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ORIGINAL ARTICLE

Screening and brief interventions for hazardous and harmful use of alcohol and other psychoactive substances: How are nurses and midwives involved?

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ABSTRACT

Background: Globally, about two billion people use alcohol and between 172 and 250 million people used illicit drugs at least once in 2007. Harmful alcohol use accounts for 4.5% of the global burden of disease and is responsible for 3.8% of all deaths. Hazardous and harmful drinkers may constitute up to 20% of patients in primary health care in some countries. Given the extent of the problem and the risks of hazardous and harmful substance use to health, nurses and midwives who are the largest group of frontline health workers, are best placed to deliver brief interventions.

Methods: This literature review focused on the role of nurses and midwives in both screening and delivering brief interventions. Reviewed were articles published English in data bases British Nursing Index, CINAHL, Medline, PsychInfo and Cochrane databases.

Results: The majority of the published literature are reports on participation of nurses and midwives in interventions in study settings. The review showed that nurses and midwives participate in implementing brief interventions and these take place in a broad range of settings such as, in-patient hospitals, obstetrical and sexual health services settings, workplaces, schools and community settings. Furthermore, prospective studies show the effectiveness of nurses and midwives-led interventions. However, there is a lack of evidence of nurses participating in interventions involving older people.

Conclusion: The findings provide an important reference point for developing strategies for maximizing the role of nurses and midwives in prevention and treatment of harmful alcohol use and other substances. Priority should be given to training nurses and midwives to using existing tools for screening and implementing interventions. This can be achieved through capacity building during basic and in-service training.

Keywords: *nursing; midwifery; brief interventions; harmful alcohol use; psychoactive substance use.*
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Introduction:

Harmful use of psychoactive substances is a pattern of use that is causing damage to physical and/or mental health. Psychoactive substance use and substance use disorders can result in a wide range of problems for individuals, their families and wider community (WHO 2004). Worldwide, about two billion people use alcohol. Between 172 and 250 million people used illicit drugs at least once in 2007. Harmful alcohol use accounts for 4.5% of the global burden of disease and is responsible for 3.8% of all deaths (WHO 2009). Psychoactive substance including illicit drug use is associated a wide range of social and health problems and disorders both in developed and developing world (WHO 2004, 2007 and UNODC 2008, 2009). Injecting drug use is closely linked to blood-borne viruses such as HIV and hepatitis B and C transmission (EMCDDA 2008). Dependence, overdose and serious mental health problems are amongst the main health risks (Seivewright N et al, 2004). This article summarizes the key findings on involvement of nurses and midwives in screening and brief interventions for hazardous and harmful use of alcohol and other psychoactive substances. They identify entry points for expanding the role of nurses and midwives to include brief interventions for prevention and treatment of disorders resulting from harmful use of psychoactive substances in their daily practice.

Methods

The review was confined to literature published in English in which nurses or midwives had an active role in either screening or delivering brief interventions. The following bibliographic databases were searched, British Nursing Index, CINAHL, Medline, PsychInfo and Cochrane database of systematic reviews.

Relevance for nurses and midwives

In most countries, nurses and midwives constitute the largest group of health care providers, sometimes forming up to 80% of the workforce (WHO 2006). They often have enduring professional relationships with patients across the lifespan giving them opportunities delivering primary, secondary and tertiary prevention interventions to prevent or reduce the harms associated with substance use. They provide preventative advice and information from treating trauma sustained as a consequence of intoxication, detoxification to preventing relapse of dependence.

Screening for hazardous or harmful use of alcohol and other psychoactive substances

A large number of tools have been developed for identifying hazardous or harmful substance use. CAGE is a four-item validated questionnaire for identifying individuals with alcohol problems (Erwing JA 1984 and Gavin DR et al 1989). The Alcohol Use Disorders Identification Test (AUDIT), is a screening tool for the identification of hazardous and harmful drinkers (Babor TF and Higgins-Biddle JC 2001) while the Fast Alcohol Screening Test (FAST) is an abbreviated version of the AUDIT (Hodson R et al). The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) is used to screen problems or risky use of tobacco, alcohol and other psychoactive substances. This literature review did not yield much evidence of use of ASSIST. Relevant studies show that the nurse, or midwife, should adopt an empathetic interviewing style that enhances self-confidence to change (Miller WR, Rollinick S 2002 and Littlejohn C Holloway A 2008). Screening can be undertaken during a general health and lifestyle assessment (Babor TF et al, 2001). This may reduce the potential negativity that some nurses and midwives anticipate (Aalto M et al, 2001, Lock CA et al, 2002 and Holmqvist et al, 2008). Computerized versions are also available (Karlson et al 2005, Nordqvist C et al, 2006 and Bendtsen p et al, 2007).

Results

Screening and brief interventions in primary health care settings

Health care practitioners are encouraged to recognise hazardous or harmful substance use and institute early interventions (Caulker-Bernett I 1994). The AUDIT is viewed as a screening instrument for early detection of hazardous or harmful alcohol use (McPherson TL, Hersch RK 2000). A three-hour counselling session to reduce alcohol use, delivered by a nurse to patients, was more cost-effective than the provision of simple advice. After one year,

patients showed reductions in reported alcohol consumption, psychosocial problems, had improved liver functions and increased use of primary care services (Israel et al 1996). Two 30-minute brief alcohol interventions delivered by a nurse in a family practice setting and a five-minute session of brief advice from a doctor were compared. Interventions by the nurse showed a greater reduction in alcohol use (McIntosh MC et al 1959), further suggesting that brief interventions delivered by nurse were as effective as those delivered by physician. This was confirmed by a study in Sweden (Tonson Y et al 1998) and another, which showed that patients reported reduced alcohol use between baseline and the six-month follow-up (Lock CA et al, 2006).

Screening and brief interventions in emergency departments

Surgical nurses trained in delivering brief motivational interventions, conducted screening and brief interventions patients with maxillofacial injuries (Smith AJ et al, 2003, Gooddall CA et al, 2008 and Oakley F et al, 2008). The patients who received the intervention reported reductions in the frequency of alcohol use and mean number of days of heavy drinking. Those with the highest AUDIT scores at baseline showed the greatest change. A study which assessed the effect of a brief intervention for hazardous drinkers among patients attending the emergency department had reduced their use of alcohol to a similar extent at 12 month follow-up(Daeppen J et al 2007 and Dent et al 2008). A computerized screening identified 1,011 patients (43%) as having problems associated with substance use and they were referred for a nurse-led intervention. Most of the positive screens related to alcohol use (55.1%), but a substantial number were users of other substances (13.7%) or users of alcohol with other substances (28.1%) (Cummings GE 2006). This study showed that computer-based screening was feasible in a busy emergency department. Studies show CAGE had the best overall sensitivity and specificity but screens for long-term harmful use of alcohol, whereas the AUDIT is able to screen for both hazardous and harmful drinking (Ragaisis KM 2004).

Screening and brief interventions in in-patient hospital settings

The effectiveness of a stand-alone brief counselling session supplemented by a health education booklet on alcohol was evaluated. One year later, statistically significant reductions in alcohol use and alcohol-related problems where observed. Patients who received the intervention and the booklet reported the greatest benefits (Watson HE 1999). However another study found no additional benefit of two counselling sessions over one (McManus S et al 2003). In a study of 215 hospital in-patients who received a self-efficacy enhancement brief intervention, a self-help booklet on reducing alcohol consumption or usual care, at six months, there was a significant reduction in alcohol use for the self-efficacy enhancement group and the self-help booklet group (Holloway AS et al, 2007). A pilot project in New Mexico hospital in-patients, comprised screening of a substance use-related diagnosis using the AUDIT and/or Drug Abuse Screening Test (DAST) tools. Patients who screened positive were offered one to six brief motivational interviews by nurses (Lopez-Bushell K and Fassler C 2004).

Obstetric and sexual health services

A randomized controlled trial for prenatal alcohol use offered a 25-minute brief intervention from either a nurse or a doctor, or to receive usual care (control group). Alcohol use was found to have reduced in both groups (Chang G et al, 2005). The brief intervention was significantly more effective in reducing the frequency of drinking among those women whose alcohol use was greater at entry to the study. Nurses and midwives in contact with pregnant adolescents for hazardous or harmful substance use are in an ideal position to identify indications of substance use, provide education and make referrals to specialist services(Bragg EJ, 1997 and Richardson KK 1999) and that home visits during and after pregnancy for women with a history of hazardous or harmful use of alcohol and/or other psychoactive substances showed better engagement of these women in drug treatment services, improved pregnancy and neonatal outcomes, better mother-infant interaction and reduced substance use (Doggett C et al,2005) . Screening and brief intervention for hazardous and/or harmful alcohol use, delivered by a nurse in a sexual health clinic in Sydney also showed a greater proportion in reduced drinking in the intervention group ($p<0.001$) (lane J et at 2008).

School settings

Results from a study of the effectiveness of a brief intervention by a nurse on alcohol avoidance among sixth grade high school showed that fewer students who had received the intervention reported drinking heavily during the past 30 days, or had consumed alcohol over any period of time ($p<0.05$) (Werch Ce et al, 2003). In a Finnish school pupils who scored at particular levels on the ADSUME, (a validated questionnaire adapted from the AUDIT) , received targeted interventions from school nurses. Nurses reported that the ADSUME had been useful in helping to raise psychoactive substance use issues and

the confidentiality they provided to pupils was an advantage, creating an open -door for pupils to talk to nurses at any time. The majority (92%) of employees who took part found the process acceptable (Pirskanen M et al, 2007).

Workplace settings

A feasibility and cost effectiveness study on screening and brief intervention delivered by an occupational health nurse in the workplace included 627 (41.4%) employees of a local authority council, of these, 26% were hazardous drinkers. Employees in the intervention group reported greater reductions in frequency and quantity of alcohol used. At the six-month follow-up, they reported fewer days use of hospital services and primary care than at baseline. The economic evaluation suggested a substantial net saving of resources from the intervention (Watson HE et al, 2009).

Community settings

A controlled evaluation of a brief intervention for HIV prevention among intravenous drug users who were not in treatment for their psychoactive substance use followed by an intervention, provided information on risk and harm reduction, with the therapists adopting a personalized motivational interviewing style. Injecting risk-taking behaviour was reduced between baseline and follow-up (Baker A 1994).

Discussion

Most of the articles reviewed report findings and brief interventions in study settings. Observational studies in routine settings were not common. However, the screening and interventions described in the literature are simple and can be implemented by nurses and midwives with minimum orientation and training. Relevant studies show that using some of the existing tools used for screening and brief interventions lead the nurse, or midwife, to adopt an empathetic interviewing style that enhances self-confidence to change. In addition, the studies show that nurses and midwives can lead these interventions just as effectively as those delivered by physicians. In the wider community, it is feasible to deliver cost effective alcohol interventions in workplace settings. In schools however, the primary focus has tended to be on prevention. The reviews show that there is limited interventions targeting older people for hazardous or harmful use of alcohol and other psychoactive substances. This is a major concern especially in light of increasing older population due to improved life expectancy in both developed and developing countries. Priority should be given to increasing the knowledge and skills among nurses and midwives for them to conduct screening and brief interventions in their routine practice. Those working in community settings can play a bigger role among the older population,

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