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State and trait influences on attentional bias to food-cues: The role of hunger, expectancy, and self-perceived food addiction

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Abstract

Food-related attentional bias (AB) varies both between individuals (i.e. trait differences) and within individuals (i.e. state differences), as a function of a food's momentary incentive value. People with self-perceived food addiction (SPFA) find food particularly rewarding and may therefore demonstrate increased AB to food-related cues, relative to those who do not perceive themselves as food addicts. However, these trait differences may interact with *state* factors, such as hunger and the perceived availability of food, to differentially affect AB to food-cues. In the current study, female participants (N=120) completed an eye-tracking task to assess AB to chocolate pictures in which the expectancy of receiving chocolate was manipulated on a trial-by-trial basis (0%, 50%, 100%). Participants were randomly allocated such that half completed the task when hungry (hungry condition), and half completed the task following a lunch meal (satiated condition). Participants also indicated the extent to which they perceived themselves to be 'food addicts' (SPFAs: *n*=37; Non-addicts: *n*=53; Undecided: *n*=28). Consistent with previous findings, there was a significant main effect of chocolate expectancy; food-related AB was greater on 100% and 50% trials, compared to 0% trials. However, there was no effect of hunger condition (hungry vs. satiated) on AB. Contrary to our hypotheses, SPFAs did not show increased AB to food-cues, and this was not moderated by hunger condition or the expectancy information. Exploratory analyses revealed that higher desire-to-eat (DtE) chocolate was associated with increased AB to chocolate pictures. These findings partially support contemporary theoretical models of AB by indicating a key role for state factors (reward expectancy, DtE) in determining AB to food-cues, while a trait factor (SPFA) was not a significant determinant of food AB.