

Mindful and Distracted Walking Experiences are Similar at Moderately High Intensity

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HOW EXERCISE IS EXPERIENCED MATTERS!

Dual Process Models (Brand & Ekkekakis, 2018):

- Exercise motivation is cognitive *and* affective
- Exercise experience leads to pleasant or unpleasant **affective associations** with exercise
- Strategies to make exercise more pleasant is an important way to maximize motivation

MINDFULNESS

Awareness of the present moment with openness, acceptance, and non-judgement (Bishop et al., 2004; Kabat-Zinn, 2003)

- Fosters intrinsic motivation (IM) via psychological needs (Cox et al., 2020a)
- Similar level of enjoyment and pleasure while being mindful AND while listening to music when walking at low - moderate (38-54% HRR) intensity (Cox et al., 2020b)

WITHIN-SUBJECTS EXPERIMENT

30 women (age 18-43; 53% non-White) who do not meet PA guidelines walked for 20 minutes each session at moderately high intensity (75% HRR); Conditions were counterbalanced

- Baseline session determined incline needed to achieve target intensity
- Podcasts selected from podcast options and listened while walking
 - e.g., Behind the Scenes of Netflix Documentaries
- Participants listened to a guided mindfulness audio while walking
 - "notice each sensation in the body, simply feel it without needing to react"



CONCLUSIONS

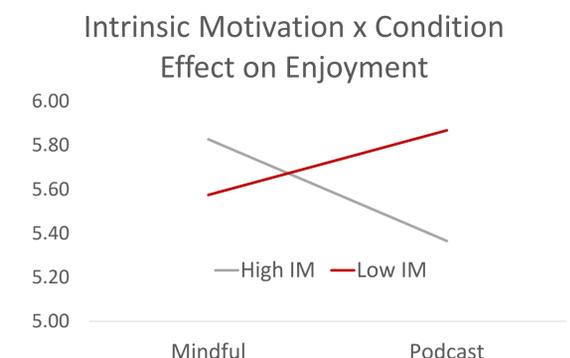
- Manipulation checks support the successful manipulation of mindfulness
- No cognitive or affective outcome differences between mindful and distracted walking
- Mindful walking is similarly enjoyable regardless of intrinsic motivation for exercise level
- Distraction only supports enjoyment for those with low intrinsic motivation for exercise
- Distraction might undermine enjoyment for those with high intrinsic motivation
- Mindful association at a moderately high intensity does not lead to less positive experiences by inactive women compared to dissociation

RESULTS

Mindful walking was experienced similarly to listening to a podcast (felt arousal, core affect, remembered and forecasted affect, enjoyment, RPE, satisfaction, accomplishment)

One covariate effect: intrinsic motivation x condition on enjoyment ($F=7.95, p < .01, \eta_p^2 = .22$)

- Podcast enjoyment was higher for those w/ low IM than high IM
- Distraction was not more enjoyable for those w/ high IM, but enjoyment with mindfulness didn't differ based on IM



RESEARCH QUESTION

How do mindful and distracted exercise experiences compare at a moderately high intensity?

DISSOCIATIVE STRATEGIES

Distraction from uncomfortable sensations makes exercise more pleasant (Jones et al., 2014)

- Music, Podcast



ASSOCIATIVE STRATEGIES

Tuning into the experience and sensations can be just as pleasant as dissociation (Cox et al., 2020b)

- Internal focus
- Mindfulness



Abstract

Ullrich-French, Cox, McMahon, & Thompson (2023)

Comparing walking experiences of inactive women at moderately high intensity while listening to guided mindfulness and listening to a podcast

Dual-mode model states that affective responses during exercise emerge from interoceptive cues, cognitive appraisals, or a combination depending on exercise intensity (Ekkekakis, 2003). Dissociation from the interoceptive cues of exercise has been a primary intervention strategy to support positive affect. Distraction strategies (e.g., music) indeed result in positive exercise experiences across exercise intensity levels (e.g., Hutchinson et al., 2018; Jones et al., 2014). A less explored associative strategy is mindfulness, which is the awareness of, and attention to the present moment with acceptance, openness, and nonreactivity (Bishop et al., 2004). We found that a guided mindful experience during exercise resulted in more internal focus and state mindfulness compared to a dissociated experience using music but did not differ in affect valence (Cox et al., 2020b). A mindful internal focus was similar to listening to music in pleasure experienced. Participants self-selected their pace, which was highly variable and moderate, 50% heart rate reserve (HRR), on average. Whether these results for mindful associative attention hold at higher intensities is not clear. Therefore, the purpose of this study was to compare a guided mindful exercise condition to a podcast (dissociative) exercise condition on core affect, remembered affect, forecasted affect, and feelings of satisfaction and accomplishment at consistent higher exercise intensity levels than Cox et al., 2020b (i.e., 70-80% estimated HRR). Data collection on this within-subjects experimental study is ongoing. Preliminary results ($N = 6$) supports that the experimental manipulation of mindfulness produces higher ($ps < .05$) state mindfulness and internal focus in the mindfulness condition compared to the podcast condition. No other significant differences ($ps > .05$) emerged across the two conditions on any affect or motivational outcomes assessed. Preliminary results support the use of guided mindfulness at higher intensity levels for a non-active sample of women.

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