EN_41037094 Research Proposal

While there is extensive literature on the influence of music therapy on stress and even some evidence that it can reduce symptoms of academic stress specifically, the age group of adolescents as a population has been largely neglected in research. The underrepresentation of this age group in any studies examining how academic stress is influenced by music therapy is problematic because adolescents can be considered a highly vulnerable group when it comes to the negative effects of academic stress. There are two reasons underlying their vulnerability, first, it has been established that how adolescents perceive their academic performance in comparison with other students is closely linked to their academic self-concept. This means that in an environment where students experience high levels of academic pressure and stress, they will develop lower academic self-concepts which can result in a lower self-esteem and reduced academic performance (Jónsdóttir & Blöndal, 2024). The second reason is that according to the literature behaviours and habits related to long-term health are often developed during adolescence and early adulthood (Sawyer et al., 2012). This indicates that an individual's environment during the final years of secondary school and in college has a fundamental influence on their long-term health-related behaviour and habits. Thus, adolescents can be seen as especially vulnerable when it comes to the negative effects of academic stress, and it is very problematic that their age group remains largely underrepresented in research.

Seeking to fill that gap in research I investigate whether music therapy can alleviate physical and mental symptoms of academic stress in high school students. Answering this question will expand research on the influence of music therapy on academic stress to a new age group, adolescents. In addition to that it could guide the development of new stress management strategies for adolescents.

The present study has two central goals. My first goal is of a scientific nature and consists of contributing to fill the gap in the literature on academic stress and music therapy by shifting my focus on the age group of high school students which has been underrepresented in research so far. I aim to validate that the application of music therapy to treat academic stress

is also effective in high school students which would open doors for further research and the development of new treatments. My second goal is societal. Because of its rising prevalence, academic stress is an issue society is increasingly affected by. Developing coping strategies and a good support system and making them accessible for students would thus be highly beneficial as it could improve health in adolescents and young adults as well as academic performance.

According to the literature, music therapy is effective in reducing symptoms of stress in general and can foster recovery after encountering stressors (de la Torre-Luque et al., 2017; Linnemann et al., 2015), which leads me to the hypothesis that music therapy interventions could alleviate symptoms of academic stress in adolescents as well. In line with that, the study conducted by Gallego-Gómez et al. (2020) suggests that music therapy can significantly reduce symptoms of school-related stress such as heart rate, blood pressure and cortisol levels in college students, which further supports this hypothesis as we expect to observe similar effects of music therapy on academic stress in adolescents.

To test this hypothesis, I designed a randomized controlled trial. 80 high school students who are in their second to final year will be divided into two equal groups and will each fill out a questionnaire on their perceived academic stress at the beginning of the study. This is to assess the level of stress they are experiencing. In addition to that, we will measure their heartrate as a physical marker for stress. Over a period of four weeks, the experimental group will receive four music therapy sessions led by a professional music therapist. After this intervention, all participants will fill out the questionnaire a second time and have their heart rate measured once again to assess the severity of their stress-related symptoms.

In line with my hypothesis that the symptoms of academic stress will be reduced significantly through music therapy interventions, I expect the experimental group to report lower levels of stress, meaning a lower heart rate and less perceived academic stress, than the control group after the intervention. Besides that, I expect an improvement within the experimental group, comparing the first measurement to the second one.