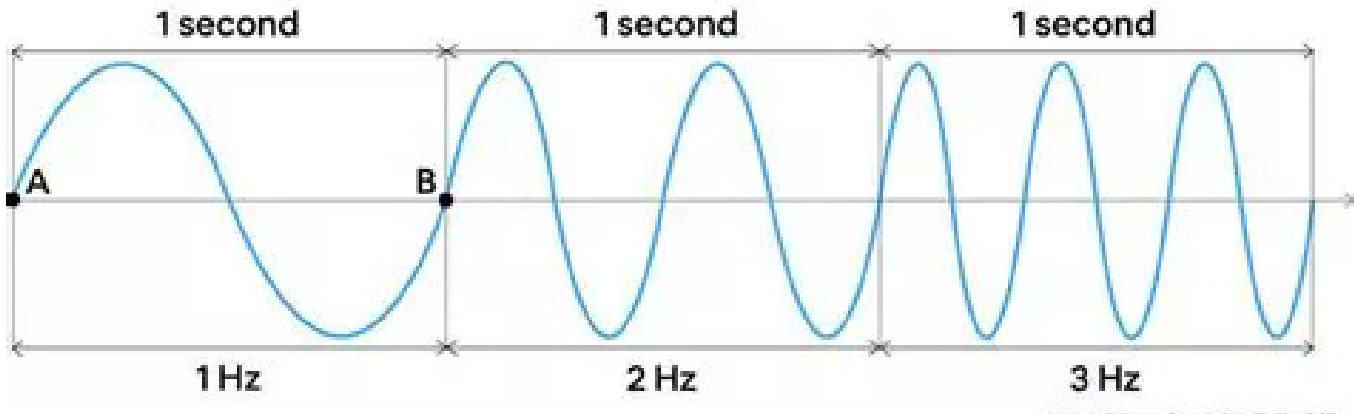


AUTHORS
Alex Stoica

AFFILIATIONS
CreaTE student, University of Twente

INTRODUCTION

Infrasound are low-frequency noises(LFN) , they are below 20Hz and inaudible to humans. Some human made structures that are continuous sources of LFN are industrial environments and high-voltage lines. Common risks amongst individuals exposed to infrasound include discomfort, stress, annoyance, sleep problems and concentration difficulties.



OBJECTIVE

The objective of this research poster is to raise awareness on the effects of chronic and short term exposure to LFN and to create a basis for future studies.

METHODOLOGY

The population groups targeted in literature focus on factory workers and residents living around high-voltage power lines. Experiments are based on control groups, with some studies using exclusively male demographics and others predominantly female. Groups of exposed and unexposed subjects, participated in experiments and were subsequently tested using quality of life measurements scales.

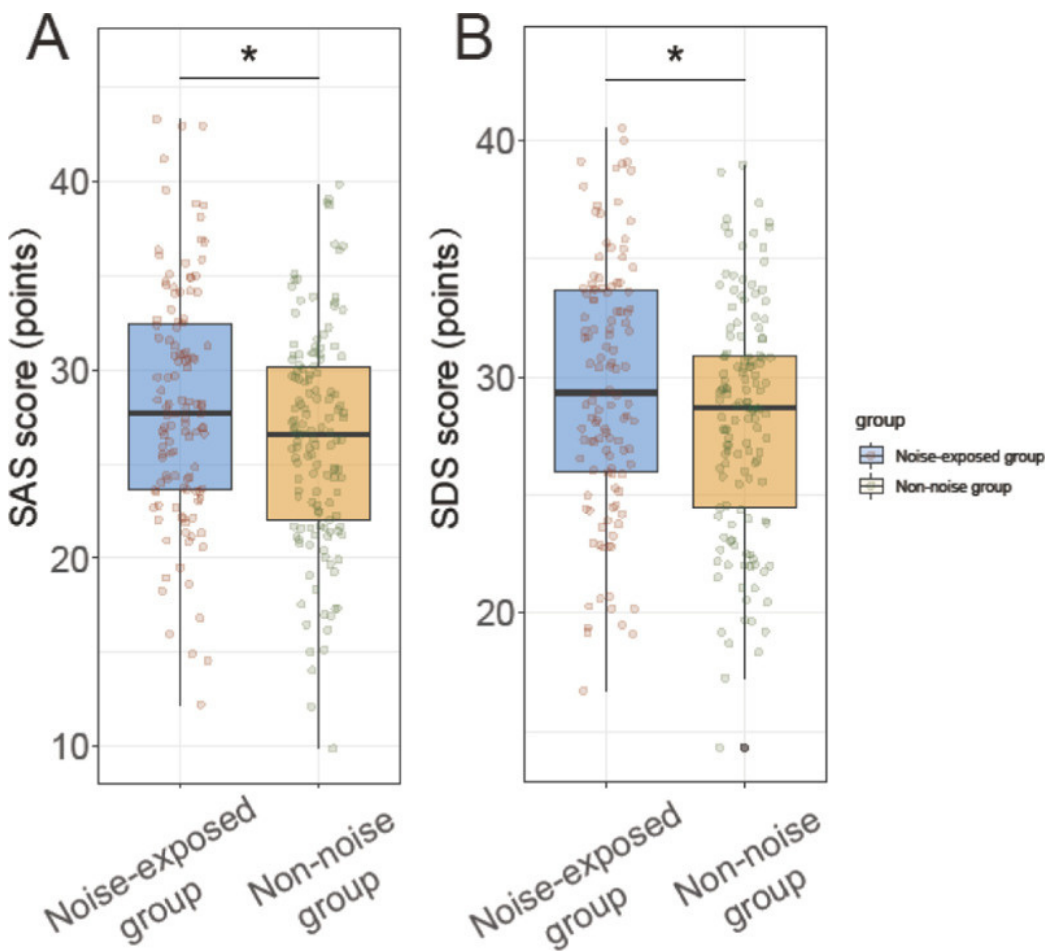
RESULTS

Results of the experiments on factory workers showed that LFN had a significant impact on physiological function, however laboratory based studies and experiments conducted show the opposite. However most studies agree that the dB levels that the population around such environments is exposed to are higher.

ANALYSIS

The literature shows mixed findings on both the physiological and psychological effects of exposure to LFN, although the consistency of the findings vary across the studies. Observational research indicates that exposure to LFN may come with a reduction in well being. Baliatsas et al. (2016) found that exposure to LFN may have symptoms such as annoyance, stress and sleep disturbance. Similarly a study conducted in Portugal by Alves et al. (2018) agrees with the previous findings. Chen et al. (2025) conducted experiments on 256 employees of a automotive factory and reports that besides hearing and well being risks there is also musculoskeletal pain effects and lower quality of life among individuals. Additionally Walker et al. (2016) claims that exposure to LFN negatively impacts heart rate variability (HRV).

However, a recent study, by Marshall et al. (2023), where his experiments report that a nocebo effect is responsible for the negative effects, concluding that infrasound did not influence the measured subjective or objective outcomes.



CONCLUSION

The impact of rapidly evolving technologies and the required infrastructure that it comes with, on society, calls for precaution to be taken and further research to be conducted. I believe that our responsibility as creative technologists is to develop innovative solutions for cotidian problems.

RELATED LITERATURE

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