

Relationships between chemesthesis and personality factors

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Previously, Rozin and Stevens proposed personality plays a role in determining sensitivity to, liking for, and intake of capsaicin containing foods. As part of a larger ongoing study on the genetics of oral irritants (Project GIANT-CS), we revisited relationships between personality measures and capsaicin burn, spicy food liking, and annualized intake. In our laboratory, participants completed a 63 item survey of foods and beverage liking; it also includes 16 non-food items to encourage participants to rate items in a broader hedonic context. Capsaicin (25uM) was rated on the generalized Labeled Magnitude Scale. Participants later completed personality measures online, including the Sensitivity to Punishment-Sensitivity to Reward Questionnaire (SPSRQ), the Arnett Inventory of Sensation Seeking (AISS), Miller's Private Body Consciousness (PBC), and the novelty seeking subscale of the short Tridimensional Personality Questionnaire (ShortTPQ-NS). When capsaicin burn, spicy food liking and intake were compared to the personality measures, positive and negative correlations were observed. Sensitivity to Punishment (SP) associated with greater burn ($r > 0.1$). Conversely, SP associated with lower liking for spicy foods (r 's > -0.04). High sensation seeking associated with lower burn ($r = -0.1$), and higher spicy food liking, explaining between 6-25% of the variance in liking of spicy foods. Likewise, sensation seeking associated with greater reported intake ($r = 0.39$). When exploring personality and non-food items on the hedonic survey, liking of 'driving fast on a twisty road' associated negatively with punishment sensitivity ($r = -0.3$) and positively with sensation seeking ($r = 0.5$). In contrast to prior reports, liking for roller coasters (Rozin) and PBC (Stevens) were not associated with any of the capsaicin/spicy measures in our sample. Future work will explore mediator and moderator relationships between these variables.

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