IMPROVING THE MENTAL HEALTH AND WELLBEING OF BUILDING AND CIVIL ENGINEERING WORKERS: BARRIERS TO FLEXIBLE WORKING

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Abstract
Despite the growing research on mental health and wellbeing (MHW) in construction, very little research (if not none) has examined the barriers to strategies such as flexible working arrangements that improve MHW in the construction industry. This research aims to fill this gap in knowledge. The research adopted a systematic literature review where relevant literature was critically reviewed and discussed. The main findings include the high level of diversity in the industry, which makes it challenging to have a flexible working system that meets the work-life balance of construction workers and improve their mental health. Large contracting firms are more likely to adopt formal flexible work arrangements because they have more resources than smaller companies, but micro contracting forms are most likely to adopt the informal flexible work arrangements. Further barriers are the nature of the roles of the practitioners, for example, construction professionals are more likely to be allowed to adopt flexible work system than the tradespersons; Collaborative project delivery arrangement supports flexible work arrangement more than the traditional method. National policies or legislation in some countries such as UK and Vietnam do not adequately support work-life balance strategies such as flexible working; for instance, the regulation in the UK is open to misinterpretation and creates room for employees' exploitation by employers. Evidence shows that this is the first study to examine the barriers to MHW in the construction industry through a flexible working arrangement. There is a need for a shift in workplace culture to support such strategies and the need for tighter legislation and guidance.

Keywords: alternative work arrangement, labour laws, male-dominated workplaces, strategies, work-life balance, working conditions, workers' welfare.

INTRODUCTION

Recently, the mental health and wellbeing (MHW) of construction (building and civil engineering) workers have been at the forefront of policymaking and programmes of many organisations, businesses, professional institutions and governments because of the implications of poor MHW on employees, the productivity of organisations and the economy of countries. This growing awareness of MHW (Centre for Mental Health 2017; Sherratt and Turner 2018) has resulted in programmes and charities such as Mates in Mind which focus on the mental health of construction workers, and some unnoticed efforts in projects such as the London 2012 Olympic Park (Sherratt and Turner 2018).

Lingard et al. (2007) found that a compressed workweek (a type of flexible working) improves employee's work-life balance, and project objectives were still met. While there is extensive research on employee work-life balance (for example Lingard et al. 2007) and growing attention on MHW (for example Oswald et al. 2019; Campbell and Gunning 2020; Sherratt and Turner 2018), the systematic literature search of the current study shows gaps in knowledge. There is limited research that examines the barriers to strategies such as flexible work systems to improve employees work-life balance, by extension, the health and wellbeing of workers in the construction industry. While the search is limited to Scopus database, covering the past 20 years, the findings of Bell et al. (2015: 492) supports this — 'At present, there is no academic research investigating the impact and practical challenges of introducing a wellbeing intervention into a construction company or to a

construction site'. Oswald (2019) echoes this, recently calling for more research on how MHW can be identified and managed in construction of which flexible working is one. There is limited understanding of the realistic workability of flexible working arrangement in improving workers' wellbeing in the construction industry (Bell et al. 2015). By implication, the barriers are poorly understood, supporting the identified gap of the literature search.

This study examines the MHW of construction workers by illuminating the hidden barriers to improving the condition and broadening the available knowledge. Specifically, it investigates the barriers to improving the MHW of (building and civil engineering) construction workers through flexible working arrangements. Addressing this will have implications to attaining the Sustainable Development Goal 9 — Build resilient infrastructure, promote inclusive, sustainable industrialisation and foster innovation — in that (as Lingard et al. 2007 show) a mentally healthier workforce is more productive. This is the first stage of a large study, the next stage being empirical. There is no consensus on the definition of flexible working, but people define it based on the work pattern or ways of working, e.g. part-time work, flexi-time, working from home, compressed hours, shared working and term-time working (Chartered Institute of Personnel and Development (CIPD) 2019). Gov.uk (n.d.) defines it as a way of working that suits employees need, e.g. working from home and flexi-time. The current study is based on this definition, but zero-hour contracts (despite the benefits to some people) are excluded because of its contentious nature (CIPD 2019).

CONTEXT

Mental Health and Wellbeing (MHW) and impact

Mental health issues include anxiety, depression and substance use disorder. Centre for Mental Health (2017) reports that in 2016/17, the aggregated cost of mental health on employers (construction industry industry included) in the UK is £34.9 billion, an increase of 35% from 2006. Specifically, presenteeism — reduced productivity at work — costs £21.2 billion; sickness absence, £10.5 billion; and staff turnover, £3.1 billion. The record of the construction industry on mental health is no exception. A study by the Chartered Institute of Building in 2020 found that in 2019, 27 per cent of construction professional contemplated sucide, 97 per cent claimed to be stressed at least once in the last year (Global Construction Review 2020). These demonstrates missed increase in productivity and profit for businesses and countries which will have implications meeting development goals. Authors such as Lingard et al. (2007) offer further supporting arguments, including that improved employee experiences and work-life balance which will improve MHW, contributes to improved work performance.

Flexible working arrangements, implications for MHW, and policy

A flexible working pattern, different from the traditional method of working, can contribute to addressing the MHW issues (CIPD 2019; Doan and Ngo 2020). The implications include work-life balance, one of Campbell and Gunning's (2020) recommended strategies for improving mental health and wellbeing in construction. For example, working from home will mean that travel time will be reduced or removed, and workers can work with their families. There is evidence that work-life balance strategies such as alternative working arrangements, working closer to home and working the normal hours improved MHW (Geurts et al. 2009; Sherratt and Turner 2018; CIPD 2019; Construction New 2019; Sherratt and Turner 2018). Specifically, in all sectors, CIPD (2019) found that in 2019 in the UK, workers who worked flexibly (one of the work-life balance strategies) were most likely to report a positive impact on their mental health than those that did not. From the construction perspective, Construction News (2019) reports that 74 per cent of 1580 respondents (in offices and sites) in the construction industry view that long working hours impacted more on their mental health and wellbeing. The highest of the 13 factors; 64.1 per cent claim that is working away from home impacted on their MHW (also see Kivimaki et al. 2015 for the negative impact of long

working hours on cardiovascular diseases (CD). In support, Sherratt and Turner (2018) exemplify that travel time, working away from home, long working hours negatively affect and influence construction workers' health and wellbeing in the UK and Australia. See Geurts et al. (2009) for findings on the Netherlands also reported later in this paper.

Besides, the nature of the activities of the industry needs consideration. For example, according to Kivimaki et al. (2015), occupational factors such as overtime, high job strain, low social support were observed to be positively associated with CD. The MHW is exacerbated by the construction activities, organisational structure and culture of the industry (Campbell and Gunning 2020; Sherratt and Turner 2018). Flexible work is mainly used in assisting workers in meet their family responsibilities (Fernandez, 1986 in ibid) and have implications for social inclusion, longer employment period especially for the elderly (Doan and Ngo 2020).

According to CIPD (2019), while Eurostat reports that there have been a significant underlying shift to flexible working across the 28 European Union (EU) countries in the past five years, UK was behind Netherlands and Germany for part-time workers and behind Netherlands and Sweden for those that work from home in 2017. However, the UK was above the average across the EU28 (ibid).

Flexible working has statutory backing in some countries. For example, in Great Britain there is the Flexible Working Regulations 2014, in South Africa, Section 6 of the Employment Equity Act, 1998 requires no discrimination against persons on the various grounds including family responsibility and Section 7 of Basic Conditions of Employment Act, 1997 requires employers to regulate employees time regarding family responsibilities. Doan and Ngo (2020) also report National policies that address flexible working in Vietnam. While these policies have positive implications for improving MHW of workers, there is still a need for improvement in terms of implementation.

METHODOLOGY

The research was based on a systematic literature review of relevant literature. Extensive searches on Scopus were conducted on 27 June 2020. Table 1 shows the keywords of the searches covering the year 2000 to 2020 and the output. Following the search, the abstract and titles of all the 66 articles were scrutinised, narrowing it down to 12. The abstracts and titles were further securitised, and only five (direct or indirectly) relevant papers were selected. For example, Bryce et al. (2019) addressed flexible working for female engineers in the civil construction industry in Australia, hence had indirect implications for the study. Nevertheless, none of the papers addressed the research question of this study suggesting that the topic and is under-researched.

Table 1: Systematic literature search results

Keywords	Location	Limit to subject areas	Output
'Flexible' AND 'Working' OR 'Flexitime' AND 'Construction' AND 'industry'.	Abstract	Engineering; Environmental Sciences Business, Management and Accounting; Social science;	66
'Flexible' AND 'Working' OR 'Flexitime' AND 'Construction' AND 'industry' AND 'Welfare' AND 'mental health'.	Abstract, title, keywords	Engineering; Business, Management and Accounting; Social science; Environmental Sciences	0
'Flexible 'AND 'Working' OR 'Flexitime' AND 'Construction' AND 'industry' AND 'Welfare' AND 'mental health' AND 'Wellbeing'.	Abstract, title, keywords	Engineering; Business, Management and Accounting; Social science; Environmental Sciences	0

Searching only Scopus database eliminates the consideration of publications not indexed therein. This was complemented by the citation approach, where references of books and relevant articles

were searched for leads to papers or books that can be used. This is consistent with papers such as Umeokafor et al. (2018). It resulted in adding Lingard et al. (2007), and CIPD (2019) based on the authors' knowledge. In total, seven publications were analysed to address the research question. There are many empty reviews — systemic reviews conducted with no studies meeting their inclusion criteria — which are acceptable in academia (Yaffe et al. 2012). Using Cochrane Library, which hosts over 4500 systematic reviews, Yaffe et al. (2012) strongly demonstrate that the number of studies used in a systematic study does not limit the findings. Consequently, arguments that using seven academic publications in the current research limits the findings should be with caution and/or perhaps flawed. The exclusion criteria include publications before the year 2000, publications outside the subjects in Table 1, non-peer-reviewed publications. However, the inclusion criteria include publications in the subject areas in Table 1, publications with the keywords in the locations in Table 1; publications written in the English language; and peer-reviewed publications. While reading the material questions that were asked include 'what is happening here?', 'what is missing here?' 'Do these directly or indirectly bar flexible working systems?' 'If yes, what are the implications for MHW of construction workers?'

FINDINGS, ANALYSIS AND DISCUSSION

The summary of the findings is presented in Table 2. In being interrelated and subject to empirical validation, the roles of people in the construction industry, norms and values, the features of the industry and legislation are emphasised in the study (Table 2).

Culture

Authors show that the male dominance of the construction industry and other characteristics result in long working hours and weekends being a culture with implications for MHW (Lingard et al. 2007; Bryce et al. 2019; Francis et al. 2013: 369). This is exacerbated by the less childcaring responsibilities that men have (Bryce et al. 2019). Consequently, flexible working is of low priority to them (Bryce et al. 2019). Additionally, the construction industry has been criticised for its 'macho' work culture (Bridges et al. 2019), which may result in men viewing flexible working arrangement as a sign of weakness. All these do not attract and retain women in the industry who could contribute to clamouring for flexible working arrangements more than men (Lingard et al. 2007) because of the assumed high level of childcare responsibilities they have than men (Bryce et al. 2019). They are not ideal for all gender, especially women (Bryce et al. 2019). According to Bryce et al. (2019), women view that part-time work has negative implications for their career progression hence would not accept it when offered. So far gender bias and long working culture are barriers to flexible working.

Table 2: Summary of the barriers to adopting flexible working to improve the MHW of construction workers

Themes	Subthemes	Factors and supporting evidence and sources
Culture	Rigid long working hours culture	A strong culture of working for long hours (Bryce et al. 2019) and weekends (Lingard et al. 2007); is a culture of the industry due to its features (Francis et al. 2013).
	Gender bias culture	The male-dominated industry thus long working (Lingard et al. 2007; Francis et al. 2013; Bryce et al. 2019), not also ideal for all special women (Bryce et al. 2019). Negative implications of flexible working on the career progression of women (Bryce et al. 2019).
People	Workers' perception and choice	Flexible working is not the priority of many workers (CIPD 2019), especially men (Bryce et al. 2019) Lack of demand for flexible working arrangements by employees (CIPD 2019; Brown et al. 2011). Workers not adopting flexible working arrangement because of perceived financial loss (Brown et al. 2011; Lingard et al. 2007)

		and its implications on career progression (Bryce et al. 2019). Resistance by workers because of perceived unfair difference in workload among them when working flexibly (Lingard et al. 2007).
Characteristics of the industry	Male-dominated industry	A male-dominated industry where men have less childcaring responsibility than women hence care less for flexibility (c.f. Bryce et al. 2019).
	Type of sector	Public sector offers more flexible working than the private sector (CIPD 2019: 10); Private sector offers less flexible working to employees than public sector employers (Francis et al. 2013).
	Size of organisation	Micro firms allow more informal flexible working than others; large firms offer more formal flexible working than others (CIPD 2019: 8).
	Nature of role and employment	Nature of career impacted on flexible working (Bryce et al. 2019); Professional roles get more flexible working that the non-professional (CIPD 2019). The higher pay of job, the more likely there will be flexible working (CIPD 2019). Office roles mostly work part-time than non-office roles (Bryce et al. 2019). Nature of employment (permanent, self-employed causal) works (Druker and Croucher 2000; Lingard et al. 2007).
	Nature of activities and industry	Nature of activities in the industry — construction ranks low in industries that flexible working can take place (CIPD 2019); Few construction organisations in Australia would adopt work-life balance initiatives (Lingard et al. 2007). The nature of construction activities, e.g. site works means that working from home may not be possible for respective employees (Francis et al. 2013); features of the industry result in long hours (ibid).
Organisational factors	Perception and priority of the organisation	Employers have a negative perception of part-time work (Druker and Croucher, 2000; Bryce et al. 2019). The priority of organisations because of the benefits (Druker and Croucher 2000)
	Procurement method	Project delivery arrangement — compressed week work is more likely in a collaborative project alliance than in traditional procurement (Lingard et al. 2007).
	Lack of organisational support	Lack of available role models (Bryce et al. 2019). Lack of opportunity to negotiate an alternative working arrangement with the employer (Lingard et al. 2007) Limited or lack of support from employers in the industry (Doan and Ngo 2020)
	Counterproductive flexible working arrangement	Counterproductive flexible work arrangements — e.g. impacts on work-life balance rather (Brown et al. 2011; Lingard et al. 2007). Lack of Flexicurity — Lack of employment and social security in the flexible labour market and relations, organisation (Doan and Ngo 2020).
Policy and legislation	Limitations in policies and legislation	Policy/legislation reaching its limit (CIPD 2019) Limitations in national policies (Doan and Ngo 2020) and legislation. The exploitation of national policies by organisations (ibid).

People

The study shows that people play a key role in the success of a flexible working arrangement aimed at improving MHW. For convenience, the factors in Table 2 are categorised into the subtheme,

workers' perception and choice. Elsewhere in this paper, there are discussions of the roles of employees' perceptions on the success of work-life balance strategies. Table 2 shows that the offer of flexible working arrangement to employees does not guarantee acceptance by workers. Understandably, when workers feel that such strategies result in loss of wages (Lingard et al. 2007) or lack of career progression or are poorly designed to meet their needs, they are less likely to take up the offer. In this case, the onus is on employers, trade unions and the government to provide an enabling environment to facilitate this. While these may explain the lack of priority of flexible working arrangements to some workers, the wrong perception of flexible working being for the weak may also be an explanation, highlighting the need for more sensitisation of construction workers on the importance of work-life balance to their health.

Characteristics of the industry

There is evidence that the (building and civil engineering) construction industry are less likely to adopt flexible working than other industries (Table 2). Typically, of the 14 industries in the UK surveyed by CIPD, Construction industry ranked 9th with 51 per cent of workers being in one form of flexible working arrangement in 2016 (CIPD 2019). Industrial sectors such as public administration (80 per cent), education (76 per cent) and, information (75 per cent) reported that flexible working was more common than distribution (33 per cent) and transportation (34 per cent) which ranked the lowest (CIPD 2019). Few organisations in the Australian construction industry implemented work-life balance initiatives (Lingard et al. 2007).

A critical look at the paragraph above submits that the nature of the activities may explain this. To illustrate, the nature of construction activities means that working from home will not always be possible, but other types of flexible working such as job sharing, part-time, compressed hours, flexitime, staggered hours and annualised hours may depend on factors such as procurement strategy (Lingard et al. 2007). However, education and public administration activities can accommodate remote working, compressed hours or other types of flexible working. While transportation and distribution can accommodate limited forms of flexible working arrangements such as weekend working more than others such as public administration, though this presents its own MHW challenges as Brown et al. (2011) found, it may be attractive to some employees for childcare and education reasons.

Nevertheless, these industries lagging, including construction, can do more because of many reasons. For example, the advancement in technology, through presenting its challenges, have made working remotely more feasible for many professions (Francis and Lingard 2012). Other possible explanations, such as culture are covered elsewhere in this paper.

There is evidence that the types of sector (private or public) impacts on employee's wellbeing (Table 2). CIPD (2019) and Francis et al. (2013) establish that private-sector employees reported less flexible working arrangements than public sector employees. Francis et al. (2013) established that private-sector employees experienced more difficulty managing family responsibilities, greater conflict in combining work demands and family responsibilities, and worked longer hours than the public sector employees; all were in the construction industry including public sector employees that were managing subcontractors in physical construction projects. This is where there is evidence in the literature of the impact of working arrangement on work-life balance, the ability of the worker to meet family responsibilities which all have implications for their MHW. In the Netherlands, Geurts et al. (2009) found that while flexible working reduced the effects of long hours and supported work-family balance; long hours and overtime significantly impacted on employee's ability to balance work and family responsibilities. They also observed positive results work-family balance when employees work from home. Employees are more likely to commit to organisations when employers commit to work-life balance initiatives (Francis, 2003). Noteworthy, some of these mental health

issues are pre-employment-related but may be exacerbated by those caused by employment. Some pieces of legislation (e.g. the equality ones or related clauses) impose obligations on employers to consider MHW factors or employees with MHW issues. The extent to which employers (for example contractors) can mitigate the mental health issues that are pre-employment vs those as a result of the employment (especially through strategies such as flexible working) may differ for many reasons. Nevertheless, further exploration is required.

The point in Table 2 that pay rate has implications for the MHW of workers as it determines whether they work flexibly is worrying, just as the nature of employment being a factor are reported in CIPD (2019). Similarly, Druker and Croucher (2000) and Lingard et al. (2007) found that casual workers, self-employed workers do not take up alternative working arrangements that will provide work-life balance. Typically, permanent workers are most likely to work flexibly than self-employed persons (Druker and Croucher 2000) or salaried employees (Lingard et al. 2007). This is because wage employees and self-employed workers are paid for the hours they work hence will lose if work hours are reduced as some flexible working such as compressed week hours may do (ibid). This calls for an alternative mechanism that will address this, such as production-based remuneration, not time-based on-site (Lingard et al. 2007). This may present challenges such as cutting corners (which pose health and safety risks) if the performance indicators and assessment methods are not robust.

Organisational factors

The evidence in Bryce et al. (2019) and Doan and Ngo (2020) shows that the negative attitudes of employers and the implications of flexible working impact on the request or the ability of workers to take up flexible working hence MHW is poorer in the industry. This is exemplified in the more passive policies in the construction industry on flexible working than other industries in Vietnam (Doan and Ngo 2020). Further, Bryce et al. (2019) show that 73 per cent of female construction workers in their study either agreed or strongly agreed that part-time working had or would hurt their career; and 4.2 per cent of them would miss out career opportunities. However, 60.8 per cent of managers did not agree with the latter (ibid). The disagreement does not mean flexible working is offered (Bryce et al. 2019).

Consequently, it can be argued that the construction workers may not opt for flexible working to ensure that career progress is maintained and view employers as unsupportive. Conversely, it can be argued that Bryce et al.'s (2019) finding is based on women only, who are already underrepresented in the industry. Hence it is not a true reflection of what is happening. A counter-argument is that the lack of flexible working is a key barrier to women working in the construction industry (ibid).

Brown et al. (2011), Doan and Ngo (2020), and Lingard et al. (2007) note that flexible work arrangements that are counterproductive as they impact on work-life balance are in. Typically, Brown et al. (2011) found that employers provide flexible work arrangements that impact an employee's leisure times rather than work-life balance, including affording them 'time away'. Doan and Ngo (2020) report national policies that fail to provide employment and social security in the flexible labour market and relations, organisation. This shows that employers and policymakers need to support workers more in this regard (Bryce et al. 2019), including ensuring that the work-life balance strategies are worker-focussed. Lingard et al. (2007) and Doan and Ngo (2020) report the lack of support where employees do not have a say in the design and negotiation of flexible work arrangement. When roles are not developed to be supported by flexible working, it does not attract enough workers but just some. It also indicates the non-inclusion and consultation of workers in developing flexible work arrangements. The classic motivational theory argues that the involvement of workers in decision making concerning their jobs and the business, in general, improves their performance and that of the organisation as they work smarter and harder (Cotton 1993). While the worker's needs may not always align with organisational agenda hence, it is not suitable for

business, the findings on benefits of employees' satisfaction for the organisational performance call for more nuanced strategies to carry employees along.

Table 2, the findings on collaborative project delivery arrangement also being a determinant of functional, flexible work arrangement than the traditional procurement (Lingard et al. 2007) call for the attention given the high popularity of the traditional procurement arrangement. Similar calls can be extended to other procurement methods given the strategic roles that integrating health, safety and wellbeing (HS&W) into procurement strategies play in improving HS&W and other project outcomes (Umeokafor et al. 2020).

Policy and Legislation

Table 2 shows that the implications of policies, national and international for flexible working are reported in studies. For example, focusing on elderly workers in Vietnam including those in the construction industry, Doan and Ngo (2020) observe that the national policies in Vietnam are limited to just actors at the local level, they are not flexible, preventive and activating as expected. Doan and Ngo (2020) call for a fundamental shift in the national policy to address the inequality towards older workers. The same arguments can be extended to other aspects of inequality, such as gender bias in Table 2 in countries where such legislation is absent or dysfunctional. Analogously, CIPD (2019) note the ability of policies in the UK to drive flexible working has reached its limit because of lack of increase in that mode of working over the past 15 years pre 2016. Possible explanations include that the alternative methods of employment such as the increased self-employment may offer what flexible working is unable to offer.

Furthermore, vague or flexible rules (e.g. employers considering requests on a reasonable basis) as against the perspective rules of the Flexible Working Regulations 2014 may have implications for the rate at which employers offer flexible working. This is because in some cases, it may be hard for employees to prove that a rejected request or an alternative offer of a type of flexible working arrangement was on reasonable grounds. Hence, in 2018, CIPD (2019) calls for a new flexible working policy framework but welcomes the taskforce on flexible working established by the UK government. However, the involvement of stakeholders e.g. trade unions, employers are more likely to enable achieving the objective than a 'speculative breakthrough driven by legislation' (CIPD 2019).

CONCLUSIONS AND RECOMMENDATIONS

While a case is made for improved business and project performance when workers have work-life balance (including through flexible working), this study also investigated the factors that hinder the implementation of flexible working strategies for MHW. The systematic literature review conducted shows that the main factors that hinder the implementation of flexible working strategies for MHW include cultures in the industry (such as working long hours and weekend), lack of interest from workers and limitations in policies and legislation. However, the onus is on the organisation to do more to support workers in balancing work with life. It also emerged that public sector employers are more likely to offer flexible working arrangements than their private sector counterparts. The study shows relationships among the factors highlighted in Table 2. For example, while the nature of work activities in the building and civil engineering construction industry (such as site roles) cannot be remote and maybe cheaper to undertake some during the day except where night and weekend works are inevitable, the industry can do more to support other types of flexible working. However, the attitude of employers towards flexible working and the fear of the implications of adopting this for the careers of workers complicates the strategy. The implications of the findings of the research include the need for a shift in workplace culture to support such work-life balance strategies and the needs for tighter legislation or guidance in some countries.

Also, construction workers need more education and awareness on the importance of work-life balance on their health, a key recommendation for construction companies and trade unions. Building and civil engineering companies should involve and consult with workers in the development and implementation of flexible working arrangements to meet workers' and organisations' needs and make it more acceptable and attractive to them with little negative implications. Policymakers should support this with legislation where absent. Where possible, building and civil engineering companies and trade unions should encourage flexible working arranagements that is worker-focussed.

Furthermore, propositions emerging from the research include that more construction workers request for flexible working is designed to meet their needs. Also, that construction organisations are more likely to support workers in the flexible working programme if they see the benefit of flexible working; polices are more likely to be effective if revised with stakeholders including the trade unions and employers involved. The extent to which employers (e.g. building and civil engineering companies) can mitigate the pre-employment mental health issues vs employment-caused ones (especially through strategies such as flexible working) requires further research hence recommended. Such research by extension will assess pre-employment mental health issues vs employment-caused ones towards understanding the implications. Further research to test the factors outlined in Table 2 are recommended. In particular, the extent to which the factors impact on the strategies for improving the MHW of construction workers is unknown, especially whether human-related factors impact more than industry-features related factors. This will offer insight into the dominant factors that influence the implementation of flexible working strategies for MWH, towards enabling organisations, academics and the industry to channel resources to address the barriers appropriately. Also, the suggested relationship or association between the factors and the extent of correlation needs to be tested. Just like other systematic reviews, the current one has limitations including that focusing on peer-reviewed publications means that little or no government reports are covered hence a risk a bias. But the citation approach contributed to addressing this by including a report.

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