DO ADOLESCENTS EXERT AS MUCH SOCIAL INFLUENCE ON THEIR FRIENDS TO QUIT SMOKING AS THEY DO TO START?

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Researchers investigated the impact of social influence on smoking among adolescents. They found that both smoking and quitting are influenced by one’s peers. Adolescents exert social influence on their peers both to begin smoking and to quit. Clustering of smoking behavior in adolescent social networks results from both the tendency for adolescents to follow their friends’ smoking behavior and the effect of social influence that nonsmokers exert on their peers to quit smoking. Our approach allows us to isolate the true impact of social influence from the confounding effect that smoking’s acting as a characteristic that influences with whom adolescents form friendships.

Despite recent declines, smoking remains the single largest source of premature and preventable morbidity and mortality. With 80 percent of smokers having their first cigarette by age 18, adolescence continues to be the key point of smoking initiation. Decades of social science research suggests that the influence of one’s peers plays an important role in the initiation of smoking among adolescents. However, little research has examined how adolescents’ attempts to quit smoking are influenced by their social networks and whether the social influence that peers exert differs for smoking initiation and cessation.

We analyzed the social networks from two American high schools as part of the National Longitudinal Study of Adolescent Health. We used a dynamic actor-based social network model to study the co-evolution of smoking and adolescent social networks over time. We examined the extent to which adolescents exert social influence on their peers to quit smoking and how such influence differs from that on smoking initiation. Our approach allows us to isolate the true impact of social influence from the confounding effect that results from smoking’s acting as a characteristic that influences with whom adolescents form and maintain friendships.

KEY FINDINGS

- Clustering of smoking behavior in adolescent social networks results from both the tendency for smoking to influence the choice of one’s friends and the effect of social influence that brings adolescents’ smoking behavior closer to that of their friends.
- Adolescents exert social influence on their peers both to begin smoking and to quit.
- The impact of social influence on smoking is asymmetrical in that the tendency for adolescents to follow their friends into smoking is stronger than the tendency to follow friends out of smoking (Figure 1).

Figure 1. Predicted Likelihood of Adopting Each Level of Smoking Based on One’s Current Smoking Level and That of One’s Friends (Jefferson and Sunshine High Schools).

Notes: Each panel (A–I) presents the predicted likelihood of an adolescent’s adopting each level of smoking in the future based on the combination of both his or her initial level of smoking and that of his or her friends. For example, panel A represents the scenario wherein both the focal adolescent and his or her friends remain a nonsmoker (level 0). This individual is most likely to remain a nonsmoker (level 0) and least likely to become a heavy smoker (level 2). White circles (S) represent Sunshine; black circles (J) represent Jefferson. Ego refers to the focal adolescent. Smoking levels in the past 12 months include the following: 0 = none/never, 1 = once a week or less, and 2 = 3–5 days a week or more.

POLICY IMPLICATIONS

Greater understanding of social influence processes has led to the development of successful antismoking interventions grounded in exploiting social network mechanisms. Our results suggest that the effects of social influence on health behaviors such as smoking are more complex and multifaceted than previously acknowledged. That social influence is stronger for smoking initiation than cessation is consistent with the policy prescription to focus adolescent intervention efforts on preventing the onset of smoking rather than encouraging smoking cessation. However, our findings also suggest new leverage points for antismoking interventions that target existing adolescent smokers, particularly if those interventions can be designed so as to effectively boost the influence that nonsmoking adolescents have on their smoking network peers.