

Effects of Music on Arousal, Affect, and Mood Following Moderate-Intensity Cycling

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ABSTRACT

Music has been widely recommended for its ability to produce psychophysiological benefits during exercise. Researchers have identified lyrics as a musical element that may moderate the relationship between music and psychophysiological responses. Previous investigations suggest that listening to music during exercise can enhance performance, optimize arousal, and improve affect. However, few studies to date have examined the influence of motivational lyrics on other affective phenomena during exercise, including mood states. **PURPOSE:** The purpose was to investigate the effects of lyrics in music on affect, arousal, and mood states during moderate-intensity cycling. **METHODS:** Thirty (Mage = 21.0 ± 2.9 years old) college-aged individuals performed three, 8-min acute bouts of moderate-intensity exercise on a cycle ergometer during music with lyrics (ML), music without lyrics (MNL), and no music control (MC) conditions. Primary outcomes were assessed via the Felt Arousal Scale (FAS), Feelings Scale (FS), and the Brunel Mood Scale (BRUMS) before a 6-min warm-up and again following a 2-min cool-down post-exercise. **RESULTS:** A Time main effect for the FAS was superseded by a Condition x Time interaction, $F(2,28) = 3.79, p = .035$, indicating an increase in arousal for the MNL (0.4 ± 0.18) condition compared to the ML (0.1 ± 0.15) and MC (-0.3 ± 0.19) conditions. Similarly, a Time main effect was superseded by a Condition x Time interaction for the FS, $F(2,28) = 4.56, p = .019$, revealing an increase in affect for the MNL (0.93 ± 0.19) condition compared to the ML (0.63 ± 0.22) and MC (0.13 ± 0.29) conditions. A Time main effect was also found for the Tension (-0.73 ± 0.16), Vigor (1.96 ± 0.41), Fatigue (-0.60 ± 0.25), and Confusion (-0.32 ± 0.10) subscales of the BRUMS, indicating general improvements following exercise. However, no Condition x Time interactions were observed for mood outcomes. **CONCLUSION:** Results suggest that music may increase more basic components of affect and arousal more than lyrical music or exercise alone. Regardless of lyrical content, music does not appear to influence more stable affective phenomena (i.e., mood states) beyond exercise. Potential limitations of the current study include song selection methods and the short exercise duration. Future investigations examining the effects of lyrics in music on psychophysiological responses during exercise are warranted.