

Associations between Mindfulness, Temporal Discounting, Locus of Control, and Reward-Based Eating in a Sample of Overweight and Obese Adults

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Abstract : Overeating, and obesity have been associated with addictive behavior, primarily due to behaviors like reward-based eating, the tendency to overeat due to factors such as lack of control, preoccupation over food, and lack of satiation. Temporal discounting (TD), the ability to select future rewards over short term gains, and mindfulness, the process of maintaining present moment awareness, have been suggested to have significant, differential impacts on health-related behaviors. An individual's health locus of control, the degree to which they feel that they have control over their health is also known to have an impact on health outcomes. The goal of this study was to investigate the relationship between health locus of control and reward-based eating, as well as the relation between TD and mindfulness in a sample (N = 126) of overweight or obese participants from larger health-focused study. Through the use of questionnaires (including the Five Facet Mindfulness Questionnaire (FFMQ), Reward-Based Eating Drive (RED), and Multidimensional Health Locus of Control (MHLOC)), anthropometric measurements, and a computerized TD task, a series of regressions tested the association between subscales of these measures. Results revealed differences in how the mindfulness subscales are associated with TD measures. Specifically the 'Observing' (beta = -.203) and 'Describing' (beta = .26) subscales were associated with lower TD rates and a longer subjective devaluation time-frame respectively. In contrast, the 'Acting with Awareness' subscale was associated with a shorter subjective devaluation timeframe (beta = -.23). These findings suggest that the reflective perspective initiated through the observing and describing components of mindfulness may facilitate delay of gratification, whereas the acting with awareness component of mindfulness, which focuses on the present moment, may make delay of gratification more challenging. Results also indicated that a higher degree of reward-based eating was associated with a higher degree of an external health locus of control based on the power of chance (beta = .10). However, an external locus of control based on the power of others had no significant association with reward-based eating. This finding implies that the belief that health is due to chance is associated with greater reward-based eating behavior, suggesting that interventions that focus on locus of control may be helpful. Overall, findings demonstrate that weight loss interventions may benefit from health locus of control and mindfulness exercises, but caution should be taken as the components of mindfulness appear to have different effects on increasing or decreasing delay of gratification.

Keywords : health locus of control, mindfulness, obesity, reward-based eating, temporal discounting

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