

Extent of peer social networks influences onset of adolescent alcohol consumption

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Most parents recognize that the influence of peers on their children's behavior is an undeniable fact. But, just how far do these influences reach? A study published in the September/October issue of *Academic Pediatrics* reports that adolescents are more likely to start drinking alcoholic beverages when they have large social networks of friends.

The findings suggest that, in addition to well-established demographic [risk factors](#) like age, race, and team sports, adolescents are at heightened risk of alcohol use onset because of their position in the social network in relationship to their friends and the friends of their friends, regardless of the drinking status of individuals within those networks. The study also found that closer proximity to more popular individuals was a factor in drinking initiation.

"In this study, adolescents in higher density school networks were more likely to initiate alcohol use," according to Marlon P. Mundt, PhD, Department of [Family Medicine](#), School of Medicine and Public Health, University of Wisconsin, Madison. "More dense networks exhibit more interconnected clusters that magnify the spread of influence. Notably, the results come to light in view of [computer simulations](#) showing that more dense networks amplify the dynamics of influence cascades."

Using data from the National Longitudinal Study of Adolescent Health (Add Health), a nationally representative survey of 7th- through 11th-grade students enrolled between 1995 and 1996, the author analyzed the social linkages of 2610 students. Students were surveyed in school and in-

home interviews of students and parents were conducted between April-December 1995 (wave 1) and again in April-August 1996 (wave 2). If students had not consumed alcohol outside their family group at wave 1 but had at wave 2, they were classified as an Alcohol Use Initiator.

To gauge the extent of social networks, students were asked to name up to 5 male and 5 female friends from their school roster. Social network analysis methodology was used to calculate 4 characteristics; (1) Indegree is the number of friendship nominations received by the respondent from the other study participants. (2) Centrality is the relative number of connections that an individual's friends have within the adolescent social network. (3) 3-Step Reach is the degree to which a member of the peer social network can make contact with other members of the network through 3 steps of friendship connections. (4) Density, a school-level measure, is the number of ties in the total school peer social network divided by the number of possible network ties.

Two of the 3 friend social network characteristics (indegree, 3-step reach) increased the risk for the student to initiate alcohol use. For every additional friend with high indegree, the likelihood that an adolescent initiated alcohol use increased by 13%. For every additional 10 friends within 3-step reach of a nominated friend, risk of alcohol initiation by a nondrinker increased by 3%. Risk of alcohol use onset increased 34% for each additional friend who drank alcohol.

The findings suggest that potentially limiting the size of adolescent groupings may have a positive effect on delaying alcohol initiation. In this case, the study results argue for smaller schools, as they provide a smaller number of peers an adolescent can reach on their own or through their friends. Interestingly, a new generation of online social networks (Path, GroupMe, Rally Up, Shizzlr) focuses on limiting the size of the friendship group.

The study points to the important role that parents can play. Dr. Mundt observes that "parental modeling of responsible alcohol use and having fun together as a family offer protective benefit against adolescent alcohol initiation. The results are similar to previous research showing that low family bonding and parental drinking are linked to the onset of alcohol consumption."

Finally the author proposes future research to explore how the density of virtual social communities (eg, Facebook), which connect a great number of adolescents online, can influence alcohol drinking among adolescents.

More information: The article is "The Impact of Peer Social Networks on Adolescent Alcohol Use Initiation" by Marlon P. Mundt, PhD. It appears in Academic Pediatrics, Volume 11, Number 5 (September/October 2011)

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