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Using ecological momentary assessment to better understand dietary lapse types

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Abstract

Frequency of lapsing from a diet predicts weight loss failure, however previous studies have only utilized one definition of dietary lapse. No study has examined different types of lapse behaviors among individuals with overweight/obesity. The current study uses ecological momentary assessment (EMA) to examine predictors of three lapse types—eating a larger portion than intended, eating an unintended type of food, and eating at an unplanned time—in adults (N = 189; M_{BMI} = 36.93±5.83 kg/m^2; 82.0% female; M_{age} = 51.81 ±9.76 years) enrolled in a 12-month randomized controlled trial of two behavioral weight loss treatments. Participants completed 14 days of EMA at the start of treatment during which they indicated types of lapses that occurred with time and location of the lapse. Participants also responded to questions assessing current physical (e.g., hunger, tiredness), environmental (e.g., presence of "delicious" foods), and affective (e.g., loneliness, sadness) states at each prompt. Weight change was assessed at post-treatment. Separate generalized estimating equations were used to examine whether states prospectively predicted lapse occurrence at the next survey. Results indicated that lapse types differed significantly across time and location. Momentary increases in deprivation, hunger, and boredom increased likelihood of different lapse types. Lastly, we examined the prospective association between lapse type and weight loss. Eating at an unintended time was the only lapse type that predicted worse weight loss outcomes. Results support the theory that distinct lapse types exist, and that lapse types can be predicted by both momentary conditions and individual tendencies toward certain physical and affective states. However, not all lapse types may impact weight outcomes. Future research on behaviors that constitute dietary lapse is warranted and could inform personalized weight loss treatments.

Keywords: dietary lapse; weight loss; ecological momentary assessment; eating behavior