

Alcohol and the workplace

Peter Anderson

Introduction

The workplace provides several opportunities for implementing prevention strategies to reduce the harm done by alcohol, since the majority of adults are employed and spend a significant proportion of their time at work. The workplace can also be a risk factor for harmful alcohol use. Many studies have found significant associations between stress in the workplace and elevated levels of alcohol consumption, an increased risk of problem drinking and alcohol dependence.

Evidence has found that alcohol, and in particular heavy drinking, increases the risk of unemployment and, for those in work, absenteeism. Alcohol, especially episodic heavy drinking, has also been found to increase the risk of arriving late at work and leaving early or disciplinary suspension, resulting in loss of productivity; a higher turnover due to premature death; disciplinary problems or low productivity from the use of alcohol; inappropriate behaviour (such as behaviour resulting in disciplinary procedures); theft and other crime; poor co-worker relations and low company morale. Studies suggest that alcohol consumption may have more effect on productivity on the job than on the number of workdays missed. Overall, the costs of lost productivity feature as the dominant element in studies of the social costs arising from the harm done by alcohol, being about half of the total social cost of alcohol in the EU.

Despite the evidence of the negative impact of alcohol on the workplace, there are surprisingly few good-quality scientific studies to inform policy and practice, and of those that have been undertaken, it is not always possible to conclude convincingly the best approaches. Increasingly, and as an alternative, evidence suggests that prevention activities at the workplace to reduce the harm done by alcohol should be embedded in broader workplace health promotion and well-being at work initiatives.

This paper summarizes a review of workplace-based policies ([Anderson, 2012](#)) undertaken for the European Workplace Alcohol project financed by the EU ([European Workplace Alcohol project, 2012](#)) which, in turn, was informed by a review ([Anderson, 2010](#)) within the EU-financed FASE project ([FASE, 2012](#)). The review of the European Workplace Alcohol project provided the background for the Scientific Opinion of the Science Group of the European Alcohol and Health Forum on Alcohol, Work and Productivity ([European Commission, 2011](#)).

Alcohol and employment

Impaired productivity

There are three lines of evidence to suggest that alcohol could impair productivity: its impact on the accumulation of human capital through education; the time in life when alcohol leads to ill health and premature death; and its importance in the working age population, relative to other risk factors, in leading to impaired health and premature death.

There is evidence, although not from all studies ([Dee & Evans, 2003](#)), that drinking ([Koch & Ribar, 2001](#)), in particular binge-drinking ([Renna, 2009](#)), has an impact on the number of years at school ([Lye & Hirschberg, 2010](#)). Other studies find a significant negative relationship

between drinking and measures of education that reflect the quality of human capital accumulation (Wolaver, 2007). Carrell, Hoekstra & West (2011) exploited the discontinuity in drinking at age 21 years at the United States Air Force Academy, where the minimum legal drinking age is strictly enforced. They found that drinking caused significant reductions in academic performance, particularly for the highest-performing students. Their results indicated that the negative consequences of alcohol consumption extended beyond the narrow segment of the population at risk of more severe, low-frequency, outcomes.

Globally, the peak age of alcohol-related death is in middle age and older middle age, a time often of peak performance at work (Rehm, Taylor & Room, 2006). As an illustration of this, the age of alcohol-related hospitalizations and deaths has been estimated in the United Kingdom for conditions solely and partially due to alcohol (Jones et al., 2008). For both men and women, the estimated highest absolute number of deaths from alcohol-attributable conditions occurred in the age ranges 45–64 years, an important part of the working age population (OECD, 2010). On the other hand, it can be seen for both men and women that young people, although having a small absolute number of alcohol-related deaths, have the highest proportion of all deaths due to alcohol-related conditions in the age group. This is not surprising, since the highest rates of heavy alcohol use and binge-drinking occur among young adults aged 18–25 years. In 2010, youth unemployment in developed countries and the EU stood at over 18% (ILO, 2011). This is a risk factor for alcohol-related harm. In addition, for those joining the labour market, the transition from school to the labour force represents a high-risk time for alcohol use. Specific job-related influences associated with problem drinking, including job stressors and participation in work-based drinking networks, may pose a particular problem for young adults as they attempt to fit into their new workplace (Bray et al., 2011).

Looking globally at the age range 25–59 years, the age group in the EU with the highest employment rates (OECD, 2010), alcohol use is the world's number one risk factor for ill health and premature death (expressed as DALYs) (WHO, 2011). Lost productivity costs feature as the dominant element in studies of social costs arising from the harm done by alcohol (Rehm et al., 2006; Collins & Lapsley, 2008; Saar, 2009; Rehm et al., 2009).

Recession, unemployment and alcohol

Many commentators have expressed concern that the present economic downturn is adversely affecting public health as a result of job losses, contributing to mental health or addiction problems and the adoption of less healthy lifestyles. If this is the case, it is important to know how better to mitigate the impact of the economic downturn and how to improve the reintegration of unemployed people with mental health or addiction problems into the labour market (Litchfield, 2011).

Becoming unemployed does seem to worsen alcohol-related harm. An analysis of the effect of economic downturns in the EU undertaken by Stuckler et al. (2009) found that a more than 3% increase in unemployment was associated with an increase in suicide rates at ages younger than 65 years (4.45% increase; 95% CI: 0.65–8.24; 250–3220 potential excess deaths [mean 1740] EU-wide) and an increase in deaths from “alcohol abuse” (28.0% increase; 95% CI: 12.30–43.70; 1550–5490 potential excess deaths [mean 3500] EU-wide). Unemployment seems to lead to less alcohol consumed but to more risky patterns of drinking (Dee, 2001). Stuckler et al. (2009) found that for every US\$ 10 higher investment in active labour market programmes, there was a 0.04% lower effect of a 1% rise in unemployment on suicide rates in people younger than 65 years. When the spending was greater than US\$ 190 per head per year (adjusted for PPP), rises in unemployment would have no adverse effect on suicide rates. The associations between US\$ 100 rises in income, social welfare spending and health care spending per capita (PPP in

US\$ for 2000) on cause-specific mortality in 15 EU countries for the period 1980–2005 have been studied by [Stuckler, Basu & McKee \(2010\)](#). Increases in social spending in areas other than health care were significantly associated with reductions in alcohol-related mortality. For every US\$ 100 rise in social welfare spending excluding health care, alcohol-related mortality fell by 2.8%.

Only a limited number of studies have tried to estimate the role of alcohol in unemployment, but they do suggest that heavy drinking increases the risk of unemployment. A meta-analysis of papers that studied the relationship between alcohol consumption and earnings suggested that there was a lack of labour force participation by individuals who consume large amounts of alcohol ([Lye & Hirschberg, 2010](#)).

Absenteeism

A Swedish study found that a one-litre increase in total consumption was found to be associated with a 13% increase in sickness absence among men ($p < 0.05$) but not among women ([Norström, 2006](#)). In Norway, a similar study found that a one-litre increase in total alcohol consumption was associated with a 13% increase in sickness absence among men, but the effect of alcohol was not significant among women ([Norstrom & Moan, 2009](#)).

Micro-level data from Finland and Sweden have shown that alcohol consumption and alcohol-related problems are usually ([Upmark et al., 1997](#); [Upmark, Moller & Romelsjo, 1999](#); [Johansson, Bockerman & Uutela, 2008](#); [Laaksonen et al., 2009](#); [Salonsalmi et al., 2009](#)), but not always ([Hensing, Holmgren & Mårdby, 2011](#)) positively associated with the number of sickness absence days and disability pensions for both men and women. A large study of 13 582 Australian workers found clear evidence for the impact of drinking patterns on absenteeism ([Roche et al., 2008](#)). Compared to low-risk drinkers, workers drinking at short-term high-risk levels (110 g alcohol or more on any one day for a man and 70 g alcohol or more on any one day for a woman) at least yearly, at least monthly or at least weekly were 3.1, 8.7 and 21.9 times, respectively, more likely to report alcohol-related absenteeism.

Presenteeism

Currently, there is no universal agreement on the most appropriate method for measuring or monetizing presenteeism (when employees come to work ill and perform below par due to illness) or suboptimal performance at work ([Schultz, Chen & Edington, 2009](#); [Chen et al., 2008](#)). It is typically measured as the costs associated with reduced work output, errors on the job or failure to meet company production standards. Despite the measurement difficulties, a range of studies have stressed the importance of health risk factors, including alcohol, in increasing presenteeism ([Cooper & Dewe, 2008](#); [Schultz Chen & Edington, 2009](#); [Goetzel et al., 2004](#)).

An Australian study of 78 000 workers found that drug and alcohol use disorders increased the risk of presenteeism 2.6-fold, and 8.6-fold, when compounded with psychological distress ([Holden et al., 2011](#)).

Alcohol and earnings

When compared with abstainers, some studies have found a positive effect of alcohol on wages, a wage premium from light drinking ([Peters, 2004](#); [van Ours, 2004](#); [Lee, 2003](#); [Barrett, 2002](#)). It seems, however, that part of this effect is due to misclassification and the specific problem of combining former drinkers, who might have increased health problems and thus lower wages, and long-term abstainers into one pooled group of abstainers, called the “former drinker error” ([Jarl, Gerdtham & Selin, 2009](#)). A meta-analysis of 11 studies that have reported a positive

impact of alcohol consumption on earnings (a proxy measure of productivity) suggested that the relationship was an artefact, with alcohol consumption proving to be an imperfect proxy for all personality traits that have a positive influence on human capital (Lye & Hirschberg, 2010).

Alcohol and people other than the drinker

Almost all studies that have estimated the social costs of alcohol have not estimated the costs of alcohol borne by people other than the drinker. Given the impact of alcohol on people other than the drinker, this seems a rather important omission. One study has estimated the social costs of alcohol borne by people other than the drinker – an Australian study which reviewed the magnitude and range of harm from alcohol to others (Laslett et al., 2010) – and found its impact on productivity to be important. The total cost of harm from people other than the drinker was Australian \$14.2 billion. Of this, A\$ 9.3 billion resulted from lost productivity costs due to lost and wasted time because of the activities of a heavy drinker, while A\$ 801 million was due to direct work-related costs split between extra hours worked (A\$ 453 million) and absenteeism (A\$ 348 million). The annual cost of extra hours worked by workers because of a co-worker's drinking (A\$ 453 million) is comparable with estimates of absenteeism due to one's own drinking (A\$ 3 68 million, Collins & Lapsley, 2008). Overall, it was found that the inclusion of harm done by alcohol to people other than the drinker, after deducting any double-counting, doubled the social costs from A\$ 12.2 billion to A\$ 23.5 billion.

Adverse work environment

Analysis of the Whitehall II occupational cohort of London-based civil servants study found that there was a clear grade gradient for women, with those in the highest two grades having the highest proportion of problem drinkers, which was not the case for men (Head, Stansfeld & Siegrist, 2004). In men, the effort–reward imbalance was associated with alcohol dependence after taking account of age and employment grade, with those classified as putting in high efforts but receiving low rewards having the highest risk of being alcohol-dependent. This association was also seen for women, although it was not as marked. In addition, a low decision latitude in women was associated with increased risk of alcohol dependence. Neither high job demands nor low work support were associated with alcohol dependence. These associations between work characteristics and alcohol dependence did not appear to be mediated through physical illness, poor mental health, or adverse changes in social supports or network size.

The workplace could influence workers and those who do not drink in three other ways: (i) through the perceived physical availability of alcohol at work, including the ease of obtaining it at work and of using it during working hours and breaks; (ii) through descriptive norms or the extent to which members of an individual's workplace social network use alcohol or work while impaired by alcohol at work; and (iii) through injunctive norms or the extent to which members of an individual's workplace social network approve of using or working under the influence of alcohol at work. A study of employees in the United States found that injunctive norms predicted alcohol use and impairment, and descriptive norms predicted alcohol use before and during work as well as workplace impairment (Frone & Brown, 2010). Another study of abstinent employees in the United States found that all three dimensions of the workplace substance use climate were negatively related to workplace safety, positively related to work strain, and negatively related to employees' morale (Frone, 2009). A study in the United States revealed that employees who were problem drinkers were more likely than non-problem drinkers to perceive lower levels of certain workplace alcohol social controls against drinking. Employees who were problem-drinkers were also found to be more likely than abstainers and non-problem-drinkers to report higher levels of certain forms of social availability of alcohol at the workplace (Berger, 2009). In Canada, workplace alcohol availability predicted general alcohol problems (Hodgins, Williams

& Munro, 2009). In another set of studies of the impact of alcohol use by colleagues among municipal employees, Bennett et al. (2004) found that the presence of a drinking climate correlated with job stress and job withdrawal more than did reports of individual colleagues' drinking. The drinking climate and individual job stress were negatively associated with cohesion of the work group. A drinking climate combined with low cohesion resulted in increased vulnerability for job stress, job withdrawal, health problems and performance (work accidents and absences). Moreover, work group cohesion appeared to attenuate the negative impact of exposure to drinking norms. Increased vulnerability was exacerbated in employees with higher proportions of jobs involving risk, such as machine work.

Despite the structural relationships between the work environment and the risk of alcohol use disorders, few intervention studies have investigated the impact of changing work structures on reducing workplace alcohol-related harm (Roman & Blum 1996; 2002). An exception to this is a study that compared two work settings with distinctly different managerial cultures (Ames, Grube & Moore, 2000). One setting had a traditional hierarchical United States management design and the other was based on a Japanese management model transplanted to the United States. Although overall alcohol consumption rates in both populations were similar, the traditional management design was associated with more permissive norms regarding drinking before or during work shifts (including breaks) and higher workplace drinking rates. By contrast, the transplant management design was associated with greater enforcement of alcohol policies which, in turn, predicted more conservative drinking norms and lower alcohol availability at work. Qualitative research clearly indicated that the transplant design facilitated the social control of alcohol problems, whereas the traditional design appeared to undermine such control.

The workplace can also act as a role model for families and communities. The vast majority of European adults in the EU are in full-time employment. They are also parents and members of social networks. The workplace is also a site for young people for job experience and internships. Thus, what goes on in the workplace (such as workplace alcohol-free environments) can, through social networks of families and friends, have an impact outside the workplace. For example, data from the Framingham heart study shows that alcohol consumption behaviour spreads in social networks up to three degrees of separation (Rosenquist et al., 2010), with a dose-response relationship between the fraction of a principal's friends and family who drank heavily or abstained at one examination and the average number of drinks per day that the principal reported at the next examination. Being surrounded by heavy drinkers increased the reported alcohol consumption by about 70% (CI: 35–142%) compared with those who were not connected to any heavy drinkers. Conversely, being surrounded by abstainers decreased reported alcohol consumption by half. Each additional heavy drinker increased the likelihood that a principal drank heavily by 18% (CI: 11–25%) and decreased the likelihood that a principal abstained by 7% (CI: 2–12%). Conversely, each additional abstainer significantly reduced the likelihood that a principal drank heavily by 10% (CI: 4–15%) and increased the likelihood that a principal abstained by 22% (CI: 17–28%).

A number of analyses have found that occupations with the highest alcohol-related death rates are bar staff, seafarers and publicans and those working in the catering, entertainment and hospitality industries, as well as those working in the construction industries (Coggon et al., 2009; 2010; Hemmingsson et al., 1997). Interestingly, while male medical practitioners were among the occupations with the highest alcohol-related mortality in the 1960s to 1980s in the United Kingdom (England and Wales), they were among the occupations with the lowest alcohol-related mortality in 2001–2005 (Romeri, Baker & Griffiths, 2007).

Workplace interventions

A systematic review of workplace interventions for alcohol-related problems ([Webb et al., 2009](#)) identified only 10 intervention studies, of which 5 were counselling-based interventions, 4 were mail-out/feedback/brief intervention studies and 1 was a peer support programme. Counselling and related interventions comprised three broad types of strategy: psychosocial skills training; brief intervention, including feedback of results of self-reported drinking, lifestyle factors and general health checks; and alcohol education delivered via an internet web site. The psychosocial interventions included peer referral, team-building and stress management and skills derived from the social learning model. For health checks, topics covered in addition to alcohol were smoking, exercise, diet, weight, stress, depression, blood pressure, cholesterol, diabetes, cancer, safety and preventive health-care risks. The counselling-based interventions either reported no effect ([Hermansson et al., 1998](#)) or the effect was small, self-reported only, or measured desire to change rather than actual behaviour ([Bennett et al., 2004](#); [Heirich & Sieck, 2000](#); [Cook, Back & Trudeau, 1996](#); [Lapham, Gregory & McMillan, 2003](#)). The four mail-out/feedback/brief intervention studies ([Anderson & Larimer, 2002](#); [Richmond et al., 2000](#); [Matano et al., 2007](#); [Walters & Woodall, 2003](#)) were practical and possibly sustainable interventions that achieved outcomes somewhat comparable to the more intensive counselling interventions. The outcomes were, however, self-reported.

An additional study published since the systematic review of [Webb et al. \(2009\)](#) of screening and brief intervention for risky alcohol consumption at the workplace in the transport sector failed to find evidence of effect ([Hermansson et al., 2010](#)). An employee assistance office-based programme compared the impact of a brief intervention for at-risk drinking compared with usual care. At three month follow-up, employees who received the brief intervention had significantly reduced their presenteeism (but not absenteeism), with costs saved from improved productivity over the four-week period prior to the three-month assessment of US\$ 1200 per employee over the usual care group ([Osilla et al., 2009](#)). Consistent with other experience, the increase in productivity came primarily from increases in presenteeism and not decreases in absenteeism ([Goetzel et al., 2009](#)).

Peer support programmes

One of the 10 studies identified by [Webb et al. \(2009\)](#) used objective outcome measures to describe the impact of a workplace peer-focused substance abuse programme in the transportation industry implemented in phases from 1988 to 1990 ([Spicer & Miller, 2005](#); [Miller, Zaloshnja & Spicer, 2007](#)). The programme focused on changing workplace attitudes towards on-the-job substance use in addition to training workers to recognize and intervene with colleagues who have a problem. The programme was strengthened by federally mandated random drug- and alcohol-testing (implemented, respectively, in 1990 and 1994). With time-series analysis, the association of monthly injury rates and costs with the phased programme implementation were analysed, controlling for same industry injury trend. The combination of the peer-based programme and testing was associated with an approximate one third reduction in the injury rate, avoiding an estimated US\$ 48 million in the employer's costs in 1999. That year, the peer-based programme cost the company US\$ 35 and testing cost another US\$ 35 per employee. The programme avoided an estimated US\$ 1850 in the employer's injury costs per employee in 1999, corresponding to a benefit–cost ratio of 26:1. In another study of urban transit workers, perceived co-worker support was found to attenuate the link between frequency of heavy episodic drinking and absenteeism ([Bacharach, Bamberger & Biron, 2010](#)).

Computer-delivered programmes

A meta-analysis of 75 randomized clinical trials that have included more than 35 000 participants and evaluated 82 separate computer-delivered health promotion interventions concluded that computer-delivered interventions can help individuals to make improvements in various forms of health behaviour including substance and alcohol use (11 studies) (Portnoy et al., 2008). A greater intervention dose strengthened the impact on reduction of substance use. One study has evaluated the efficacy of an alcohol web-based personalized feedback programme delivered in the workplace to young adults (Dumas & Hannah, 2008). Results indicated that participants in the intervention group reported significantly lower levels of drinking than those in the control group at 30-day follow-up. This was particularly true for participants classified as high-risk drinkers at the baseline assessment. Adding a 15-minute motivational interviewing session did not increase the efficacy of the web-based feedback programme.

Mandatory screening

A Cochrane systematic review to assess the effect of alcohol and drug mandatory screening of occupational drivers in preventing injury or work-related effects, such as sickness absence related to injury (Cashman et al., 2009), identified only two interrupted time-series studies (Swena, 1999; Spicer & Miller, 2005). Spicer & Miller reported the evaluation of the workplace peer-focused substance abuse prevention and early intervention programme (entitled PeerCare) implemented against the background of federally mandated random drug- and alcohol-testing in an interrupted time-series design from 1983 to 1996. Swena reported the evaluation of federally mandated random drug-testing on countrywide fatal truck accidents in an interrupted time-series design from 1983 to 1997. The workplace-based study in the transport company found that while alcohol testing was associated with a decrease in the level of injuries immediately following the intervention (-1.25 injuries/100 person years; 95% CI: -2.29 – -0.21), there was no significant change in the already long-term downward trend (-0.28 injuries/100 person years/year; 95% CI: -0.78–0.21). For federally mandated random drug-testing, both studies found no immediate beneficial effect but did find significant declines in the yearly injury rate additional to the existing downward trend over time: -0.19 injuries/100 person years/year; 95% CI: -0.30 – -0.07 for the transport company (Spicer & Miller, 2005), and -0.83 fatal accidents/100 million vehicle miles/year; 95% CI: -1.08 – -0.58 for the countrywide study (Swena, 1999).

A systematic review of interventions for preventing injuries in the construction industry only identified five studies (van der Molen et al., 2007), one of which evaluated whether or not drug-free workplace programmes, which included alcohol, prevented occupational injuries (Wickizer et al., 2004). Overall, in the construction, manufacturing and service industries, companies with drug-free workplace programmes had a net reduction of 3.33 injuries per 100 person/years, compared with companies without drug-free workplace programmes, with the reduction being greater in the service than in the construction and manufacturing industries.

Embedding alcohol programmes within health promotion programmes

Interventions that focus on health promotion and on different lifestyles rather than on the disease have shown higher participation as well as greater improvement in drinking risk than those focusing on punitive sanctions (Sieck & Heirich, 2010). An inclusive model of prevention minimizes the likelihood that employees will feel singled out for their alcohol use or their participation in an intervention programme in a punitive context. The evidence for the impact of health promotion programmes at the workplace is, however, limited. In a systematic review, Kuoppala, Lamminpaa & Husman (2008) identified 46 studies which suggested that workplace health promotion could improve work ability (risk ratio (RR) 1.4; range 1.2–1.7) although not decrease sickness absences. Overall, there was no impact on mental or physical well-being.

Exercise programmes were effective in increasing overall well-being (RR 1.25; range 1.05–1.47) and work ability (RR 1.38; range 1.15–1.66), but education and psychological methods were not. In another systematic review of 27 identified papers, [Kuoppala and colleagues \(2008\)](#) found evidence that leadership at work can improve job well-being (RR 1.40, range 1.36–1.57) and decrease sick leave (RR 0.73, range 0.70–0.89) and disability pensions (RR 0.46, range 0.42–0.59).

A systematic review of the effects of workplace health promotion programmes on presenteeism identified 14 studies, of which 10 were described as presenting preliminary evidence of promising effects on presenteeism in their respective employee populations and work settings ([Cancelliere et al., 2011](#)). Two studies were described as showing the strongest evidence, one of which involved worksite exercise ([Nurminen et al., 2002](#)) and the second, the impact of a supervisor education programme regarding mental health promotion ([Takao et al., 2006](#)). However, even in these two studies, the evidence is either not present or very weak. In the study by [Nurminen et al. \(2002\)](#), women engaged in physically demanding laundry work were individually randomized into an intervention or control group, with the intervention subjects participating in worksite exercise training guided by a physiotherapist. The women were followed up at 3, 8, 12 and 15 months. Although at 12 months, the number of workers with perceived good work ability increased more in the intervention group than in the control group (11.0%, 95% CI: 0.2–21.9), as did the health-related prognosis of work ability at 8 months (8.1%, 95% CI: 0.5–16.3), there were no statistically significant differences between the two groups as regards job satisfaction, work ability index or sick leaves.

In a programme to reduce work-related stress in a sake brewery, [Nishiuchi et al. \(2007\)](#) found that although an education programme for stress reduction could improve supervisors' knowledge about stress reduction in the workplace, it had no impact on their attitudes or behaviour. Not surprisingly, then, the job stress education programme for supervisors on psychological distress and job performance among their immediate subordinates made no difference to psychological distress or job performance among male and female subordinates ([Takao et al., 2006](#), the study referred to above as showing an impact). The only exception to this was among the 27 young male subordinates in white collar occupations, for whom there was some evidence for improvement in stress reduction and job performance. Nevertheless, independent of the programme, subordinates working under supervisors with good listening attitudes and skills reported slightly (but statistically significant) better job control and less stress than those subordinates working under supervisors with poor listening attitudes and skills ([Mineyama et al., 2007](#)).

Workplace wellness programmes

Despite the limited evidence for effective workplace health promotion programmes, some meta-analyses have reported positive returns on investment for workplace wellness programmes ([Chapman, 2003; 2005; Baicker, Cutler & Song, 2010](#)). In their systematic review of United States-based studies, [Baicker and colleagues \(2010\)](#) identified 22 studies reporting on employees' health care costs and 22 on absenteeism costs. It should be remembered that in the United States, over 60% of Americans get their health care insurance through an employment-based plan. By far the most frequently used method of workplace intervention delivery was the health risk assessment, a survey that gathers baseline self-reported health data from the employee, which are in turn used by the employer to tailor the subsequent intervention. The second most common wellness intervention mechanism was the provision of self-help education materials, individual counselling with health care professionals or on-site group activities led by trained personnel. The use of incentives to motivate participation was seen in 30% of programmes. The most common foci of the programmes were obesity and smoking. Seventy-five

per cent of programmes focused on more than one risk factor, including stress management, back care, nutrition, alcohol consumption, blood pressure and preventive care, in addition to smoking and obesity. Medical costs were found to fall US\$ 3.27 for every dollar spent on wellness programmes, and absentee day costs fall by US\$ 2.73 for every dollar spent. Of course, there are some caveats to the validity of the findings: first, the firms implementing wellness programmes are likely to be those with the highest expected returns; second, it is difficult to gauge the extent of publication bias, with programmes seeing a high return on investment most likely to be published; third, almost all of the studies were implemented by large employers, who are more likely than others to have the resources and economies of scale necessary both to implement and to achieve broad savings through employee wellness programmes; and, fourth for the topic of this report, we have no idea how much, if any, the positive effects are alcohol-specific.

Conclusions for policy and practice

Well-being at work initiatives

Given the lack of a robust evidence base for workplace-based approaches that focus on individual counselling, it may be better to focus activities under the umbrella of well-being at work initiatives (Robertson & Cooper, 2011), particularly those that focus on presenteeism (Cancelliere et al., 2011), and those that bring a good return on investment (Baicker, Cutler & Song, 2010). The core factors that promote well-being at work include structural factors (Podsakoff, LePine & LePine, 2007) and management and leadership styles (Yarker, Lewis & Donaldson-Feilder, 2008), all of which could make an impact on alcohol-related harm.

Alcohol-free workplaces

Many workplaces are already alcohol-free. Increasing the extent of alcohol-free workplaces will result in reductions in alcohol-related workplace accidents and injuries, as well as creating a culture for a more healthy relationship with alcohol that has an impact on families and friends through social networks.

Occupational target groups

Based on the rates of alcohol-related mortality, three target groups stand out for action: those working in the retail alcohol trade, labourers in the construction industry, and seafarers and dockers. The example of English doctors who, over the course of 20–30 years fell in the occupational league table of alcohol-related mortality from near the top to near the bottom, demonstrates that change can be made. The behaviour of doctors has been taken as a marker of how harmful lifestyle forms of behaviour are perceived in a country.

Population target groups

Although this might be interpreted as covering everyone, there are in fact two target groups, the young and the older middle age: the young, because they suffer from both differential high rates of unemployment and risky drinking, compounded by the stresses when joining the labour market, and the middle-aged, because they have the absolute highest rates of alcohol-related disability and premature death. The United States-based multisite initiative on substance use prevention programmes for young adults in the workplace provides, for example, a frame for action for young people, which has been commonly neglected in the past (Bray, Galvin & Cluff, 2011).

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