PROVING THE EFFECTIVENESS OF A VIBROACOUSTIC MUSIC THERAPY INTERVENTION FOR POSTOPERATIVE DELIRIUM

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Introduction

Postoperative delirium (POD) is a highly prevalent morbid syndrome in intensive care units (ICUs). Approximately one-third of all patients over 70 years of age are affected by POD. Its fluctuating symptoms and manifestations pose serious psycho-physiological risks to the patients, as well as strains on their relatives and medical professionals (Janssen et al., 2019). Given the frequent side effects and uncertain benefits from pharmacological interventions, non-pharmacological approaches like music interventions might contribute to alleviate the symptoms and shorten the duration of delirium. The theoretical background is solid, but practice is still limited (Golubovic et al., 2022).

Aim and Objectives

The aim is to develop and implement an intervention that combines music therapy and vibroacoustic using the resono SoundPad in order to reduce the psycho-physiological burden of symptoms of POD. The efficacy, relevance, and applicability in managing POD will be investigated.

Method

The core element of the intervention is the

SoundPad - a thin wooden board with two small speakers that allows wireless connection to a mobile device. The SoundPad acts as a resonance body so that the vibrations can also be perceived haptically with the hands or other parts of the body, such as chest, stomach, and tights in addition to the auditory musical experience (Gießible, 2023).

After outlining the intervention and its theoretical implications, this presentation introduce the study protocol for a pilot study. It will be a two-arm RCT study conducted in the Department of Anesthesiology and Surgical Intensive Care Medicine of the University Hospital Augsburg in a naturalistic setting.

Results and Discussion

The results of the research project will open up a new field of work for music therapy, which will make an important contribution to the further development of the music therapy discipline. The concept development, further development and resulting scientific publications will make an important contribution to the care of delirious patients in intensive care. A possible adaptation of the findings for the care of delirious patients in normal wards is conceivable.

References

- Gießible, K. (2023, 27. January). resono SoundPad - Musik mit dem ganzen Körper erleben!. Resono. https://resono.de/ soundpad.php
- Golubovic, J., Neerland, B. E., Aune, D. & Baker, F.A. (2022). Music interventions and delirium in adults: A systematic literature review. *Brain Science*, *12*(5), 568.
- Janssen, T. L., Alberts, A. R., Hooft, L., Mattace-Raso, F., Mosk, C. A. & van der Laan, L. (2019). Prevention of postoperative delirium in elderly patients planned for elective surgery: Systematic review and meta-analysis. *Clinical Interventions in Aging, 14*, 1095–1117.

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