

Prevention of alcohol-related assault and injury

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There is a causal link between alcohol intoxication and injury in assault, mediated by individual, contextual and cultural factors. Harm reduction can be achieved through practical measures like plastic glasses and bottles in licensed premises, controlling drinks prices and targeted policing organized on the basis of police and accident and emergency data.

There is now strong evidence from self-report and case-control alcohol investigations that binge drinking and being injured in violence are causally related (Shepherd, 1998). Specifically, consumption of above eight units in a 6-hour period, or a blood alcohol level above 160 mg per 100 ml can significantly raise the risk of being injured in alcohol-related violence (Shepherd, et al, 1990, Shepherd and Brickley, 1996).

The fact that the offender and victim of any incident of violence have often both consumed alcohol is not surprising given that around 30% of all violent incidents occur in or around licensed premises (Maguire and Nettleton, 2003). In all Western countries, the incidence of alcohol-related assault injury is underestimated because many violent offences, even many serious assaults are not reported to the police (Shepherd, 2001).

ALCOHOL INTOXICATION

Alcohol impairs motor control and sensory perception leading to behavioural consequences such as clumsiness and slowed reaction times. It interferes with cognition and affective processes, resulting in problems such as incomplete encoding of perceptual information, impaired problem solving and reduced anxiety about antisocial behaviour. These changes increase the likelihood of aggression in response to aversive stimuli (Giancola et al, 2003).

The consequences of alcohol intoxication also increase the probability of victimization (Shepherd, 1998). Assaultants perceive intoxicated individuals as unable to defend themselves and unable to identify them – an essential prerequisite to prosecution. In addition, intoxicated individuals are more likely to become isolated late at night in risky urban settings (Shepherd, 1998).

INDIVIDUAL FACTORS

In the UK, those most at risk of alcohol-related assault, and those most likely to assault others are single males between the ages of 16 and 29 years. Individual risk factors that have been linked with alcohol-related aggression include poor child management (e.g. harsh discipline), stable personality traits (e.g. impulsiveness and aggressive disposition), and transient mood states (e.g. stress).

Beliefs such as hostile bias and alcohol-aggression outcome expectancies (i.e. 'if I drink I will become aggressive') also interact with alcohol to increase aggression. Recent research suggests that drinking habits modulate the acute effects of alcohol, with inexperienced and infrequent binge drinkers most at risk (Giancola et al, 2003).

CONTEXTUAL FACTORS

Violence is associated with urban centres that have a high concentration of drinking establishments (Zhu et al, 2004). Crowding and inadequate access to the bar increase the potential for accidental contact and frustration (Deehan, 1999) which can be interpreted by an intoxicated individual as provocation. Provocation is a major mediator of aggression (Bettencourt and Miller, 1996). Aversive stimuli within premises, e.g. stale air, loud noise and smoke, have been related to an increased risk of aggressive interaction (Homel and Clark, 2004).

Variability in violence between drinking establishments (both inside and outside) has been attributed to management style because a few establishments usually account for the majority of injuries sustained in licensed premises (Homel and Clark, 2004). Where heavy and/or rapid drinking is encouraged, such as during 'happy hours', and when bar staff continue to serve obviously intoxicated customers there is increased risk (Homel and Clark, 2004). The behaviour of door staff, who are

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often aggressors, is also important (Maguire and Nettleton, 2003).

Perceived encouragement of aggression, abusive swearing, sexual activity among patrons, sexual competition, prostitution, drug use and dealing, and rough/rowdy behaviour are also contributory factors (Homel and Clarke, 2004).

SOCIO-ECONOMIC FACTORS

The economics literature shows that alcohol consumption is related to household income and proportion of the population of youth age. This research demonstrates a causal relationship between price of alcohol, alcohol consumption, and violence resulting in injury. In addition to violence in and around bars, child abuse and spousal abuse have also been linked with low alcohol prices (Matthews et al, 2005).

INTERACTION OF RISK FACTORS

Intoxication, individual differences and contextual factors interact to impact on the risk of violence. For example, a poorly presented and maintained bar can give the impression of permissiveness for violence (Homel et al, 2001) which may attract aggressive individuals who deliberately seek out places where they believe violence will be tolerated (Raistrick, et al, 1999). This is exacerbated by competition for food, transport and other resources. Licensed premises' capacity, a convenient proxy for numbers of people in licensed premises in city entertainment districts, is an independent predictor of violence in the street along which premises are situated (Warburton and Shepherd, 2005).

PREVENTION OF ALCOHOL-RELATED ASSAULT AND INJURY

Tackling alcohol intoxication

Controlling drink prices and restricting the availability of alcohol are effective but legislation must be enforced. A study in New South Wales found that, despite legislation, bar staff frequently continued to serve intoxicated individuals (Donnelly and Briscoe, 2002). Refusal to serve pseudo-patrons feigning intoxication increases in enforcement campaigns (McKnight and Streff, 1994). Targeted policing of specific premises can help reduce alcohol-related violence (Warburton and Shepherd, 2005).

There is little evidence that deregulation of licensing in Scotland has resulted in changes in the incidence of alcohol-related disorder. Longer trading hours are associated with increased alcohol consumption, low-level disruption and violence in New Zealand and Australia (Civic Trust and Institute of Alcohol Studies, 2002). In the UK, the

Licensing Act 2003 allows flexibility of opening hours and increases police powers to intervene substantially.

Responsible beverage service (RBS) training equips bar staff with the skills to prevent intoxication and to refuse service to those already intoxicated. A typical training programme includes information on the law, the alcohol content of different drinks, circumstances which lead to violence, and how violence can be prevented. RBS evaluations utilize pseudo-patrons pretending to be drunk or who look underage. In Stockholm refusal to serve intoxicated individuals increased from 5% to 47% following RBS intervention (Wallin et al, 2002). A recent review suggests that, in the short term at least, such programmes can help reduce irresponsible serving (Wallin, 2004).

Education

Mass media campaigns promote responsible drinking, present information about alcohol risks and challenge perceived social norms of heavy drinking. However, there is little evidence that this approach is effective (Babor et al, 2003).

Addressing individual risks

Brief interventions have been shown to be effective in reducing harmful levels of alcohol consumption (Wilk et al, 1997). Brief interventions are time and cost-efficient as well as effective. A randomized controlled trial has found that a brief intervention (motivational interviewing) combined with standard wound care (suture removal) is effective in reducing alcohol misuse in males injured while intoxicated (Smith et al, 2003).

Intervention in this context is particularly worthwhile because a high proportion of facial injuries (up to 85%) are sustained in violence (Shepherd and Brickley, 1996), and high visibility of such injuries enhance individual susceptibility to behaviour modification (Smith et al, 2003). Oral and maxillofacial surgery trauma care 5–10 days after injury, when patients are normally sober, represents a 'teachable moment'.

Because antisocial behaviour is characterized by injury and offending, interventions targeting victims are likely to include offenders in the process and vice versa (Shepherd et al, 2004).

Addressing contextual factors

Reducing crowding in licensed premises and in the street, for example by means of pedestrianization, can be effective (Warburton and Shepherd, 2004). Design should minimize the risk of unintended contact between patrons. Although most assaults involve punching and kicking, drinking glasses and glass bottles are the most frequently

used sharp weapons (Shepherd, 1990). A randomized field trial showed that increasing glass impact resistance (glass toughening) reduces injury risk (Warburton and Shepherd, 2000). Eating can reduce levels of intoxication.

Targeted closed-circuit television (CCTV) surveillance can be cost-effective as the majority of alcohol-related assaults occur in a bar or on leaving, in particular areas of the city centre (Shepherd and Brickley, 1996) and the routes away from them (Zhu et al, 2004). Although there is little evidence that CCTV acts as a deterrent to violent behaviour, by facilitating rapid police response to street arguments or fights it limits or prevents injury in violence (Sivarajasingam et al, 2003).

A study of the effects of CCTV on violence and disorder recorded by the police, and injury treated in accident and emergency departments, has shed light on the apparently conflicting trends in violence from the British Crime survey and police data (Sivarajasingam et al, 2003). CCTV installation and 24-hour monitoring in city centres result in the detection of more incidents by police, and rapid police response results in fewer injuries presenting at accident and emergency departments.

Careful siting of food outlets and planning of services to transport drinkers away from city centres can reduce the potential for provocation by dispersing intoxicated individuals.

INTEGRATED INTERVENTIONS

Combining a variety of evidence-based interventions such as targeted policing, price control, situational prevention informed by health service (accident and emergency) data, and alcohol misuse services for victims and offenders, are most likely to be successful (Shepherd, 2001). In the UK, crime and disorder reduction partnerships which bring health services into violence prevention on a statutory basis (Crime and Disorder Act 1998; Police Reform Act 2002) are responsible for this approach. **HM**

KEY POINTS

- There is a causal link between binge alcohol consumption and assault injury.
- There are individual, contextual and cultural risk factors for alcohol-related injury.
- Intoxication can be controlled through legislation, alcohol price control and motivational interviews.
- Modifications to the physical drinking environment can reduce risk.
- Violence-related injury can be reduced by targeted policing and situational interventions, such as plastic bar glassware.

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