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DIZZINESS UPON INITIAL EXPERIMENTATION WITH CIGARETTES: IMPLICATIONS FOR SMOKING PERSISTENCE

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Haberstick and colleagues [1], in a study published elsewhere in this issue, utilized a genetically informative same- and opposite-sex twin and sibling sample involving 2482 subjects in an attempt to tease out environmental and heritable differences in susceptibility for smoking and nicotine dependence. The focus was on subjective responses to initial exposure to tobacco smoke using the Early Smoking Experiences (ESE) questionnaire [2,3], a nine-item self-report instrument that asks participants to rate retrospectively the following responses: global pleasant sensations, global unpleasant sensations, nausea, relaxation, dizziness, buzz/rush, coughing, difficulty inhaling, and heart pounding. Responses were dichotomized as present or absent.

The authors found that pleasant and unpleasant sensations demonstrated high internal reliability. Further, effects rated as pleasant were associated with greater likelihood of regular smoking whereas those rated as unpleasant were associated with inconsistent use of cigarettes or not smoking. The overall findings of this well controlled and carefully executed study support and strengthen prior research on early smoking experiences. Hereditability of positive experiences, negative experiences, and dizziness was 35%, 18%, and 31%, respectively. Multivariate genetic modeling by the authors revealed an underlying factor with 37% hereditability that loaded strongly with reports of dizziness at the first cigarette. The identification of dizziness as a gateway variable that serves as a common pathway to regular cigarette smoking is an important finding as a precursor for further exploration of genetic mechanisms in smoking and more precise delineation of genetic differences between smokers and non-smokers.

In our initial reports on the ESE [2,3], while dizziness differentiated smokers from never-smokers and was seldom reported by people who did not go on to become smokers, the sensation seemed to be affectively neutral. In subsequent studies using more sophisticated analytic techniques, however, dizziness emerged as a latent factor that correlated with both pleasant and unpleasant sensations [4]—a finding replicated in the study by Haberstick and colleagues. The distinction between “pleasant dizziness” and “unpleasant dizziness” [5] and the contribution of affective valence to the continuation of smoking clearly deserves further investigation.

Haberstick and colleagues were able to rule out sex differences in the affective valence of dizziness. A complication not addressed, though, is the possibility that the enjoyment of dizziness may, like novelty-seeking, decline with age–a shortcoming of retrospective assessment that may be relevant. Retrospective reports of dizziness upon initial experimentation have been shown, however, to serve as good predictors of response to the

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administration of nicotine nasal spray [6]. Studies of lifespan variability in the affective valence of dizziness, and the possible effect of other person variables as well, should enhance the utility of this measure.

An additional potential threat to validity in earlier studies—including our own—is the failure to provide participants with a precise definition of the term “dizziness.” Roget's online thesaurus [7] offers a list of synonyms that includes some that few people would find pleasant (e.g., “vertigo”, “wooziness”) but others that many might endorse as positive (e.g., “giddiness”, “lightheadedness”). Future research on dizziness and smoking will be well-served by efforts to refine the item-set to ensure that all participants are “on the same page.”

Overall, Haberstick and colleagues have made a very good start towards the disentangling of key issues. Continued refinement of the variables involved will certainly contribute to a better understanding of the mechanisms underlying the development of regular smoking and nicotine dependence—and possibly of other types of substance use as well [8].

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