The Role of Human Values in Behavioural Safety

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Abstract
Whilst behavioural based safety (BBS) is not new and is even becoming increasingly common, especially among large construction organisations; research on BBS and hence its implementation has paid limited attention to the role of innate drivers of behaviour, particularly human values (e.g. individual worker values). It is argued in this article that there is a need for empirical studies in this area towards the generation of fresh insight that could be valuable for designing more robust interventions for strengthening BBS programmes.

Keywords: occupational health and safety

1. Introduction

Occupational safety and health (OSH) is a concern in the industrial sectors of many countries around the world. In the construction sector the concern is even much greater as many occupational injuries, deaths and illnesses are recorded within the industry. For instance, it has been reported that, in the Australian construction industry, there is an average of 46 compensated fatalities per year (Lingard et al., 2010) and in USA this sector accounts for about 21% of all occupational deaths from injuries (Hallowell and Gambatese, 2009). Like these countries and several others, the UK construction sector also has an unenviable reputation in terms of OSH performance. This article highlights the state of OSH in the UK construction industry, the role of behavioural based safety (BBS) as part of OSH improvement efforts, and the need for more research into BBS, focusing on the potential effect of individual worker values on safe work behaviour.

2. OSH in the UK construction industry and the role of BBS

Accidents are relatively commonplace on construction sites in the UK resulting in human tragedies such as deaths, injuries and illnesses (HSE, 2014). Associated with these tragedies are economic costs such as fines and costs from prosecution, claims on employers, insurance, damage to buildings and equipment or vehicles, expenditure on medical care, cost of investigation, and cost from disruption of construction processes and delayed progress (Hughes and Ferrett, 2011). It is estimated that the annual economic costs resulting from injuries and illnesses in UK construction is circa £1 billion (HSE, 2014). Beyond the economic costs are also social costs such as the pain and suffering of the affected workers, lowering of employee morale, determent of workers from entering the industry, and the emotional and psychological impacts caused to friends, families and co-workers of the affected workers (De Saram and Tang, 2005).

Although over the past decades improvements have been recorded, injury and ill-health statistics (see HSE, 2014) show the current situation still leaves much to be desired. Acknowledgement of this need for further improvement is evident from common industry initiatives and straplines such as “target zero”, “incident and injury free”, and “one death is too many” taken from the Donaghy Report for the UK government (Donaghy, 2009). Efforts to address the OSH problem in the industry have been widespread covering legislation, government initiatives and non-government industry-wide initiatives (Hughes and Ferrett, 2011). As the understanding of the factors responsible for injuries, deaths and illnesses is crucial to the development and implementation of sound policies and measures across the industry, numerous OSH studies have also been conducted. These studies have shown that, whilst construction accident causation is complex, two broad causal factors are often at play: proximal factors (including behaviour/unsafe acts by front line workers); and latent/underlying factors attributable to management/organisational and other pre-construction factors (Haslam et al., 2005; Manu et al., 2010).

Whilst it is understood that the direct cause of many incidents is unsafe acts, it is also known that these acts can be triggered by latent failures which are distant in time and/or space from the incidents (Gibb et al, 2006; Manu et al., 2012). Removing or mitigating latent failures is thus important in addressing unsafe acts by frontline operatives and consequently minimising accidents in the work environment. Over the years this has led to advances in engineering and safety management system controls/measures targeting latent failures not just during the physical construction phase but during the design and planning phase (see Ove Arup and Partners and Gilbertson, 2007; Zhang and Hu, 2011; Manu et al., 2013). Whilst these developments have not

led to an abandonment of direct efforts aimed at addressing unsafe acts by frontline operatives, it is evident from the construction OSH management literature that efforts targeting latent failures have been more prominent. Central to the efforts aimed at redressing unsafe acts by frontline operatives has been the BBS approach which seeks to change unsafe behaviour of operatives (Anderson, 2005; Lees and Austin, 2011). Indications in the literature point that there is increasing attention on BBS (Sherratt and Farrell, 2011; Talabi et al., 2015). For instance, many large contractors with established safety management systems are implementing BBS programmes to further drive down incidents and accidents (Sherratt and Farrell, 2011; Talabi et al., 2015). Changes made to the industry's workers safety certification test (i.e. the Construction Skills Certificate Scheme test) to incorporate behavioural issues also attest to the growing attention on behavioural safety (CITB-ConstructionSkills, 2012). Report by Finneran and Gibb (2013) also suggests that in developed regions like the UK, there is a need to pay attention to innovative OSH improvement efforts such as BBS in order to drive down incidences and accidents in construction.

Previous studies have shown that a BBS approach using interventions to modify behaviour can be useful in improving OSH. This applies not only to construction but to other industries (Duff et al., 1994; Anderson, 2005; Lunt et al, 2008). This approach has however not always been successful in improving safety (Lingard and Rowlinson, 1998; Anderson, 2005). Whilst these mixed findings should not completely rule out the pursuit of BBS programmes, they bring to question the efficacy of how BBS is implemented, especially the interventions used in achieving and sustaining behavioural change. Interventions that have sought to change workers OSH behaviour have taken limited cognisance of intrinsic human factors that could affect behaviour. A study by Sherratt and Farrell (2011) hinted that such factors ought not to be overlooked in BBS programmes. Arguably, the success of BBS programmes relies on an insight into the significant drivers of workers' OSH behaviour, some of which could be intrinsic. However, despite the plethora of evidence showing that human values affect behaviour, their effect on construction workers' OSH behaviour has not received much attention in the BBS agenda, especially at the research front.

Studies in psychology have shown significant relationships between human values and key behaviours including interpersonal cooperation, voting behaviour, readiness for social contact with members of an out-group, political activism, opposition to immigration and environmental behaviour (Schultz et al., 2005; Schwartz, 2009). These studies provide sufficient justification for further empirical studies into BBS taking into account the potential effect of human values as an intrinsic antecedent of OSH behaviour. An insight into this relationship could be invaluable not only for OSH in construction but in other industrial sectors. Indeed, such insight could have far-reaching implications for designing more effective behavioural safety interventions which take into account intrinsic drivers of OSH behaviour. As sustaining behaviour change remains a key challenge in implementing behavioural safety programmes (Lunt et al, 2008; Sherratt and Farrell, 2011), insight into the potential effect of human values (an intrinsic behavioural driver) on OSH behaviour could be invaluable in designing interventions that can help in achieving sustained behavioural change. To this end, empirical studies which explore the predictive potency of workers' values on their OSH behaviour are encouraged.

3. Conclusion

Undeniably, OSH improvement is needed in the construction industry and as part of efforts to achieve this there is increasing attention on BBS to drive down incidents and accidents. To further entrench the utility of BBS it is imperative that more research is undertaken to understand what

role established intrinsic drivers of behaviour, such as human values, play in OSH behaviour. It is envisaged that research in this domain could help to develop more effective BBS interventions.

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