



Caring for employee wellbeing in the rise of modern methods of construction

Dr Jing Xu and Dr Simon Addyman

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Because when projects
succeed, society benefits

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About the authors

Dr Jing Xu (Jean) is an Associate Professor in Enterprise Management at the Bartlett School of Sustainable Construction, University College London (UCL). Jean's research is concerned with promoting decent work and the health and wellbeing of project stakeholders. She specialises in the management of project-based firms, their people, and their relationships. Jean has taken a relational approach and advocated for an ethics of care in organising construction projects. Her publications cover crucial topics such as employee wellbeing, health and safety and trust in the construction industry.

Dr Simon Addyman is an Associate Professor in Project Management at the Bartlett School of Sustainable Construction, UCL, where he is Director of the MSc Project and Enterprise Management and Director of the Centre for Construction Project Organising. His primary research interests include understanding the nature of temporary organising and routine dynamics in construction, particularly how participants engage in a dialogue to create value from projects.

Permissions acknowledgements

Figure 1 adapted and developed from "Health and Well-Being in the Workplace: A Review and Synthesis of the Literature" by Karen Danna and Ricky W. Griffin, in *Journal of Management*, Vol 25 (3) 357-384, SAGE Publications, June 1999, copyright © SAGE Publications, 1999. Reproduced by permission of the publisher via Copyright Clearance Center

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Executive summary

Wellbeing management is receiving growing attention in project management due to increased fatigue, stress and burnout in projects and project businesses. Developing strategies and taking actions to promote employee wellbeing is an ethical imperative and key to achieving the United Nations Sustainable Development Goals of Decent Work and Economic Growth (SDG 8) and Good Health and Wellbeing (SDG 3).

A common underlying assumption of wellbeing management in the workplace is that wellbeing needs to be properly managed as it contributes to productivity, profitability and project outputs (Xu and Smyth, 2023). We reject this instrumental view and argue that a decent work life should enable employees to pursue meaning and purpose through positive engagement with others, and employees can be treated as an end in themselves. Good health and wellbeing are built upon a decent and meaningful work life. This may yield workplace benefits of productivity and profitability, but they need not be the primary goals.

This research takes the first step in empirically investigating wellbeing management in project work environments from the perspective of care. We set the context in the construction sector, which is a traditional project-based sector historically known for being unhealthy and bad for employee wellbeing. Modern methods of construction (MMC) have risen on the industry's agenda in recent years, mostly for the purpose of improving productivity and environmental sustainability. The human and wellbeing side receives little attention, yet it is imperative to ensure that wellbeing is not sacrificed for the pursuit of project efficiency and profits.

Using MMC as the research context, our research aims to explore how project-based firms care for employee wellbeing when implementing MMC. We found the following:

- MMC provides new opportunities for project businesses to care about themselves, stakeholders and sustainability. Business self-care is the dominant driver of adopting MMC, reflecting the transactional nature of the construction business model. However, the narratives of caring about other actors through MMC are treated as afterthoughts.
- There is an absence of strategic leadership within project-based firms and client organisations to align and address competing needs for care, which adversely affects the wellbeing of project managers and workers.

- MMC, as a process and a range of onsite and offsite techniques and digital technologies, offers a more structured and streamlined way to deliver projects. It potentially benefits employee wellbeing by providing a cleaner and safer work environment, enhancing project planning and workplace diversity, allowing for smaller group working where individuals are better recognised, fostering collaborative work communities and nurturing a sense of pride by making positive contributions to others such as end users and colleagues.
- MMC introduces new systems, practices and competences. Systems integration is currently weak at the boundaries of design, manufacturing, and construction, within the firm, and at the firm-project interface. The resulting fragmentation causes fatigue, stress, and job insecurities, counteracting many of the above benefits.
- Wellbeing management approaches are developed in isolation by various functions. They are not consistently and effectively integrated with project plans and schedules.
- Employee wellbeing and ethics of care are interdependent. Wellbeing is fundamentally rooted in meaningful work. A meaningful work life enables workers to make a positive contribution to the lives of other people.

Employee wellbeing is broader than digitalisation, innovation, leadership, the development of project management capabilities, or other single factors. It cannot be adequately addressed by the prevailing transactional business models that approach these factors piecemeal and treat employee wellbeing as a bolt-on extra. Such an approach is not working for individuals, projects and firms. A fundamental shift is dependent upon the firm and project transforming to proactively and strategically address the impact of organisational activities on employees and other stakeholders, rather than considering narratives of care as an afterthought. To facilitate this transformation, we propose five specific recommendations for shifting towards a caring approach in the management of project workers' wellbeing within and beyond construction:

- 1. Recognise wellbeing as an intrinsic part of value proposition for project workers.** This requires reconstructing value in project-based firms, which may involve challenging the dominant ethical frameworks and the existing business model to include employee wellbeing as a legitimate objective of value creation in projects.
- 2. Establish strategic leadership for wellbeing integration within project-based firms and client organisations.** This role should focus on aligning and addressing competing care needs from different stakeholder, creating a strategic narrative of meaning and purposes for the firm and/or the project, clarifying responsibilities for embedding wellbeing in project businesses and project strategies. For client organisations, strategic project organising (Winch et al., 2022) is needed to create conditions for integrating wellbeing initiatives into project strategies and plans.
- 3. Improve systems integration and cooperation between functions and at the firm-project interface.** This could involve the integration of new competences, systems and practices introduced by innovations, better coordination between different subsystems and the development of programme management capabilities to work with various functions to co-create a framework for wellbeing management in projects.
- 4. Enhance diversity and inclusion management for care and wellbeing.** Simply increasing workplace diversity is insufficient to enhance employee wellbeing. What is required is proactive diversity and inclusion management within project-based firms, which drills down to individual projects and is embedded in the ethos of project management. The care-based approach also offers opportunities to address intersectionality by acknowledging that each worker has unique work-life experiences that can impact their wellbeing.
- 5. Support bottom-up learning and employee-oriented initiatives.** One of the objectives of project management should be cultivating environments where project workers can find meaning, purpose, and happiness in their work. This is achieved through delivering benefits for end users, providing opportunities for supporting and collaborating with colleagues and other project stakeholders, empowering employees to make informed decisions and openly voice their opinions, and fostering a culture of care and respect.

1. Introduction

What does an employer's responsibility towards employee wellbeing entail? Can project organisations care, in the sense of going beyond legal obligations? Addressing these pivotal questions is an ethical imperative but also key to achieving the dual goals of Decent work and economic growth (sdg 8) and good Health and wellbeing (SDG 3).

Workers spend about one-third of their waking hours at work and do not necessarily leave their job behind when they leave the workplace. A person's work life, family life and other lives are not separate entities; rather, they are interrelated and intertwined domains with reciprocal effects (Danna and Griffin, 1999). It is critical to a human life to have work that is decent but meaningful, in the sense that it is "worthwhile or worth spending time doing" (Ciulla, 2019, p.31). The creation of such workplaces, therefore, is fundamentally about fulfilling human dignity and care.

Employee wellbeing has received growing attention in the mainstream media (Jones, 2023), industry reports (Cheung et al., 2019) and academic journals (Lingard and Turner, 2023), because of increasing awareness that work environments pose a variety of risks for the workforce. For instance, annual figures since 2012 indicate that, in the UK, the number of workers fatally injured in all industries each year ranges from 110 to 150 (Clark, 2023). In 2022/23, approximately 1.8 million workers suffered from work-related ill health, and an estimated 561,000 workers sustained non-fatal injuries (HSE, 2023b). Nearly 900,000 workers in the UK experienced work-related stress, depression, or anxiety in 2022/23 (HSE, 2023b).

The wellbeing of project professionals is a major concern in project management (Cheung et al., 2019; Xu and Smyth, 2023). For example, construction as a traditional project-based sector is historically known for being unhealthy and bad for employee wellbeing. Between 2011 and 2015, the UK construction industry represented 13.2% of the total number of in-work suicides, and the risk of suicide among male construction workers was three times higher than the male national average (ONS, 2017). The construction sector also accounts for the greatest number of workers killed in accidents (HSE, 2023c).

Meanwhile, modern methods of construction (MMC) have risen up the industry's agenda (HM Government, 2022). MMC includes a wide range of offsite and onsite innovations that have the potential to deliver better project outcomes for stakeholders. Digital technologies and manufacturing techniques provide alternatives to traditional methods and create the conditions for changing current work practices and systems to enhance productivity, sustainability, and wellbeing. However, existing discussions in academic research and industry publications are mostly interested in the productivity and environmental sustainability side of MMC, and less interested in the human and wellbeing side. The successful implementation of new methods and technologies requires changes to working practices, decision-making and ways of interacting, all of which affect the wellbeing of those working in and interacting with the new systems.

Our research aims to explore how project-based firms care about employee wellbeing when implementing MMC. The specific questions are:

- How does the implementation of MMC affect employee wellbeing?
- How is "care" enacted in the implementation of MMC?

Although we set the study in the construction sector, we take the first step by empirically investigating wellbeing management in project work environments from the perspective of care. A common underlying assumption of wellbeing management in the workplace is that wellbeing needs to be properly managed as it contributes to productivity, profitability and project outputs (Xu and Smyth, 2023). We challenge this instrumental view by arguing that a decent work life should enable employees to pursue meaning and purpose through positive engagement with others. It treats employees as an end in themselves.

We hope that the findings and recommendations of this research are insightful for those with employee wellbeing responsibilities, including senior managers, human resource managers, health and safety managers, project managers and frontline managers in construction and beyond.

2. Theoretical background

2.1. Employee wellbeing in projects

2.1.1. The concept of employee wellbeing

Wellbeing has multiple interpretations and in its broadest sense is an inclusive concept. It is generally viewed as a state of mind and a state of being, attributed to subjective feelings such as safety, security, comfort, happiness, fortune and health (Hesketh and Cooper, 2019). Figure 1 presents an organising framework that highlights the major elements of employee wellbeing in the realm of management and organisation.

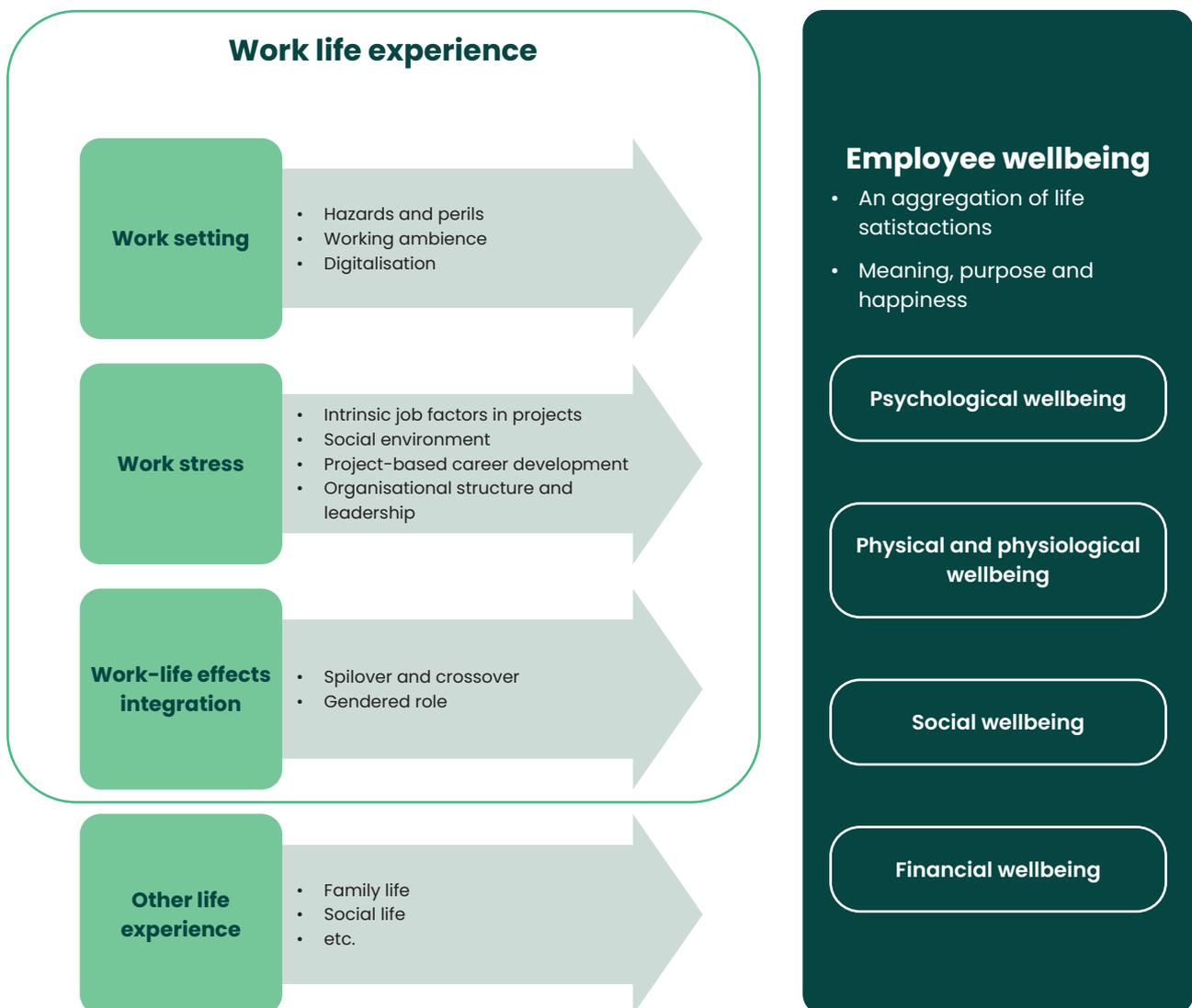


Figure 1: A framework for organising employee wellbeing in projects (adapted and developed from Danna and Griffin, 1999)

Wellbeing is an aggregation of various life satisfactions as experienced by individuals (e.g., satisfaction and/or dissatisfaction with work life, social life and family life). It has two characteristics (Hesketh and Cooper, 2019):

- Meaning and purpose – positive ways of living and perceiving life, and the personal comprehension and mastery of these phenomena.
- Happiness or pleasure – sometimes framed as subjective wellbeing.

Wellbeing takes into consideration the “whole person”. Although various aspects of life experience can be differentiated, they are interwoven and interdependent, inducing integrated effects on wellbeing.

Employee wellbeing consists of different dimensions (Grant et al., 2007):

- Psychological wellbeing – related to the subjective and affective experiences.
- Physical and physiological wellbeing – related to their level of physical comfort, safety, and health, including injuries and diseases, as well as being fit and active.
- Social wellbeing – related to the quality of relationships. At the workplace, this includes peer relations and hierarchical relationships.
- Financial wellbeing – feeling secure and in control of personal finances (Hesketh and Cooper, 2019).

2.1.2. Work setting, work stress and work-life integration

The framework recognises three major sets of factors that relate organisational life to the wellbeing of project workers: work setting, work stress and work-life integration. In construction, these factors sit under how business models are structured and implemented. The transactional business model that prioritises commercial considerations may place employee wellbeing as something of a “bolt-on extra” in decision-making (Smyth et al., 2019).

Work setting

Health and safety (H&S) hazards can create dangerous work conditions. Construction consistently ranks as one of the industries with the highest number of workers involved in fatal accidents (HSE, 2023c). In 2023, the fatality rate in construction was over four times higher than the average across all industries. Between 2020 and 2023, around 2.6% of construction workers sustained a non-fatal injury in their workplace, mostly due to falls from heights and slips, and around 3.3% suffered from work-related ill health (HSE, 2023a). Identifying, mitigating and controlling hazards by integrating health and safety into project design, planning, and site inspection is critical to the physical and physiological wellbeing of construction site workers. In the last few years, more attention has also been paid to workplace perils that seem to be increasing, such as violence and a range of ergonomic hazards leading to musculoskeletal disorders. Workplace perils in the home are also of concern, especially for remote workers. This is often seen in project-based sectors such as IT, consultancy and architecture, and for hybrid workers, whose numbers have risen significantly since the Covid-19 pandemic (Charalampous et al., 2022).

Beyond meeting standards in H&S areas, creating the right type of working ambience can improve employee comfort. For example, the quality of the work premises and site welfare facilities have been reported as the most important factor for construction workers' wellbeing (Smyth et al., 2019). Office layout and how different configuration choices affect communication, teamwork, productivity and employee experience is also a key concern in the hybrid work era (Sailer et al., 2023).

The accelerating forces of digitalisation have raised a number of wellbeing issues at the workplace. On the one hand, digital technologies can relieve employees, mentally or physically, by replacing repetitive work requiring manual handling, improving information flow, and allowing for a more efficient work execution (Kaihlanen et al., 2023; Umans et al., 2018). On the other hand, digitalisation creates job insecurity for certain workers. The redesign of a job induces a new psychological contract that has consequences on wellbeing.

Work stress

A variety of factors intrinsic to project work can induce occupational stress. Projects are commonly recognised as a locus for high levels of motivation to achieve goals, surpass oneself and develop professional competence by working as a team with various professionals. Yet excessive work involvement and commitment could result in psychoaffective disorders (Asquin et al., 2010). High job demands, goal ambiguity, role conflict and the lack of authority in project settings could cause burnout, inducing an emotional exhaustion and a detached response to clients (Darling and Whitty, 2019; Pinto et al., 2014). In construction, the competitive nature of the industry sparked construction firms to use the transactional business model, which focuses on cash flow and return on capital employed, resulting in low investment in management capabilities and project workers (Smyth, 2021). Transient workforces working long hours and irregular shifts have been prevalent in construction project works (Love et al., 2010). Construction workers are found to use substances to stay awake (Smyth et al., 2019), which could cause accidents as well as depression and other psychological conditions (Dembe, 2009).

A negative social environment is a source of stress in the workplace. Construction projects typically involve different organisations and professionals, and outcomes are delivered via networks of relationships. Throughout its lifecycle, a construction project involves the constant formation of new roles and teams of staff who were previously unacquainted. Work relationships offering support and care can help prevent emotional exhaustion (Day et al., 2017; Lee, 2021). However, the temporary nature of a project can reduce opportunities to develop long-term

relationships (Bakker et al., 2016). Negative emotions might emerge if staff are lonely when they are away from head office and workers may have difficulties building trust and informal relationships in project works (Charalampous et al., 2022; Lee, 2021). Limited diversity may also create social stress. Women have been underrepresented in major projects (MPA, 2017; Pritchard and Miles, 2018). In the UK, women account for only 16% of the construction workforce and just 1% of skilled tradespeople (Buchanan et al., 2023). In male-dominated work environments with interpersonal relations characterised by entrenched macho norms, women often encounter diminished networking opportunities within their professions and face significant challenges in achieving social integration. Research found that the macho of construction discourages vulnerability, emotions and mental health concerns from being expressed, through peer pressure and coercion (Hanna et al., 2020; Xu and Wu, 2023).

Job insecurity and career development have increasingly become sources of occupational stress. This can probably be attributed to the increase in mergers, acquisitions and downsizing following the economic downturn caused by the pandemic. Project workers live in an ongoing temporary, 'in-between' state that requires continuous organisational support to enable employees' long-term development while they encounter a series of intermittent projects (Bredin and Söderlund, 2013; Turner et al., 2008). The transitory and competitive nature of workforces in the construction industry, coupled with insufficient investment in employee development, significantly aggravates job insecurity among construction workers (Hanna et al., 2020; Smyth et al., 2019).

Organisational structure and leadership can also be sources of stress. These sources impact the level of employee consultation and engagement, effectiveness of communication, organisational culture, politics, norms and employee behaviour. Transformational leadership promotes employee participation and extra-role behaviour in H&S issues, while abusive supervision and leader incivility can erode employees' psychological health and the organisational climate (Mullen et al., 2024). Projects are temporarily decoupled from firms that act as parent organisations. In such cases, the people management function is decentralised and distributed between the

line manager, project manager and human resource management department (Keegan et al., 2018). In construction firms, further challenges to wellbeing management arise from the lack of integration at the programme level and the firm-project interface, and the silo working between functions along the project lifecycle (Smyth et al., 2019). Shared leadership is therefore critical to employee wellbeing in project contexts.

Work-home interface

Conflicts between professional life and personal life could lead to emotional exhaustion, fatigue and job dissatisfaction (Turner and Mariani, 2016). Fatigue, stress and health problems caused by a tight project schedule, fast work pace and excessive and irregular work hours can have spillover and crossover effects on an employee's private domain, which could further exacerbate issues with their wellbeing (Dembe, 2009). On the other hand, pressures from income-earning responsibilities may also drive a heavy work investment (Hanna et al., 2020).

The norm of working long hours can also impede women from working in projects. Women project professionals are more likely than men to limit their work hours in favour of caring responsibilities and a better work-family balance (Dainty and Lingard, 2006; Legault and Chasserio, 2012). A culture that condones employees working extended hours may impose barriers to full-time work and promotion for female employees (Dembe, 2009). Furthermore, while working from home, female workers are more likely to work a "double shift" that combines working very long daily hours with domestic and caring work (Wheatley, 2012).

2.2. Ethics of care in project management

The ethics of care has been introduced as an alternative ethical theory in project management (Xu and Smyth, 2023). Rooted in the feminist work of Gilligan (1982), the ethics of care has increasingly been discussed as part of an embodied ethical turn, where relationships, care, responsibility and intersubjectivity are emphasised instead of judgements based on rationality, utility, regulations, or policies.

The central focus of care ethics is on mutual growth-in-connection. A caring organisation places people at the centre, "To be cared for is essential for the capacity to be caring" (Gaylin, 1976, as cited in Liedtka, 1996, p.187), and treats employees as an end in themselves. To do so, organisations actively support individual efforts through goals, systems, strategies and values, which develops a community of mutual purpose and nurtures social and human capital. Learning to care is essential for self-identify and recognition in such a community. The wellbeing and the growth of all parties involved is recognised as "value" in a caring organisation (Nicholson and Kurucz, 2019). Organisational effectiveness is understood as how well the caring relation is nurtured in caring for employees and other stakeholders. Economic concerns remain central yet are integrated with a concern for wellbeing.

Projects, firms, and other organisations with underlying care ethics are more capable of managing moral resources to create and mobilise social capital in business networks. They also contribute to the moral economy at the macro level, which can prevent the dysfunction of a market economy caused by the pursuit of profit purely for self-interest (Smyth, 2007). Figure 2 summarises the main tenets of care ethics.

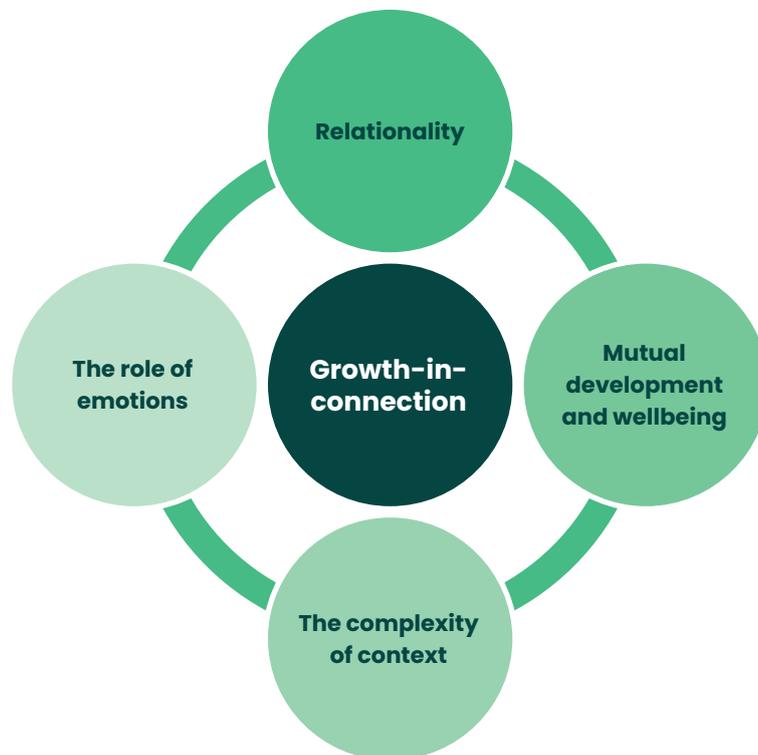


Figure 2 :The main tenets of care ethics

Relationality. An ethics of care starts from a fundamental position that regards people as inherently relational and interdependent, rather than the ideal of being independent and having separated autonomy (Held, 2006; Noddings, 2013). Individuals develop in networks of relationships that help constitute who they are and are becoming, where the development process is ongoing. From the perspective of ethics of care, the responsibilities for a project are presented by the embeddedness in networks of social, political and historical relationships. Enacting such responsibilities in the context of interdependence requires strategic project organising (Winch et al., 2022) to scope out the current conditions and conceptually set out potential conditions that enable the growth-in-connection of stakeholders in a project.

Mutual development and wellbeing. The essence of caring is to foster the mutual development and wellbeing of both the carer and the cared-for. The caring relationship is not necessarily hierarchical in an organisational context. It can arise out of interdependencies, such as working together or alongside others in shared spaces, but the culture and business model must support caring. To care is not to impose predetermined solutions to problems or to pursue one's own ends for them. Rather, it is to focus on the other's needs, to respect the other's autonomy and to enhance the other's ability to make good choices (Liedtka, 1996). The co-creating of goals and dialogic practices is imperative to mutual development and wellbeing (Lawrence and Maitlis, 2012; Nicholson and Kurucz, 2019). Goals, values and relationships are dynamic and emerge in project contexts. Co-creating value in a project community, from the perspective of care ethics, requires an iterative process of two-way influence and openness to find a common purpose, so that choices are made within the context of mutual aid.

The complexity of context. The ethics of care highlights a concept of truth and knowledge as being locally situated and produced. It is sceptical of relying on universal and abstract rules. It cultivates the traits of character and of relationship in order to understand the experiences of workers within their sociocultural contexts (Held, 2006; Lawrence and Maitlis, 2012). Care ethics links care to specific others rather than a generalised "other". Therefore, it rejects the premise that any worker is replaceable. An ethics of care is also future oriented. It drives the pursuit of possibility through dialogic caring practices, which opens up novel action, innovation and uncertain futures. In project management, bringing project organising to the fore (Addyman and Smyth, 2023) gives greater primacy to emergent and changing contexts of interdependence, providing a more fruitful understanding of the development of an ethics of care.

The role of emotions. In contrast to the dominant rationalist approaches, an ethics of care takes emotions as moral elements that "*need to be cultivated not only to help in the implementation of the dictates of reason but also to better ascertain what morality recommends*" (Held, 2006, p.10). Noddings noted that "*To care is to act not by fixed rule but by affection and regard*" (Noddings, 2013, p.24). Responsibilities forged in this way are more likely to emphasise trust, mutual connectedness and co-development with the cared-for than to affirm asymmetrical power relations, such as imposing particular ideals of lifestyle or behaviour in the workplace that reinforce certain senior managers' personal values (Johansson and Edwards, 2021).

In summary, the ethics of care provides an alternative ethical framework to examine organisational practices in project working environments. Taking the perspective of care ethics, we investigate how project-based firms care for employee wellbeing in the context of modern methods of construction.

3. Research methods

This study uses a qualitative methodology to explore employee wellbeing and its management in implementing modern methods of construction (MMC). We selected research participants who 1) work in the construction industry and 2) have experiences with wellbeing management and/or MMC projects. The fieldwork had two phases. Figure 3 illustrates an overview of this research.

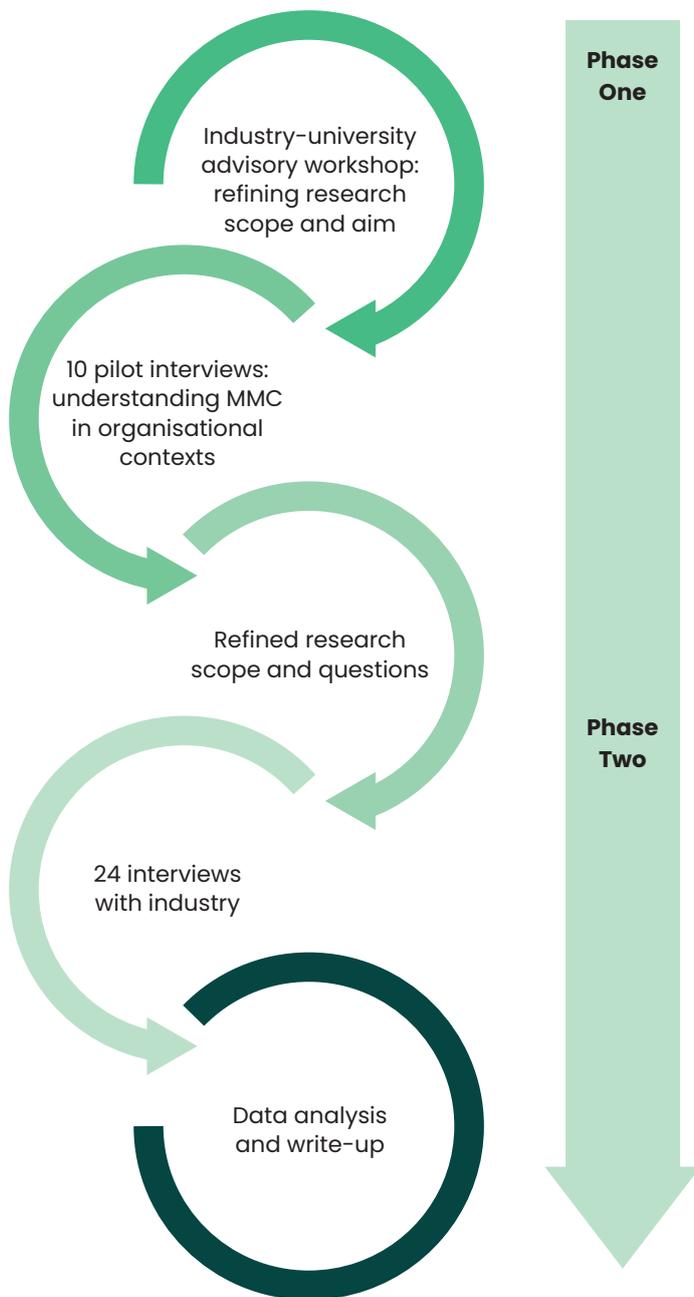


Figure 3: An overview of research process

The first phase involved an industry-university advisory workshop and 10 pilot interviews. The advisory workshop, which consisted of five advisers from universities and industry partners, helped refine the overarching aim and narrow the research scope to three types of construction firms (consultancies, main contractors and MMC specialists) in order to generate a more in-depth understanding of the topic. The purpose of the pilot interviews was to understand MMC as it applied in different organisations and to select suitable firms and participants for the main interviews. In total, two scholars and 13 industry experts from 10 companies participated in the first phase.

In the second phase, 24 interviewees from the UK construction industry were chosen (see Table 1). The average duration of interviews was approximately 50 minutes. The interviews were semi-structured and guided by interview protocol to ensure consistency. They included three main topics: 1) the description of the role and experience; 2) the impact of MMC on the organisation and its people; 3) approaches to wellbeing management. The roles of participants included programme manager, technical director, bid manager, health and wellbeing director, human resource director and designer. The interviewees were selected through snowball sampling (Goodman, 1961).

The main interviews were recorded and transcribed. An interpretative and thematic approach was used in the data analysis. Data analysis is an abductive process involving a constant comparison between data and theories (Dubois and Gadde, 2002). A list of potential themes was created based on the theories of workplace wellbeing and the ethics of care, and this initial list changed as new ones emerged from the data and unused themes were discarded.

Table 1: Main interview information

Organisation	Organisation type	Interviewee roles	Subtotals
Consultancy 1	A large international firm providing engineering, design, planning and project management consulting services	Managing Director	1
		Human Resources (HR) Lead	1
Consultancy 2	A large international firm providing engineering, design, planning and project management consulting services	Senior Designer	1
Consultancy 3	A large international firm providing project and cost consulting services	Contracts Manager	1
MMC Specialist 1	A UK-based small/medium enterprise (SME) delivering modular construction via a product platform to encompass facility set-up, design, procurement, assembly and site installation	Managing Director	1
		Design Coordinator	1
		Technical Lead	1
		Procurement and Production Manager	1
		Assembly Lead	1
Main Contractor 1	A large UK-based construction and civil engineering firm	Head of MMC	1
Main Contractor 2	A large international firm providing construction management and project management consulting services	Head of Health and Wellbeing	1
Main Contractor 3	The UK-based civil engineering and infrastructure branch of a large international construction firm	HR Director	1
		Bid Manager	1
		Digital Construction Specialist	1
Main Contractor 4	A UK-based SME delivering new build, refurbishment, project management and design and build construction services via MMC solutions	Managing Director	1
		Project Manager	2
		Contracts Manager	1
		Senior Design Manager	1
		Design Manager	1
Main Contractor 5	The UK branch of a large international firm providing construction management and project management consulting services	Technical Director	1
		Head of MMC	1
		Health, Safety and Wellbeing Manager	2
Total			24

4. Findings

4.1. Care in modern methods of construction (MMC)

MMC is a broad term. Our interviews found various definitions at the strategic level, ranging from data-driven project and supply chain management and automation, to “a whole range of more modern thinking, invariably around offsite” (Managing Director, Main Contractor 4) and to “innovation to deliver better outcomes” (Head of MMC, Main Contractor 1). Operationally, these strategies are implemented at the project level by using a combination of offsite and onsite techniques, as defined by the government (Cast Consultancy, 2019), product platform approaches (Construction Innovation Hub, 2023) and digital technologies such as building information modelling (BIM).

Despite the different strategies, our study found common reasoning in deciding the purpose of MMC, as discussed below. We highlight the problem of competing care needs within project-based firms, which has implications for project workers’ wellbeing.

4.1.1. Business self-care as the dominant driver of MMC

There is a strong recognition within the industry that MMC can enhance project efficiency and competitive advantages in the bidding process for certain project types. However, our interviews show variations in how MMC benefits the overall business. Single-sector firms, typically in the building and housing sectors, view MMC as a means to business growth. These firms utilise MMC as a process and bundle of manufacturing techniques and digital technologies to proactively engage with clients and supply chains, shaping solutions and outcomes. The effectiveness and efficiency of individual projects contribute to the firm’s reputation, long-term relationships, continuous learning and repeat or referral business.

In large multisector firms, MMC solutions are developed on a project-by-project basis, primarily driven by client requirements. Synergy is limited across projects and sectors, so programme or portfolio management is weak and may not realise the business-wide benefits. Only one multisector firm in our study explicitly used MMC as a strategy for business growth through diversification. However, as will be discussed in the subsequent section, the challenge lies in integrating various systems to deliver a sustainable business model, which has consequences for employee wellbeing.

4.1.2. Narratives of other-oriented care as afterthoughts

A notable observation from the interviews is that the impact on other actors of adopting MMC is not explicitly incorporated into business strategies. Hence, the narratives of caring about others, including end users, local communities, suppliers and employees are only afterthoughts, such as in the examples of increasing diversity or improving health and safety.

Care about end users. Our interviewees emphasised the health and wellbeing of end users as a key value proposition of adopting MMC. MMC enables an outcome-focused approach in its design, construction and maintenance. Digital building models and prefabricated modules and components increase the tangibility of end products, which aids in envisioning, communicating and visualising how specific solutions can benefit user experience and performance.

Care about environmental sustainability. Another value proposition of MMC mentioned by interviewees is its reduced environmental impact during both construction and use phases. Care about environmental sustainability, however, is largely driven by legislation, regulations and construction standards such as Building Research Establishment Environmental Assessment Method (BREEAM).

Care about diversity and inclusion. One company in our study noted that MMC aligns with their strategic goal of increasing inclusion and diversity, a concern shared across the industry. MMC helps to promote digitalisation in construction, reduce physical and manual work, and enable factory-based work, hence changing the historical image of construction work as dirty and dangerous. This shift can help attract and retain younger workers and female workers. Inclusion is also considered from a local economic perspective. For instance, establishing a prefabrication factory in a particular location and hiring staff from the local community can boost local employment.

Care about supply chains. MMC necessitates long-term partnerships with manufacturers and specialist contractors (Managing Director, Main Contractor 4). These partnerships are crucial for developing quality design and achieving timely or just-in-time production built upon mutual trust and care. The structured process of MMC projects increases certainty in supplier payment, thereby adding financial security and stability to the suppliers' cash flow. For instance, Main Contractor 4 uses timely payments to suppliers as a key performance indicator for its business streams. As will be explained in the subsequent section, our case study firms have organised various events with their key suppliers to maintain their relationships. However, for multisector construction firms, designing a formal structure to sustain such relationships while reflecting dynamic client requirements remains a work in progress.

Care about employee wellbeing. Employee wellbeing is mostly regarded as a by-product of increased project efficiency, sustainability, or diversity and inclusion. There is a lack of strategic leadership within project-based firms and client organisations to align the competing needs of care in construction, which may exacerbate fatigue and stress for project managers and workers. Typically, various initiatives are developed in silos by different functional departments and then imposed onto projects. The time for planning and organising events to implement such initiatives, however, is often not built into the project schedule, resulting in increased workload, longer work hours and undue strain on project managers.

4.2. MMC and employee wellbeing

We analysed the effects of MMC on the wellbeing of three types of employees: 1) site-based employees such as project managers and site operatives; 2) office-based employees such as designers and bid managers; and 3) workers from suppliers and the self-employed.

We found that wellbeing implications resulted from changes in four main categories:

- work settings
- workload and pace
- work community and interaction
- field and nature of work

There were similarities and differences in the views of different types of professionals. The results are presented comparatively in the sections below.

4.2.1. Changes in work settings

The implementation of MMC could improve the physical working conditions of construction workers. MMC solutions generally encompass offsite production of modules or building components, which are finished to a greater degree before being transported and assembled onsite. Consequently, instead of working in the variable conditions of an open construction site, some suppliers complete their tasks in controlled manufacturing plant environments, where health and safety (H&S) may be better managed.

Our interviewee (Project Manager, Main Contractor 4) mentioned that construction workers working onsite within the prefabricated modules or structures are also shielded from extreme weather conditions and hazardous substances that could otherwise lead to chronic health risks. Risky onsite activities such as working at height are reduced, as is more physically demanding work.

Moreover, MMC facilitates cleaner, tidier and drier construction sites. According to the interviewees, particularly site-based employees, working in such an environment is less stressful as they can better focus on their professional tasks. It also encourages

collective behaviour to maintain hygiene, inducing a good work environment physically and psychologically. H&S hazards become easier to identify and mitigate through enhanced cooperation and awareness among workers in MMC settings.

MMC solutions often leverage digital technologies, enabling greater flexibility for designers. A good example of this is observed in the practices of MMC Specialist 1. They design the project using a product platform to produce design information for internal and external stakeholders¹. The employees of MMC Specialist 1 reported a high level of life satisfaction as they have more flexibility to integrate their daily work with other commitments, leading to better work-life integration.

4.2.2. Changes in workload and pace

The adoption of MMC can mitigate uncertainties typically associated with traditional construction programmes. This is achieved by introducing a more structured and streamlined process that provides a sense of psychological safety for designers, manufacturers and suppliers.

Although the front-end stages of design and planning in MMC projects usually require more time, the overall duration of a project is often reduced due to the early freezing of the design, the clarity and integration of design and construction information, and planning based on the whole process. Securing design approval from various stakeholders is crucial, which intensifies the pressures on designers at the front end of the project. Nevertheless, designers interviewed in this research reported that, compared with traditional projects, the approach taken in MMC projects reduces the duration of the stress they experienced because the early freezing of designs reduces variation requests later on.

According to the interviewed site workers, MMC has alleviated their workload as certain tasks are now relocated to manufacturing plants. They highlighted benefits such as better planning, and less congestion, trade overlap and waiting time onsite. The workflow is more efficiently organised, allowing multiple trades to work simultaneously on prefabricated sites without interference. Good quality control in factory settings

¹ For more information about product platform approaches in construction, see Jones, K., Mosca, L., Whyte, J., Davies, A. and Glass, J. (2022). 'Addressing specialization and fragmentation: Product platform development in construction consultancy firms', *Construction Management and Economics*, 40(11–12), pp.918–933.

also helps ensure minimum defects and rework onsite. Collectively, these factors reduce fatigue and enhance workers' financial wellbeing, as explained by a project manager:

"There's a high number of suicides in construction. It's way too high. I think it's now the biggest killing in construction. That's caused because people have money troubles; they are stressed, etc. If you can take away that risk of somebody going to work for a day and not earning any money, by having it properly planned, that's one stress taken away."

(Project Manager 1, Main Contractor 4)

4.2.3. Changes in work community and interaction

All professionals highlighted the importance to wellbeing of a collaborative work environment. Early engagement, collaborative design and continuous learning within MMC projects have changed the dynamics of the work community and the way project professionals communicate and interact with each other.

To achieve a seamless design/manufacturing/construction process, various stakeholders – including designers, clients, project managers, manufacturers and specialist contractors – are actively involved in the design and planning phases. This collaborative approach ensures design quality but also fosters a shared understanding and a sense of collective ownership of the project.

The use of digital building models plays a pivotal role in this process, serving as a boundary object to convey meaning and integrate information from both internal and external stakeholders. The accessibility of information is further enhanced by BIM and cloud services. Designers, in particular, have reported an increased sense of empowerment and satisfaction when finalising the design in collaboration with these stakeholders, which in turn reinforces their professional identity and values.

Continuous learning and knowledge sharing, both during and after the project, helps sustain the collaborative atmosphere and relationships.

Two firms in our research, MMC Specialist 1 and Main Contractor 4, engage in extensive learning activities with clients, end users, manufacturers, specialist contractors and different internal project teams. The knowledge gained from these interactions not only contributes to the continuous improvement of MMC products and services but also aids in planning for future collaborations and just-in-time production. It also informs shared behavioural norms, including respect and trust. Both firms echo a common perspective on the importance of selective tendering and strategic supply chain partnerships to establish long-term relationships and facilitate repeat business.

According to the site-working interviewees, the social environment onsite is notably enhanced due to the smaller size of teams. In a more compact team, site managers, employees and workers from different trades have the opportunity to understand each other as whole individuals, or as "particular others". This converts construction sites into social spaces, which helps alleviate work-related fatigue and stress. It allows for a better understanding of and caring for workers' needs and voices, both professionally and socially. This further translates into the behavioural norms of trust and respect, which in turn induces mindful interactions and self-organising among different professionals.

Lastly, the adoption of MMC necessitates effective diversity management in construction. A contract manager shared that MMC allows for various trades to work concurrently that typically work sequentially in traditional projects. Those professionals have varying work habits, practices and needs, which can lead to challenges. Moreover, the contract manager observed that MMC attracts a greater number of women into the construction industry and enables them to undertake various onsite tasks. Shifting towards a more balanced male-female worker ratio is a critical step in altering the traditionally macho culture of construction sites. Yet advancing gender equality requires proactive diversity management to amplify the voices of minority groups, promote healthy interpersonal relationships and improve social and psychological work environment for workers of different genders.

4.2.4. Changes in the field and nature of work

MMC adds new challenges to systems integration in construction project organising. Systems integration has been a long-standing concept in project management and has found significant application in the construction sector (Whyte and Davies, 2023). It is the process of coordinating various subsystems to achieve project outcomes. The implementation of MMC introduces new systems and practices (such as manufacturing system and techniques) that must be integrated into construction projects and businesses to realise the long-term benefits of MMC.

However, our research indicates that failures to integrate manufacturing, design, and construction systems, as well as failing to embed MMC knowledge and competences within the project business (across various projects and functions), have led to several issues, such as ambiguous H&S responsibilities across different work environments, inconsistent quality assurance at the factory, and insufficient time built into the bids due to a lack of understanding of MMC requirements. These issues have increased onsite workload; for instance, poor factory quality control of prefabricated panels has necessitated additional adjustments onsite (Contract Manager, Consultancy 3). Such cumulative issues adversely affect site workers' physical, psychological and financial wellbeing. Additionally, it was mentioned that the effective integration of construction projects and broader systems, such as the planning system, is key.

The H&S and wellbeing issues have been further compounded by the loss of skilled workers due to the Covid-19 pandemic, Brexit in the UK, and the subsequent economic downturn. According to our interviewees, projects have responded to the challenge of quickly filling the gap by either recruiting self-employed individuals, who may lack the requisite competence and language skills, or by increasing the workload of more competent employees.

MMC has introduced the role of the 'digital technician-level designer' (Managing Director, Consultancy 1), who works at the boundary of design, construction

and manufacturing to make sure the producibility and buildability of designs. The main responsibilities of these digital designers include working with architects or principal designers to ensure the feasibility of designs within MMC systems, participating in the manufacturing process, conducting quality checks at plants and construction sites, and engaging with clients and end users to understand the user experience. This new role encompasses a full lifecycle process, which generates new professional values. For instance:

"With modular, I get a lot of pride from what goes out ...And like I say, one of the aspects I like is to see it being used in its final intended use, with people living in it. And like, we've built schools before, and to go back to the school and see the children in the school. We've built lots of houses and sheltered accommodation. I've actually spoken to some of the residents ...They'd never had a night's sleep like it, because of the whole-house ventilation system and things like that."

(Technical Lead, MMC Specialist 1)

The above quote highlights the role of MMC in producing meaningful work for construction employees. Digital building models, technologies and manufacturing techniques allow designers and site workers to visualise the tangible end product, strengthening their connection to the final outcome and the users of their work. A sense of pride was generated through the social value of project.

The successful adoption of MMC requires incumbent firms to either adapt the nature of their existing work or expand the scope of their operations. This poses challenges, particularly for large, multisector companies, as mentioned in previous section. Cultural integration is another challenge; for example, encouraging architects and engineers who traditionally take pride in creating prestigious, unique or technically complex projects (HR Lead, Consultancy 1) to embrace a mindset oriented towards modularity and production. These challenges, if not well managed, could cause stress, anxiety, and job insecurity among employees.

4.3. Wellbeing management in project-based firms

Our research finds that organisational responsibility for employee wellbeing in project-based firms is distributed between various functional departments, including senior management, human resource management (HRM), H&S management, operations management and project management. Yet wellbeing management approaches are often developed in isolation by these different departments, each having distinct professional values. This fragmentation points to the need for stronger strategic leadership in wellbeing management. A significant challenge we identified is the lack of cooperation between departments, notably between HRM and operations, and at the firm-project interface (e.g. aligning organisational initiatives with project planning), which reduces the effectiveness of wellbeing management.

4.3.1. Different approaches to wellbeing management

Senior management leadership demonstrates the organisational values that set workplace priorities, which in turn guide the attitudes and behaviour of other managers and employees. Our interviewees recognised a “showing” approach by some senior managers as impactful in terms of dismantling barriers to discussing mental health and wellbeing, which is of particular importance for male-dominated workplaces like construction. It involves senior leaders sharing personal experiences of mental health challenges both in the workplace and at home, and thus revealing their vulnerabilities.

HRM typically leads an enabling approach, focusing on policies and programmes that help individual self-care and care for others. According to the HR professionals we interviewed, these initiatives encompass flexible working arrangements, promotion of healthy habits and positive life attitudes, increased health literacy and wellbeing awareness, and financial wellbeing through personal finance education. It was also stressed that training in mental health first aid has been a growing trend in the construction industry to enable frontline managers to recognise early signs of wellbeing issues and engage in more thoughtful conversations. Senior leadership training also includes mental health awareness and support.

However, our research finds that these measures are often generic and do not always consider the diverse needs across different work types, genders, ages and other demographic backgrounds. Any new requirements emerging from the implementation of MMC are not considered. Flexible working arrangements are not practical for site- and factory-based workers. Inflexibility was identified as a factor in employee turnover.

One HR professional stressed the gendered differences in self-care and healthcare service access. A lot of campaigns and health resources have been directed towards men’s health and wellbeing, due to high male suicide rates and lower male health literacy. However, women’s work experiences and wellbeing receive less attention, despite the growing focus on diversity and inclusion in the sector.

Wellbeing has also been managed from a H&S perspective. This approach focuses on conveying best practice, improving welfare facilities, and reducing hazards in the work environment to protect the physical wellbeing of site employees and supply chain workers. One female H&S manager told us that site welfare for female workers is often set up without considering women’s psychological needs. Having women taking a leadership role in projects brings different perspectives to H&S issues but also helps amplify women’s voices and experiences on construction sites, including not only direct employees but also tradeswomen, female cleaners and other roles.

Interviewees emphasised that proactive fatigue management is key to preventing accidents. However, it was noted that long work hours and abnormal shifts are inevitable in project work. To mitigate this, project managers require sufficient resources to enable them to rotate duties among workers, which can be challenging in some projects.

Bonding and supportive approaches are practised in operations and projects. These emphasise fostering the feeling of being recognised, valued, and respected by building trust relationships and creating meaningful work.

Keeping ties with their own professional department at the corporate headquarters helps reduce project workers' stress, as this manager explains:

"I shouldn't have said this but we're predominantly women ...So if somebody's working with another team and it's not going so well, we all know that we can all pick up the phone to each other and just say 'Oh, I just really need to just download this'. And I think that's quite important."

(Bid Manager, Main Contractor 3)

There is a gender-based difference in leadership styles, particularly in terms of creating a workgroup climate featured by psychological safety, openness and mutual care. It is essential to clarify that the point of this observation is not to suggest that the construction industry needs more women leaders because they may be perceived as more caring. Rather, our findings emphasise that all individuals, regardless of gender, possess the capacity to care for and support others. The value of diverse leadership lies in providing employees with varied approaches to working and connecting with their managers and peers, which allows employees to choose the interaction styles that best align with their individual needs and circumstances.

A bottom-up communication channel is critical for recognising the various needs of employees. Many companies have included wellbeing in their regular employee surveys. This is a reactive approach. In our interviews, we found more proactive approaches that encourage open conversation and knowledge sharing within and beyond projects. For instance, some main contractors set up consultation meetings onsite between workers and independent parties (such as union representatives and wellbeing professionals) where they can raise their concerns.

Workgroup networks were noted as being particularly useful for knowledge sharing across projects, functions and hierarchies. These were applied at Main Contractors 4 and 5. These networks attract employees sharing the same interests or protected characteristics, such as women in construction, health and wellbeing, sexual and gender minorities, and allow knowledge sharing and learning among employees of various professional backgrounds and in different organisational roles.

We identified some good examples of organisational support for employee initiatives. These bottom-up initiatives empower employees and create a meaningful work life, which is necessarily different from one person to another. They also lead to a caring atmosphere, which is infectious and influences the work life of others, including supply chains, as well as life outside of work. For example:

"From day one it's a 'WE' atmosphere. And it stems from [the MD] right down to our own in-house decorators. Everyone's got the same attitude and it's, you know, we look after one another. But I think because we do that, you naturally bring it in the supply chain, and I think you naturally want to do things ...So we're not regimented like some of the tier ones where somebody sat there is going, 'This is the initiative for this month and this is what they're going to do'. It's actually everyone within [Main Contractor 4] is empowered and they go, 'This is what we're going to do. We're gonna do this'. And this is what's gonna create that atmosphere. I mean, I'll spend more time at work than I do at home. So the better it is here, the better it is at home."

(Project Manager 2, Main Contractor 4)

4.3.2. Lack of cooperation between functions and at firm-project interface

One of the primary issues identified in our research is the lack of cooperation between HRM and operations regarding wellbeing management. Due to their lack of influence on projects, HRM largely relies on managers at individual sites to proactively flag wellbeing issues (HR, Consultancy 1). Yet construction project workers operate in predominantly efficiency-driven business models, often adhering to a "must-do-it-now" mentality within a dynamic work environment, as highlighted by a contracts manager in our research. This focus can reduce the likelihood of the effective awareness and reporting of wellbeing issues. As a result, wellbeing management often operates within an informal system, leaving frontline managers and workers to bear the caring responsibilities.

Moreover, despite the widely held view that the current way of organising projects is a major contributor to mental health issues in the construction sector, our interviewees found that most training sessions continue to emphasise organisational values and behaviour. There is a lack of effort to change working practices to more effectively support the wellbeing of employees and supply chains.

Wellbeing initiatives are not effectively and consistently integrated into project plans and schedules. As discussed, there are tensions between various initiatives, such as equality, diversity and inclusion (EDI) and sustainability. Project teams often find themselves overwhelmed by the additional time required to implement these initiatives, without adequate time allocated within the project schedules to address them effectively. Each site can potentially adopt different approaches to wellbeing and other organisational priorities, but, when resources or time are lacking, some of these approaches are neglected. In addition, HR professionals in our research recognised that these initiatives are not always monitored and reported back to the corporate centre. Overall, this fragmented approach leaves management without a comprehensive understanding of the implementation or the effectiveness of wellbeing management across different sites.

Client behaviour, particularly in the public sector, plays a significant role in influencing the wellbeing of construction employees. Our interviewees mentioned that some clients have included wellbeing management in the tendering process. However, they often regard wellbeing management as a static criterion, for instance, enquiring about wellbeing events that have been held or awards and accreditations that have been obtained, rather than taking a future-oriented approach that assesses the extent to which wellbeing is integrated into project plans, programmes, business models and organisational cultures. Furthermore, the uncertainty inherent in client demands can cause stress and anxiety. For example, a bid manager explained to us that the unpredictable nature of client demands results in construction employees having to choose between self-care (e.g. taking holidays) and professional obligations.

5. Conclusion and implications for practice

The aim of this research has been to investigate how project-based firms care for project workers' wellbeing in the context of modern methods of construction (MMC).

It found the following:

- MMC provides new opportunities for project businesses to care about themselves, stakeholders and sustainability. Business self-care is the dominant driver of adopting MMC, reflecting the transactional nature of the construction business model. The narratives of caring about other actors through MMC are treated as afterthoughts.
- There is an absence of strategic leadership within project-based firms and client organisations to align and address competing needs for care. This adversely affects the wellbeing of project managers and workers.
- MMC, as a process and a range of onsite and offsite techniques and digital technologies, offers a more structured and streamlined way to deliver projects. It benefits employee wellbeing by providing a cleaner and safer work environment, facilitating project planning and workplace diversity, allowing for smaller group working where individuals are better recognised, fostering collaborative work communities, and nurturing a sense of pride by making positive contributions to others, such as end users and colleagues.
- MMC introduces new systems, practices and competences. Systems integration is currently weak at the boundaries of design, manufacturing and construction, within the firm, and at the firm-project interface. The resulting fragmentation causes stress, anxiety and job insecurity, counteracting many of the above benefits.
- Wellbeing management approaches are developed in isolation by HRM, H&S management, operations, and project management departments. Wellbeing management is not consistently and effectively integrated with project plans and schedules. The lack of cooperation between departments and at the firm-project interface reduces the effectiveness of wellbeing management.
- Employee wellbeing and ethics of care are interdependent. Wellbeing is fundamentally rooted in meaningful work. A meaningful work life enables workers to make a positive contribution to the lives of other people. This is achieved through:
 - delivering benefits for end users, thereby providing project workers with a sense of purpose and contribution
 - collaborating with and supporting colleagues and other stakeholders, to foster care and respect in the work environment
 - providing project workers with the autonomy to choose their own ways of working and connecting with managers and peers
 - empowering employees to make decisions and express their opinions.

Employee wellbeing is broader than digitalisation, offsite construction, manufacturing techniques, leadership, the development of project management capabilities, or other single factors. It is dependent upon transformation in the firm and the project. Where to start and how to do this will vary from firm to firm. We recommend five important principles and actions to accommodate a caring approach that creates meaningful project work and enhances project workers' wellbeing within and beyond construction (see Figure 4).

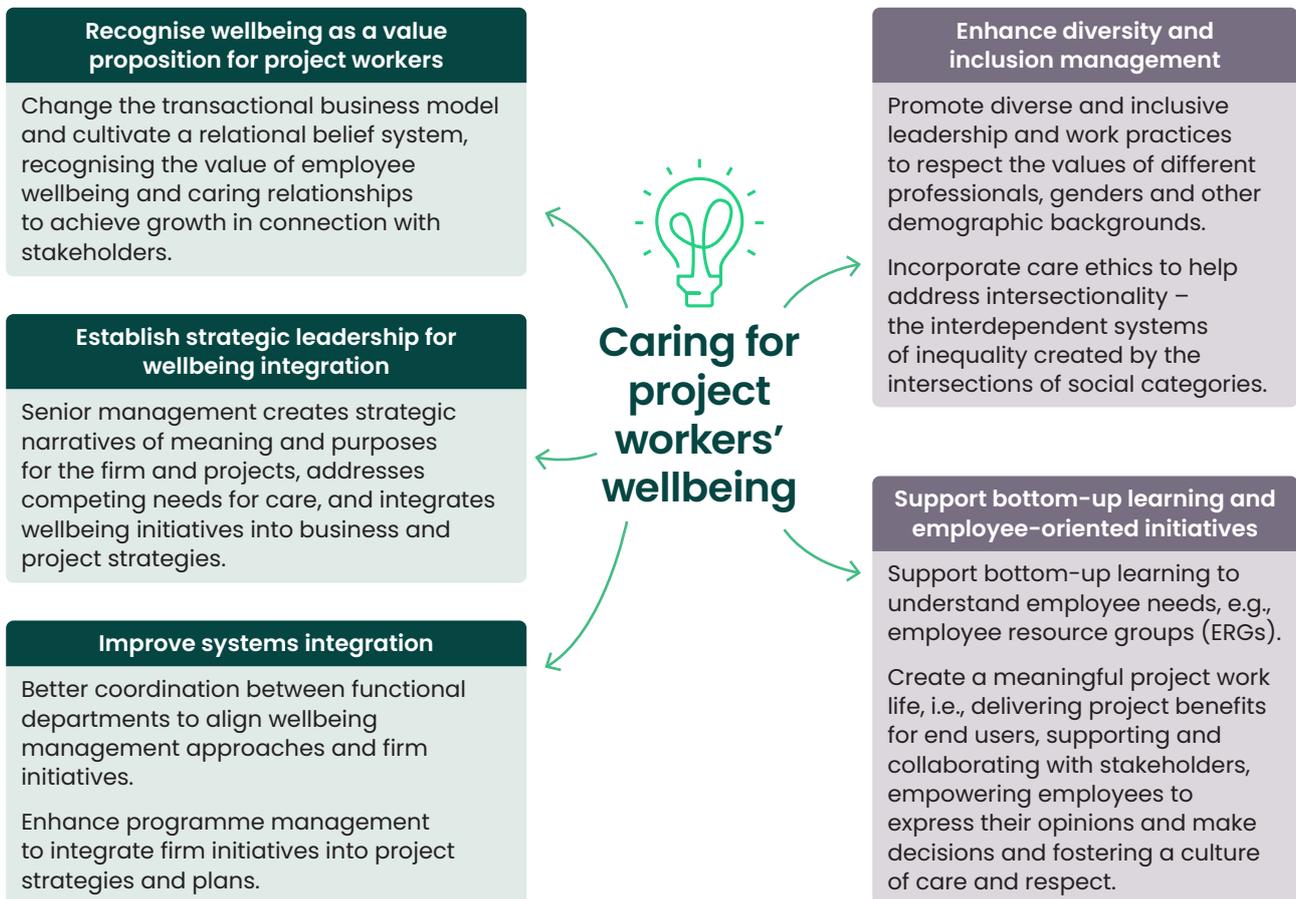


Figure 4: Research findings and recommendations

- 1. Recognise wellbeing as an intrinsic part of value proposition for project workers.** This requires reconstructing value in project-based firms, which may involve challenging the dominant ethical frameworks and the existing business model to include employee wellbeing as a legitimate objective of value creation in projects. The theory of care ethics provides a promising alternative for this (Xu and Smyth, 2023). Specifically, project-based firms need to cultivate a relational belief system that acknowledges the value of employee wellbeing and personal growth, as well as the vital role of caring relationships for achieving these. Embracing such a belief system can inspire relational behaviour and practices to encourage a positive interaction and mutual growth-in-connection within the project environment.
- 2. Establish strategic leadership for wellbeing integration within project-based firms and client organisations.** Strategic leadership concerns the organisational vision, strategy, systems, routines and values that guide interactions and behaviour within the organisation (Crossan et al., 2008). This role should focus on aligning and addressing competing care needs from different stakeholders, such as employees, local communities and supply chains, creating a strategic narrative of meaning and purposes for the firm and/or the project. This clarifies the responsibilities for embedding wellbeing in project businesses and project strategies. For client organisations, strategic project organising (Winch et al., 2022) is needed to create conditions for integrating wellbeing initiatives into project strategies and plans.

3. Improve systems integration and cooperation between functions and at the firm-project interface. This could involve the integration of new competences, systems and practices introduced by innovations, better coordination between different subsystems and across organisational boundaries in projects, the alignment of wellbeing management approaches between different functions, the incorporation of different initiatives such as wellbeing, diversity and sustainability and the inclusion of firm initiatives in project plans and schedules. It also requires developing programme management capabilities to work with various functions to co-create a framework for wellbeing management in projects, supported by adequate resources at the programme and portfolio levels.

4. Enhance diversity and inclusion management for care and wellbeing. There is a growing need to enhance diversity and inclusion in project work environments due to technological, demographic and structural changes in society. These changes are leading to a greater presence of individuals from diverse backgrounds within projects. Simply increasing workplace diversity is insufficient to enhance employee wellbeing. What is required is proactive diversity and inclusion management within project-based firms, drilling down to individual projects and being embedded in the ethos of project management. Project workers need to see how practices are relevant to local-level issues. Incorporating care ethics into diversity and inclusion strategies and practices can help counteract the instrumental view that often reduces diversity to merely a tool for enhancing organisational productivity and profitability, hence ensuring employee engagement and buy-in. This requires promoting diverse leadership and different work practices to respect different professional and ethnic values and perspectives, tailoring approaches to meet the varying needs of professions and different demographic backgrounds. The care-based approach also offers opportunities to address intersectionality – the intersecting power dynamics that shape social relations and individual experiences (Collins and Bilge, 2020). By acknowledging that each worker has their own unique work/life experiences that can impact their wellbeing, this approach engages with the intricate intersections of social categories such as race and gender, thereby confronting the interdependent systems of inequality they create.

5. Support bottom-up learning and employee-oriented initiatives. Bottom-up learning supports a flexible and nuanced approach to accommodate specific needs in local projects. The paradigm of project organising (Addyman and Smyth, 2023) provides empirical guidance for this dialogic approach. An objective of project management should be to cultivate environments where project workers can find meaning, purpose and happiness in their work. This is achieved through delivering benefits for end users, providing opportunities for supporting and collaborating with colleagues and other project stakeholders, empowering employees to make informed decisions and openly voice their opinions, and fostering a culture of care and respect. Employee resource groups (ERGs) are gaining popularity in practice. These groups are led by employees who share a characteristic or interest; for example, workgroup networks as identified in our research. As mentioned, these networks build trust relationships within project-based firms, encourage conversation and knowledge sharing across hierarchies, projects, and professions, and foster a sense of belonging in the workplace. Moreover, research has identified the role of ERGs in enhancing the careers of minority groups and hence diversity at managerial levels, transcending the silos between functions, fostering communities, and increasing employee social embeddedness and engagement (Welbourne et al., 2017).

In conclusion, taking the lens of the ethics of care, our research reveals pivotal insights into the impact of MMC on employee wellbeing and wellbeing management in projects. It highlights the need for the strategic integration of wellbeing into projects and project business, the creation of meaning in project work, and the promotion of diversity and inclusion, which contributes to the United Nations Sustainable Development Goals of Decent Work and Economic Growth (SDG 8) and Good Health and Wellbeing (SDG 3).

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