Editorial

Addressing Adolescent Smoking Cessation through Innovative Approaches: A Call for Action

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Abstract

The issue of adolescent smoking represents a significant challenge to global public health, contributing markedly to the burden of disease and mortality on a global scale. Despite the implementation of numerous strategies to reduce tobacco consumption, the prevalence of smoking among adolescents remains a significant concern, particularly in low- and middle-income countries (LMICs). The use of tobacco during adolescence not only increases the risk of developing chronic diseases such as cardiovascular disease and cancer but also presents challenges to smoking cessation, due to the addictive properties of nicotine and the sociocultural factors influencing youth behaviour. This paper is expected to offer valuable insights into the potential of technology-based solutions to support smoking cessation among adolescents, contributing to broader efforts to reduce tobacco-related morbidity and mortality on a global scale.

Keywords: Adolescents, Smoking Cessation, Tobacco, Intervention, Quit

INTRODUCTION

Smoking among adolescents remains a pressing public health issue with significant long-term consequences (WHO, 2023). According to the World Health Organization (WHO), tobacco use is the leading cause of preventable death worldwide, and it is often initiated during adolescence. Data suggest that the majority of adult smokers began smoking before the age of 18. Globally, 7% of adolescent girls and 12% of adolescent boys report being current smokers (World Health Organization, 2023). Studies indicate that boys generally have higher rates of cigarette smoking than girls, although girls tend to start smoking at an earlier age (Agaku et al., 2024). Several factors contribute to the continued prevalence of adolescent smoking. Peer influence, teacher smoking, family dynamics, and the tobacco industry's targeted marketing strategies all play a significant role in shaping smoking behaviors (Park et al., 2020)(Cheng et al., 2022)(Fithria et al., 2021)(Ilmaskal et al., 2022).

Understanding Adolescent Vulnerability

Adolescence is a crucial developmental period bridging childhood and adulthood, marked by transitions and potential discontinuities that shape future life trajectories, impacting health and well-being. It is a period of exploration and identity formation (Chaku & Davis-Kean, 2024)(World Health Organization, 2024). During this developmental stage, young individuals are particularly vulnerable to social, environmental, and behavioral influences that can lead to the initiation of smoking, including peer pressure, family influences, and the portrayal of smoking in media (Groner & Balk, 2020). The increasing prevalence of smoking among adolescents is particularly concerning due to the profound health risks associated with tobacco use at a young age. Smoking during adolescence can interfere with lung development, increase the risk of addiction, and predispose individuals to chronic diseases such as cardiovascular disease, cancer, and respiratory conditions in adulthood (Horn et al., 2022). Additionally, adolescent smokers are more likely to engage in other risky behaviors, including substance abuse, further exacerbating the health risks they face. Many adolescents begin smoking due to peer pressure, the desire for social acceptance, or curiosity. At this stage, the developing brain is particularly vulnerable to nicotine addiction. The earlier the exposure to nicotine, the more challenging it becomes to quit, making early intervention crucial. Moreover, adolescents often lack awareness of the long-term health risks of smoking. The immediate rewards, such as fitting in with peers, tend to outweigh the distant consequences, like disease development (Lydon et al., 2014)(Park et al., 2020). This underscores the need for interventions that not only educate but resonate with adolescents on a personal level.

The Role of Mobile Health in Smoking Cessation

Health professionals aiming to develop smoking prevention programs should incorporate the adolescent perspective on smoking to enhance the program's effectiveness and relevance for this demographic (Ilmaskal & Daswito, 2023). In recent years, mobile health (mHealth) interventions have emerged as promising tools for promoting smoking cessation among adolescents. mHealth applications provide an accessible, flexible, and cost-effective means of reaching adolescents in their everyday environments. Through personalized messaging, reminders, and interactive tools, these applications can offer consistent support and motivation for smoking cessation efforts (Heffner et al., 2020). Studies have shown that adolescents are highly engaged with mobile technologies, making mHealth an ideal platform for delivering health-related interventions. Tailoring these applications to include gamification, social support networks, and culturally relevant content can enhance their effectiveness (Peiris et al., 2019). However, while mHealth holds potential, its implementation should be carefully designed to avoid stigmatization and ensure sustained engagement.

A Multi-faceted Approach to Intervention

The utilisation of mHealth (mobile health) applications has been demonstrated to be an effective approach in the context of public health interventions (Aromatario et al., 2019), particularly in relation to the targeting of behaviours such as smoking cessation(Rushender et al., 2024). In the case of adolescent smokers, these applications employ a range of strategies that leverage technology with the objective of facilitating a reduction in or cessation of smoking. While mHealth is a key component of modern cessation strategies, it should be part of a broader, multi-faceted approach. Schools, communities, and families must be involved in reinforcing anti-smoking messages. Educational campaigns should be age-appropriate and focus on the immediate benefits of quitting smoking (Park et al., 2020). Additionally, healthcare providers must be trained to identify adolescent smokers and offer counseling that

acknowledges the challenges specific to this age group. This includes addressing mental health issues, such as stress or anxiety, which may contribute to smoking behaviors (Rajani et al., 2023).

The deployment of mobile health (mHealth) applications offers a range of features designed to meet the specific needs of adolescents, including personalised cessation plans, real-time support, gamification, social networking, education, and professional involvement (Zhang et al., 2023). The integration of these tools within mobile technology has been demonstrated to enhance engagement, support, and accessibility with respect to the smoking cessation process for this demographic (Abroms et al., 2012).

Conclusion: A Call for Collaboration

The challenge of adolescent smoking cessation cannot be addressed in isolation. It requires a collaborative effort between public health professionals, educators, families, and technology developers. Policymakers should support research into innovative cessation methods and ensure that adolescents have access to resources that promote a smoke-free lifestyle (Ilmaskal et al., 2022)(Semple et al., 2022). By investing in evidence-based interventions, including mHealth applications, we hope adolescents quit smoking and build healthier futures. The time to act is now.

DECLARATION OF CONFLICTING INTEREST

None

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