Keep on running: Benefits of music for exercise and sport

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Music is frequently used as an accompaniment to exercise and by athletes as part of their preparation for competition. A recent meta-analysis of the extant literature in the exercise and sport domains has identified robust, small-to-moderate benefits of music in the areas of psychological responses, perceived exertion, and physical performance, plus small but significant benefits to physiological functioning. This symposium addresses the scientific basis for music use in exercise and sport, as well as presenting a range of applied examples. A conceptual model will be presented, which identifies the personal and situational variables that influence a range of potential benefits of music. The effects of variables, such as rhythm response, musicality, cultural impact, and associations, are also explained. Paper 1 presents an evaluation of the effects of synchronous music on endurance and feeling states during circuit exercises, which particularly assesses the influence of gender. Paper 2 reports on a study of the influence of familiarity on the arousal and relaxation qualities of music, during imagery use. Paper 3 presents the results of a laboratory investigation of the psychological, physiological and performance benefits of music synchronized to stride rate among elite triathletes. Paper 4 focuses on music applications for athletes, including those that incorporate innovative use of technology. A discussant will provide concluding remarks. There are three learning objectives for this symposium. Following attendance, participants should be able to: 1) explain the scientific underpinnings for music use in exercise and sport; 2) understand the findings of three empirical investigations of music use in exercise and sport; 3) Know the basics of implementing music interventions with exercisers and athletes.

Ergogenic and psychological effects of synchronous music during circuit-type exercise

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Researchers have highlighted the human tendency to synchronize movements with the rhythmical elements of music. Recent findings indicate that when synchronized with movement, music improves performance in a range of aerobic and anaerobic tasks (e.g., treadmill walking, cycle ergometry, bench stepping, 400 m running). Women are exposed to dance and choreographed exercise-to-music classes earlier than men and more frequently; however, gender differences pertaining to the potential benefits of synchronous music have seldom been investigated. The main aim of the present study was to investigate the effects of synchronous music on anaerobic endurance and feeling states during a series of circuit-type exercises. A secondary aim was to explore the possible moderating influence of gender. Participants comprised 13 female and 13 male sport sciences undergraduates. Three synchronous conditions were employed (motivational music, motivationally-neutral [oudeterous] music, and a metronome control). Performance was measured using repetitions to failure and post-task affect was assessed using Hardy and Rejeski's (1989) Feeling Scale. The data were analyzed using mixed-model 3 (Condition) x 2 (Gender) ANOVAs, ANCOVAs, and MANOVA. Results indicated that synchronous music did not elicit significant ergogenic or psychological effects in isolation. Rather, significant ($p < .05$) Condition x Gender interaction effects emerged both for total repetitions and mean affect scores. Both women and men produced fewer repetitions in the oudeterous when compared to the motivational condition. Nonetheless, whereas women performed fewest repetitions under the control condition, men performed comparably in the motivational condition. Women and men showed differential affective responses to synchronous music: men experienced more negative feeling states than women in both music conditions. However, the