There is strong academic and anecdotal evidence associating heavy drinking with violence, but no clear agreement on the connections between these two behaviours. Violent conduct can also be associated with other factors, such as being male, young, living in a deprived area, and being unemployed. Even the weather could be an aggravating factor – a ‘heat hypothesis’ that attributes violence to unusually high temperatures.

The link between alcohol and violence is also not straightforward. Alcohol could cause violent behaviour, an aggressive mood could encourage heavy drinking, or some people could be prone to both violence and alcohol abuse for other reasons. But there is a potential influence that is straightforward to consider: the price of alcoholic drinks. The basic assumption is that higher prices discourage consumption, reducing violence. Violent behaviour obviously does not affect the price of alcohol, so there can only either be this clear connection or no connection.

An economist’s eye
Professor Kent Matthews from Cardiff University Business School has cast an economist’s eye over many possible factors that explain violent injury, particularly the influence of alcohol pricing. To test the idea of a price effect, he used a technique called ‘dynamic econometric modelling’. This can identify cause-and-effect relationships between various factors over time. In this case, Matthews and others from the Violence Research Group at Cardiff University designed a model to discover the effect of changes in the price of alcoholic drinks on the number of violent injuries over ten years across England and Wales.

Combining regional price differences across time with regional incidents of violent injury revealed a clear relationship.

There is a vast literature associating alcohol consumption with violence, but no clear causal link has been identified.

Dr Kent Matthews, with other members of the research team from the Violence Research Group, Cardiff University, Wales, uses econometric modelling to examine the effect of various factors, especially drink prices, on alcohol-related violence conduct.

The research reveals that higher alcohol prices are widely associated with reduced incidents of violence, suggesting a simple way to tackle the problem via alcohol duties.

Casualties of violence
The research used emergency department attendances across England and Wales from 2005 to 2014 for violence-related injury as the indicator of an act of violence. Information from emergency departments provides clear daily evidence of the number of relatively serious incidents across regions, ages, and genders at the hospital level. This captures a far broader and deeper picture than official crime statistics, which are only produced periodically and identify only reported cases. Analysis of this data revealed clear regional differences. Violent injuries are far more common across the north of England and Wales. To provide further insight, the team then introduced other factors into the equation, with the key variable being alcohol price.

There is a vast literature associating alcohol consumption with violence, but no clear causal link has been identified.
Their model aimed to uncover the effect of changes in the price of alcoholic drinks on the number of violent injuries. The core focus of the Violence Research Group’s research – whether alcohol prices affect levels of alcohol-related violence – has clearly revealed that they do. This shows that raising the price of alcoholic drinks is an effective policy tool to reduce serious violence.

The April effect
Each year, in April, the UK government produces a budget that alters the duty on alcoholic drinks, changing prices across the board in a single sweep. Alcohol duty rates tend to move in line with background inflation, which creates no obvious impact. But in 2008, the Chancellor risked the ire of drinking voters by hiking duty levels to 6%, well above inflation.

The April effect

Raising the price of alcoholic drinks is an effective policy tool to reduce serious violence.

The real price of alcohol
Alcoholic drink prices across regions of England and Wales are collated by the Office of National Statistics (ONS). To identify the impact of actual alcohol prices on violent injury, the researchers constructed a combined price for the individual prices and then removed background inflation from price changes to discover variations in the real price of alcoholic drinks as felt by consumers.

The April effect

A taxing solution
The core focus of the Violence Research Group’s research – whether alcohol prices affect levels of alcohol-related violence – has clearly revealed that they do. This shows that raising the price of alcoholic drinks is an effective policy tool to reduce serious violence.

Kent acknowledges that ideally, the price of violence itself should be increased to reduce its occurrence. This involves numerous high-cost policy initiatives, such as increasing policing and court resources. Taxation, on the other hand, is a quick and simple instrument.

Estimates from the research suggest that a 1% increase in the real price of alcohol could reduce violent injury cases by approximately 7,000 a year. That’s 7,000 people and their families and friends saved from direct harm and the stress and trauma of these serious incidents. It could also directly reduce hospital emergency treatment costs by almost £100 million per year. This is without factoring in the wider benefits to public health of reduced alcohol abuse. The drivers of alcohol-related violence are multi-faceted, but the VRG’s research clearly shows that alcohol duty is an effective tool.

Further reading
Matthews, K. et al, (2023) Alcoholic prices, the April effect and the environment in violence-related injury in England and Wales, Eur J Health Econ.

Details

Bio
Kent Matthews is professor of banking. Saed Heravi and Peter Morgan are professors of quantitative methods. Nicholas Page is a research associate in the School of Social Science, Jonathan Shepherd is professor emeritus oral and maxillofacial surgery at Cardiff University, and Vaseekaran Sivarajasingam is professor and Clinical Director at the University Dental Hospital.

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• Professor Peter Morgan (Cardiff Business School)
• Professor Saed Heravi (Cardiff Business School)
• Dr Nicholas Page (Cardiff University School of Social Science)
• Professor Jonathan Shepherd (Cardiff University School of Dentistry)
• Professor Vaseekaran Sivarajasingam (Cardiff University School of Dentistry)

Further reading
Matthews, K. et al, (2023) Alcoholic prices, the April effect and the environment in violence-related injury in England and Wales, Eur J Health Econ.