Young adults' health beliefs and safety concerns regarding the use of electronic cigarettes: Evidence from Eastern Europe

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Background and objectives

Despite no conclusive evidence on their safety, electronic cigarettes (e-cigarettes) are being marketed as a safer alternative to regular cigarettes. Recent studies show that awareness and ever trial of e-cigarettes has doubled among adults and young people, from 2008 to 2012. Although current smokers of conventional cigarettes represent the majority of e-cigarette users among young people, studies show that, from 2011 to 2013, the intention to use and experimentation with e-cigarettes has also increased in never smoking youths. The majority of young people who use e-cigarettes report positive health beliefs associated with this behavior. More specifically, studies show that up to 90% of those who use e-cigarettes believe that they can reduce the harms related to conventional smoking. Also, other studies found that current smoker’s use of e-cigarettes is not correlated with their intention to quit, but mostly with their beliefs that e-cigarettes are safer than conventional cigarettes. In this context, it is essential to understand young adults’ health beliefs regarding the use of e-cigarettes. The aim of this study is to assess concerns regarding the use of e-cigarettes in a sample of smoker and non-smoker Romanian and Moldovan young adults.

Methods

Participants and procedure. A cross-sectional, internet-based survey was conducted between January and December 2013 in three medical and non-medical state universities in Romania and Moldova. In total, 720 university students (Romania n=466, Moldova n=254) participated in the study. Two online, secured versions of the study questionnaire were set up, one for each country involved in the study, and their links were disseminated by email to undergraduate, graduate, and post-graduate students, who were invited to fill in the web-based survey via the official electronic mailing system of the universities or via their formal and informal student online groups. Students received three reminders over a period of nine weeks regarding the invitation to participate in the study. Students were required to sign an electronic informed consent.

Measures. The web-based questionnaire was used to assess students’ demographics characteristics (gender, age, university affiliation); self-reported conventional cigarette smoking status (smoker, non-smoker); electronic cigarettes awareness and use, measured using two dichotomous questions: 1) “Have you ever heard about e-cigarettes?” (yes/no) and 2) “Have you ever tried an electronic cigarette, even one puff?” (yes/no); and health-related beliefs regarding the use of e-cigarettes, in terms of their regulation or ban by governmental agencies; the safety of their use, especially the safety of their flavored liquid; their addictive nature; their potential to attract children and adolescents; and the safety of the exposure to the vapor produced during the use of e-cigarettes.

Analysis. We used descriptive statistics to describe the study sample and logistic regression models to assess the differences among smokers and non-smokers regarding safety concerns related to the use of e-cigarettes.

Results

Out of the 720 students who filled out the survey, approximately 75% were females (73.18% in Romania and 77.17% in Moldova) and 49% were attending medical universities (23% in Romania and 100% in Moldova). The mean age of the sample was 21.5 years (SD=2.43). The sample’s smoking behavior and awareness and ever trial of e-cigarette is reported in Fig. 1-3.

A statistically significant relationship has been found between regular cigarette use and experimentation with e-cigarettes (OR=187.667, p<0.001). When compared with regular cigarette users, non-smokers think that e-cigarettes can lead to dependence (p<0.001), are attractive for children (p<0.001), and should be completely banned (p<0.001). The results of the logistic regression show that experimentation with e-cigarettes is more likely among smokers of conventional cigarettes in both countries; however, there are differences in the two countries in smokers and non-smokers’ opinions regarding the regulation of e-cigarettes and their safety. MD students who believe e-cigarettes are as dangerous or less dangerous than conventional cigarettes (as compared to those who believe that e-cigs are much more dangerous as conv. cig.) are less likely to be smokers of conventional cigarettes. In their terms of addiction, when compared with those who believe e-cigs are not addictive, both RO and MD students who consider e-cigs to be less addictive or as addictive as conventional cigarettes are less likely to be smokers of conventional cigarettes.

Conclusions

The results of the study show differences between smokers and non-smokers’ health beliefs regarding the safety of e-cigarettes. More specifically, when compared with conventional cigarette users, non-smokers think that e-cigarettes can lead to dependence (p<0.001), are attractive for children (p<0.001), and should be completely banned (p<0.001). Public health professionals could capitalize on the non-smoker young adults’ safety concerns regarding the use of e-cigarettes, to inform interventions deterring the uptake of these products.

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References


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