

v1: 29 December 2023

Review Article

Pairing Peer Education and Social Media for Adolescent Smokers with Disabilities

Peer-approved: 29 December 2023

© The Author(s) 2023. This is an Open Access article under the CC BY 4.0 license.

Qeios, Vol. 5 (2023)
ISSN: 2632-3834

Melissa Beck Wells¹

1. Department of Educational Studies, Empire State University, Saratoga Springs, New York, United States

Tobacco usage among adolescents with and without disabilities is associated with negative outcomes in health and finance. To combat usage, inclusive peer education combined with social media outreach may benefit efforts to minimize, prevent, and discontinue tobacco use in adolescents with and without disabilities. This article aims to concisely review current literature associated with tobacco usage, associated with the term health outcomes, and social media usage; specifically connecting the relationships with adolescents with and without disabilities.

Correspondence: papers@team.qeios.com — Qeios will forward to the authors

Pairing Peer Education and Social Media for Adolescent Smokers with Disabilities

Smoking has been linked to several negative outcomes (U.S. Department of Health and Human Services, 2012). Nicotine, found in tobacco, has powerful and lasting effects on the developing brain, and adolescent exposure is associated with impaired cognition, attention, memory, and mood (U.S. Department of Health and Human Services). Particularly for individuals with disabilities, tobacco use may exacerbate impeding behaviors and characteristics (Beck Wells, 2023). The intricate relationship between social, economic, and health factors associated with disability poses risks for substance use, unhealthy habits, and addiction (Reif et al., 2023). In addressing the negative impact of smoking on adolescents, researchers have explored intervention strategies. A systematic review by Dodd et al. (2022) suggests that peer-education interventions show evidence of effectiveness. Additionally, Lazard (2021) found promise in social media campaigns educating about the harms of e-cigarette usage.

Peer Education for Tobacco Use

Peer mentors, individuals of the same age, can provide support towards a common goal. In Turkey, Bilgiç and Günay (2014) discuss the potential positive impact of systematically planned peer education in changing the smoking behaviors of adolescents. Khambayat et al. (2023) emphasize the effectiveness of peer-led programs in India, including peer-to-peer education and support, in preventing e-cigarette use. Peer educators, trained to understand and communicate the dangers of e-cigarettes, offer non-judgmental support to their peers. In Finland, Kiuru et al. (2010) suggest that addressing smoking trends in adolescents involves not only promoting resistance to peer pressure but also focusing on peer selection and challenging the perception that smoking is favorable.

In the United States, Glover-Kudon et al. (2019) found that raising the minimum legal age for tobacco sales to twenty-one, based on peer, family, or cultural groups, may accelerate a decline in tobacco prevalence. Lakon et al. (2015) and Mamudu et al. (2022) reported similar findings on the influence of peers on smoking behavior, indicating the potential impact on electronic nicotine delivery systems use.

Adolescents with Disabilities and Tobacco Use

Among adolescents with disabilities, Senders and Horner-Johnson found higher rates of cigarette use, e-cigarette use, and dual use. Krahn et al. (2015) reported differences in health outcomes for individuals with disabilities, highlighting higher rates of unmet healthcare needs, unhealthy lifestyle behaviors, mental health and chronic diseases, and social determinants of poor health. Chen et al. (2022) emphasized the importance of peer engagement, noting its influence on social outcomes for autistic adolescents.

Beck Wells (2023) suggests that evidence-based peer education programs may benefit adolescents with disabilities by reducing tobacco use and promoting positive decision-making, self-determination, and independent living skills. Wagemaker et al. (2022) highlight the potential for peers to promote prosocial behavior in inclusive settings.

Social Media and Peer Education

Combining peer education with social media may be a beneficial pathway to support smoking cessation and avoidance in adolescents, including those with disabilities. Elmore et al. (2017) found that media-related cognitions significantly influenced adolescents' perceptions of social approval for alcohol and tobacco use.

In the context of social media, Argen et al. (2023) reported a preference for peer support among young people with learning disabilities. Lazard (2021) suggested that social media campaigns can effectively reach youth, potentially through peer-to-peer sharing. Lyu et al. (2022) recommended a combined approach, involving social media-based peer mentoring interventions for e-cigarette cessation.

However, there are challenges that may impede the applicability and practicality of pairing peer education and social media. Moorhead et al. (2013), in their systematic review, stated that while there are many benefits to the use of social media for health communication, the information exchanged needs to be monitored for quality and reliability, and the users' confidentiality and privacy need to be maintained. In a more recent systematic review, Chen and Wang (2021) concluded that although several new usages have emerged since Moorhead et al.'s review, such as advancing health research and practice, social mobilization, and facilitating offline health-related services and events, research gaps continue to exist

concerning advancing the strategic usage of social media based on audience, assessing the impact of social media in health interventions, appreciating the impact of health identity development, and resolving privacy concerns. These health implications and social media findings can be applied to the health associations of tobacco usage in adolescents and the usage of social media. Next steps include further investigation and the creation of peer-mentoring social media programs that incorporate feasibility, acceptability, and efficacy for adolescents, which may be beneficial to support positive health outcomes.

Conclusion

Tobacco usage in adolescents, with and without disabilities, is associated with negative outcomes. Inclusive peer education combined with social media outreach may be effective in minimizing, preventing, and discontinuing tobacco use in adolescents with disabilities. The creation of such a program should be considered, with further investigation into the usefulness of peer education and social media programs, building on the insights from previous research.

Acknowledgements

I would like to thank Andrew, Beckett, Everly, Emelia, and Eliza for their time management and support.

Statements and Declarations

Data Availability and Sharing Statement

I did not analyze or generate any datasets because this work proceeds within a theoretical and mathematical approach.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors. This research was not supported by grants.

Conflict of Interest Statement/Competing Interests

The author has no conflicts of interest to declare.

Informed Consent

No direct participants were utilized in this study, so no informed consent was collected.

Correspondence

Correspondence concerning this article should be addressed to Melissa Beck Wells, Interim Director of Teaching, Learning and Faculty Development, 1200 South Avenue, Staten Island, NY 10304.

References

- Ågren, K. A., Hemmingsson, H., & Kjellberg, A. (2023). Internet activities and social and community participation among young people with learning disabilities. *British Journal of Learning Disabilities*, 51, 125–134. <https://doi.org/10.1111/bld.12519>
- Bilgiç, N., & Günay, T. (2014). A Method for Supporting Smoking Cessation in Adolescents: Peer Education: Turkish Thoracic Journal. *Türk Toraks Dergisi*, 15(3), 102–105. <https://www.proquest.com/scholarly-journals/method-supporting-smoking-cessation-adolescents/docview/1648068969/se-2>
- Chen, J., & Wang, Y. (2021). Social media use for health purposes: systematic review. *J Med Internet Res* 2021;23(5):e17917. doi:10.2196/17917
- Chen, Y.-L., Schneider, M., & Patten, K. (2022). Exploring interpersonal and environmental factors of autistic adolescents' peer engagement in integrated education. *Autism*, 26(5), 1255–1266. <https://doi-org.sunyempire.idm.oclc.org/10.1177/13623613211046158>
- Dodd, S., Widnall, E., Russell, A.E. et al. School-based peer education interventions to improve health: a global systematic review of effectiveness. *BMC Public Health* 22, 2247 (2022). <https://doi.org/10.1186/s12889-022-14688-3>
- Elmore, K. C., Scull, T. M., & Kupersmidt, J. B. (2017). Media as a "Super Peer": How Adolescents Interpret Media Messages Predicts Their Perception of Alcohol and Tobacco Use Norms. *Journal of Youth and Adolescence*, 46(2), 376–387. <https://doi.org/10.1007/s10964-016-0609-9>
- Glover-Kudon, R., Plunkett, E., Lavinghouze, R., Trivers, K. F., Wang, X., Hu, S., & Homa, D. M. (2019). Association of Peer Influence and Access to Tobacco Products With U.S. Youths' Support of Tobacco 21 Laws, 2015. *Journal of Adolescent Health*, 65(2), 202–209. <https://doi.org/10.1016/j.jadohealth.2018.11.020>
- Khambayat, S., Jaiswal, A., Prasad, R., Wanjari, M. B., Sharma, R., & Yelne, S. (2023). Vaping Among Adolescents: An Overview of E-Cigarette Use in Middle and High School Students in India. *Cureus*, 15(5).
- Krahn, G. L., Walker, D. K., & Correa-De-Araujo, R. (2015). Persons with disabilities as an unrecognized health disparity population. *American journal of public health*, 105(S2), S198–S206.
- Kiuru, N., Burk, W. J., Laursen, B., Salmela-Aro, K., & Nurmi, J.-E. (2010). Pressure to drink but not to smoke: Disentangling selection and socialization in adolescent peer networks and peer groups. *Journal of Adolescence (London, England.)*, 33(6), 801–812. <https://doi.org/10.1016/j.adolescence.2010.07.006>
- Lakon, C. M., Hipp, J. R., Wang, C., Butts, C. T., & Jose, R. (2015). Simulating Dynamic Network Models and Adolescent Smoking: The Impact of Varying Peer Influence and Peer Selection. *American Journal of Public Health*, 105(12), 2438–2448. <https://sunyempire.idm.oclc.org/login?url=https://www.proquest.com/scholarly-journals/simulating-dynamic-network-models-adolescent/docview/1733898114/se-2>
- Lyu, J. C., Afolabi, A., White, J. S., & Ling, P. M. (2022). Perceptions and Aspirations Toward Peer Mentoring in Social Media-Based Electronic Cigarette Cessation Interventions for Adolescents and Young Adults: Focus Group Study. *JMIR formative research*, 6(12), e42538. <https://doi.org/10.2196/42538>
- Mamudu, H. M., Shahani, D., Jones, A., Ahuja, M., Adeniran, E., Weierbach, F., Swindle, J., Liu, Y., Keener, J., Blair, C. J., McNabb, M., Asare, M., Wood, D. L., & Ferketich, A. (2022). Exploring Patterns of the Use of Electronic Nicotine Delivery Systems among Adolescents in High-Risk Appalachian (U.S.A) Communities. *Substance Use & Misuse*, 57(2), 167–174. <https://doi.org/10.1080/10826084.2021.1990333>
- Moorhead, S. A., Hazlett, D. E., Harrison, L., Carroll, J. K., Irwin, A., & Hoving, C. (2013). A new dimension of health care: systematic review of the uses, benefits, and limitations of social media for health communication. *Journal of Medical Internet Research*, 15(4), e85–e85. <https://doi.org/10.2196/jmir.1933>
- Reif, S., Lee, M. T., & Ledingham, E. (2023). The intersection of disability with substance use and addiction. In *Oxford Research Encyclopedia of Global Public Health*.
- U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General. *Preventing tobacco use among youth and young adults: a report of the Surgeon*. 2012. Accessed April 1, 2023. <https://www.cdc.gov/tobacco/sgr/2012/index.htm>
- Wagemaker, E., van Hoorn, J., & Bexkens, A. (2022). Susceptibility to peer influence on prosocial behavior in adolescents with Mild Intellectual

Disability or Borderline Intellectual Functioning.
Research in Developmental Disabilities, 120, 104143.

Declarations

Funding: No specific funding was received for this work.

Potential competing interests: No potential competing interests to declare.