Title: An integrative literature review exploring the impact of alcohol workplace policies

Abstract

Purpose: Alcohol workplace policies (AWPs) can help organizations to manage and support employees with alcohol-related problems. Over the last two decades, there has been a slow but steady rise of research on AWPs with some indication that these can contribute to reducing employee excessive consumption. However, there does not appear to be any empirical literature reviews to consolidate and evaluate what this body of evidence says regarding the impact of these policies. The following review seeks to address this gap.

Design/methodology/approach: Five electronic databases were searched for papers published between January 1996 and January 2020. To capture additional relevant papers (including those from non-peer reviewed sources), the search was extended to Google Scholar, professional and human resource management websites, trade publications and the website of one United Kingdom (UK) based alcohol charity. Inclusion and exclusion criteria were used to systematically screen the paper titles, abstracts, and full-text records. 14 papers were deemed eligible and therefore included in the integrative review. After extracting data, all 14 papers were appraised for quality then analysed using the narrative synthesis guide by Popay *et al*., (2006).

Findings: Five themes were identified, namely; Associations between Policy and Consumption Levels/Patterns; Deterrence; Policy and Programme Type; Knowledge and Understanding; Enforcement and Discipline. These themes encapsulated what the included papers concluded about the broad impact and associated benefits or challenges of AWPs.

Originality & Implications for Practice and Research: This review provides an up to date synthesis of literature published over the last two decades on the impact of AWPs. It highlights that AWPs can benefit employees and workplaces, therefore organizations are encouraged to develop and implement these to support health improvement and prevention of alcohol problems in the workplace. This review identifies however, that up to 40% of workplaces do not have AWPs in place, and future research needs to explicitly explore the reasons for this.

Keywords: alcohol, workplace policy, workplace health, literature review, impact, influence

Background

For many centuries alcohol has played an important part in family and work-life for those that choose to consume it (Baggott, 2011). The alcohol industry makes a sizeable contribution to economies across the globe. For example, in the United Kingdom (UK) the alcohol industry generates approximately 1.8 million jobs, and £29 billion in annual revenue (Anderson, 2010; HM Government, 2012). Despite these positive aspects, alcohol remains a major contributor to avoidable mortality, morbidity and a wider range of social problems such as crime, homelessness, suicide, violence and poor parenting (Obot & Room, 2005; Department of Health [DH], 2009).

Alcohol is also problematic at an organizational level, with 60% of UK employers reporting problems because of staff drinking excessively (Alcohol Concern, 2014). Working-age adults, particularly those aged 25-59 years old, are reported to be the heaviest drinkers and they exhibit the highest alcohol-related mortality worldwide (WHO, 2011; Institute for Alcohol Studies [IAS] 2017). Individuals with alcohol-related problems are likely to hold jobs for shorter periods and have higher sickness absence rates in comparison to other work colleagues (Health Development Agency [HDA], 2004). The workplace also experiences problems associated with alcohol-related presenteeism – in the UK for example, over 200,000 employees attend work with symptoms of a hangover daily (Rehm, 2009; Alcohol Concern, 2014). Working while inebriated or hungover can potentially tarnish the image and reputation of an organization (Austin and Ressler, 2012). Furthermore, reduced concentration, poor performance and the likelihood of making mistakes may pose a risk to an individual's safety as well as that of their colleagues and the public (Aviva, 2008; The Standard, 2012; Alcohol Concern, 2014). Alcohol-related absences, loss of productivity, unemployment and premature death of economically active people in the UK result in 17 million working days lost each year (National Collaborating Centre for Mental Health [NCCMH], 2014), and costs approximately £6.4 billion annually (IAS, 2009).

There is a strong health, economic and social case for supporting employees in the workplace setting, and one of the ways to do this is through the development and implementation of AWPs (Pidd *et al.,* 2016). Workplace alcohol policies are documents that clarify rules and organizational expectations of employees with regards to alcohol consumption at work, work-related functions (on or off-site), as well as implications of reporting for duty while under the influence of alcohol. AWPs are important because they enable organizations to have a consistent approach to managing and supporting employees with a range of alcohol-related problems (Chartered Institute for Personnel Development [CIPD], 2007). In recognition of the need for AWPs to be developed and evaluated, there has been a steady increase in research around this topic over the last two decades (Henderson *et al*., 1996; Anderson, 2010). There is however no empirical literature review that synthesizes this research. Literature reviews consolidate the best evidence, providing a collective view of what works best, what is cost-effective and they are also used to inform the development of national guidelines. Therefore, a lack of reviews on the impact of AWPs is problematic because it can hinder the development of national guidelines that would enable a more consistent response to alcohol in the workplace. In England for example, the current National Institute for Health and Care Excellence (NICE) Alcohol Use Disorders Prevention Public Health Guidance (PH24) makes very minimal mention of alcohol in the workplace setting (NICE, 2015). The Royal College of Physicians (2012) identifies this as a "missing knowledge area" which needs to be addressed to support workplaces. The following integrative

review seeks to provide a current overview of the evidence around the impact of AWPs to support the development of future workplace guidance and provide a resource for organizations to draw on when making decisions about AWP development and implementation. An integrative review design was chosen because it allowed the incorporation of a broader range of evidence from peer-reviewed and non-peer reviewed sources.

Methods

The review questions and consequent search terms were formulated and refined using the "who what how" (WWH) framework proposed by Schiavo and Foster (2017). The WWH framework is recommended for the development of searchable questions that have a focus on interventions such as policy. The integrative review addresses the following two questions:

- What is the impact of alcohol workplace policy on workplaces?
- What influence does alcohol workplace policy have on employees?

Search Strategy

The search strategy was developed by the first author, then refined and enhanced through discussion with the co-authors. Five electronic databases were scanned, (Academic Search Ultimate, Business Source Complete, CINAHL, Medline Complete, and PsychINFO) for papers from 1996 to January 2020. These databases were selected for their likelihood to yield literature from business, company information and health research disciplines. The following search terms were used: "alcohol OR drug* OR substance use OR substance misuse OR substance abuse" AND "work OR workplace* OR work-place* OR job OR organization* OR organisation* OR company OR business* OR companies" AND "policy OR policies OR programme* OR strateg* OR guid* OR intervention*. Using Boolean operators "AND" and "OR" enabled the location of potentially relevant records that could answer the review questions. The term "impact" and any related synonyms were only added later on at the full-text article screening stage, rather than at the database search stage, because the specificity of the latter yielded very few results. To provide a more comprehensive search, books and reference lists of potentially relevant articles and reports were searched electronically and by hand. Furthermore, the search was extended to Google Scholar, professional and human resources management websites (Chartered Institute of Personnel Development [CIPD] & ExpertHR), trade publications (Personnel Today and Management Today), and one UK based alcohol charity (Alcohol Concern). Literature review databases, namely the York Centre for Reviews and Dissemination, Cochrane and the Joanna Briggs Institute were also searched to rule out any existing or current reviews on the same topic. Finally, thesis databases EThOS and ProQuest-Thesis, as well as the grey literature website OpenGrey were searched.

Hand searching and scanning of websites yielded some grey literature from non-peer reviewed sources. Relevant papers from these sources were included in this review. The guidance provided by Adams *et al*., (2016) helped with the process of selecting the type of grey literature to work with. Adams *et al*., (2016) present a '3 Tier' system for classifying grey literature according to its potential quality; with '1st Tier' publications regarded as more robust and verifiable than 2nd or 3rd Tier

publications. With this in mind, we included '1st Tier' grey literature such as government reports and think tank publications in this integrative review; and excluded 2nd and 3rd Tier publications such as newspaper articles and blogs respectively.

Study Selection

447 records were found through the electronic database search and a further 18 records were obtained through web-based searching and hand searching, bringing the total number of records located to 465. After removing duplicates, the remaining 394 records were screened using inclusion and exclusion criteria (see Table 1) to enable the selection of papers that would answer the review questions. 320 records were excluded at this stage because they did not meet the inclusion criteria. For example, some were published before 1996 or the paper titles and abstract content were not relevant to policies around alcohol in the workplace setting. Other records were excluded because they were Tier 2 and Tier 3 grey literature. This left 74 records that were assessed through reading the full-text versions and a further 60 were excluded at this stage because they also did not meet the inclusion/exclusion criteria (for example, some had a global or national policy focus and others looked at policies around student alcohol consumption or illicit substances only). This left a final number of 14 records that were included in the integrative review. These comprised of 8 peer-reviewed papers and 6 reports/grey literature. No further relevant records were identified through checking reference lists of the included papers. Figure 1 presents a flowchart for the process followed to select the relevant papers.

Table 1, Inclusion & Exclusion Criteria

Inclusion Criteria	**Exclusion Criteria**
• January 1996 onwards • English language • Workplace policies on alcohol (including broader drug or substance misuse policies that encompass alcohol use/misuse) • Focus on all paid or volunteer workers • Policy focussed on the workplace/organization • Studies exploring or measuring impact, views, influence or effect of alcohol workplace policy on workers or the workplace • Studies from any country • Any study design (including those establishing cause and effect or associations)	• Studies referring to global, national or local (city level) policy • Papers that did not explore alcohol workplace policy as one of the main elements of a study or project • Policy templates or development guides • Studies that focussed on employee testing policies because a review on this was done by Pidd & Roche in 2014.

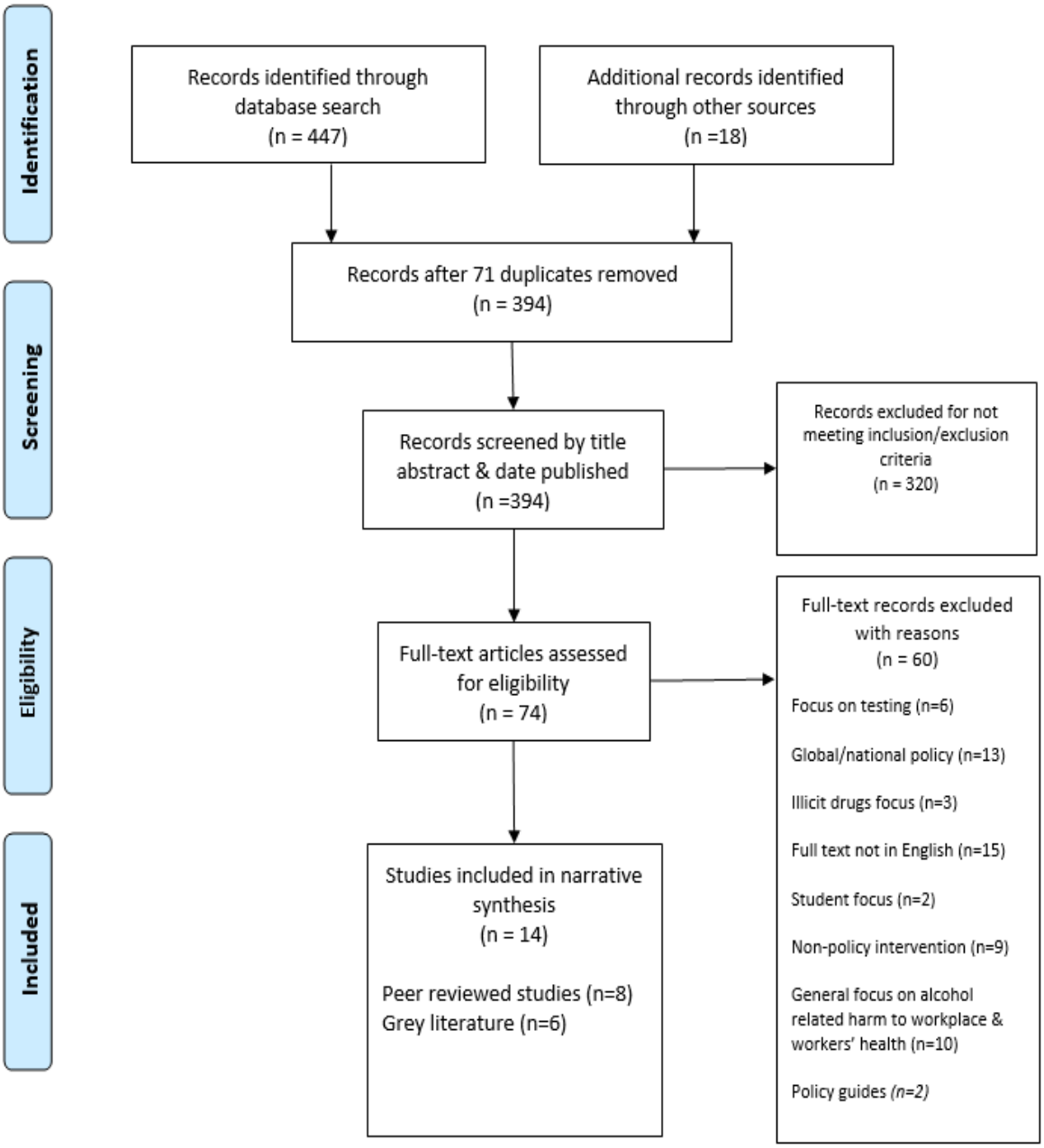

Figure 1- Flow chart for selection of papers (based on PRISMA guide, Moher *et al*.,2009)

Data Extraction and Quality Appraisal

Using a data extraction form for consistency, key data from the 14 papers were extracted by the first author. The data extracted comprised of author names, study publication date, study aims, country, industry name, and main findings/outcomes. The papers were then appraised for methodological quality and a judgement made on the utility of findings using the Tyndall (2010) Authority, Accuracy, Coverage, Objectivity, Date Significance (AACODS) checklist for appraising grey literature; Joanna Briggs Institute (JBI) appraisal tools for qualitative, cross-sectional, and quasi-experimental studies

(JBI, 2017); and the Hong *et al*., (2018) Mixed Methods Appraisal Tool (MMAT). To determine whether the quality of the papers was weak, moderate or good, we used a percentage scoring system (derived from dividing the number of 'yes' responses by the number of relevant appraisal questions then multiplying by one hundred). 'Weak' studies scored below 40%. 'Moderate' studies scored between 41% – 60% (Eriksson 2004; Koeppe, 2010). Then 'Good' papers achieved 61% and above (Brown *et al* 2008; Bush and Lapari 2014; Cheng and Cheng 2016; Harkins *et al* 2008; Larson *et al* 2007; Moore *et al* 2012; Pidd *et al* 2006; Pidd *et al* 2016; Pidd *et al* 2018; Rodriguez-Jareno 2013; Wickizier *et al* 2004; Zhang *et al* 1999). The co-authors checked the included papers, data extraction, and quality appraisal; and any disagreement or inconsistencies were resolved through discussion between all three authors.

Characteristics of included studies

All 14 papers were published between 1999 and 2018, and they attempted to explore (to varying degrees), AWP and the associations or influence this had on the workplace, and employees. 6 papers had a focus on 'alcohol only' policies; and 8 focussed on combined drug and alcohol or substance use policies. The sample sizes ranged from 22 participants to 115 million participants, and participants were aged 14 years or above. Most studies were from the USA (n=5) followed by Australia (n=4), and then (n=1) each from Taiwan, Sweden, and England. N= 2 involved several countries from across Europe. The combined papers represented a wide range of industries; including Manufacturing, Catering, Construction, Transport & Storage, Water Supply Sewage & Waste Management, Chemical industry, Alcohol Breweries & drinks businesses, Health and Social Care, Armed & Uniformed Services, Electricity Gas Steam, and Air Conditioning Supply and Gas/Fuel industry. A summary of the included papers can be seen in Appendix 1.

Data Synthesis

Due to methodological heterogeneity of the 14 papers, it was not possible to undertake a meta-analysis. Instead, the papers were synthesized using the narrative synthesis guide by Popay *et al*., (2006). The narrative synthesis process involved reading each paper repeatedly then developing a preliminary synthesis and description of the results from each paper in line with the review questions (see Appendix 1). The results from the papers were interrogated to explore relationships within and across the findings from the papers. Labels were created to describe the relationships and emerging patterns from each paper; then these labels were grouped into clusters denoting areas of similarity or emerging themes across the papers (see Table 2). Finally, the robustness of the synthesis and themes produced were assessed by checking the papers again to ensure that the themes sufficiently represented the key findings from the papers in line with the literature review questions.

Findings

Table 2, Themes

	Theme 1: Associations between policy & consumption levels / patterns	Theme 2: Deterrence	Theme 3: Policy & Programme Type	Theme 4: Knowledge & Understanding	Theme 5: Enforcement & Discipline
Brown *et al* (2008)			X		X
Bush & Lapari (2014)	X	X	X	X	
Cheng & Cheng (2016)		X	X	X	X
Eriksson *et al* (2004)	X		X		
Harkins *et al* (2008)	X		X	X	X
Koeppe (2010)	X			X	
Larson *et al* (2007)	X	X	X	X	
Moore *et al* (2012)	X	X	X	X	X
Pidd *et al* (2006)	X	X	X		
Pidd *et al* (2016)	X		X		
Pidd *et al* (2018)	X		X	X	
Rodriguez-Jareno *et al* (2013)	X	X	X	X	X
Wickizier *et al* (2004)			X		
Zhang *et al* (1999)	X	X	X		

Theme 1: Associations between alcohol workplace policy and worker consumption levels/patterns of drinking

All papers except for Wickizier *et al* 2004 and Brown *et al* 2008 presented links between AWP and worker consumption levels or drinking patterns. The presence of alcohol policy in the workplace was viewed as beneficial for employees, with some studies showing it was associated with reduced odds of heavy or hazardous consumption levels Pidd *et al* 2016; the reduced likelihood of work-related drinking or drinking during working hours; and reduced alcohol availability in the workplace Pidd *et al* 2006. Also, there were associations with an overall reduction in consumption regardless of whether a worker was a heavy drinker or not, however, this took into consideration policy and other interventions such as employee assistance and staff support Rodriguez-Jareno *et al* 2013. To identify the different levels of risky drinking such as hazardous or harmful consumption, some papers mentioned using the Alcohol Use Disorders Identification Tool (AUDIT) or its shortened versions, for example, the AUDIT-C (Pidd *et al*., 2006; Moore *et al*., 2012; Rodriguez-Jareno *et al*., 2013; Pidd *et al*., 2018). The AUDIT is a gold standard screening tool that helps with identifying the different risk levels associated with alcohol intake (Babor et al., 2001). It is worth noting, however, that the consumption level/patterns data obtained in these studies were based on employee self-report, therefore the potential for underreporting and social desirability bias may have been present. Counselling, education, leaflet provision and employee assistance programs were highlighted as health-promoting interventions for employees. However, it was not clear whether the support or interventions offered where based on the different AUDIT identified risk levels or not.

Going beyond policy presence; some studies analysed the policy content, and found that this tended to target mainly heavy or dependant drinkers Harkins *et al* 2008. While the benefits of prevention in non-dependant drinkers is acknowledged; one study reported employers' and employees' lack of interest in prevention because they perceived the role of the workplace as being concerned with job performance, and legitimate intervention through policy and practice when a worker exhibits visible problems with dependency that impact on their job performance Eriksson *et al*., 2004. Alcohol was not considered a problem in the workplace, and the expectation that workplaces can truly serve as an arena for health promotion was viewed as idealistic Eriksson *et al*., 2004.

Some studies referred to the limited reach or influence of AWP outside of working hours. In these studies, employees who reported abstinence during work hours were also amongst those that indulged in heavy drinking after work Harkins *et al* 2008; Moore *et al* 2012. However, not all workers who drank heavily outside of work had problems in their job performance; therefore it again raises the issue of whether the workplace can legitimately impose standards of drinking on the private lives of employees outside of work Eriksson *et al* 2004; Harkins *et al* 2008; Moore *et al*., 2012.

Theme 2: Deterrence

From an employment perspective, Pidd *et al* 2006 and Larson *et al*., 2007 identify that organizations with robust alcohol policies deterred heavy alcohol users from applying for employment with them.

Furthermore, workers that had heavy or problematic alcohol use were more likely to change jobs more frequently than those who did not have problematic drinking.

From a drinking perspective, Zhang 1999; Pidd *et al* 2006; Larson *et al* 2007; Moore *et al* 2012; Rodriguez Jareno *et al* 2013; and Bush and Lapari 2014 present policy as a deterrent to staff drinking alcohol during working hours. Interestingly though, the study by Cheng and Cheng 2016 which explored the management of a policy that prohibited alcohol use on the premises of a construction company, highlights that this prohibitive policy did not necessarily deter employees from drinking. Employees merely found ways to smuggle alcohol into the workplace by concealing it in soft drink bottles. Furthermore, contrary to what wider research evidence has shown on inebriated employees and poorer performance, the Cheng and Cheng 2016 study outlined that employees expected to be provided with drinks containing alcohol while they worked, as they perceived these would help them work more effectively.

Theme 3: Policy and Programme Type

Policy presence was mentioned briefly in the first theme; however, it is worth highlighting that some studies provided further analyses around the effects or associations based on the type of policy or programme approach that workplaces had. Policy was seen to play an important role; however, some studies highlighted that using this as a lone solution to tackle alcohol problems in the workplace was unlikely to be effective, nor sufficient (Larson *et al*., 2007 and Brown *et al*., 2008). A common aspect in all but 3 papers (Pidd *et al* 2006; Moore *et al* 2012 and Cheng and Cheng 2016) was the adoption of a "programme approach" which consisted of policy as a fundamental element, alongside a variety of other elements such as employee assistance, referral pathways, occupational health support, staff training/education, rehabilitation, workplace design and promotion of consistent health messages. The holistic nature of the programme approach increased the likelihood of positively affecting the workplace and workers; and it was the hallmark of a safer and more productive working environment Wickizier *et al*., 2004 and Brown *et al*., 2008. Wickizier *et al*., 2004 for example established through their 7-year longitudinal study that the introduction of a drug and alcohol programme resulted in a significant reduction of occupational injuries. Pidd *et al* 2018, in one of the few experimental design studies on this topic, had the opposite finding- their implementation of a programme in the workplace did not have a statistically significant impact on reducing employee excessive drinking. Furthermore, it identified that the intervention group drank more post-intervention than the control group. They observe however that the intervention group had higher drinking levels than the control group at baseline and that the effect of seasonal drinking may have influenced the result.

There was a comparison of the different types of policies and programme approaches; and these ranged from detailed and universal/comprehensive types, through to those that were more basic (Eriksson *et al*., 2004; Brown *et al*., 2008; Moore *et al*., 2012; Rodriguez-Jareno *et al*., 2013 and Pidd *et al*., 2016). For a policy or programme to be regarded as comprehensive or universal, it often went beyond alcohol education, awareness-raising and signposting; and included additional aspects such as involving staff in the development and implementation of policies, developing monitoring systems

and regular evaluation. Comprehensive or universal policies also emphasized capacity building for managers to undertake screening and alcohol brief interventions. Alcohol brief interventions are short, evidence-informed, structured conversations aimed at motivating and supporting individuals to change their drinking behaviour in order to reduce the risk of harm. Policies and programmes that were more comprehensive, had a beneficial influence by increasing the likelihood of employee help-seeking, better attitudes towards alcohol and creating a shared sense of ownership of policies and approaches taken by the workplace (Brown *et al*., 2008; Rodriguez-Jareno *et al*., 2013 and Pidd *et al*., 2016).

It was identified that even basic policies and programmes had a potentially beneficial effect on employee drinking; the concern, however, was for workplaces that did not have any policies or programmes at all. The percentage of employees reporting lack of AWPs (or were not aware of the presence of such policies) ranged between 20% to 40% (Zhang *et al*., 1999; Pidd *et al*., 2006; Larson *et al*., 2007; Harkins *et al*., 2008; Bush and Lapari 2014 and Pidd *et al*. 2016). Furthermore, employees who were heavy drinkers were most likely to report the absence of AWP, and three studies in this review demonstrated that this finding has remained consistent over time Zhang *et al* 1999; Larson *et al* 2007; Bush and Lapari 2014.

Generally, larger companies were in a better position in terms of alcohol policy presence and provision of employee assistance. However, working for a large organization was then associated with greater opportunities for employees to socialise and for those entering employment to become accustomed to the group norms for alcohol consumption after work Pidd *et al* 2006. For smaller organizations, opportunities to have close-knit relationships, easier supervision and surveillance of employee drinking restricted employee consumption to some extent Pidd, *et al*., 2006. However, these smaller companies were less likely to have alcohol policy or employee assistance; with reasons such as cost of purchasing employee assistance programmes implicated as a barrier Zhang *et al*., 1999; Larson *et al*., 2007; Harkins *et al*., 2008 and Cheng and Cheng 2016. The issue of resource allocation is said to differ

Theme 4: Knowledge and Understanding

Almost all studies referred to knowledge, awareness, and understanding of policy (and programmes) on alcohol in the workplace. Some reported an increase in staff policy awareness levels by measuring this before and after implementing programmes that included awareness-raising and alcohol education (Koeppe, 2010; Rodriguez-Jareno *et al*., 2013 and Pidd *et al*., 2018). Other papers analysed annual household survey data and established an increase over time in knowledge, awareness levels and the number of employees reporting working for companies that had policies (Zhang *et al*., 1999; Larson *et al*., 2007; Bush and Lapari 2014). The programme approach was credited with increasing the likelihood for staff to be aware of the policy and to also have an idea of what support was available if they experienced problematic drinking. One study highlighted that this then increased the chances of staff seeking help if they needed it (Pidd *et al*., 2018). Findings from the wider literature also recognize the link between knowledge or awareness of alcohol policy and a greater likelihood for managers to

initiate interventions within the workplace (Elling et al., 2020). However, as seen in this review, awareness of policy did not always equate to an understanding of policy. This was demonstrated in the study by Moore *et al*., 2012, where restaurant employees felt confused by the details of the workplace policy on alcohol consumption. Confusion was also evident in Cheng and Cheng 2016, where construction workers reported that despite having a policy which prohibited alcohol use in the workplace; employers' actions undermined this by allowing vendors to sell alcohol to workers on-site. Furthermore, some managers also offered alcohol to employees during the working day.

The approach that organizations took to policy development was of noteworthy mention; for example, if they did not involve staff in its development, employees were less likely to be aware of the policy content, or even that it existed. Some studies showed statistically significant associations between awareness of policy or programmes of staff support, and worker demographics such as age, gender, ethnicity, and education attainment (Larson *et al*., 2007; Harkins *et al*., 2008; Moore *et al*., 2012; Bush and Lapari 2014). Harkins *et al*., 2008 refer to workers instinctively knowing that a policy would at the very least highlight required professional behaviour, that is - refraining from drinking alcohol at work, and not attending work while inebriated or hungover.

Theme 5: Enforcement & Discipline

Moore *et al*., 2012 highlight the relationship between workers' understanding of policy and outcomes on policy compliance or violation. The participants in this study gave narratives of colleagues who had lost their jobs as a result of their drinking, and they viewed policy enforcement in these circumstances as fair and handled according to the policy guidelines for managing problematic drinking. There was a sense however, that fear of disciplinary action or loss of a job was a driving force behind most employees' likelihood to comply with the policy. Contrary to the findings in Moore *et al*., 2012; Cheng and Cheng 2016 highlighted a different response in employees when workplace context is taken into consideration. They found that participants did not fully adhere to the prohibitive "no alcohol" policy in the organization and they were ambivalent about any consequences of violating the policy. They were outsourced employees under precarious work conditions, on short term, insecure contracts with no employee benefits or assistance/support per se; therefore, the consequence of being fired for drinking alcohol at work was not a deterrent because they were already used to frequently moving from one work project to another, and they could simply just find another job. Alcoholic drinks in this instance were viewed as a perk, and something to look forward to. In the Brown *et al* 2008 study of apprentices, although they had the same employee rights and benefits as full-time workers, they were on fixed-term contracts. The temporary nature of the employment was seen as a potential contributing factor to the decisions that workers made to engage in workplace social drinking culture with colleagues irrespective of what policy dictated. Their desire being to engage with their colleagues, become part of the team and increase the chances of securing a full-time job at the end of the apprenticeship.

Workers generally adhered to alcohol policy more closely if they felt their manager or supervisor would enforce it Moore *et al*, 2012. A variety of factors such as company size, manager's drinking

habits and positive attitudes towards alcohol consumption more generally, were cited as factors that affected whether alcohol policy was enforced or not, and the ways or extent to which it was enforced Cheng and Cheng, 2016. Having a policy meant managers felt reassured about having a guide on the types of action or interventions they could pursue where problematic employee drinking was highlighted. Harkins *et al*., 2008, in particular, observed that organizations that had policies in place were more likely to discipline workers for their drinking than those that did not have policies. Furthermore, they noted differences between industries in terms of the approach to managing alcohol problems at work, with health and social care organizations being more likely to offer support, signposting and rehabilitation than disciplinary action when compared to other industry types.

AWP has been known to focus on employee performance management and discipline. It would seem this may still be the case for some organizations, for example, the Harkins *et al* 2008 report identified that some organizations managed alcohol problems in the workplace using a "disciplinary code" instead of a policy. The wording of this carries and perpetuates the fear of disciplinary action or the loss of a job, which may consequently prevent employees from highlighting or seeking support for any problems they may have with alcohol. Brown 2008 recommends that an effective workplace policy approach should be heavily weighted towards support, rehabilitation, and access to counselling, than on punishment and discipline. The extent to which this is achievable and the conditions that would make this a possibility requires further empirical exploration.

Discussion

This integrative review sought to capture and synthesize literature regarding the impact that AWPs have on organizations and to establish whether the policies can influence employees. The five themes that emerged encapsulated what the papers concluded on this. For example, an important effect on the workplace was demonstrated by the evidence that linked AWPs with a reduced risk of workplace injuries. This suggested that AWPs contributed to creating a safer work environment. Wider literature acknowledges the risks that inebriated or hungover employees can pose to workplaces (Alcohol Concern, 2014). The review shows that to mitigate this negative impact, the introduction of AWP can serve as an effective health and safety strategy Pidd *et al*., 2006. Workplaces have a legal duty to ensure the health, safety and welfare of employees (Trade Union Congress, 2019). Developing policies (such as alcohol workplace policy) would symbolize organizational commitment to this duty (Health and Safety Executive, 2019). However, this literature review reveals that not all workplaces have AWPs. More specifically, up to 40% of organizations from a broad range of industries, (Education, Building & Construction, Health, Industrial, Leisure & Hospitality, Office, Retail Shops, Service, Transport, Charities, & Social Housing) did not have these in place. Similar statistics regarding the absence of AWPs are seen elsewhere in the literature (CIPD, 2007). Arguably, there is a potential for measurement error within the studies reviewed because employees may perceive an absence of policy even in situations where policy exists (and they are just not aware of it). Nevertheless, as the paper by Zhang *et al*., 1999 highlights; having an alcohol policy that employees are 'not aware of' will have limited influence over consumption behaviour. The lack of policy coverage might be explained by the fact that employers are not mandated to develop and use AWPs (Pritam and Hale 2010), and the choice to adopt these or not, is discretionary (Paton, 2012). More empirical work is required to

fully understand the limited uptake and any factors that might influence or hinder the development of policies for alcohol in the workplace.

With regards to influence on employees, this review found that in most cases, the presence of AWP contributed to reducing the likelihood of heavy or hazardous drinking. This was seen particularly in organizations that adopted a more comprehensive approach that incorporated alcohol policy alongside other interventions such as employee assistance, alcohol harm reduction education, access to counselling, occupational health support and rehabilitation. These additional interventions provided opportunities to support behaviour change; which is complex and dependant on a variety of factors such as personal circumstances, resources, and motivation (Kelly and Barker, 2016). Comprehensive policies and programmes also resulted in longer term benefits to employees and workplaces Brown *et al*., 2008 and Rodriguez-Jareno *et al*., 2013, however, the issue of cost was identified as a barrier to adopting comprehensive approaches for managing and regulating workplace drinking. It is important to note that this review also showed all types of policies and approaches, even the most basic ones, still benefitted workplaces and their employees. Therefore, organizations can choose the approach that suits their budget and still derive some benefit.

The review identified a tendency for AWPs to disproportionately address dependant drinkers. Given that non-dependant drinkers who occasionally drink excessively make up a larger number of alcohol-related work performance problems (Weise et al 2000), policies that limit their focus to dependant drinkers only may be missing the opportunity to contribute towards health promotion, health improvement and primary prevention of ill health in all workers that drink alcohol. Rose's 1981 seminal work on the prevention paradox might apply here, however it is worth considering that greater workplace population health gains can be obtained by having AWPs that also aim to reduce alcohol misuse in the far larger population of non-dependant drinkers. Therefore workplaces need to ensure their alcohol policies and approaches cater to all employees (Harkins et al., 2008) because this will help maximise the opportunity to support health, well-being and safety at work. This will also allow for the provision of various interventions aligned with the employee's level of risky drinking. For example, in addition to signposting and support for those who are potentially dependant on alcohol - a policy that also addresses non-dependant drinkers would enable provision of alcohol brief interventions which are cost-effective, evidence-based workplace interventions that can reduce alcohol consumption in employees that are drinking at hazardous or harmful levels (Watson et al., 2015). Alcohol brief interventions are one example from a range of workplace interventions that can be used. It is important to highlight that the range of interventions are more likely to have a beneficial impact on drinking patterns if they are part of a comprehensive AWP that coordinates and brings together the whole workplace approach to addressing alcohol related harm (HDA, 2004).

Strengths and Limitations

The 14 papers represent a wide range of industries however the majority were from developed countries (mainly USA and Australia) where the dynamics between employees, employers, the workplace culture, drinking culture and economic context may differ from other countries around the world. Furthermore, the study designs used were predominantly cross-sectional surveys, meaning their findings were limited to establishing associations, but not cause and effect. A meta-analysis was not possible due to the varied methodologies used by the included papers. Instead, we carried out a

narrative synthesis using recognized guidance for synthesizing papers that use diverse methodologies (Popay *et al*., 2006). Every attempt was made to locate all relevant papers to answer the literature review questions; however, there is always the potential that some resources may have been missed. This review adheres to the PRISMA checklist for reviews, and a particular strength is the inclusion of papers from peer-reviewed journals as well as grey literature from non-academic sources. This minimised publication bias.

Conclusion and Implications for Research and Practice

What remains clear from this review is that despite the benefits to workplace safety and employee health and wellbeing; AWP remains an underutilised and missed opportunity for employee health promotion Pidd *et al* 2006. Not all workplaces have alcohol policies, and future empirical research should explicitly explore the reasons for this. Organizations are encouraged to develop and implement AWPs that address all employees who drink alcohol; not just those who are potentially dependant on it. Moreover, where possible, workplaces should consider adopting a comprehensive programme approach which includes AWP alongside interventions such as alcohol harm reduction education, brief interventions and counselling to promote and improve employee health.

Declaration of Conflicting Interests

None

References

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Appendix 1- Summary of Included Papers

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Grey Literature/Reports

Author, Year & Country	Setting / Industry	Aim	Participants & Methods	Main Outcomes	Quality Appraisal
Zhang et al., (1999) *USA*	Desk based research using data from national survey	To describe the nature of drug & alcohol use & show prevalence of workplace programmes (including policy) for reducing consumption To explore associations between workplace programmes /policies & employee use/consumption	Full time workers aged 18-49 years Secondary analysis of national survey on drug use & health	Workers reporting lack of workplace policy on drugs and alcohol were twice as likely (p <0 .05) to report heavy alcohol use than workers who reported policy presence Workers at smaller companies were less likely to report having drug & alcohol policy, employee assistance (EAP) and alcohol information than those at larger companies	89% (Good)
Larson et al., (2007) *USA*	Desk based research using 2002, 2003 & 2004 national survey dataset	To describe nature of drug & alcohol & show prevalence of workplace programmes (including policy) for reducing consumption To explore associations between workplace programmes /policies & employee use/consumption	115 million (full time workers aged 18-64 years) Secondary analysis of national survey on drug use & health	significant association (p<0.05) between less educational attainment & younger workers (18-25yrs old) and the reduced likelihood to report drug and alcohol policy availability, EAP, & education programmes offered in the workplace Across most demographic comparisons, those meeting criteria for alcohol dependence were less likely than those who did not meet the criteria, to report working for an employer who had educational programmes, written policies & EAP	76% (Good)
Bush & Lapari (2014) *USA*	Desk based research using data from national survey	To analyse survey data on substance use & health to present a variety of estimates of full-time workers who are employed by companies that provide workplace policy & programs on drug & alcohol	2003-2007 data (from 123,100 participants) compared with 2008-2012 data (from 111,500 participants) Secondary analysis of data from a national survey on drug use & health	Small but significant (p<0.05) increase in number of workers who worked for employers with a drug & alcohol policy - from 79.1% (2003-2007 annual average) to 81.4 % (2008-2012 annual average) Heavy drinkers less likely to report working for employers that have workplace policies when compared to those who drank less Females more likely than men to report working for employers with alcohol or drug policies & programs Younger workers (18-25yrs) less likely to work for an employer with alcohol or drug policies & less likely to be aware of policies	76% (Good)

Harkins et al., (2008) *Liverpool, England*	Education, Health, Industrial, Leisure & Hospitality, Office, Retail Shops, Service, Transport, Charities, Social Housing & Translation	To investigate the impact of alcohol on the workplace, & how companies manage this To look at existence of, and details in alcohol workplace policies	Mixed methods Telephone survey of 302 companies 10 interviews (participants from 10 companies) Survey of 62 employees (from the 10 companies where interviews done)	66.8% of businesses had policies - these were more likely to be larger more established companies, aged between 5-10 years. Much older or much younger companies less likely to have policies Businesses with an alcohol policy more likely to discipline an employee 75.5% think an alcohol policy is useful	97% (Good)
Koeppe, (2010) *Austria, Belgium, Czech Republic, Germany, Greece, Hungary, Ireland, Lithuania, Norway, Portugal, Slovenia, Spain, Sweden, Finland, France, Italy, Luxembourg, Pol&, Slovakia, Slovenia, UK*	Motoring, service, drinks industry, oil refinery, council, administration, production, trade sector, government agencies	To report on workplace policy and programme impact on harm reduction To share good practice case studies	Case studies reporting on good practice examples of policies & programmes	Range of alcohol policy & programme benefits reported, such as reduced sickness absence and increased productivity Review done (by Anderson 2010) as part of the first phase of this project concluded that there is limited empirical work on impact of alcohol workplace policies	53% (Moderate)
Rodriguez-Jareno et al., (2013) *13 European countries- Belgium,*	Manufacturing; Transport & storage; water supply sewage & waste management;	To share good practice in workplace-based methods for reducing alcohol related harm	**At country level** 12 countries (case study gathering phase) 11 countries (pilot intervention phase)	In areas with alcohol policy- workers were more aware about health conditions, had better attitudes regarding alcohol at corporate events, reported less risky consumption (among men) and less workers reported covering for colleagues	65% (Good)

Catalonia, Croatia, Estonia, Finland, Germany, Greece, Ireland, Italy, Poland, Portugal, Romania, Scotland	Chemical industry; Alcohol breweries & drinks businesses; Health & social work; Armed & uniformed services; Electricity gas steam & air conditioning supply; Gas/Fuel industry	To engage workplaces in innovative & evidence-based alcohol focussed interventions To measure impact of the interventions Prepare & disseminate a toolkit & policy recommendation for better workplace practice to reduce alcohol related harm	**At organisation level** 24 companies at case study phase 55 companies in the pilot interventions **At individual level** baseline surveys - employee (n= 5623) & employer (n=55) follow up surveys- employee (n=3810) & employer (n=54) 1:1 semi-structured interviews with key informants	Policy regarded as the most cost-effective single intervention acting as a deterrent, clarifying procedures for disciplinary action and support Basic interventions (including policy) had greater impact on workers alcohol consumption regardless of whether they were risky drinkers or not Comprehensive interventions (including alcohol policy) had greater impact on increasing employee help seeking	

Peer Reviewed Papers

Author, Year & Country	Setting / Industry	Aim	Participants & Methods	Main Outcomes	Quality Appraisal
Brown et al., (2008) ***Australia***	Agriculture	Explore employee perceptions & attitudes on the effectiveness of alcohol and drug policies	Survey 147 participants	Attitudes are a strong predictor of whether employees perceive alcohol or drug policies as effective or impactful Men and blue-collar workers were less likely to view workplace drug and alcohol policies as effective Employee perceptions of policy effectiveness were associated with perceptions that the organization was taking holistic preventative measures against drug or alcohol use. Policies were perceived as effective where employees viewed the organization as showing concern for the health, wellbeing, and safety of workers. Perceptions of policy effectiveness are higher when policies are clearly articulated, focused on rehabilitation, and they address work design and community involvement around alcohol or drug use. policy alone unlikely to be perceived as most effective in reducing alcohol or drug impairment	63% (Good)
Cheng & Cheng (2016) ***Taiwan***	Construction	Examine construction workers drinking & workplace alcohol management policies in the context of outsourcing	22 qualitative interviews with male outsourced workers Convenience sample	Policy has limited influence or effect when contextual factors such as outsourcing, size of company (smaller firms), subcontractors' own behaviour & attitudes to alcohol, precarious work conditions and low wages are considered Worker drinking on the job remained a popular practice despite the company having a prohibitive policy in place	80% (Good)
Eriksson et al (2004) ***Sweden***	Public & private companies (Industry types not explicitly mentioned)	To explore interest in alcohol & drug prevention in the workplace, including policies & programmes on prevention	54 telephone interviews in 16 companies, 6 focus groups Analysis of 121 policies/programmes	Limited interest in primary prevention within the workplace Staff believe there is little that workplaces can do to prevent staff from using alcohol, and that intervention is only appropriate when there is a clear alcohol problem Policies are formulated to meet regulatory requirements – but then they are consigned to a shelf to gather dust. Alcohol workplace policy seen as the best preventative method	60% (Moderate)

Moore et al., (2012) ***USA***	Bar chain	Explores the relationship between comprehension of workplace alcohol policy, policy compliance & consequences of policy violation	Mixed Methods Restaurant workers aged 18-29yrs old 67 semi-structured interviews (analysed using ATLAS.ti) 1294 telephone surveys (analysed through multivariate regression)	Policy deterred drinking in most workers during work hours (but not out of hours) Alcohol policy violation was associated with hazardous drinking ($p<.001$, OR=1.44, 95%CI 1.29, 1.62) and greater likelihood for hazardous drinkers to experience problems at work (BETA=0.084, $p<0.005$) Confusion about the policy specifics particularly in workers under 21yrs old. This reduced likelihood for policy to be adhered to	94% (Good)
Pidd et al., (2006) ***Australia***	Building & Construction	To assess associations between alcohol & other drug policies (& workplace factors) with drug & alcohol consumption/use patterns	Cross Sectional Survey Anonymous 300 participants full time, first year apprentices (15-22yrs old) SPSS & non-parametric statistics tests (Man Whitney-U, Spearman's Rho, Logistic regression & R)	Apprentices reporting presence of alcohol workplace policy were more likely to report lower consumption than those who reported policy absence Alcohol or drug policies significantly associated with consumption patterns for drugs & alcohol (with less likelihood to drink during work hours) Apprentices employed at a workplace with no policy were significantly more likely to report availability of alcohol in the workplace (x^2 (2)= 6.91, $p< 0.05$) & they reported higher work related consumption (x^2 (2) =9.37, $p<0.01$) when compared to those in workplaces with a policy or those that were not aware of one Alcohol availability, no policy presence & size of company significantly predicted work related use of alcohol (x^2 (5) = 8.35, $p<0.01$	75% (Good)
Pidd et al., (2016) ***Australia***	Desk based research- using data from national survey	To explore the prevalence & impact of alcohol & drug policy in Australian workplaces (using a nationally representative dataset)	Secondary analysis of data from the 2010 National Drug Strategy Household Survey (13,590 participants) Multinomial, logistic & multivariate regression analyses of relationship between policy & health behaviour	Workplace alcohol and drug policies are associated with significantly decreased odds of high-risk drinking (OR: 0.61) use & use with assistance policies showed even greater odds of reduced high-risk drinking (OR: 0.64 & OR: 0.43 respectively) 25% of workplaces did not have an alcohol and drugs policy	63% (Good)

Pidd et al., (2018) ***Australia***	Manufacturing	To examine 4 strategies to reduce workplace alcohol related harm – using a holistic approach	Cluster Non randomised controlled trial 284 participants 4 sites (2 intervention, 2 comparison) SPSS, MCAR, MLE, T tests, & post-hoc analysis	No significant intervention effect for reducing risky drinking Unexpected finding of intervention group having higher AUDIT-C scores (riskier drinking) than the control group at T3. Post-intervention analysis, there was a significant intervention effect for raising policy awareness ($p<0.02$) with odds of intervention group being aware of policy being 48% higher than comparison group (Confidence Interval 29.3-88.9%).	89% (Good)
Wickizer et al., (2004) ***Washington State, USA***	Companies in Washington State (mining, agriculture, fishing and forestry, manufacturing, transportation, wholesale and trade, finance, insurance, real estate, services	To assess/evaluate the impact of a publicly sponsored drug-free program on reducing occupational injuries	Pre-post quasi-experimental design with non-equivalent comparison group 261 companies in the drug free workplace programme (intervention group) assessed against 20,500 (non-intervention group) Longitudinal (7 years)	The drug free workplace programme showed a statistically significant ($p< 0.05$) but selective industry specific impact on reducing occupational injury Programme significantly associated ($p< 0.05$) with reduction in incidence of serious injuries that required 4 or more days off work particularly in construction services and manufacturing industries The study did not analyse the effect of individual programme elements - so it is unclear if the alcohol workplace policy element alone would have an impact on reducing occupational injuries	78% (Good)