

EXPLORING THE IMPACT OF ALCOHOL ABUSE ON CONSTRUCTION SITES IN SANTO DOMINGO, DOMINICAN REPUBLIC

Kenneth Lawani¹, Billy Hare, Iain Cameron and Laura Maria Ibert Soto

*School of Computing, Engineering and Built Environment, Glasgow Caledonian University,
Cowcaddens Road, Glasgow G4 0BA, UK*

The construction industry in Santo Domingo, Dominican Republic grapples with problems of unregulated and harmful alcohol consumption by workers and this directly have an impact on workplace safety. This study fills the gap in literature related to the harmful consumption of alcohol by construction workers and the need for policies to be implemented that could regulate harmful alcohol consumption amongst construction workers in Santo Domingo. A qualitative approach using purposeful sampling was adopted to evaluate the perception of workers in the construction sector. A total of 12 in-depth semi-structured, open-ended interviews with workers undertaking different roles were conducted until saturation. The initial findings suggest that alcohol is used as a coping mechanism by workers to deal with situations related to financial, emotional and personal difficulties. It also indicated that heavy drinking is not considered as an addiction, but as part of the cultural norms, habits and way of living. Although instances of harmful alcohol use link with incidences within the workplace; there are no formal regulations in place to encourage, mitigate and educate workers within the industry. Rather, offenders are casually dismissed off site only for them to get back on to the project next day. To achieve meaningful change, adopting formal policies and procedures, involving stakeholder collaboration, education and raising the awareness and the impact of harmful alcohol consumption should be considered. The limitation of this study was the lack of access to a more diverse participant base due to the sensitive nature of the topic. This initial study is a precursor for further in-depth investigation.

Keywords: alcohol, health and wellbeing, safety, Santo Domingo, safe working

INTRODUCTION

The economy of Dominican Republic (DR) mainly relies on free trade zone industry, tourism and construction (Nowak, 2018). The construction sector experienced major growth in the 1990s and over the years, it has remained consistent, dynamic and with high retention of migrant workforce (Petrozziello, 2012). The consumption of alcohol in the DR is perceived as a normal way of life with resulting consequences of the alcohol-influenced behaviour sometimes overlooked and this is also analogous to other Latin American regions, (Pan American Health Organization, 2007).

The construction industry in DR is perceived to adopt a similar ‘not much of a problem’ approach around issues involving alcohol misuse and this can have

¹ kla2@gcu.ac.uk

detrimental impact; irrespective of geographical location of workers this often lead to irregular working schedules, mental health of workers, lack of workforce engagement and work-related accidents (Roche, *et al.*, 2012; Ntili, *et al.*, 2015; Shield *et al.*, 2015; Lawani *et al.*, 2019). Issues related to global excessive consumption of alcohol which often result in significant risk to the health of individuals has been at the forefront of The World Health Report (Monteiro, 2007). The work of Sherratt (2018) indicated that the levels of stress, the occupational norms and workplace issues could translate into high levels of alcohol abuse, smoking, overeating and drug use. These aforementioned characteristics coupled with availability of substances; a significant time and distance working away from families; and economic concerns place construction workers in a cycle with these unique risks (Roche *et al.*, 2012; Ntili *et al.*, 2015).

In the Americas, the excessive consumption of alcohol is significant for countries ranked as low and middle income. For developing countries such as the DR, the perilous volume of alcohol consumed and the harmful patterns of use has become a health and safety related burden, with minimal or non-existing legal enforcement (Monteiro, 2007). However, the UK that previously adopted rigorous enforcement-based safety approaches on construction sites is gradually moving towards safety-culture programmes (Sherratt *et al.*, 2013) as well as management systems designed to mitigate hazards in the workplace; whilst in developing countries, safety implementation and initiatives are not always a top priority (Dorji and Hadikusumo 2006). Putting Santo Domingo into context, there are still some unknowns in terms of the worker's perception regarding the need for treatment for alcohol misuse; and there is a dearth of studies conducted in the Americas and DR regarding the impact of harmful alcohol consumption and the workplace (Cherpitel, *et al.*, 2013; Edlund, *et al.*, 2009).

The Blurred Line Regarding Alcohol Misuse in the Dr Construction Sector

Alcohol and illicit drug use have formed part of people's lives as an alternative to alter mood and as well as being part of certain customs or cultures (Mushi and Manege, 2018). The construction industry has consistently and statistically significantly ranked very high for illicit drug and alcohol use when compared to other industries (Tan and Lloyd, 2016), with male-dominated industries presenting the highest levels of alcohol misuse. Additionally, alcohol represents the most used and abused psychoactive substance by construction workers, with the sector having one of the highest rates of heavy alcohol use (Bush and Lipari, 2015; Rajeshkannan, *et al.*, 2018). Mushi and Manege (2018) identified motives behind the consumption of alcohol and drugs and that these are directly or indirectly related to the workers themselves. The construction site is considered as a high-pressured, high-hazard work environment and any likelihood of worker impairment can have significant consequences on the worker and those involved on the project site. The very nature and pressure of construction work, including coming in contact with hazards on a daily basis (Biggs and Williamson 2012), are some of the resultant factors that could trigger workers getting involved in excessive alcohol consumption.

Although Ntili, *et al.*, (2015) highlight that alcohol abuse can be swayed by attitudes, beliefs, social patterns, affordability, acceptability, advertisements and its availability; the World Health Organization (WHO) identified that harmful consumption or use, can damage the health and social environment of the drinker and those around, such as family, friends, and co-workers (Flannery, *et al.*, 2019). In the Americas, drinking is linked to social-cultural activities like social gatherings, and alcohol consumption is

also vital to closing out deals with profound cultural roots, beliefs and customs (Japal and Benoit, 2017). McIlwaine and Moser (2004) revealed that the level of acceptance of alcohol in Colombia mirrors the common trend in Latin America, where it forms part of the life of individuals and the social activities of communities. This is however in stark contrast with the use of drugs which is seen as shameful, whilst heavy drinking in large quantities in short periods or binge drinking is interpreted as a norm.

The adult per capita consumption of pure alcohol in the Latin American region has been on the increase since 1961; an average of 7.14 litres over a calendar year above the world average of 6.1 litres, (Cherpitel, *et al.*, 2013; Shield, *et al.*, 2015). The health burdens related to excessive use of alcohol or illicit drug use affect all stages of life; resulting in multiple ill-health conditions, violence and risky health and safety behaviours (Delker, *et al.*, 2016). Alcohol consumption is considered as significantly problematic in Latin America, accounting for an incremental rise in the number of early death and disabilities; and with over 200 diseases and disabling conditions (Dohn, *et al.*, 2014; Japal and Benoit, 2017). However, the trend of alcohol intake has not been extensively investigated for the DR; where levels of consumption over a calendar year (94% beer and spirits) has seen a sharp rise from an average per capita of 1.18 litres in 1961 to 6.70 litres in 2010 and 6.90 litres of pure alcohol in 2016 according to WHO. The World Health Organization (WHO) and the Pan American Health Organization (PAHO) indicate that the DR has higher number of men experiencing long-term risk associated with alcohol consumption as well as being one of the countries with the highest percentages for women in the Americas. Also, DR has no national policy or action plan regarding mitigating the use of alcohol; no restriction for on or off-premise sale of alcoholic beverages; no legally binding regulations on alcohol advertising or product placement and no legally binding regulations on alcohol sponsorship or sales promotion. Therefore, work-related pressure resulting from extended and long working hours, long commute to job sites, meeting tight deadlines, lack of job control or autonomy, excessive and conflicting demands, inadequate training, poor working conditions, and the temporary nature of projects and employment all impact on construction workers based on the ever-changing and rising levels of work-related stress in the sector (Dohn *et al.*, 2014; Japal and Benoit, 2017; Flannery *et al.*, 2019).

Ntili *et al.*, (2015) shows that although there are multiple root-causes regarding alcohol abuse, the consumption of alcohol by construction workers is often as a substitute for coping with the challenges of their work environment. Flannery *et al.*, (2019) also identified how the workplace can influence alcohol use as a coping mechanism and concluded that one in three men traced their poor mental health to the stress and pressure related to the workplace and the 'macho' attitude in the work environment. Sherratt *et al.* (2017) evidenced that construction workers have a tendency to smoke, use illicit drugs and harmful use of alcohol with higher than average rates compared to other industries, and these can be directly related to absenteeism, presentism, interpersonal conflicts, job turnover, poor performance and reduced productivity (Kenley *et al.*, 2012). The consequences of excessive alcohol consumption can result in short-term behavioural, cognitive and physical changes; including symptoms like slurring, diminished hand-eye coordination and reaction time, lack of consciousness, reduced perception, lack of attention and coordination and all these factors can increase the possibility of workplace injury for the individual, work colleagues or the public (Foster and Dissanaik, 2014). Despite the possible link between alcohol abuse and the risk of injury on worksite, studies intended to reaffirm

this relationship using samples from multiple nations have posited no relevant connection between substance use and traumatic injuries in the workplace, (Veazie and Smith 2000). However, global policies such as the Sustainable Development Goals of 2030 and the World Health Organisation's Global Target strategy intends to confront the harmful use of alcohol by increasing the prevention and mitigation of alcohol abuse through the following objectives - incorporate increasing taxes on beverages, enforcement of restrictions on marketing and promotion, the implementation of restrictions on the availability of liquor and advocating for policies by the respective society.

Rationale

The construction industry is among the top three contributors to the DR's economic growth with 10.6% in 2018. Santo Domingo (capital of the DR) is a thriving city, with the construction sector being one of the net employers of labour and currently boosting the country's economy. However, construction work in Santo Domingo as in other developing countries is very much unsafe and unregulated coupled with other inherent health and safety risks associated with construction projects. Despite studies alluding to the possible harmful effects of alcohol in terms of health and safety in the construction sector, the levels of liquor consumption per capita in the DR exceeds the average global standards and research is needed to address this paramount issue in construction. This study explores the impact of alcohol consumption on daily tasks on construction sites in Santo Domingo and the initiatives in place to mitigate against the effects. Therefore, this study addresses the following objectives: investigating the leading indicators of harmful alcohol consumption and impact on construction sites; evaluating the effects of alcohol and safety on construction sites; and examining policies or strategies in place to mitigate the consequences on construction sites.

METHODOLOGY

To adequately contextualize this study, it was ideal to address it through the lens of the construction workers (different job roles) based on their perception of the industry and the impact on job site safety. The study adopted qualitative phenomenological approach focusing on how participants understand and attribute meaning to specific events (Creswell, 2014; Creswell and Poth, 2017; Creswell and Creswell, 2018). The phenomenological interpretive approach was implemented to collect the data necessary to explain the phenomena of alcohol consumption of construction workers from the viewpoint of the workers. This approach describes the lived experiences of a phenomenon for single or several individuals (Creswell, 2013) by conducting interviews with workers in Santo Domingo regarding harmful consumption of alcohol. This type of description concludes in the core of the experiences of the workers that have experienced the phenomenon of alcohol abuse. A qualitative approach was adopted by collecting data within an informal setting within the workplace. The study readapted and used the World Health Organisation Alcohol Use Disorders Identification Test (AUDIT) questions and the work of Ntili, *et al.*, (2015) on the impact of substance abuse in construction to develop a semi-structured interview for workers in Santo Domingo.

Sampling

Qualitative research method was employed to research the causes, effects and strategies in place regarding harmful alcohol consumption in the construction industry. Purposive non-probability sampling strategy was adopted as the most appropriate to ensure standardized job profile for participants working in Santo

Domingo construction sector and also due to the sensitive nature of the topic under consideration (Creswell, 2014; Creswell and Poth, 2017). Access to participants was facilitated through industry contacts, adopting convenience sampling. It was important not just to identify individuals that work in the construction industry, but those willing to share their perception on the issues of harmful alcohol consumption in Santo Domingo as well as proffer insight into the current measures in place to mitigate substance misuse in the industry. The participants held management and technical positions and their understanding of the subject matter, perspective of the causes, impact and sensitivity of the issue made them ideal participants. Getting labourers involved in this study proved difficult as employers were not willing and committed to free up time for the labourers to participate.

Semi-Structured Interviews and Data Collection

The adoption of the phenomenological study involves different data collection strategies predetermined by either the type of interview or the use of non-numeric data analysis (Creswell, 2014; Creswell and Poth, 2017). The study collected information based on the perception of the individuals regarding harmful alcohol use. The in-depth semi-structured, non-leading open-ended interview was the most suitable approach to enable the gathering of relevant information on the issue and to allow the exploration of a sensitive topic through the eyes of the participants. The interview was developed and implemented following a logical order to enable participants offer their perceptions on the issue. It is important to state that the native speaking language in the DR is Spanish and the interviews were all conducted in this language as participants felt more comfortable being engaged in their native language. The interview questions were translated from plain English to Spanish, while the interview responses were transcribed and translated verbatim from Spanish to plain English by the researcher who is bilingual. The interviews involved participants within the technical and managerial positions, such as foremen, supervisors and field engineers with a minimum of two-years construction site experience in Santo Domingo. A total of 12 in-depth interviews were conducted with the participants until saturation (Charmaz, 2014). At this point in the interview process, no new information emerged from the interviews, and responses led to the same conclusions with recurring keywords. The interviews lasted from 20 to 35 minutes, with each individual interview an average of 25min of which harmful alcohol consumption was the main subject. Each participant was requested to willingly review the transcribed texts for accuracy after the interview phase.

FINDINGS

Harmful alcohol consumption is widespread in the Latin American countries and there is dearth of studies specific to the DR, and in particular to workers in Santo Domingo construction industry. This exploratory study acquired primary data using interviews with participants having between two and 30-years hands-on construction site experience in Santo Domingo, see Table 1.

The interviews related to the causes of harmful alcohol consumption revealed that workers rationalised their consumption of alcohol stating that it helps them forget their financial, emotional and family issues. Other responses from workers identified issues associated to the amount of work-related pressure and stress, and Ntili *et al.* (2015) alluded to this same idea that workers use substances such as sedatives to deal with the high levels of stress, financial situations or past traumas.

Table 1: Role and years of experience of participants

Job Role	Experiences in Years
2 Site Project Manager/Civil engineers	4 and 3
2 Foremen	21 and 8
1 Plumber	25
1 Floor polisher and cleaner	10
3 Project supervisors	6, 3, and 3
1 Project Inspector	2
1 Civil Engineer/ Supervisor	3
1 Civil Engineer	30

Leading Indicators of Harmful Alcohol Consumption and Impact on Construction Sites

The interviews indicated that workers use alcohol as an alternative ‘to clear their minds’ while some consume harmful alcohol to deal with workplace resentments, to relieve work-related stress, and for general relaxation. It was also clear that not all participants identified alcohol consumption as harmful or negative, by highlighting that people drink ‘to have a good time or simply because they like the taste’, and most importantly, it is part of their culture. The workers associated alcohol consumption as part of the custom of DR and personal lifestyle choice, which ties with the work of Mushi and Manege (2018) regarding the direct causes for alcohol consumption, relating it to traditions, customs, lifestyle or peer pressure. The participants acknowledged that heavy or harmful drinking is a common occurrence in the construction industry, however, majority of the participants overwhelmingly do not consider if heavy drinking represents or should be classed as an addiction problem that needs intervention.

...the consumption of alcohol is an acceptable part of the lives of workers after work hours, which means that as long as this activity is done outside work hours, it is not a matter of concern for employers.

The feedback from the interviews revealed that issues around accident causation, worker performance and productivity impairment, and physical wellbeing resulting from harmful alcohol consumption was not considered as managements responsibilities because workers indulge in such activities outside of the work environment. Also, the growing evidence over the consumption of alcohol amongst construction workers in Santo Domingo and its impact on site safety are not particularly considered as managements primary responsibilities. The consequences of this in-action could pave way for management to blame workers for wider issues related to job site management failures, but this could also indicate the lack of genuine benevolence from management (Frederick and Lessin, 2000; Lawani *et al.*, 2018).

Evaluating the Effects of Alcohol and Safety on Construction Sites

Participants agreed that consistently overindulging in harmful alcohol consumption could impact on the safety and health of construction workers, with consequences on cognitive performance related to issues that affect productivity and site safety. Ntili *et al.*, (2015) identified that substance misuse can potentially lead to health hazards and a danger to the lives of other construction workers which is similar to the case of harmful alcohol consumption.

...fainting during working hours due to dehydration caused by excess alcohol intake”, was an example cited by a project supervisor as a condition that is quite common with some particular set of workers.

A few days ago I had a worker who was vomiting, although the reality is that he usually gets to work under the influence of alcohol and because of this, he puts the job/the company in a bad position because he fails to fulfil his requirements on the necessary amount of days and delay the general schedule. The truth is, he works well, and he's mostly a Monday drunk.

Some of the participants indicated that the recurrence of this type of case is often overlooked mostly when it involves a worker that is exceptionally skilled in specific craft and executes quality work. Such actions from a worker could potentially jeopardise on-site safety and productivity, and such intoxicated workers are simply told to “come back to job site the next day” and then pressured to complete their task to maximise lost time and to meet deadlines. Participants also identified that workers that are hung-over often display signs associated with difficulties in task completion and this could result in even more complex social consequences, like the increased probability of making mistakes and exposing other workers to harm, (Schofield *et al.*, 2013).

Examining Policies or Strategies to Mitigate the Consequences of Harmful Alcohol Consumption

The participants identified the lack of adequate strategy, and the inconsistency in terms of policies and enforcement on construction sites regarding addressing alcohol and drugs related issues.

Although it is not a mandatory practice, some companies do random testing to check for alcohol consumption; however, most testing usually occur when there is already a case of intoxication and not as a measure for prevention.

There is conflicting evidence regarding alcohol testing, e.g., the British Medical Association identify that despite random testing becoming a common practice in the United Kingdom and the United States, its benefits in terms of reducing occupational injuries are still uncertain.

Some project sites in Santo Domingo adopt an approach where:

Every foreman, before work begins visually assess their workers so that none of them enter the construction zone under any apparent influence of alcohol.

This policy of assessing workers acts as a deterrent to those under the influence of alcohol from entering the job sites and not exclusively leading to sanctioning or dismissal. There are no regulatory or legal limit regarding alcohol consumption in DR, but with the influx of migrant construction workers from Haiti, the participants agreed that they have experienced fewer cases of worker intoxication on site which they associated to the migrant workers' culture or religion. The participants established that there are currently no unified formal management measures or procedures adopted by the industry to curtail or control the misuse of alcohol by construction workers. However, very few companies are beginning to independently implement random use of breathalysers or random blood testing to ensure that workers enter the site sober, and that a system of consequences or penalties for the individuals that violate the regulations should be in place whilst raising awareness and providing education.

First, raise the worker's awareness of the danger of working under the influence of alcohol and give them workshops on the negative effects of alcohol on the work area...

Behavioural-based safety initiatives (Frederick and Lessin 2000) or programmes that can educate or raise the awareness of the impact and consequences of harmful alcohol consumption should be introduced in a number of ways during pre-employment (proactive), post-accident (reactive and lessons learned), randomly, or because of reasonable suspicion, (Schofield *et al.*, 2013), with the aim of mitigating harmful alcohol use for current and future workers.

CONCLUSION

Research on the theme of alcohol abuse by construction workers in Santo Domingo is rare. Although the consumption of alcohol is considered as part of the culture and customs of DR, the introduction of higher taxation or minimum pricing unit for alcohol and tighter availability restriction measures like limiting alcohol sale outlets and their opening times and minimising prime time advertisements are measures capable of influencing consumer behavioural change. The consumption of alcohol in DR is generally seen as a social way to relax or for people to psychologically escape from their personal issues. However, harmful consumption behaviour comes with burden of disease and introducing policy options such as increasing the minimum age to legally buy and consume alcohol might be an effective way to minimise long-term health, wellbeing and safety impact. Working under the influence of alcohol can affect task quality, reduce performance and potentially increase the likelihood of an accident happening within the workplace. Therefore, the management should reassess their safety and engagement practices that encourage and grant unhindered access to job site without penalties just because workers under the influence have valuable trade skills. Such actions could pose a major safety risk to other workers and the cost of alcohol-related accident far outweigh the cost of getting the job done. There are no formal alcohol policies regarding alcohol misuse for construction companies to adopt and even if there are, such policies take time to develop and to be unanimously adopted. Few organisations have measures in place to assess workers for alcohol consumption at the start of a shift and to prevent unsafe behaviours and improve site safety; these type of screening measures being introduced have no immediate intervention actions for workers considered as needing treatment for alcohol dependence or harmful use. Also, construction workers rarely undergo any form of education or training on health, site safety and psychological wellbeing and the introduction of initiatives that could promote these would be immensely beneficial to workers. The limitation of this study is that the findings cannot be generalised and may not represent the entire Santo Domingo. However, the findings could serve as a roadmap to further initiate a holistic and more extensive set of participants from multiple jobsite across DR. The sensitive nature of the topic being investigated could also lead to particular bias or reservations from participants involved in the study.

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