

Motivational qualities of music in exercise

Dietmar Tscherne

University of Graz, Austria, Centre for Systematic Musicology
dietmar.tscherne@edu.uni-graz.at

In: Jakubowski, K., Farrugia, N., Floridou, G.A., & Gagen, J. (Eds.)
Proceedings of the 7th International Conference of Students of Systematic Musicology (SysMus14)
London, UK, 18-20 September 2014, <http://www.musicmindbrain.com/#!sysmus-2014/cfmp>

Music can enhance athletic performance in different ways, depending on whether it is synchronous (movements are in time with rhythm; Terry et al., 2006), asynchronous (no conscious synchronization between movement and music tempo; Terry et al., 2006), or pre-task (to regulate arousal level prior to performance; Karageorghis et al., 2012). Benefits of music include more positive mood, reduced pain/fatigue, reduced subjective exertion, improved performance (e.g. in treadmill running, cycling, on grip strength, etc.), faster acquisition of motor skills, and increased likelihood of flow states (Karageorghis et al., 2001). Motivational qualities of a piece of music depend on the response to rhythm, pitch/harmony, identification with cultural groups, and non-musical associations (Karageorghis, et al., 1999; Terry et al., 2011). Tempo is the most important determinant of response to music (Karageorghis et al., 1999) and an average of 130 bpm was reported to be most suitable for workout settings (Felstead et al, 2006) and for workouts with low to moderate intensity (Karageorghis et al., 2006). This mixed-methods project focuses on the motivational qualities of music, extending Priest's findings (2003). Which music enhances motivation during a workout? Is music particularly designed for workouts more likely to motivate than other music? A total of 24 well-known sound samples with a tempo close to 130 bpm will be cut to a length of ten seconds and assigned to eight different musical styles, making them three samples for each style. Four styles will reflect workout-music (taken from Spotify workout playlists), and four will be non-workout music including Jazz, Classical, Pop/Rock, and Electronic music. Regular gym-goers will be asked to listen to each sample in a random order and to answer the question, how much they would like to listen to that music during a workout, using a questionnaire after each sample. Participants are requested to rate each sample on a seven-point-scale and briefly comment on it. In a second run, subjects will be asked about their musical preferences in general and to rate the samples' musical styles on a seven-point-scale accordingly. Gathered data from both inquiries will be analyzed.

Keywords: Motivation, music, exercise, musical styles

References

Felstead, A., Bishop, D., Fuller, A., Jewson, N., Lee, T. & Unwin, L. (Eds.) (2006). Moving to the Music: Learning Processes, Training and Productive Systems - The Case of Exercise to Music Instruction. In *Learning as Work Research Paper* (No. 6). Cardiff, UK: Cardiff School of Social Sciences, University of Cardiff.

Karageorghis, C. I., Jones, L. & Low, D. (2006). Relationship between exercise heart rate and music tempo preference. *Research Quarterly for Exercise and Sport*, 26, 240-250.

Karageorghis, C. I. & Priest, D. L. (2012). Music in the exercise domain: a review and synthesis (Part I). *International Review of Sport and Exercise Psychology*, 5, 44-66.

Karageorghis, C. I. & Terry, P. C. (2001). The magic of music in movement. *Sport and Medicine Today*, 5, 38- 41.

Karageorghis, C. I., Terry, P. C. & Lane, A. M. (1999). Development and validation of an instrument to assess the motivational qualities of music in exercise and sport: The Brunel Music Rating Inventory. *Journal of Sports Sciences*, 17, 713-724.

Priest, D. L. (2003). *Characteristics and effects of motivational music in exercise* (Doctoral dissertation). Retrieved from <http://bura.brunel.ac.uk/bitstream/2438/2914/14/FullTextThesis.pdf>

Terry, P. C. & Karageorghis, C. I. (2006). Psychophysical effects of music in sport and exercise: An update on theory, research and application. In M. Katsikitis (Ed.), *Psychology Bridging the Tasman: Science, Culture and Practice. Proceedings of the 2006 Joint Conference of the Australian Psychological Society and the New Zealand Psychological Society, September 26-30, 2006* (pp. 415-419). Melbourne, VIC: Australian Psychological Society.

Terry, P. C., & Karageorghis, C. I. (2011). Chariots of fire: The role of music in sport and exercise. In T. Morris & P. C. Terry (Eds.), *Sport and exercise psychology: The cutting edge*. Morgantown, WV: Fitness Information Technology.