

Секция «Психология познания и творчества: единство интеллекта и аффекта»

Heart rate variability as a mediator to explore the effectiveness of music interventions for stress relief - a systematic review and meta-analysis

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BACKGROUND: Stress is an important factor affecting the physical and mental health of human beings, and prolonged stress may lead to a variety of diseases, including depression and anxiety disorders; therefore, preemptive disease prevention is particularly critical. Heart rate variability (HRV) can reflect the level of human health as well as the degree of stress, and the effectiveness of music can be detected by HRV results. Currently, most of the subjects in music-related studies are patients with various types of illnesses, but nowadays stress is prevalent in all types of groups, therefore, the research object of this paper focuses on healthy groups under stress. The aim of this paper is to provide a systematic review of previous studies on the specific effects of different musical stimuli to relieve stress in healthy adults. **METHODS:** We conducted searches in databases such as PubMed, Web of Science, Cochrane, embase, SpringerLink, and identified other studies through the reference lists in the included literature. The efficacy of music therapy on stress was assessed using standardised mean deviation (SMD) and 95% confidence interval (CI) values. In addition, subgroup analyses with different outcomes were performed to assess the effectiveness of music for stress relief. **RESULTS:** A total of 11 randomised controlled trials with a total sample size of 786 were included, and we expected that all music types showed a favourable effect on stress-related HRV outcomes. **CONCLUSION:** This systematic evaluation confirms that music increases parasympathetic nervous system activity, promotes relaxation and calming of the mind and body, and has a favourable effect on stress relief.

The findings of this article demonstrate the significant effectiveness of music interventions in relieving stress and also confirm the effects of different types of music on stress relief. This study provides a useful reference to help inform the application of music in the future.