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Editorial

Adolescent Susceptibility to Smoking: The Importance of an International Perspective

Veeranki, Mamudu, Anderson, and Zheng [1] used Global Youth Tobacco Survey (GYTS) data from 168 countries to examine the prevalence and correlates of susceptibility to smoking among never-smoking youth ages 13–15 years. A substantial percentage of these youth (12.5% or 1 in 8) were susceptible to smoking, and susceptible youth were more likely to be male, exposed to parent or peer smoking and secondhand smoke, and tobacco industry promotions. Surprisingly, susceptible youth were also more likely to be exposed to antismoking media messages.

Continuing to draw attention to this susceptible group of adolescents internationally is a valuable contribution. As the United States and wealthier developed nations increased their tobacco regulation efforts and public health campaigns, tobacco industry marketing increased in poorer countries, and there is concern about smoking prevalences in low- and middle-income countries [2,3]. Indeed, a recent study [4] found that 68% of 5- and 6-year-olds in Brazil, China, India, Nigeria, Pakistan, and Russia could identify the logo for at least one brand of cigarette. These findings suggest a substantial reach of tobacco marketing to children at quite young ages in low and middle-income countries. Moreover, given that the GYTS is school-based, it is possible that the Veeranki et al. findings represent an underestimate of the extent of susceptibility to smoking among youth worldwide.

From a public health perspective, focusing on vulnerable youth before tobacco use has begun is an important component of tobacco control, given the very high rates of persistence among established smokers, across the globe [5]. However, one important implication of Veeranki et al.'s findings is that adolescent and adult tobacco use risk are linked, because exposure to parent smoking and secondhand smoke were significantly related to youth susceptibility. Thus, tobacco control measures that target both adults and adolescents are needed.

The World Health Organization (WHO) Framework Convention on Tobacco Control [6] identified six tobacco control measures for reducing tobacco use ("MPOWER"), including monitoring tobacco use and tobacco control measures, providing cessation programs, warning people about smoking-related

harms (e.g., through warning labels and media campaigns), banning tobacco advertising and tobacco promotions, and raising taxes on tobacco products. Their 2013 report notes that 2.3 billion people in 92 countries (or one third of the world's population) are covered by at least one of these recommended measures (not including monitoring), a substantial increase from the previous report, 5 years earlier. However, the WHO 2013 report also found that a smaller share of the population was covered by policies to ensure smoke-free environments (16%) or advertising bans (10%), which are elements that should reduce youth susceptibility according to the Veeranki et al. findings.

One limitation that Veeranki et al. acknowledge is the cross-sectional nature of their findings. It is important to map changes over time in youth smoking and smoking susceptibility to changes in tobacco control policies. For example, Huan et al. [7], used GYTS data from Taiwan to track changes in youth smoking before and after the 2009 implementation of a tobacco control law with elements similar to those of MPOWER. Results showed that youth smoking was on an increasing trajectory before the implementation of the law and then declined (although less for youth who lived in cities). Although this study used repeated cross-sections of data, it illustrates the potential value of these tobacco control components for youth smoking. Similarly, in the GYTS data between 1999 and 2008, there were a substantial number of sites that showed an increase in non-cigarette tobacco use, particularly water pipe use [8]. Given changes in the range of available tobacco products and changes in tobacco control measures, a longitudinal perspective is needed to fully understand youth susceptibility and to construct optimal interventions. Tobacco control may require a broader focus on multiple forms of tobacco use rather than a focus only on cigarette smoking.

A longitudinal perspective may also help us to understand the counter-intuitive finding of Veeranki et al. that exposure to antismoking media campaigns was associated with increased susceptibility among never-smoking youth. It is possible that this reflects a true iatrogenic effect. If so, this is of great concern given that the WHO (2013) report found that

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54% of the world's population was covered by an antismoking media campaign, the most common of the six recommended tobacco control measures studied. However, it is also possible that this relation reflects a reverse direction of effect, such that adolescents who are susceptible to smoking also find antismoking media messages more salient, and thus recall and report them more than their peers who are not susceptible. Finally, of course, the relation between antismoking media campaigns and smoking susceptibility could reflect the influence of some common third variable that is associated with both exposure to antismoking media messages and smoking susceptibility.

Finally, the Veeranki et al. findings demonstrate the potential importance of culturally specific factors. For example, the magnitude of gender differences in susceptibility varied considerably across countries. These cross-national variations caution against relying solely on “one size fits all” intervention strategies. Nevertheless, continued monitoring of trends over time in susceptibility and tobacco use in relation to tobacco control interventions worldwide is an important contribution to adolescent health.

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