

Understanding perceived addiction to and addictiveness of electronic cigarettes among e-cigarette users – a cross-sectional analysis of the International Tobacco Control Smoking and Vaping (ITC 4CV) Europe Surveys

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Abstract

Background and aims: The addictive potential of electronic cigarettes (e-cigarettes) remains to be fully understood. We identified patterns and correlates of perceived addiction to e-cigarettes and perceived addictiveness of e-cigarettes relative to tobacco cigarettes (relative addictiveness) in dual users as well as exclusive e-cigarette users.

Design, setting and participants: Observational study using cross-sectional survey data from England (2016) from the International Tobacco Control Project (ITC) Four Country Smoking and Vaping (4CV) survey. The study comprised 832 current e-cigarette users who had been vaping for at least 4 months.

Measurements: Perceived addiction to e-cigarettes and relative addictiveness of e-cigarettes were examined. Socio-demographic factors were age, gender and education; markers of addiction included urge to vape, time to first vape after waking and nicotine strength used; vaping and smoking characteristics included frequency and duration of e-cigarette use, intention to quit, adjustable power or temperature, enjoyment, satisfaction relative to tobacco cigarettes and tobacco cigarette smoking status.

Findings: A total of 17% of participants reported feeling very addicted to e-cigarettes, while 40% considered e-cigarettes equally/more addictive than tobacco cigarettes. Those who felt very addicted had higher odds of regarding e-cigarettes as more addictive than tobacco cigarettes (odds ratio 3.4, 95% confidence interval 2.3-5.1). All markers of addiction, daily use and enjoyment were associated with higher perceived addiction, whereas time to first vape after waking, daily vaping and perceiving vaping as less satisfying than smoking were associated with relative addictiveness.

Conclusions: Markers of addiction to e-cigarettes appear to correspond with perceived addiction to e-cigarettes, suggesting that self-reported perceived addiction might serve as an indicator of addiction. Prevalence both of markers of addiction and perceived addiction were comparatively low overall, suggesting a limited but relevant addictive potential of e-cigarettes. Additionally, positive and negative reinforcement, reflected here by enjoyment and relative satisfaction, might play a role in e-cigarette addiction.

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