

Congruence in music and movement enhances the perception of sports routine quality

ABSTRACT

Most studies of music and sports relate to the ergogenic effect of synchronization between music and movement in repetitive sports activities. As in dance, music is clearly important for sports routines that involve choreography. This study performs an experiment involving a rhythmic gymnastics routine to investigate whether increasing the congruence between music and movement enhances the quality of sports routines from a musical perspective. In preparing the video stimulus, the original music accompaniment was replaced with a new composition to increase the congruence between music and movement using six musical parameters that parallel dance, including tempo, rhythm, phrasing, accent, direction and dynamic. Fifty-two undergraduate music majors participated in the study and evaluated two videos of the same routine, one with the original music and the other with the new music. The participants completed a two-part questionnaire: the first part evaluates the perceived congruence between music and movement in terms of the six parameters, and the second part evaluates the acrobatic qualities. The results show that the intended congruence and the acrobatic qualities were perceived as significantly improved in the routine with the new accompaniment.

Keyword: Perceived congruence; Sports routine; Music and movement; Choreomusicology; Music and sports