Violence spreads like a disease among adolescents, study finds

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A new study of U.S. adolescents provides some of the best evidence to

date of how violence spreads like a contagious disease.

Researchers found that adolescents were up to 183 percent more likely to carry out some acts of violence if one of their friends had also committed the same act.

But the spread of violence doesn't just stop at friends - results suggest the contagion extends by up to four degrees of separation - from one person to a friend, to the friend's friend and two more friends beyond.

"This study shows just how contagious violence can be," said Robert Bond, lead author of the study and assistant professor of communication at The Ohio State University.

"Acts of violence can ricochet through a community, traveling through networks of friends."

Results showed that participants in the study were 48 percent more likely to have been in a serious fight, 183 percent more likely to have hurt someone badly, and 140 percent more likely to have pulled a weapon on someone if a friend had engaged in the same behavior.

Bond conducted the study with Brad Bushman, professor of communication and psychology at Ohio State. Their results appear online in the *American Journal of Public Health*.

These results fit in with other studies that have shown that characteristics and behaviors from happiness to obesity to smoking spread within social networks, at about the same rates found in this research.

"We now have evidence that shows how important social relationships are to spreading violent behavior, just like they are for spreading many other kinds of attitudes and behaviors," Bushman said.

Data from the study came from 5,913 young people who participated in the National Longitudinal Study of Adolescent Health (ADD Health) and who were interviewed in-depth in 1994-95 and again in 1996. The ADD Health researchers interviewed as many students (grades 7 to 12) as they could from 142 schools across the country so they could have information on social networks within each school.

Participants were asked to name up to five male and five female friends from their school at both of the two interviews. They were asked how often in the past 12 months they had been in a serious physical fight, how often they hurt someone badly enough to need bandages or care from a doctor or nurse, and how often they had pulled a knife or gun on someone.

The researchers then analyzed whether each student's friends (and friends of friends, and so on) had said they committed the same acts of violence.

The finding that adolescents were more likely to commit acts of violence if their friends had done so is not surprising, Bond said. Much of that association is related to what scientists call a "clustering effect" - people with similar interests, including the use of violence, tend to cluster together as friends.

But the researchers also tested whether friends could influence each other to commit more acts of violence than they might normally commit given their friendship.

They could estimate this influence effect because they had data from two different points in time, a year apart. They calculated the effect by determining whether friends had committed more violent acts at the time of the second interview than could be explained by what their shared history at the time of the first interview would suggest.

Results showed that each additional friend who had seriously hurt someone increased the likelihood that a participant had hurt someone badly by 55 percent, even after taking into account the clustering effects and other factors. If you include only male participants (who were more likely than females to seriously hurt others), then the likelihood increased to 82 percent.

After taking the controls into account, the researchers didn't find influence effects for being in a serious fight or pulling a weapon on someone. But that doesn't necessarily mean the influence of friends doesn't play a role in these violent acts, Bond said.

One explanation may be that fights are common enough among these adolescents that it is difficult to find the role of influence. On the other hand, pulling a weapon was rare enough that they may not have had a large enough sample size to determine influence.

This study is the first to show how far violent behavior may spread within a social network, Bond said. The findings showed that the influence of one person's violent act can spread up to two degrees of separation (friend of a friend) for hurting someone badly, three degrees (friend of a friend's friend) for pulling a weapon on someone, and four degrees for serious fights.

The influence declines with each degree of separation, but is still noticeable.

For example, a student in the study was about 48 percent more likely to have participated in a serious fight if a friend had been involved in one. But they were still 18 percent more likely to have participated in a fight if a friend of a friend had.

This result is particularly important because it shows the value of anti-

violence programs.

"If we can stop violence in one person, that spreads to their social network. We're actually preventing violence not only in that person, but potentially for all the people they come in contact with," Bond said.

Provided by The Ohio State University