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► **[Social network effects in alcohol consumption among adolescents.](#)**

**Ali M.M., Dwyer D.S.**

**Addictive Behaviors: 2010, 35, p. 337–342.**

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*Is the peer influence on which many substance use prevention programmes are based an illusion due to other factors like pupils sharing similar environments or choosing like-minded friends? Not entirely, finds this unusually rigorous US analysis; the chances of a given child drinking rise by 4% for every 10% more of their school year-mates who drink.*

**Summary** Presumptions about the influence of friends and peers on the substance use of young people lie at the heart of important approaches to preventing substance use. However, estimating the strength of this influence is complicated by the tendency for youngsters to choose like-minded friends, meaning that the causal relation is reversed – young drinkers choosing for example to befriend other young drinkers rather than being influenced to take up drinking by their friends. Another type of complicating factor are shared influences which might affect both the focal child's drinking and that of their friends, creating the illusion that one is causally related to the other. An example might be the areas they live in and the schools they attend. Unless these confounding factors are controlled for, we risk basing prevention programmes on mistaken estimates about the influence of peers. The featured analysis sought to refine these estimates by as far as possible eliminating other influences.

Data for the analysis came from the 1994 wave of a national US study of adolescent health conducted in 132 schools between grades 7 and 12. The children were asked how often they had drunk in the past year, enabling the study to assess what proportion were drinkers and how [frequently](#) on average they drank. Just over 20,000 of the pupils (they averaged 15 years of age) were not just surveyed in schools but also interviewed in their homes where their parents too were interviewed, yielding [information](#) which could help

eliminate influences which might bias the estimate of the influence of peers.

Another major advantage of the survey was that it gathered information about two differently constructed sources of peer influence. The first came from asking the young people to name their five closest male and five closest female friends. Since these friends were usually also surveyed, it was possible to assess the extent of their drinking and in turn assess how this might have influenced the focal child. However, these estimates were vulnerable to reverse causality – similar peers gravitating towards each other. This was not the case for the second source of peer influence assessed by the analysis – the drinking of the other children in the same grade of the child's school, an influence particularly relevant to school-based prevention programmes which operate on whole classes and grades in a school. For both sources of influence the analysis assessed the possible impact on the focal child of the proportion of their peers who drank at all and of the average intensity of their drinking.

## Main findings

Results not fully adjusted for confounding influences indicated that a 10% increase in the proportion of close friends who drink is associated with a just over 2% increase in the chance that the focal child too would drink. For grade-level peers the corresponding proportion was 4%. In both cases there were also strong and statistically significant relationships between how often peers drank and how often the focal child drank, and again this relationship was stronger for grade-level peers.

Once other influences had been accounted for, the results for grade-level peers remained roughly the same; a 4% increase in the chances that the child will drink for every 10% increase in the proportion of their peers who drink, and also a 4% increase in the frequency of their drinking for every 10% increase in the average frequency of drinking among other children in the same grade of the same school.

However, the results for friends did change, an expected consequence of taking in to account the formation of friendships between boys and girls from similar environments and of similar backgrounds and preferences. No longer was there a statistically significant relation between friends' drinking and the chances that the child would drink, and the relation between the frequency of the child's and their friends' drinking was diminished though still statistically significant.

Among the other possible influences, easy access to alcohol at home had strongest relationship with the child's drinking, one almost as great as peer effects.

## The authors' conclusions

The findings indicate that peer effects are important determinants of drinking and could be used as a policy tool to reduce drinking among adolescents. Specifically, a 10% increase in the proportion of classmates who drink will increase the likelihood of drinking by about 4%. These findings suggest that public health interventions at the school level might be more cost-effective than previously estimated, since health-promoting behaviour in one pupil may spread to others. We also found evidence that the apparent influence of close friends is partly due to the clustering of similar youngsters together in friendship networks rather than an influence of network drinking on its members. Another significant finding was the importance of controlling for unobserved

environmental confounders, confirming a correlation between those factors and the peer measures. Not controlling for such environmental factors resulted in larger estimated effects of peer influence even after the two-way nature of peer effects had been accounted for.

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