exploring the hidden social consequences of working in construction with Q Methodology: Developing a study for Australia and the UK

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Construction work is unhealthy and bad for worker wellbeing. The industry structure results in insecure contracts, transient work, long working hours, stressful workplaces and poor occupational health, all of which contribute to poor worker wellbeing, influence their social determinants of health, and impact society in the broadest terms, workers often unable to fully participate due to poor work-life balance. Industry has become more aware of this in recent times, yet interventions continue to focus on readily identifiable symptoms and easy solutions, such as smoking cessation programmes, rather than underlying and more systemic causes. A study which will mobilise Q Methodology is proposed, to reveal how construction workers experience industry demands in the widest possible sense. By exploring subjective evaluations, the organisational and industry characteristics that impact most significantly on workers’ health and wellbeing are revealed as well as their influences on workers’ wider social contexts. This paper presents the proposed research design alongside the development of the Q-Sample, the data set to be evaluated by the participants, for discussion, evaluation and feedback, before it is mobilised in the field as part of a future research project to be undertaken in Australia and the UK.

Keywords: health, Q Methodology, social, wellbeing, work-life balance

Introduction

Awareness and interest is growing around construction trade worker health and wellbeing. Construction practice and how it affects workers, both directly and indirectly, as well as considerations of work-life balance are now the focus of an increasing body of research. There is growing support in the extant literature for an integrated approach to occupational health and safety with health promotion and disease prevention, to prevent injury and advance health and wellbeing (Anger et al. 2015; Sorenson et al. 2011). Improving worker health has not gone unnoticed by the construction industry, specifically within the ‘developed’ world, where attention has started to give the management of worker health and wellbeing a similar priority to safety. Examples of this can be seen in the UK at the London 2012 Olympic Park construction project (Tyers and Hicks 2012) which adopted the slogan ‘health like safety’.

Less well explored, however, are the wider social consequences of construction work – how its organisation, management and practice also affects workers’ intimate and local communities. Research in this area is emerging in both Australia and the UK, both considered to be ‘world-leaders’ in construction safety, health and wellbeing management, and this paper presents the development of the design of a comparative study utilising Q Methodology to be undertaken collaboratively in both countries.

The aim of the study is to better illuminate the hidden social consequences of working in construction, and specifically to examine how workers experience the different demands construction work places on their health and wellbeing, and the impact they feel this has on their families, friends and wider social communities. It is hoped that such research will be able to generate specific insights that are in turn able to better direct effective interventions, either in the form of policy or industry practices. By highlighting the areas of most significant concern for construction workers through this research, programmes can subsequently be developed that directly address and counter these, able to bring about the most positive changes in practice both for both workers and their immediate communities.

Context

Work characteristics driving health outcomes

The poor state of worker health, safety and wellbeing within the industry is well documented: workers suffer significantly more numbers of injuries and occupational health problems simply because they work in construction (Smallwood and Lingard 2009). In addition to the stress and anxiety caused by facing a potentially dangerous and high-pressure workplace every day (Health and Safety Executive 2017), other less ‘visible’ and certainly less challenged aspects of construction work also pose threats to worker health and wellbeing. For example, the way construction work is traditionally structured, payment on price (the amount of work produced per shift) through insecure and temporary contracts, transient work and long working hours can also directly contribute to poor worker wellbeing (Beswick et al 2007; Cunradi et al 2009; Papadopoulos et al 2010), and research has shown that job insecurity can have as negative an influence on workers as having no job at all (Kim and von dem Knesebeck 2015).

Such aspects are also closely linked to the social determinants of health (Wilkinson and Marmot 2003; Dollard and Neser 2013; Dhesi 2014), the underlying reasons why people drink, smoke, take drugs or overeat, which can in part explain why construction workers have significantly higher use of alcohol and illicit drugs than in any other high-hazard industry (Tan and Lloyd 2016). Yet the consequences of working in construction are not limited to the site, or even to the worker themselves. They also have impact and influence on wider society, as the demands placed on workers mean they can struggle to find fit with their home, family and community lives outside of work (Turner and Lingard 2014; Turner and Lingard 2016).

Responding to health concerns

The World Health Organization describes health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Work places have been identified as places where changes can result in significant health improvement through health promotion and disease prevention (Anger et al. 2015). Health promotion programs are interventions put in place by employers to improve the lifestyle choices and health of workers as a way of preventing chronic illness (Comcare, 2010), and the construction industry in the ‘developed’ world has seen their widespread adoption (Sherratt 2017a). This has been further supported by significant changes in societal expectations of organisational responsibility. A core aspect of Corporate Social Responsibility (CSR), society now demands demonstrable commitment to not only assuring workers health, safety and wellbeing, but also to seek improvement and enhancement where possible, and the construction industry is no exception (Sherratt 2015).

Criticisms and limitations of health programs

However, this wider contextualisation of construction worker health and wellbeing has also faced criticism. It has been suggested that it has led to a level of superficiality within many worker health and wellbeing programmes, which focus on individual behavioural factors and ‘lifestyle’ issues that can be used to deflect ‘… attention away from serious examining the effects of corporate cultures or the work environment’ (Conrad 2005:546), something that has been suggested of the construction industry in the UK (see Sherratt 2017a for a mapping to justify this latter statement). In addition, the medium of CSR has also arguably started to shape the message, through the commodification of worker health and wellbeing into a corporate marketing tool that provides suitably photogenic content for social media outputs (Sherratt 2017b).

It is within this highly complex milieu that construction workers try to balance their health, their personal, family, social and community lives on one side, with the demands of an industry that could be said to be fundamentally unforgiving on the other.

**Q Methodology**

The focus of this paper is the development of a key part of the methodology to be used in a comparative and collaborative study of this phenomenon amongst construction trade workers in Australia and the UK. The approach taken here is that of Q Methodology (grounded in the work of Stephenson 1953), which has been successfully used in similar studies evaluating the demands and resources of construction industry workers (Turner and Lingard 2011). It is an exploratory research technique (Watts and Stenner 2005) that focuses on subjective attitudes, perspectives and experiences of the research participants. We consider this aspect of Q Methodology to be of the utmost importance, and one of the key benefits of utilising this approach within the construction management research field. Much construction health and safety research neglects to incorporate the voice of the workers for a number of different reasons, for example they can be a difficult sample to access, there is the potential for language to be a barrier between the researchers and workers, and there can be problems around stopping work for research purposes and the consequences for productivity. Therefore much health and safety research actually gathers its empirical data from management, be they site or safety managers, rather than the workers themselves (Sherratt 2017c). Management has much more time for research activities and also often have access to a computer for initial contact and online data collection, rather than being located out on a site and busy carrying out physical tasks. We would argue that although the opinions of the workers themselves are perhaps often neglected for logistical reasons, Q Methodology is very able to remedy that by providing a research approach that necessitates involvement of the workers themselves.

In Q Methodology, the research participants, known as the P Set, draw on their understandings and experiences to categorise and rank presented data, known as a Q Sample, and so provide a subjective hierarchical evaluation of the significant and value of the data from their perspectives (Brown 1986). This enables a considerable amount of empirical data to be obtained through a relatively ‘non-threatening’ approach: there are no right or wrong answers, and there is no need to read long instructions or lengths of text. Instead the participants are facilitated through the process to rank the presented data within a set grid.

The P Set is purposive in structure, aiming to sample a range of views and perspectives on the topic under investigation (Stenner et al 2008). For this study, the P Set will be an equivalent sample of construction trade workers from Australia and the UK. The Q Sample contains the items and statements to be sorted and ranked by the P-Set, along a scale of ‘it affects me a lot’ to ‘it does not affect me at all’, in a process referred to as Q Sorting. Within Q Sorting, a Condition of Instruction (CoI) is used to direct the participants in their evaluation of the data within the Q Sample. Here, the CoI has been defined as: “in your current job, how do you experience this?” Q Sorting utilises a sorting grid which dictates a fixed quasi-normal distribution of the Q Sample, and members of the P Set position the Q Sample within the grid according to their own subjective ranking (Watts and Stenner 2005). Following the Q Sort, information is also gathered from the participant through a post-sort interview, which enables further discussion around the sort and allows the researcher to seek comments to aid interpretation of the sorting configurations and viewpoints (Stenner et al 2008).

Developing the Q Sample

To develop the Q Sample for the proposed study, a comprehensive literature review was undertaken. The authors have both previously published in the areas of work-life balance (Turner and Lingard 2014; 2016) and worker health (Sherratt 2017a) and so this data was used as the initial grounding for the review. In addition, keyword searches of the ARCOM Abstracts database were carried out, an abstracting database that draws on 21No leading journals in the field, as well as all ARCOM Conference proceedings and PhD Theses. This was supplemented by a search of CIB W099 historical conference proceedings. In all these cases the following keywords were searched for: health, wellbeing, work-life balance, stress.

In order to also go beyond the construction management research field, institutional search engines were mobilised using the following keywords as linked to ‘construction’: health, wellbeing, smoking, drinking, and lifestyle. This approach led to sources within such disparate publications such as the *Journal of Family Violence* and *Public Health Nursing*. Overall, there is a much more limited amount of research directly associated with construction workers, as opposed to professionals or managers, although this is itself common in our field where access to the trade workforce can be problematic, and those willing and easily contactable are those who work in offices with computers rather than actually out on construction sites. However, there are some notable exceptions and they have been drawn on here where possible.

The main goal in selecting a Q Sample ‘is to provide a mixture which, in major respects, contains the comprehensiveness of the larger process being modelled’ (Brown, 1993:99). Q Samples are made up of items which are presumed to be relevant to the topic at hand, and are chosen to ensure coverage of all possible sub issues (McKeown and Thomas, 1988). Therefore, in order to maximise the potential for this research, no prescriptive criteria were places on the data prior to the literature review process. Instead, key themes were collated as they emerged from the literature sources, taking a holistic and inclusive approach in order to ensure all potential demands were included within the Q Sample.

The q sample

Table 1 shows the key themes as drawn from the literature and the supporting sources, with examples of the demands to be ranked and their associated descriptions that would be used to better articulate the demand to the participant. Here examples are used to demonstrate the variety of demands included, acknowledging that the data includes both positive and negative associations between construction work and the workers’ immediate communities. It is also worthy of note that the relationships between work demands and the social determinants of health (Wilkinson and Marmot 2003) are not always explicitly set out, as it is prioritisation of the demands from the workers’ perspectives that is sought, rather than their own analysis of the route that leads them to these consequences.

The final Q Sample is too large to present her in full due to constraints of space. In total, the Q Sample contains 48 demands under these 8 themes, in order to permit their ranking within a prescribed template.

Table 1: Q Sample Themes and Example Demands and Descriptions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Theme | Example Demands | Example Descriptions | Supporting Sources |
| 1 | Long working hours | Long hours restrict family time | The hours you work mean you don’t spend as much time as you would like with your family | Clifford 2009; Turner and Lingard 2014; Turner and Lingard 2016 |
| The hours you work cause you stress and worry | The hours you work cause you stress and worry | Beswick et al 2007; Clifford 2009; Waage et al 2010; Papadopoulos et al 2010; HSE 2017 |
| 2 | Physical Work | Physical work makes me too tired for community time | The physicality of your work means you are too tired to participate as much as you would like doing activities in the community (e.g. volunteering) | Turner and Lingard 2014; Blackman et al 2014; Turner and Lingard 2016 |
| Physical work makes me healthy | The physicality of your work keeps you fit and healthy | Boschman et al 2011 |
| 3 | Dangerous Work | Dangerous work makes me stress and worry | Working in construction is dangerous and makes me worry about my health and the health of my co-workers | Beswick et al 2007; Smallwood and Lingard 2009; McGann et al 2016; HSE 2017 |
| 4 | Unhealthy Work | Unhealthy work makes me care less about my health (a) | Working in construction is unhealthy, so I might as well smoke | Wilkinson and Marmot 2003; Frone 2013; Dhesi 2014; Tan and Lloyd 2016 |
| Unhealthy work makes my family worry | My family think working in construction is unhealthy and they worry about my health | Voydanoff 2007; Turner and Lingard 2014 |
| 5 | Insecure Work | Insecure work gives me freedom | Short term projects and contracts means you are happy to manage your own work and employment | Lowry 2001 |
| Insecure work makes my family worry | Short term projects and contracts cause your family to worry | Voydanoff 2007; Turner and Lingard 2014 |
| 6 | Payment structure | Payment by how much I produce makes my family worry | Payment on price means my family worry about what my wage will be. | Papadopoulos et al 2010 |
| Payment by how much I produce makes me stressed | Payment on price means I feel pressure to earn a good wage | Beswick et al 2007; HSE 2017 |
| 7 | Working away from home | I miss my community activities working away from home | Working away from home means you miss your community commitments (e.g. volunteering), or cannot establish regular community commitments. | Clifford 2009; Blackman et al 2014; Turner and Lingard 2016 |
| I like working away from home | I prefer to work away from home, the positives outweigh the negatives | Australian Government 2017 |
| 8 | Travel | Long travel times make me tired | The hours you travel to work make you tired | Beswick et al 2007; Clifford 2009; Lingard et al 2010 |
| Long travel times mean I smoke or drink or eat too much | The hours you travel to work mean you partake in unhealthy activities | Wilkinson and Marmot 2003; Dollard and Neser 2013; Frone 2013; Dhesi 2014; Tan and Lloyd 2016 |

**discussion and Conclusions**

Workers are all too frequently simply the recipients of health initiatives and promotion programmes, as well as organisational policy and practice, and have little say in their own working conditions and arrangements. This research intends to remedy that imbalance, and seeks to add the workers’ own voices to the current directions for management of their health and wellbeing. We propose to seek empirical insights as to what and how wider industry demands are perceived by the workers, and how they feel they impact both themselves and their wider social contexts. By mobilising Q Methodology, their perceptions and prioritisations of what really matters to construction workers are revealed, and better understandings and insights of the consequences of how our industry works with regards to both worker and wider societal health and wellbeing can be illuminated.

Grounded in the widest possible literature, the Q Sample presented here deliberately looks to the causes of poor construction worker health, rather than the symptoms. In this way, the project seeks to avoid the current focus on workers’ own behaviours, such as smoking or obesity, and instead look to the ways in which working in construction could negatively affect and influence workers’ health and wellbeing, such as boredom or stress. It is duly acknowledged that to bring about change in such ‘traditional’ characteristics of working in construction, for example long site hours, will be difficult and necessitate changes to business policy, processes and operations, yet that should not negate attempts to try and improve these fundamental problems for construction workers and their local communities.

Comments and feedback on the development of this project are welcomed from CIB W099 and TG59 conference colleagues.

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