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Harm reduction and individually focused alcohol prevention

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Abstract

This paper provides a brief overview of harm reduction and individually focused alcohol prevention strategies. Universal, selective, and indicated prevention strategies are described for several populations including elementary and secondary schools, colleges, and medical settings. This paper primarily reviews individually focused alcohol prevention efforts in the United States (US), where harm reduction has been less well received in comparison to many European countries, Canada, and Australia. Zero-tolerance approaches continue to be the norm in individually focused prevention efforts in the US, especially amongst adolescents, despite research suggesting that harm reduction approaches can be effective. Moreover, existing evidence supports that harm reduction approaches show considerable promise in universal prevention and have become best practices in selective and indicated prevention contexts.

Keywords

Alcohol; Prevention; Harm reduction

The objective of this paper is to provide examples of harm reduction approaches for individually focused alcohol prevention interventions, with a focus on efficacious interventions for different populations. For our purposes, harm reduction, in the context of prevention and treatment, refers to any of a number of strategies designed to meet people "where they're at" in an effort to reduce harms associated with alcohol (Marlatt, 1996, 1998). The scope of this paper will encompass individually focused prevention strategies including both universal prevention efforts aimed at entire populations (e.g., elementary schools) and selective and indicated prevention strategies that are more specifically designed for at-risk individuals or individuals who have begun to experience negative consequences associated with drinking (Mrazek & Haggerty, 1994). From our perspective, harm reduction is a practical and flexible common sense approach designed to help people define and reach their own goals regarding alcohol use, without presupposing that they have a specific goal in mind (e.g., moderation or abstinence).

Universal prevention

In the context of individually focused prevention, universal alcohol prevention strategies most commonly refer to school-based education approaches. In considering the evidence regarding harm reduction strategies for universal alcohol prevention, it seems apropos to first review the alternatives. Historically, universal alcohol prevention efforts in the United States (US), particularly in school settings, have not had a harm reduction emphasis. The controversy over abstinence-only approaches to alcohol prevention has been ongoing for more than 100 years (Beck, 1998). School-based prevention efforts in the US have typically emphasised a "just say no" approach to drinking and have relied heavily on "education" alone. It is unfortunate that

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collectively we have learned, relearned, and learned again that exclusively emphasising abstinence and "educating students" about the evils of alcohol simply do not work and, at best, have no effect in reducing alcohol use and related consequences (Moskowitz, 1989). At worst, this emphasis encourages students to experiment and evaluate the validity of these messages for themselves. When students do not immediately experience the consequences described, but instead experience positive outcomes not mentioned in prevention programmes, they may understandably dismiss the validity of the source as biased and misleading. Furthermore, the suggestion that any use is bad sends conflicting information to students whose parents consume alcohol at least on an occasional basis. Perhaps more troubling is that these approaches provide no help to students who have already initiated use and are in greatest need of skills for avoiding or reducing alcohol-related harms.

Amongst the most recent and best known examples of universal prevention approaches with a zero-tolerance emphasis is the Drug Abuse Resistance Education (D.A.R.E.) programme. D.A.R.E. is the most widely implemented universal prevention initiative in US schools and targets all substance use, including alcohol. A fundamental assumption of D.A.R.E. is that even casual use by anyone of any substance, including alcohol, is bad. Hundreds of millions of US dollars have been spent supporting this programme over the last couple of decades, despite the fact that no large-scale evaluations have found evidence that it works to prevent the use or abuse of alcohol or any other substance (Ennett, Tobler, Ringwalt, & Flewelling, 1994; Lynam et al., 1999). Although it is encouraging that public funds are no longer available to support D.A.R.E. programmes, the persistence of D.A.R.E., funded by private sources, is evidence that policy choices are only loosely based on empirical evidence of what works (Gorman, 1998).

In contrast, a risk reduction/protection enhancement model has been supported as a more appropriate approach for preventing adolescent health problems (Hawkins, Catalano, & Arthur, 2002). Prevention strategies following this model have been found to reduce heavy alcohol use and enhance protective factors such as academic performance and parent and school bonding (Hawkins, Catalano, Kosterman, Abbott, & Hill, 1999). A focus on risk and protective factors allows for a more comprehensive approach that acknowledges the multifaceted nature of the individual and his/her experience as opposed to a single behaviour of the individual.

Increasingly, prevention programmes for youth are incorporating harm reduction principles. Many traditional school-based prevention programmes that focus on disseminating negative information have been found to be ineffective (Cruz & Dunn, 2003). Perhaps the most widely used universal prevention strategy often implemented in a manner consistent with harm reduction is social norms marketing. This approach consists of disseminating accurate information about the prevalence of drinking and is designed to correct misperceptions regarding peer drinking behaviour. The approach is theoretically based on findings that perceived norms are strongly associated with drinking and that students consistently overestimate the drinking of their peers (Baer, Stacy, & Larimer, 1991; Borsari & Carey, 2003; Lewis & Neighbors, 2004; Neighbors, Dillard, Lewis, Bergstrom, & Neil, 2006; Perkins & Berkowitz, 1986). The approach has been extensively applied on college campuses and is beginning to be widely implemented in high schools as well as in the general population. The evidence for the effectiveness of this approach is mixed, with some studies concluding that the approach does not reduce drinking (Wechsler et al., 2003) and others finding evidence of efficacy (Perkins, Haines, & Rice, 2005). Whilst the jury is still out, especially outside of college populations, whether the approach is effective is probably not the right question, but rather for whom and under what conditions is this approach effective (Mattern & Neighbors, 2004).

Another approach, consistent with harm reduction and receiving increasing support, targets alcohol expectancies. "Expectancy challenge" interventions do not focus on abstinence or scare

tactics but rather focus on an individual's perceptions of alcohol's effects and providing accurate information. One study found that expectancy interventions resulted in children displaying an increased association between alcohol and negative and sedating effects, as well as a decreased association between alcohol and positive and arousing effects (Cruz & Dunn, 2003). This study is promising because it suggests that expectancy challenge interventions shown to be effective with heavy drinking college students may be modified to be effective preventative interventions for elementary school students (Cruz & Dunn, 2003).

Selective and indicated prevention strategies

In contrast to universal prevention efforts, selective and indicated prevention strategies are more often consistent with harm reduction. This appears to be the case when considering selective and indicated prevention within a variety of populations and contexts including at-risk adolescents, high-school students, college students, and patients in medical settings.

At-risk adolescents

At-risk adolescents' risk and protective profiles need to be taken into account when developing and evaluating prevention programmes for alcohol use amongst this population (Masterman & Kelly, 2003). It is important that prevention programmes for at-risk adolescents are relevant and acceptable to the target audience (Sussman, Dent, Stacy, & Craig, 1998). Harm reduction approaches emphasise realistic goals that incorporate the individuals' personal experience and goals regarding alcohol use. Moderate drinking may in many cases be a more appropriate goal for at-risk adolescents than abstinence. Harm reduction adapts to the unique risk/protective profile of an individual and is personally relevant—which is critical when working with at-risk populations (Sussman et al., 1998).

High-school students

Several interventions consistent with harm reduction have been implemented with high-school students. One such programme is the Alcohol Misuse Prevention Study (AMPS) (Shope, Copeland, Maharg, & Dielman, 1993; Shope, Elliott, Raghunathan, & Waller, 2001), implemented with 10th grade students. This intervention, implemented in five, 45-min sessions, incorporated aspects of normative information and risks of drinking, as well as skills for reducing risks associated with alcohol and resisting peer pressure and other social influences. In addition, the curriculum focused specifically on prevention of drunk-driving in this population. Results indicated the intervention was associated with reductions in risky alcohol consumption and related consequences amongst high-school students (Shope et al., 1993; Shope, Copeland, Marcoux, & Kamp, 1996). In addition, this intervention was associated with reductions in serious traffic infractions in the first year after licensure, particularly amongst the large group of students who drank occasionally but not regularly (Shope et al., 1996, 2001).

Another example of a high-school alcohol prevention programme consistent with harm reduction is the Risk Skills Training Programme (RSTP) (D'Amico & Fromme, 2002). The programme focuses on risk reduction for alcohol and other drugs and teaches both drinking moderation skills and behavioural alternatives to such high-risk behaviours as driving whilst intoxicated. A randomised clinical trial of this intervention with 300 high-school students found that the RSTP was associated with reductions in risky drinking in comparison to both the abbreviated D.A.R.E. curriculum and the control group at 2-month post-intervention. However, these intervention effects were no longer significant by the 6-month follow-up. These findings suggest the need for continued intervention rather than a one-time curriculum in this risky developmental time frame. The findings are consistent with results reported by McBride, Midford, Farringdon, and Phillips (2000), who studied a classroom-based curriculum that

specifically targeted harm minimisation and was implemented across 2 years amongst Australian secondary students. McBride and co-workers indicated that the intervention was associated with smaller developmental increases in drinking as compared to students in the control group, and was associated with less harmful consequences of drinking, particularly for those intervention students who drank with adult supervision as compared to their supervised peers in the control group.

College students

Harm reduction strategies are well represented in the area of preventing drinking-related harms amongst college students. Several reviews (Larimer & Cronce, 2002; Larimer, Kilmer, & Lee, 2005; Walters & Neighbors, 2005; White, 2006) have concluded that interventions based on cognitive-behavioural skills training (Kivlahan, Marlatt, Fromme, Coppel, & Williams, 1990) and motivational enhancement approaches (Larimer et al., 2001; Marlatt et al., 1998; Miller & Rollnick, 2002) have the best evidence of effectiveness in reducing alcohol use and related negative consequences in this population.

In its landmark report on college drinking prevention, the National Advisory Council of the National Institute on Alcohol Abuse and Alcoholism (NIAAA) recommended specific interventions for college student drinking, indicating multiple studies demonstrating the efficacy of these approaches with college students (National Institute on Alcohol Abuse and Alcoholism, 2002). First, NIAAA recommended multi-component interventions combining motivational interviewing (Miller & Rollnick, 2002) with cognitive-behavioural skills training (Larimer & Marlatt, 1990; Marlatt & Gordon, 1985; Miller, Kilmer, Kim, Weingardt, & Marlatt, 2001) and norms clarification (Perkins & Berkowitz, 1986). An example of this type of intervention is the Alcohol Skills Training Programme (ASTP) (Hernandez et al., 2006; Kivlahan et al., 1990). ASTP is a group prevention programme that teaches alcohol moderation skills, such as alternating alcoholic and non-alcoholic beverages, drinking slowly, setting a limit prior to the drinking occasion, using external cues (such as time and number of drinks consumed) in conjunction with a blood alcohol concentration (BAC) card to remain at or below a .05–.06 BAC, and avoiding drinking in situations where it is physically hazardous (when driving, when taking medications, and so on). In addition, ASTP uses motivational interviewing strategies to elicit from students personally relevant reasons for reducing drinking and helps them weigh the pros and cons of drinking to excess as compared to drinking moderately or not at all. The programme provides accurate information about alcohol's effects, dispels common misconceptions (e.g., about using coffee or cold showers to reduce BAC), and provides information about accurate norms for alcohol use on college campuses. This intervention has been shown to reduce alcohol use and related negative consequences when implemented in 8-session, 6-session, and 2-session groups, though effect sizes are largest in the 8-session format (Baer et al., 1992; Kivlahan et al., 1990; Miller et al., 2001). ASTP has recently been translated for use with Spanish-speaking students, with encouraging preliminary findings (see Hernandez et al., 2006).

The second type of intervention recommended by NIAAA is to utilise brief motivational feedback for college drinking prevention. Brief Alcohol Screening and Intervention of College Students (BASICS) (Dimeff, Baer, Kivlahan, & Marlatt, 1999) is an example of such an initiative that has demonstrated good evidence of efficacy in college drinking prevention and, like the Alcohol Skills Training Programme, is explicitly based on harm-reduction principles. BASICS incorporates much of the same content as ASTP, but is implemented one-on-one, guided by a personalised graphic feedback sheet presenting results of an assessment of the individual's own drinking patterns, attitudes, and beliefs about drinking, and negative consequences of drinking. BASICS has been implemented both as an indicated prevention approach, based on the results of a brief screen for at-risk drinking (Borsari & Carey, 2000;

Marlatt et al., 1998), as well as a selective prevention approach implemented with at-risk groups (e.g., fraternity members) regardless of individual drinking levels (Larimer et al., 2001). In both contexts, BASICS has demonstrated efficacy in reducing alcohol use, negative consequences, or both in college populations (Larimer et al., 2001; Marlatt et al., 1998; Murphy et al., 2001). Based on evidence supporting its efficacy, BASICS is now in use on numerous campuses throughout the US, and has been recognised as a model programme by the Substance Abuse and Mental Health Services Administration (SAMHSA).

Third, NIAAA also recommended expectancy challenge interventions. These interventions involve in vivo drinking experiences which actively demonstrate the role of expectations and placebo effects in determining alcohol's effects. Specifically, students are administered either alcohol or placebo, asked to engage in a variety of social tasks, and subsequently asked to nominate who, including themselves, received real alcohol. Research indicates students cannot determine on better than a chance basis who received alcohol and who did not (Darkes & Goldman, 1993, 1998). This experience has been associated with a clearer understanding of the role of environment and expectations in producing many of the social effects of alcohol and, in turn, a reduction in excessive alcohol consumption amongst group members (Darkes & Goldman, 1993, 1998). Although in vivo expectancy challenge presents some logistical difficulties as a routine prevention component on college campuses, these findings demonstrate the efficacy of a harm-reduction approach.

Since the NIAAA report was released, several new studies have supported the efficacy of cognitive-behavioural and motivational enhancement approaches to alcohol prevention on college campuses (Barnett & Nancy, 2004; Fromme & Corbin, 2004). In addition, evidence is emerging to suggest that mailed motivational feedback may be as efficacious as in-person intervention, at least in the short-term (Agostinelli, Brown, & Miller, 1995; Collins, Carey, & Sliwinski, 2002; Murphy et al., 2004). These findings suggest that widespread implementation of screening and brief, mailed, or computerised prevention programmes for college drinking prevention may be increasingly feasible (see White, 2006, for a review). Finally, new evidence suggests that simple provision of accurate, personalised normative feedback, in the absence of other skills or motivational enhancement components, may be sufficient to promote drinking reductions, especially amongst students who are more socially motivated and less self-determined (Neighbors, Larimer, & Lewis, 2004; Neighbors, Lewis, Bergstrom, & Larimer, in press).

A number of the interventions described above have been peer-delivered. Peer delivery is not in itself a harm reduction strategy but is likely to facilitate a harm reduction perspective for a number of reasons. Meeting the clients on their level and taking the perspective of the drinker may be easier for peers to do. Talking with peers may reduce the potential stigma associated with seeking the help of a "professional" and thereby reduce barriers. In addition, all other things being equal, peer relationships are more likely to feel collaborative and less likely to be perceived as an authority figure providing direction to a subject. In both high-school and college settings, peer delivered intervention appear to be at least as effective, and in some cases more effective, in comparison to interventions delivered by teachers or professionals (Botvin, Baker, Filazzola, & Botvin, 1990; Larimer et al., 2001). Whilst the literature suggests that trained peers are able to produce similar effects to those found with well-trained professionals, additional work is needed to examine participants' preferences for peers versus professionals, as well as data to demonstrate that the peers and the professionals are delivering the same quality of prevention interventions.

Patients in medical settings

The phrase meet people "where they're at" within a harm reduction context typically refers to the non-judgmental, low-threshold nature of the prevention approach itself. However, another

way to apply this concept to harm reduction is a literal interpretation—rather than expecting individuals in need of alcohol prevention services to "come to us" as it were, these services can be integrated into the natural settings where individuals might already be found. An example of that approach is the integration of screening and brief intervention services into primary and specialty medical care settings. Several seminal studies have suggested that as little as 5–10 min of physician advice regarding the risks of excessive consumption, guidelines for reduced-risk drinking, and strategies to avoid excessive drinking are associated with reductions in alcohol use and related harms in general medical populations (Kristenson, 1983; World Health Organization Brief Intervention Study Group, 1996; for reviews, see Bien, Miller, & Tonigan, 1993; Dunn, Deroo, & Rivara, 2001). Recently, Fleming, Barry, Manwell, Johnson, and London (1997) and Fleming et al. (2000, 2002) have shown that brief (i.e., 15 min) discussions with a primary care physician about alcohol consumption, risks, strategies to reduce consumption, and negotiation of goals for reduced-risk drinking not only resulted in significant decreases in alcohol use and related negative consequences amongst problem drinkers, but were also associated with significant cost savings with respect to utilisation of other health care services as compared to a control condition.

Similarly, Monti et al. (1999) evaluated a brief, motivational intervention to encourage reductions in alcohol use and related risky behaviours in an emergency room setting, and found that individuals in the intervention group reported reduced alcohol-related negative consequences, as well as reduced driving under the influence and risky driving behaviours, in comparison to controls who received services as usual. Gentilello, Donovan, Dunn, and Rivara (1995), Gentilello, Ebel, Wickizer, Salkever, and Rivara (2005), and Gentilello et al. (1999) have demonstrated the effectiveness and value of brief harm reduction focused alcohol interventions with trauma patients in emergency room settings. In addition, Bombardier and Rimmele (1999) found that a brief motivational intervention was effective in reducing alcohol use and consequences and recidivism amongst patients treated in a level 1 trauma centre. As a result of these and a host of similar studies, implementation of screening and brief intervention in primary care and trauma settings is now a best-practice recommendation in the United States.

Harm reduction is a practical approach to preventing alcohol-related harm, and evidence is mounting that it is more effective than traditional abstinence-only approaches to prevention. It is important to be clear that the message of harm reduction is not anti-abstinence. In many cases, abstinence may represent the ideal condition with respect to reducing alcohol-related harms. For individuals who choose to drink or who may choose to drink in the future, harm reduction approaches to prevention provide a balanced view and practical skills for reducing alcohol harms that zero-tolerance approaches do not provide. Many studies have made convincing arguments for the merits of harm reduction. However, neither good arguments nor evidence are alone sufficient to change entrenched zero-tolerance approaches, especially in the domain of primary prevention. That being said, it is important to identify the progress that has been made in this area and to take some consolation in acknowledging that harm reduction has become the norm in selective and indicated prevention efforts.

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