Correlation does not imply causation proved by by amanda macmillan

Science, Statistics

In a study reported by CNN, several researchers undertook a study on the social networks of teenagers. The study found that dating teenagers is likely to be exposed to mixed-gender peer groups. Borrowing from this study, the article by MacMillan then claims that the drinking patterns of the 2nd-degree friends were the strongest influence on drinking behaviour. According to the article, these 2nd-degree friends came along with the peer group. It is through these assumptions that the article asserts that: Dating spreads drinking in teens!

The assumption made by this article is a clear representation of a misguided assumption of causality. Instead of concluding that dating spread drinking in teens, the writer of the article should have argued that the strongest association of teenager drinking behaviour occurred with that of the 2nd-degree friends. This is because the measurements of the variables were taken based on friend and self-reports. It is therefore scientifically inappropriate to conclude that the 2nd-degree friends increased the drinking habits in teens. Some other factors can also play roles in increasing drinking habits. To test a possible causality between drinking habits in teens and 2nd-degree friends; Convergent cross mapping as a statistical tool should be used.