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The Silent Risk: Mental Health as a Hidden Determinant of Safety Incidents in the UK Construction Industry

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Professional Doctorate

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Abstract

The United Kingdom construction industry remains one of the most hazardous occupational sectors, with safety management historically prioritising physical hazards while largely overlooking psychosocial risk. Emerging evidence suggests that mental health is not only a wellbeing concern but a critical and under-recognised determinant of safety performance. Psychosocial stressors, including excessive working hours, job insecurity, productivity pressures, and persistent cultural stigma, may impair cognitive functioning, reduce risk perception, and increase vulnerability to safety incidents. Despite growing awareness and the proliferation of organisational mental health initiatives, there remains limited empirical understanding of how mental health interacts with safety outcomes, and existing responses frequently lack structural integration within established safety management systems.

This research examined the extent to which mental health functions as a hidden determinant of safety incidents within the UK construction industry and identified mechanisms through which psychosocial risk can be more effectively governed and mitigated. A mixed-methods design was employed, comprising 251 questionnaire responses from construction workers, 23 semi-structured interviews with industry stakeholders, and four focus groups. Quantitative statistical analyses explored associations between psychosocial working conditions, mental health indicators, and safety-related outcomes, while qualitative thematic analysis examined cultural norms, organisational practices, and lived experiences influencing help-seeking behaviours and safety performance.

The findings demonstrate a significant relationship between adverse work design factors and both mental health outcomes and exposure to safety risk. Excessive working hours, time pressure, and employment precarity were particularly associated with increased psychological strain and heightened vulnerability to safety incidents. Importantly, the presence of organisational mental health policies and awareness initiatives was not independently associated with improved outcomes, highlighting a persistent gap between formal commitment and operational enactment. These findings indicate that programme-based and discretionary approaches are insufficient to address systemic psychosocial risk.

In response, this study makes an original contribution through the development of a systems-based operating model that reconceptualises mental

health as an integral component of construction safety management. The model aligns regulatory drivers, procurement mechanisms, organisational governance, site-level implementation, worker experience, and outcome-based evaluation within a unified and auditable framework. By bridging mental health and safety management paradigms, this research advances both theory and practice, offering a structured pathway for embedding psychosocial risk within core safety governance to improve worker wellbeing and safety performance across the sector.

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Finally, I dedicate this thesis to my dad, whom I miss dearly every single day. His influence on my life remains profound. He inspired a working-class boy from Salford to believe that he could aspire to more, to keep learning, and to hold on to the values that matter. In that spirit, this work is dedicated to his memory, with love, gratitude, and the hope of being, in some small way, the Ragged Trousered Philanthropist he inspired me to become.

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Abbreviations

AI	Artificial Intelligence
BBC	British Broadcasting Corporation
BMH	Building Mental Health
CASP	Critical Appraisal of Selected Studies
CCS	Considerate Contractors Scheme
CIF	Construction Industry Federation
CIOB	Chartered Institute of Building
CIRP	Construction Industry Research Partnership
CITB	Construction Industry Training Board
COR	Conservation of Resources
DASS-21	Depression, Anxiety, and Stress Scale - 21 Items
EAP	Employee Assistance Program
EM	Ethnic Minority
EU	European Union
GDP	Gross Domestic Product
GHQ-12	General Health Questionnaire-12
HSC	Health and Safety Commission
HSCL-25	Hopkins Symptom Checklist-25
HSE	Health and Safety Executive
IBM	Internation Business Machines
ISM	Interpretive Structural Modelling

JDR	Job Demands-Resources
JSM	Job Strain Model
LDA	Leadership Development Academy
LSSM	Low Severity Safety Management
LTI	Lost Time Injuries
MHFA	Mental Health First Aid
MH-S	Mental Health-Safety
MICMAC	Cross-Impact Matrix Multiplication Applied to Classification
MSD	Musculoskeletal Disorder
MSDS	Material Safety Data Sheet
MX	Mental Health Experience
MXM	Mental Health Management
NHS	National Health Service
NIOSH	National Institute for Occupational Safety and Health
OHS	Occupational Health and Safety
PPE	Personal Protective Equipment
PRISMA	Preferred Reporting Items for Systematic reviews and Meta Analysis
PTSD	Post-Traumatic Stress Disorder
QEEW	Dutch Questionnaire on the Experience and Evaluation of Work
SEM	Structural Equation Modelling

SIR	Standardised Incidence Ratio
SME	Small-to-Medium-sized Enterprise
SPSS	Statistical Package for the Social Sciences
SRR	Standardised Reporting Ratio
THOR	The Health and Occupation Reporting network
U. S	United States of America
UK	United Kingdom
WellBQ	Well-Being Questionnaire
WHO	World Health Organisation
WLB	Work-Life Balance
WRI	Work-Related Ill Health

Chapter 1 Introduction

1.1 Background and Rationale

This introductory chapter sets the foundation for the thesis by situating mental health within the broader social and occupational context of the construction industry, a sector widely recognised for its demanding working conditions and elevated exposure to risk. The chapter begins by outlining the background and rationale for the study, including the societal significance of mental health, the particular vulnerabilities associated with construction work, and the current gaps in research concerning the relationship between mental health and occupational safety. It then defines the central research problem, presents the research questions and hypothesis, and explains the academic, practical, and policy relevance of the study. In order to establish the context for the investigation, the chapter further examines key mental health stressors in construction, relevant industry statistics, barriers to support, and the nature and classification of safety incidents. Building on this, it introduces the theoretical and conceptual framework underpinning the thesis, drawing on occupational stress models, psychosocial hazard literature, and epidemiological perspectives. The chapter concludes by setting out the research aim, objectives, and methodological overview, before outlining the overall structure of the thesis and preparing the reader for the chapters that follow.

1.1.1 Overview of Mental Health in Society

One of the most vital aspects of human life is mental health, which remains a rather ambiguous and urgent issue today. It prevails among all age groups, social status, ethnic and geographic areas, including regions that are reportedly developing and with people of different socioeconomic statuses. As per the World Health Organisation (WHO), the general burden of mental health disorders is extremely high; every single year, an estimated 970 million people suffer from mental health or substance use disorders (WHO, 2024). Everyone’s mental health is worrying, but working-age people become more concerned because they depend on their jobs. Multiple papers have demonstrated that existing mental health disorders have consistent and negative effects on work output, work efficiency and workplace climate.

For instance, in the United States, it is thought that about twenty per cent of adults have a mental illness annually, with many of these people working. Mental

health disorders are recognised as the leading cause of disability and early retirement in the European Union (EU), underscoring the significant economic and social consequences of poor mental health among workers (Belloni et al., 2022). Acknowledging this impact will enhance the understanding of the importance of addressing mental health issues, especially in the construction industry. Employees in this sector face unique physical, psychological, and environmental factors that can contribute to the onset of symptoms related to mental health disorders (WHO, 2022). The mental health of these people, their treatment and profound comprehension, are quite necessary in order to prevent the deterioration of their conditions as well as to maintain the safety and efficacy of industry work.



Chapter 1: 1.1.1, Figure 1 Mental Health Impact (sic)

Source: Cheshmehzangi et al., 2022

1.1.2 The Construction Industry: A High-Risk Sector

The construction industry plays an important role in the global economy and has a major impact on infrastructure growth, housing construction and other related services. Nonetheless, this sector of the economy is also acknowledged as one of the most dangerous, encompassing numerous constructive, psychological, and environmentally demanding tasks that directly influence worker health and safety. At a global level, there are millions of workers engaged in the construction business, and the construction sector contributes to the gross domestic product (GDP) of all countries (Myers, 2022). Similarly, in the United States, over 7.4 million people were working in the construction industry as of 2022 (Tst-Europe, 2024). Likewise, in the EU, the construction sector is one of the major employers that provides work to a workforce of around 9% (European Commission, 2025). These numbers were chosen to illustrate the vast extent to which the construction industry affects the world's overall economy and the working class.

In construction, employees are exposed to certain conditions that could encourage mental illnesses due to various construction issues. Most work activities involve the demand for physical activities like the lifting of heavy materials, working at height and handling hazardous substances, all these can exert physical as well as mental strain (Ostad-Ali-Askari, 2022). Also, construction workers are often exposed to excessive hours, pressured schedules, and job vulnerability, which puts them at a higher risk of stress and anxiety-related disorders (Nwaogu et al., 2023). For instance, the construction industry records higher cases of substance abuse than other industries; that, combined with the demanding, unhealthy, and unsafe working conditions, makes contracted construction workers suffer severe mental health problems. These combined physical, psychological, and environmental stressors result in the current emergence of depression, anxiety, and post-traumatic stress disorder (PTSD) among construction workers (Al Jowf et al., 2022). This high prevalence of mental health disorders may point toward immense negative repercussions on the job and extend beyond the individual worker in the construction areas.

1.1.3 Mental Health and Occupational Safety in Construction

The link between mental health and work-related safety in risky sectors, including construction, forms an essential research topic. There is evidence that safety

performance may be affected by mental health problems; this has also been researched in many studies (Kim et al., 2020). In the construction industry, the occurrence of accidents and related injuries is already high; thus, peoples' mental conditions have even more influence on safety performance indicators. Low Severity Safety Management (LSSM) in the construction industry may be categorised as minor or moderate, which includes slips, trips, falls, and incidents which may arise from the management of materials or equipment. Such occurrences, though they may not cause serious accidents, could lead to other losses, such as productivity-reduced costs incurred and productivity hazards affecting the morale and health of the workers involved (Matiringe and Plaza, 2022). Notably, near miss events where there had been close calls and when organisational members experienced potentially dangerous conditions but without getting hurt are also crucial to examine, as they may reveal factors that predict safety occurrence.

Mental health should be considered a factor when modelling safety outcomes, and it has complex relationships with this factor. These factors include stress, fatigue, and mental health disorders, which affect a worker's ability to pay attention, reason, and respond appropriately in a risky situation at work (WHO, 2022). Secondly, mental health stigma and the pressure of workers not wanting to report any issues can inevitably make matters worse as they are less likely to address mental health issues, increasing the rate of safety offences.

1.1.4 Professional and Personal Motivation for the Research

The motivation for undertaking this research developed from both professional experience within the construction industry and the researcher's continuing personal and professional development within occupational health and safety. Through working within construction environments, the researcher became increasingly aware that mental health was commonly considered through the perspective of employee wellbeing, support and welfare, while its potential relationship with operational health and safety performance appeared less explicitly recognised. Although wellbeing remains an important consideration, professional experience prompted a broader question concerning whether the psychological state of workers could also influence their ability to recognise hazards, process information, make appropriate decisions and consistently undertake work safely within high-risk environments.

This distinction became particularly significant when considering minor to moderate safety incidents. Within construction, considerable attention is appropriately directed towards preventing fatalities, serious injuries and other high-consequence events. However, routine safety activities also identify lower-severity incidents, near misses, errors and unsafe behaviours that may arise through combinations of human and organisational factors. The researcher's professional experience generated an interest in understanding whether factors associated with mental health, including stress, anxiety, fatigue, distraction and cognitive overload, could contribute to the circumstances surrounding such occurrences. Consequently, mental health was not approached solely as an issue concerning individual wellbeing, but as a potentially important determinant within the wider occupational safety system.

This research focus also reflects the researcher's personal development plan and progression as a health and safety professional. Doctoral study provided an opportunity to move beyond the predominantly physical and procedural approaches traditionally associated with construction safety and to develop a more critical understanding of the psychological and psychosocial factors that may influence safety performance. This progression was considered particularly relevant to professional practice, where effective safety management requires consideration not only of physical hazards and procedural controls, but also of the human factors that influence how individuals interact with those controls in practice. The study therefore represents the convergence of professional observation, academic development and a personal commitment to improving understanding of safety within the construction industry. Investigating mental health through a safety-performance lens does not diminish its importance as a wellbeing concern; rather, it extends its significance by considering how worker mental health may interact with occupational risk. This perspective provided the motivation for examining the relationship between mental health and minor to moderate safety incidents and subsequently informed the research problem and direction of the doctoral study.

1.1.5 Research Gaps

While the role of mental health in the construction industry is gradually being noticed, few studies have investigated the extent to which mental health is associated with minor to moderate safety events. A breakdown very much related to the earlier

discussion is that studies of serious or major accidents have driven a lot of this prior work, paying little attention to minor to moderate ones that are unremarkable but can have detrimental effects on workers' health as well as organisational efficiency (Krauss and Schellenberg, 2022). In addition, most of the few published papers addressing this association have used high-risk industries in aggregate when examining their findings, with special emphasis on the construction industry as a high-risk industry and little consideration being given to the setbacks and tendencies peculiar to this industry. This absence of study is alarming, especially in the construction industry, given that the industry is considered to be a high-risk workplace that records higher rates of mental health problems and safety accidents than any other industry (Hare et al., 2023).

1.2 Research Problem and Hypothesis

1.2.1 Statement of the Research Problem

The construction industry is known as a high-risk work setting because of numerous physical, psychological and environmental hazards that negatively influence construction workers in terms of safety and health (Sun et al., 2022). Of all the problems arising out of the industry, mental health problems affecting construction workers are becoming a standard norm. There are higher rates of primary mental health disorders, including depression, anxiety, and substance abuse, among construction workers compared to the general population (Adhikari et al., 2023). However, even with this realisation, the available literature has centred the majority of construction safety research on serious and major accidents in construction and engineering; major accidents, while minor to moderate incidents, are less reported. Such types of accidents may not be fatal, but they pose a very dangerous threat to the wellbeing of the workers, organisational output, and safety culture in general.

The research aims that are highlighted in the context of this study pertain to the lack of concepts explaining the connection between employees' psychopathology and the frequency of (from minor to moderately hazardous) safety occurrences in construction organisations (Yuan et al., 2022). For that reason, until now, although the connection between mental health and safety has been discussed when it comes to some high-risk fields, it has been completely overlooked in the context of the construction domain. The following research questions seek to fill this gap and inform

the probability of the correlation between mental health and minor to moderate safety incidents, which includes slips, trips and falls and manual handling (Rasmussen, 2021). This relationship should be understood as these kinds of scenarios significantly affect organisational performance as well as employees' effectiveness, productivity, and morale.

Furthermore, this research aims to discover the challenges to mental health care services and cultural attitudes towards mental disorders in the construction industry. Overcoming these challenges is critical in designing sufficient prevention and mitigation strategies and policies that could increase the public health and safety of construction employees.

1.2.2 Research Questions

To address the research problem, this study will explore the following key questions:

1. How prevalent are mental health issues, such as depression, anxiety, and substance abuse, among construction workers?

2. What types of mental health contribute to minor to moderate safety incidents (e.g., stress, affective distraction, and cognitive overload) are commonly reported in the construction industry?

3. Is there a quantifiable link between the presence of mental health issues and the occurrence of minor to moderate safety incidents among construction workers?

4. How can addressing mental health issues in the construction industry contribute to improved safety outcomes and reduce the incidence of minor to moderate safety incidents?

By addressing these research questions, the study aims to provide a comprehensive understanding of the connection between mental health and safety in the construction industry, with a particular focus on the often-overlooked minor to moderate safety incidents.

1.2.3 Research Hypothesis

The primary research question in this study is: How are construction workers' minor to moderate safety incidents affected by treated or untreated mental health conditions, inclusive of depression, anxiety, substance dependency, and other related mental health disorders, compared to those with improved mental health? This hypothesis is grounded in the theoretical and empirical literature that links mental health conditions with cognitive and decisional deficits as well as reduced work performance that adds to the risk of adverse safety occurrences (Golzad et al., 2023). Moreover, construction workers experience higher levels of stress due to the physical and high-risk nature of the job. Even though the Leadership Development Academy (LDA) states that the industry has positively embraced mental health, the culture among construction workers discourages them from seeking help. Specifically, the research hypotheses are as follows:

- H0: There is no significant relationship between mental health conditions and health and safety outcomes.
- H1: There is significant relationship between mental health conditions and health and safety outcomes.
- H0: There is no significant relationship between mental health conditions and the occurrence of minor to moderate safety incidents in the construction industry.
- H1: There is a significant relationship between mental health conditions and the occurrence of minor to moderate safety incidents in the construction industry.

This hypotheses will be tested for providing such evidence concerning the relationship between mental health and safety results to the construction workers. Following that, the possibilities based on these probabilities will be explored to design the related safety-promoting activities and policies for enhancing worker health and safety. The research problems and hypotheses presented in this section are developed based on the literature analysis and the perceived issues in the construction industry. Answering these questions and confirming or rejecting the hypotheses suggested in the context of this study will contribute to the construction of the multifaceted link between mental health and occupational safety and can help to

create more comprehensive methods for the enhancement of the general wellbeing and safety of construction workers.

1.3 Significance of the Study

1.3.1 Contribution to Academia

This research study is expected to provide substantial contributions to the current knowledge base in the sphere of occupational health and safety with specific reference to the construction sector. Thus, furthering the understanding of how minor to moderate safety incidents relate to mental health is the objective of the study. Most of the available studies on safety in the construction sector have partly concentrated on major safety discrepancies and big disasters, even though many minor to moderate safety occurrences are reportedly experienced (Hashemian and Triantis, 2023). This study will fill this gap by identifying factors that cause such occurrences and provide a broader picture of the impacts on occupational welfare, organisational output, and safety culture.

In addition, this research is useful to the expanding literature in the interdisciplinary field of work and the mental health of high-risk workers. This framework, errors related to safety and mental welfare will be approached from a number of theoretical and conceptual perspectives including psychology, public health, occupational safety, and engineering. From the psychological perspective, the research will serve to fill the gap in knowledge of how depression, anxiety, and substance abuse adversely affect cognition, decision-making, and performance, thereby raising the likelihood of safety incidents (Schippers and Rus, 2021). Such research can be used to plan appropriate prevention and assistance programmes that would meet the mental health needs of construction workers.

Consequently, in the public health domain, this study will improve the teaching of the social and economic impact of mental health concerns in the construction sector. By doing so, this research will be able to ascertain the correlation between safety incidents and mental health issues, and thus, the overall cost and profit aspect of the company’s improvement in treatment and care for these issues (Nnaji and Karakhan, 2020). From an occupational safety standpoint, the results of this study will contribute to the development of new avenues that will supplement traditional approaches to identifying and managing physical risks, locating feasible controls at the core of the

methodological sequence, and considering the critical role of mental health and its effects on occupational safety outcomes. Such an approach to the issue can result in the generation of improved and enhanced safety management practices in construction occupations and environments and provide for the welfare and safety of construction employees (Fargnoli and Lombardi, 2020).

Also, the engineering and technical scope of the construction industry will be useful in adding to insights derived from this piece of research work. In prospective studies of minor to moderate safety incidents, cognitive and human factors should be thoughtfully analysed so engineers and designers can apply user-centred approaches and the construction industry can deliver significantly enhanced technologies, tools, and work environments that will support the mental wellbeing of workers.

1.3.2 Practical Implications for the Construction Industry

The practical significance of this research study is likely of great importance to the construction industry because its results can lead to changes in organisational practices and work environments. A practical application of this study, therefore, lies in the provision of insights that will help in the elaboration of better workplace policies and programmes, which can aim at satisfying the mental health needs of construction workers (Kotera et al., 2020). This study identifies and supports the relationship between mental health and safety incidents in construction companies and offers an opportunity for change in the way occupational health and safety is approached by supporting mental health appropriately when creating health and prevention programmes.

This, in turn, can result in consequent benefits for construction organisations, such as the patterned elimination of minor to moderate safety accidents, improved productivity, and better rates of people retention. Wellbeing promotion programmes of construction workers enable them to increase their level of involvement, attentiveness, and concentration on their work, which helps to eliminate safety-related mishaps (Zhong, 2024). Also, better access to mental support would help workers be more content and productive, thus being less absent from work; also, they provide better loyalty and retention rates. In addition, the practical contributions of this research go beyond the host construction organisations to the entire construction sector. Therefore, by linking mental health with occupational safety, this study may be useful in creating awareness and drawing attention to implementing effective mental health

awareness programmes, training and incorporating mental health supportive programmes into organisational safety plans in the future (Wu et al., 2021).

Thus, industry-wide programmes can significantly enhance the culture of mental wellbeing within the construction industry. For this reason, there is hope that there will be more interaction regarding mental health issues, increased help-seeking for services, and ultimately, construction workplaces can become safer for all employees struggling with mental health.

1.3.3 Policy Implications

The policy relevance of this research study is significant, particularly in the formulation of occupational safety measures and the promotion of mental health in related sectors such as construction. Despite the further study of previous works that presented policy implications on occupational safety issues, the results of this study could be useful for the formation and update of regulatory instruments for Occupational Health and Safety (OHS) (Marhavilas et al., 2022). In this regard, this paper has established the correlation between mental health and safety to call on policymakers as well as the regulatory bodies to factor mental health in the current occupational safety frameworks. It could involve the offering of mental health check-ups, supplementing the construction site with related information, and enforcing compulsory mental health awareness and management programmes in safety standards across construction organisations (Umeokafor and Okoro, 2020).

In addition, the knowledge produced from this study can inform the design and delivery of mental health promotion interventions in vulnerable occupational sectors. As these campaigns seek to inform the construction employees about potential presence of mental health issues and how they are linked to safety, it can actually help normalise conversation around mental health and promote suicidal prevention and encourage the construction employees to put more emphasis on themselves (Bhandari et al., 2023). Such measures at the policy level can have systemic consequences affecting not only the construction industry as high-risk but also other industries with the same problems. Being a major provider of employment and development such core institutions as construction affect the overall health of communities and hence it’s especial importance to address the mental health and safety of workers within this sector (Ahmed et al., 2022).

1.3.4 Potential for Generalisation to Other Industries

Although this research study is confined to the construction industry, the conclusions and lessons to be learnt from this investigation are quite likely to be transferable to other occupations with high risk – high stress work conditions. Several industries are comparable to the construction industry in certain aspects concerning the physically, psychologically, and environmentally challenging nature of their workplaces for employees, including manufacturing, mining, transportation, and emergency services (Hon et al., 2024). These industries are often situated in 'high-risk' contexts and workers in these industries largely experience similarities with regards to; long working hours, job insecurity, exposure to dangerous working conditions and emotional and mental pressures.

The results attained from this research on analysing safety incidents with the focus on construction workers' mental health can be extended to other high-risk industry sectors and, therefore, is of great value. Consequently, the potential of the current work lies in the broad generalisability of the findings, which could be used to modify the specific identified risk factors, address potential barriers to organisational support, and develop appropriate intervention strategies tailored to assist workers in other industries (Bandura, 2023). Other strengths of the study include its methodological and theoretical underpinnings, which could serve as a blueprint for future research in other high-occupational-stress-risk industries. The quantitative and qualitative analysis proposed demonstrate that the multi-dimensional approach may be useful for performing similar analyses in other occupational contexts to develop a better understanding of the complexity of the relationship between mental health and safety (Li et al., 2024).

Contributing to the existing literature on the effectiveness of strategies in minimising lost-time injuries, this study may ultimately impact policy and practise in various/high risk work environments across different countries (Wattenbarger, 2024). The results can be applied to the design of mental health support programmes targeted at specific sectors, to incorporate mental health aspects into safety management systems, and to advance awareness of occupational health beyond traditional safety concerns.

1.4 Contextualising Mental Health in the Construction Industry

1.4.1 Work Environment Stressors in Construction

The construction sector remains one of the most challenging and stressful fields to work in, it exposes the workers to various physical, psychological and emotional strains. These stressors derive from multiple factors of work challenges, characteristics of the physical work environment and psychosocial challenge of managing a high risk career with self-care (Dickson et al., 2021). Strenuous works are characteristic and unavoidable in construction projects. Employees can be expected to perform physical tasks including the lifting of heavy materials/manual handling, climbing tall structures or continuous repetitive movements that fatigue the muscles. Moreover, construction site environments are often very dangerous places in which to work and this increases vulnerability by exposing the respective workers to dangerous conditions that increase their chances of suffering from an injury (Kamardeen and Hasan, 2024). Such risks include falls from height, contact with plant and vehicles, machine failure, and exposure to chemical, gas, and dust hazards, all of which can have a significant impact on the mental health of workers. The constant threat of physical danger in the workplace generates a continuous state of stress, as workers remain in a state of heightened alertness, attempting to avoid potential hazards.

Furthermore, the most prominent aspect of mental and emotional demands is evident in the construction industry. Many individuals are still expected to work beyond their designated hours. This often occurs due to the necessity of extending work hours beyond the standard working period in order to meet the demands of a tight project schedule that must be completed within an agreed timeframe (Esa et al., 2020). These added working hours have social implications that compromise their work-life balance in addition as their wellbeing. In the long term, such a schedule leads to fatigue, increased stress, and the development of a short temper. Due to the necessity of maintaining high levels of accuracy under deadline pressure, anxiety levels increase significantly, as mistakes can have catastrophic consequences, particularly in terms of safety and financial implications (Pooladvand and Hasanzadeh, 2023). These stressors are made worse by the inherent instability that characterises construction work. The jobs in this context are typically project-based, and workers transition from one site to another depending on the progress of the project. This type of job insecurity undermines job continuity, leaving employees uncertain about when and where they

will receive their next remuneration payment (Qu et al., 2023). Such uncertainty can exacerbate feelings of vulnerability associated with economic instability, which, in turn, can lead to increased levels of depression and anxiety.

Such stressors extend beyond the individual worker to affect relationships with family and friends. Construction workers who work long hours are likely to experience a lack of social interaction, which can lead to emotional and social fatigue (Golzad et al., 2023). Furthermore, due to the high-stakes nature of the construction industry and the increasing pressure resulting from intense competition, workers often feel compelled to "tough it out" and refrain from expressing their emotions, thereby exacerbating the deterioration of their mental health.

1.4.2 Mental Health Statistic in Construction

Medenblik et al., (2024) reported that the construction industry showed a high prevalence rate for psychological conditions such as depression, anxiety, PTSD and substance abuse. All these problems are compounded by the nature of the construction work, emphasising the need to address mental health in the construction sector. The following figures illustrate the prevalence of psychological issues among construction workers. In the United Kingdom, approximately 25% of construction workers develop a mental health disorder during their working lives (Mwaogu et al., 2020). This is further corroborated by Australian studies, which indicate that construction workers are six times more likely to die by suicide than from a workplace accident, highlighting the significant risks associated with untreated mental illness. In the construction industry in the United States, studies have found that more than 40% of construction workers struggle with mental health issues related to their work, with substance abuse being a common coping mechanism for these challenges (Pamidimukkala and Kermanshachi, 2021).

Furthermore, the construction industry is known for its high rate of substance use addiction. Individuals often use alcohol or drugs to escape stress or relieve physical pain, whether as a means to cope or to overcome a perceived sense of inferiority. Unfortunately, this coping technique only exacerbates any comorbid mental health disorders, including addiction, while increasing the likelihood of compromised work capacity in relation to safety and efficiency. Globally, the manifestations and types of mental health disorders are similar; however, their organisation, funding, and management are shaped by cultural and economic factors (Cockerham, 2020). In

developed countries, organised workforces generally benefit from shorter working hours and better access to mental health resources. Despite this, social stigma often prevents many individuals from seeking the help they need. In contrast, in developing nations, awareness of mental health issues is frequently limited, and even when there is some awareness, the available facilities are often inadequate, leaving workers to manage their challenges independently (Johnson, 2021). It is important to note that construction workers in these regions typically lack sufficient mental health programmes, endure demanding working conditions, and have few safety measures in place to alleviate psychological strain.

1.4.3 Barriers to Mental Health Support

In the construction industry, mental health issues are prevalent among employees; however, various barriers hinder these individuals from obtaining the necessary assistance. These barriers can be classified as cultural, structural, and personal. Cultural stigma remains one of the most significant obstacles, often manifesting in various processes (DeLuca, 2020). The construction industry is characterised by a highly misogynistic culture that discourages discussions about mental health due to prevailing masculine prejudices. Employees may feel threatened to seek assistance, as doing so could render them the subject of ridicule among their colleagues (Gray et al., 2020). This mechanistic attitude not only prevents workers from seeking help for their mental health issues but also perpetuates a culture that is conducive to ignoring such problems. Structural factors further exacerbate barriers to accessing mental health services. Many construction firms, particularly smaller enterprises and mid-sized organisations, rely on inadequate structures to provide mental health support services (Jenkin et al., 2024).

Options such as employee assistance programmes, counselling services, and mental health awareness initiatives are often lacking. For workers employed by subcontractors or those in temporary positions, access to these resources is typically unavailable. Additionally, the transient nature of construction work, with employees frequently shifting from site to site, complicates the consistent use of mental health facilities (Kotera et al., 2020). While mental health support may be available, employees do not always have the means to access it. Limited time during extended working hours, negative perceptions regarding counselling sessions, and concerns about the confidentiality of their information deter many from seeking help.

Furthermore, workers often prioritise meeting their physical needs, viewing mental health concerns as inconsequential or unimportant (Simard and Parent-Lamarche, 2022). Another critical factor is literacy levels, which encompass attitudes toward mental health and help-seeking behaviours.

Labourers frequently engage in physically demanding work, which can lead them to believe that seeking medical attention for mental health issues such as depression and anxiety is a sign of 'weakness'. This perception may discourage them from acknowledging their mental health struggles and seeking the help they need, as they feel compelled to maintain an image of strength and resilience in their demanding roles. This perception is perpetuated by workplace cultures that prioritise production over employee welfare. Due to fears of being fired or demoted, employees may hesitate to openly discuss their mental health issues, which is detrimental to their wellbeing. To eliminate these barriers, a cultural shift is necessary within the construction industry. Discussions about mental health must be integrated with addressing issues of accessibility, affordability, and the relevance of resources available to construction workers (Phillips and Tucker, 2023). Stakeholders play a crucial role in facilitating this shift by adopting practices that encourage workers to prioritise their mental health, providing training to eliminate stigma, and guiding employees on where to seek care without jeopardising their job security.

1.5 Safety Incidents in Construction: Definitions and Categories

1.5.1 Overview of Safety Incidents

The construction industry is among those with the highest levels of occupational injuries and fatalities. Safety incidents within this sector can be broadly categorised into three main types: minor, moderate, and severe. Near misses are classified as safety occurrences with a low risk profile that do not result in casualties or significant losses (Hasanspahić et al., 2022). Such incidents include slip and fall injuries, which may range from minor falls from heights of one to three feet, to localised injuries such as cuts and bruises, as well as injuries sustained while handling materials or equipment. Although these cases may not appear serious, they can disrupt operations, incur losses, and render the workplace unsafe if not addressed (Mckinnon, 2023). Moderate safety incidents, while similar to minor incidents, pose more significant risks to individuals or property. These hazards include falls from heights, being struck by an

object, getting caught in or between two objects, and incidents involving the use of large equipment or hazardous substances. Such incidents may necessitate medical treatment beyond first aid, result in lost working days (Lost Time Injuries, LTI), or lead to temporary disability.

This represents the most severe type of safety incidents, which can result in catastrophic consequences, including paralysis or death. Such cases encompass structural failures of buildings, electrical shocks, contact with moving plant and machinery, and any mishaps involving the use of explosives (Wang et al., 2022). These occurrences can lead to significant losses that impact the business, legal ramifications, and, most critically, social effects on individuals, their dependents, and society as a whole. In addition to the three classifications mentioned above, construction sites also experience near misses, which are events that could potentially cause harm to individuals or property but do not result in actual harm due to chance or the prevention of further incidents (Cao et al., 2023). Near misses are valuable in that they necessitate investigation by the company to ensure that similar events do not lead to catastrophic incidents in the future.

The causes of minor and moderate safety incidents in construction are numerous and complex. They may include slips and falls resulting from slippery surfaces, poor housekeeping, or inadequate guardrails; manual handling and moving operations, which can involve improper lifting techniques or the failure to utilise appropriate handling equipment; and accidents associated with equipment operation, including improper use or equipment failure (Mosher, 2022). Additionally, communication failures can lead to struck-by or caught-in/between incidents, while contact with hazardous substances and conditions, such as chemicals, noise, and extreme temperatures, further exacerbates risks. Human factors, including fatigue, distractions, and lack of attention, also contribute to these incidents. Therefore, this paper aims to identify the potential causes of these types of incidents and, consequently, contribute to the enhancement of safety measures within the construction industry.

1.5.2 Prevalence and Reporting of Safety Incidents

Numerous studies have indicated that the construction industry is among the most hazardous sectors, exhibiting a significant increase in work-related accidents and fatalities. According to the US Bureau of Labor Statistics in 2019, the incidence rate

for construction was 9.5 per 100,000 full-time employees, surpassing the rate of 2.6 for all other industries in the country during that period (Alnuaimi, 2022). However, data regarding the frequency of minor and moderate injuries or losses is less clear, as such incidents occur frequently but are often kept confidential. Every large-scale accident typically involves numerous minor accidents and near-miss incidents that go unreported. Several factors contribute to this underreporting, with organisational culture being a significant influence. Construction contractors may refrain from reporting minor injuries due to a culture that deems non-fatal mishaps unworthy of documentation (Williams et al., 2020). Additionally, workers may fear that reporting incidents will not lead to meaningful changes or may even result in disciplinary action if the incident is perceived as too severe. This perception can discourage employees from reporting incidents, further perpetuating the cycle of underreporting in the industry.

Underreporting of minor incidents occurs due to time constraints and a lack of resources necessary for managing these occurrences. Construction projects are often characterised by strict schedule constraints, frequent time and cost overruns, and high-pressure environments (Schuldt et al., 2021). In such contexts, both workers and supervisors may find it undesirable to allocate valuable time to the documentation and investigation of minor incidents, perceiving it as a distraction from the primary goal of project completion. Another factor that hinders reporting is a lack of awareness; some employees may not even recognise that certain minor accidents or near misses have occurred (Duryan et al., 2020). Additionally, some workers may not prioritise reporting these incidents because they do not perceive the potential for such events to escalate into more significant issues if left unaddressed.

Minor incidents are often not reported due to the attitudes exhibited by employees during their work. Construction workers, particularly those with more experience, may not perceive an incident as significant enough to warrant a report. This attitude can be reinforced by organisational culture, which does not prioritise the investigation of low-severity accidents and incidents (Dyreborg et al., 2022). The widespread underreporting of minor and moderate safety incidents in the construction industry is a significant concern, as it hinders the industry's ability to identify underlying safety problems and risks. By gaining a better understanding of the factors contributing to underreporting, construction companies can implement solutions that address these

vulnerabilities, thereby enabling them to develop more effective preventive measures that enhance employee safety (Green, 2023).

1.5.3 Human Factors in Safety Incidents

The human factor is a significant contributor to incidents in the construction sector. Critical factors such as attention, fatigue, stress, and overall wellbeing can substantially influence the occurrence of incidents and near misses. Concentration is another critical aspect of safety for construction workers, as they must remain vigilant and attentive to their work environment in order to identify and mitigate risks present at construction sites (Migueles and Zanini, 2024). Thereby, situations which employees are distracted, fail to pay attention to the environment around them or get overwhelmed by the volume of work, then the chances of safety mishaps are more likely to occur. For example, a worker who is thinking of something else, or in a hurry, may not observe a slipperiness on the floor hence ends up slipping. Another human factor that can be considered a root cause of safety risks in construction is fatigue (O'Connor and O'Dea, 2021). Hazardous working conditions, such as working overtime, engaging in strenuous activities on a daily basis, and working shifts that disrupt the body's natural circadian rhythms, can impair normal physiological functioning. This impairment makes it challenging for workers to deliberate, make decisions, concentrate, and respond swiftly to avoid physical dangers. Fatigued employees are more likely to make a mistake, deviate from standard operating procedures, or neglect safety procedures thus leading to increased incidents.

1.6 Linking Mental Health to Safety Incidents: Theoretical Framework

1.6.1 Occupational Stress Models

Employee mental health and work-related safety incidents are interrelated in ways that have not yet been thoroughly explored. Several theoretical perspectives have been proposed to interpret this connection. The stress-accident model is probably one of the best known and identifies stress at work as being a factor that leads to the occurrence of accidents (Tuckey et al., 2021). This model makes the argument that stressors housed within the work environment, for example, high job demands, low job control and social support will take a toll on the physiological and psychological health of the individual. The symptoms may include mental slowness, decreased alertness, and poor judgement. Consequently, workers involved in a

manufacturing processes who experience high levels of stress may be more susceptible to making mistakes, taking shortcuts, or failing to notice and respond to safety risks. This increased vulnerability significantly elevates the overall likelihood of accidents and injuries occurring (Manzoor et al., 2021).

Another applicable theory is the Job Demands-Resources (JDR) model that describes how job demands and job resources affect the employee's health and performance; job demands encompass high working pressure, emotional pressure, etc., whereas job resources include support from co-workers and supervisors or decision-making authority (Kim et al., 2023). Based on this model, the efficiency of an employee's mental and physical resources is used up if the demands placed on their job exceeds their resources leading to stress, burnout and compromised safety performance. The Conservation of Resources (COR) theory provides another account of the behaviour stating that; people seek to gain, maintain, and nurture their resources or resources that are personally and professionally affiliated with them (Niazi et al., 2024). When such resources are challenged or depleted, stress results and this hinders an individual to carry out safety-related tasks as well as successfully handle safety hazards.

These occupational stress models afford a conceptual frame of reference regarding the relationship between mental health disorders, inclusive of depression, anxiety, and substance dependence, and safety performance in the workplace (Wu et al., 2021). By causing impairment in cognitive processing, decision making capacity and psychological health, mental health diseases heighten possibilities of accidents, especially in risky working sectors such as construction.

1.6.2 Psychosocial hazards, Workplace Safety

Besides, other stress-related processes identified in the frameworks of occupational stress models have been also pointed out as affecting the potential for the heightened rate of safety-related occurrences in the context of psychosocial factors. Psychosocial risks refer to aspects at the workplace that are capable of harming the psychological, physical or social nature of an employee (Rivera-Rojas et al., 2021). Job content hazards are characterised by high effort and low decision authority, workplace bullying, poor leadership and an organisational culture that does not support employees. These hazards can also contribute to the development of

mental illnesses, which in turn affect an individual's cognitive abilities, attentiveness, and capacity to make sound decisions (Dong et al., 2020).

When workers are exposed to psychosocial hazards, they are likely to experience high levels of stress, diminished job satisfaction, and a lack of motivation to maintain safe working conditions. These factors can lead to a range of safety issues, including decreased alertness, reduced awareness of the surrounding environment, impaired decision-making capabilities, an increased propensity to take risks, and a decline in motivation and engagement in their work. For example, people with anxiety disorders or stress may have problems with attentiveness and, therefore, are likely to miss safety risks or react inadequately to safety-sensitive conditions (Moors, 2020). Mental disorders may also affect an employee’s ability to reason, estimate danger and exercise appropriate measures to protect their safety especially in dynamic work environments.

Furthermore, individuals experiencing stress or mental health issues may choose to work unsafely or disregard safety measures in an attempt to cope with their workplace stressors. This behaviour can, in turn, increase the likelihood of safety incidents occurring. Additionally, psychosocial hazards can hinder an employee’s commitment to safety, and consequently there will be poor involvement of the employees in safety processes, for instance violation reporting or offering solutions on how problems in the workplace can be prevented (Kohn et al., 2023). In addressing the above-mentioned psychosocial hazards and improving the mental health of the workers, construction firms can achieve a safety-promoting culture that can help avoid the rate of the occurrence of minor and moderate safety occurrences.

1.6.3 Epidemiological Research on Mental Health and Safety

The theoretical formulations laid out earlier have received empirical attention in recent years; the present study also found a relationship between mental health issues and workplace safety outcomes in the construction industry. Howard et al. (2022) conducted a systematic review that demonstrated that employees who report depression, anxiety, or substance use are at an increased risk of workplace accidents and injuries. The review outlined the following ways that mental health issues can threaten safety; reduced mental capability, poor judgement and reduced efficiency on the job. Only a few studies have been conducted in the construction industry to examine the correlation between mental health and safety. Howard et al. (2022)

synthesised 13 studies and concluded that employees with depression and anxiety in this occupation are more likely to have an occupational accident than healthy employees without such conditions.

The impact of another psychosocial hazard, job strain, on both the mental wellbeing and safety of construction workers was examined. The researchers found evidence indicating that job strain increases the risk of clinical depression and anxiety, which are associated with a higher likelihood of safety incidents, including falls, being struck by objects, and being caught in or between equipment or vehicles. In addition, Liang et al. (2022) conducted a study aimed at examining the mediation role between safety climate, mental health, and safety performance in the construction industry. The evidence supported the hypothesis that a safety climate, characterised by various factors such as strong management commitment, effective safety communication, and, most importantly, worker involvement in safety initiatives, positively influences the mental health of construction workers and enhances safety performance.

Most of the research done so far in this area has focused on major accidents and severe injuries but few researchers have recently begun to explore the relationships between mental health and minor to moderate safety incidents in the construction sector. For example, Williams, (2023) observed that construction workers who displayed high level stress and anxiety had higher rates of reporting near miss and other low-level incident such as slips, trips and falls. These empirical studies underscore the necessity of addressing mental health issues that can impact the construction industry in various ways, often being only marginally associated with the likelihood of experiencing minor and moderate safety incidents. What this paper was able to establish is the patterns that indicate how mental health problems may lead to increased safety incidents in construction companies, patterns that, if understood fully, can assist construction companies to improve the strategies that will enhance worker wellbeing and safety performance.

Another way in which mental health issues can affect safety within the construction industry is through the impact they have on an individual's cognitive processing and decision making capacity. Employees suffering from a mental disorder may be unable to pay attention, reason out properly and/or make the right decisions where employee and/or employer's safety is at stake, for example where the employee is depressed or has an anxiety disorder. This may result in avoidable errors, omissions and unsound decisions with a propensity to cause safety incidents. Additionally,

individuals' mental health conditions can compromise their physical and emotional safety, thereby exacerbating safety concerns (Elbogen and Verykoukis, 2023). For instance, workers with depression and substance abuse disorders are likely to experience increased fatigue, low motivation to work, and poor motor coordination, all of which elevate the risk of accidents. Likewise, individuals who have complaints which include stress or anxiety may opt to put theirs or their fellow employees' lives at risk by taking increased risks, or not following safety measures and procedures as designed.

The two final components that should be taken into consideration are the questions concerning the correlations between workplace culture and safety between people with mental health issues and stigmatised workers. Culturally, construction companies are often characterised by aggressive roles that demand physical strength and vigour. As a result, individuals with mental health conditions may feel ashamed of their situation or lack the courage to seek treatment. This may lead to conformity with incorrect perceptions of mental health and a lack of utilisation of existing resources designed to improve mental health safety outcomes. Additionally, the construction work environment is characterised by significant stress, demanding deadlines, and rapidly changing conditions, all of which may contribute to the development of mental disorders (Pamidimukkala and Kermanshachi, 2021). If these psychosocial hazards remain uncontrolled, they often result in a negative feedback loop: unhappy mental health affects safety performance, which affects the mental health of construction workers.

To change this situation and enhance safety performance, organisations must take a holistic approach to the health of their workforce, both physical and psychological. This may include the implementation of research-proven interventions such as stress management programmes, mental health awareness initiatives, and counselling and support services (Morrison-Valfre, 2022). It is essential to recognise that addressing overall health-related issues positively influences the rates of minor and moderate safety incidents on construction sites. Furthermore, fostering a healthier workforce benefits the various groups that comprise construction workers.

1.6.4 Theoretical Integration and Conceptual Framework

The conceptual paradigms and research findings depicted in the foregoing sections of this paper form a coherent platform for appreciating the interdependency

of mental health and safety at construction workplaces. When these theoretical frameworks are recombined, researchers and practitioners can come up with an improved conceptual framework within which they can work when considering this significant issue. What this kind of conceptual framework critically revolves around is the premise that safety concerns such as mental illness including depression, anxiety, and substance dependency can either be the direct cause of increased levels of construction industry safety risks or have a very real and direct influence on, those same safety risks. Mental health issues can affect cognitive skills, decision-making skills and motor skills and this results to taking high risks, low situational awareness, and high chances of safety risks (Sedlár, 2022). In a unidimensional case, mental health issues can be exacerbated by the presence of psychosocial hazards in the workplace, such as job demands, leadership, and social support, which already escalate safety concerns.

In addition, the conceptual framework should also explore the antecedents that exist between mental health and safety from individual and organisational perspectives. Individual self-coping styles, personal resilience and seeking of help affects safety outcomes due to mental health disorders. Structural-level antecedents can either enhance or hinder the relationship between mental health and safety. These factors may include safety culture, organisational commitment, and the availability of mental health services (Genrich et al., 2022). By including all of these different theoretical and empirical considerations, the conceptual framework therefore has the potential of being the comprehensive explanation of how or why mental health and safety are related in the construction industry. It would be useful to apply this framework for implementing and designing specific prevention and preventive actions needed to meet construction workers' mental health requirements and reduce the incidence of minor and moderate safety occurrences.

1.7 Research Aim, Objectives, and Methodology Overview

1.7.1 Research Aim and Objectives

Aims

1. To investigate the existing literature on mental health in the Construction Industry and its potential impact on health and safety outcomes.

2. To explore the various factors contributing to mental health issues in the Construction Industry.

3. To examine the relationship between mental health and health and safety outcomes in the Construction Industry.

4. To analyse the occurrence of minor to moderate incidents in the Construction Industry and identify any correlations with mental health issues.

5. To assess the current practices and policies related to mental health and safety in the Construction Industry.

6. To propose strategies and interventions that can improve mental health and safety outcomes in the Construction Industry.

7. To provide recommendations for industry stakeholders, policymakers, and organisations to address mental health issues and improve safety in the Construction Industry.

Objectives

1. Conduct a comprehensive literature review on mental health in the Construction Industry, health and safety outcomes, and the correlation between them.

2. Identify and analyse the factors contributing to mental health issues in the Construction Industry, considering both individual and organisational factors.

3. Investigate the impact of mental health on health and safety outcomes in the Construction Industry, focusing on the occurrence of minor to moderate incidents in this high-risk environment.

4. Collect quantitative data on mental health indicators, safety performance metrics, and incident occurrences from a representative sample of construction companies or projects.

5. Apply appropriate statistical methods to analyse the collected data and assess the strength and significance of the relationship between mental health and safety outcomes.

6. Conduct interviews and surveys with construction industry professionals to gain insights into their experiences, perceptions, and attitudes regarding mental health and its influence on safety.

7. Analyse qualitative data to identify common themes, patterns, and challenges related to mental health and safety in the Construction Industry.

8. Evaluate the current practices and policies in place for addressing mental health in the Construction Industry, including risk assessments, training programs, and support systems.

9. Develop recommendations for improving mental health and safety outcomes in the Construction Industry, considering practical interventions, policy changes, and awareness campaigns.

10. Synthesise the findings from the literature review, quantitative analysis, qualitative analysis, and stakeholder interviews to provide a comprehensive understanding of the interconnection between mental health and safety outcomes in the Construction Industry.

11. Discuss the implications of the research findings for industry stakeholders, policymakers, and organisations, highlighting potential strategies for promoting mental wellbeing and enhancing safety in the Construction Industry.

1.7.2 Brief Overview of the Research Methodology

To answer the research questions and achieve the objectives of this study, this researcher will use a mixed-method convergent research design, more specifically explanatory sequential design. In the first stage the use of numerical data is adopted and in the second stage the use of actual data is employed with assessment of actual data being used to explain the initial numerical data findings. The first part of data collection will be a quantitative online questionnaire to construction employees to establish the overall mental health state and reporting rate of minor to moderate safety incidents at work (Pregoner, 2024). The survey will employ a thematic questionnaire designed to gather beliefs and opinions on mental health within the construction industry, utilising a 7-point Likert scale. This approach will allow participants to express

their levels of agreement or disagreement with various statements related to mental health. Additionally, the questionnaire will include items measuring health and safety measures, as well as the frequency of incidents witnessed by employees within the construction workforce. Further questions will aim to gather specific data on whether the incidents encountered by workers are classified as minor or moderate safety incidents and whether they believe there was a mental health causation.

The survey data in quantitative form shall be subjected to statistical analyses, including regression analysis, in order to assess the degree and directions of the association between diagnosed/self diagnosed mental health conditions and resulting safety incidents. This phase will offer real empirical results that will either corroborate or reject the hypotheses about the various construction industry safety outcomes and mental health. The second investigation, a qualitative study, will be in the form of semi structured interviews, these will be conducted with construction employees and supervisors, with consultation input from mental health professionals (Taherdoost, 2022). The rationale for the current phase is to identify factors that prevent construction workers from seeking mental help, cultural perceptions of mental health in construction workplaces, and feasible methods and actions that can help for the resolution of the Mental Health-Safety (MH-S) dilemma.

These interviews will include matters on workers' Mental Health Experience (MX) experience, their assumption and attitude towards Mental Health Management (MXM) within the construction industry, and barriers towards accessing MXM. Further, those involved will be asked a set of questions to help in understanding what new mental health issues the construction workers face and how the construction workers can be offered better access to mental health services. The data collected during this phase will be analysed by employing thematic analysis to capture emerging themes and patterns that can be used to explicate and situate the quantitative data collected at this phase of research. The reason for the implementation of mixed-methods approach is rooted in the fact that the problem in question is rather diverse and varies in many aspects (Leavy, 2022). The quantitative findings will afford the means by which to confirm the hypothesised link between mental health and safety, while the interview findings will supplement these patterns by capturing process, and context and overcoming the limitations of using such a measure independently.

The main limitations of the set methodology are the possible social desirability bias, that is the participants are likely to omit or distort some of the incidents or events; in addition, the sample size is a limitation since it hinders the creation of generalisations. Further, there is also a possibility of social desirability bias whereby the participants only provide answers that probably reflect what they perceive society or employers will expect from them would be ideal to do. Last, the use of cross-sectional data in the study may prevent the development of strong cause and effect relationships between safety and mental health (Chalmers and Cowdell, 2021). To overcome such limitations, the research design shall use the following measures; Data Triangulation, Sampling Techniques, Anonymity /Confidentiality Measures. However, the researcher shall minimise bias on this research study by making efforts to remain impartial and be rigorous.

1.8 Structure of the Thesis

Table 1 Structure of the Thesis

Chapter	Summary
1. Introduction	This chapter introduces the research topic, provides background information on the construction industry and safety incidents, and outlines the research objectives and questions. It also presents the theoretical framework linking mental health and safety.
2. Literature Review	The literature review chapter examines the existing research on the relationship between mental health and workplace safety, with a focus on the construction industry. It explores the underlying mechanisms, relevant theories, and empirical evidence on this topic.
3. Methodology	This chapter details the mixed-methods research approach, including the explanatory sequential design. It explains the quantitative survey and qualitative interview/focus group methods, as well as the data analysis techniques used. The chapter also addresses the potential limitations of the chosen methodology.

4. Findings	The findings chapter presents the results from both the quantitative and qualitative phases of the research. It discusses the prevalence of mental health issues and safety incidents among construction workers, the statistical relationships between these variables, and the key themes that emerged from the interviews and focus groups.
5. Discussion	The discussion chapter integrates the quantitative and qualitative findings to provide a comprehensive understanding of the mental health-safety relationship in the construction industry. It examines the implications of the results and connects them to the theoretical framework and existing literature.
6. Conclusion	The final chapter summarises the key findings, highlights the contributions of the study, and outlines the practical and theoretical implications. It also presents recommendations for future research and industry practices to address mental health and safety in the construction sector.

1.9 Conclusion to the Introduction

1.9.1 Summary of Key Points

This introduction has established the necessity of some basic attention paid to mental health problems within the construction environment, especially as it regards minor to moderate safety occurrences. There are numerous challenges associated with the construction industry in encouraging a healthy and safe working population, and mental health issues have been found to still be part of the problem. The research objectives being proposed in this chapter are meant to examine the nature of the association between mental health and safety outcomes in an empirical manner, as well as to investigate the moderation and mediation of factors and industry characteristics which contribute to the dynamics of this process.

1.9.2 Transition to the Next Chapter

As a basis for this research, the next chapter will feature a literature review on the mental health safety relationship with emphasis on the construction industry. These conceptual and empirical background reviews of prior research and theory will become useful in the development of the research method and the grounding of the findings of the current study.

Chapter 2 Thematic Literature Review

The preceding chapter provided a comprehensive introduction to the study, outlining the essential background and rationale that underpin the research. It articulated the research problem and hypothesis, establishing the significance of the study within the context of mental health in the construction industry. The chapter contextualised mental health issues by examining the prevalence of safety incidents in construction, offering clear definitions and categories to enhance understanding. Furthermore, it presented a theoretical framework that links mental health to safety incidents, thereby elucidating the intricate relationship between these two critical areas. The research aims and objectives were clearly defined, alongside an overview of the methodology employed in the study. Additionally, the structure of the thesis was outlined, providing a roadmap for the reader. In conclusion, the introduction set the stage for a thorough exploration of the interplay between mental health and safety outcomes in the construction sector, highlighting the need for further investigation into this vital area of research.

2.1 Introduction

The relationship between mental health and safety outcomes in the construction industry is a growing concern, yet the extent of its impact remains contested. Some scholars argue that poor mental health directly contributes to workplace incidents, citing increased absenteeism, reduced concentration, and impaired decision-making (Stocks et al., 2010; Kotera et al., 2019). Others, however, contend that while mental health plays a role, structural and environmental factors such as job demands, industry culture, and lack of safety training are more significant determinants of workplace accidents (Lawani et al., 2023; Leung et al., 2012). This chapter critically examines these perspectives by synthesising findings from empirical studies, evaluating the effectiveness of current interventions, and identifying gaps in the literature. The analysis is structured around six key themes, each contributing to a broader understanding of how mental health interlinks with safety performance in construction settings. I begin by introducing the importance of mental health in the construction industry, emphasising the need to address this critical issue. Next, I conduct a thorough critical appraisal of relevant studies, evaluating their quality and reliability to ensure the credibility of the research. To facilitate a comprehensive understanding, I present a summary table that organises the key findings from the

selected studies in a clear and concise manner. The next section is dedicated to a thematic analysis of various subtopics related to mental health in the construction industry. I explore the prevalence and impact of mental health issues, factors influencing mental health, relationships between mental health and safety incidents, strategic approaches and interventions for a safe working environment, the role of organisational policies and practices, and the challenges and barriers faced in addressing mental health and safety incidents. Identifying gaps in the existing literature, I highlight areas that require further research and investigation to advance our understanding of mental health in the construction industry. I summarise the key findings derived from our thematic analysis and critical appraisal of studies, providing a concise overview of the most significant insights gained.

Discussing the practical implications of my research findings, I offer recommendations and strategies for professionals in the construction industry to promote mental health and enhance safety outcomes. In the concluding section, I provide a comprehensive summary of the chapter, highlighting the main points covered and emphasising the significance of our research findings. I begin with a literature review of prior articles and papers on the effects of mental health problems on safety concerns in the construction sector.

2.2 Critical Appraisal of the Selected Studies (CASP)

The CASP framework was selected as the primary tool for evaluating study quality, as it provides a structured and replicable approach. However, while CASP is effective for appraising methodological rigor, it has limitations in assessing qualitative research, where validity is often context dependent (Greenhalgh et al., 2018). Additionally, its reliance on checklist-based scoring risks oversimplifying the nuances of study design, as it does not weigh certain limitations against real world applicability (Tong et al., 2007). These considerations must be acknowledged when interpreting the findings of this review. The template for the CASP checklist is provided in the appendices with respect to the questions of the appraisal tool.

Stocks et al. (2010) provide a valuable epidemiological account of work-related ill health (WRI) in the UK construction sector through the use of standardised reporting ratios (SRRs) based on medically certified cases. While this methodological approach ensures a degree of reliability, it is inherently limited by underreporting biases, particularly concerning mental health conditions. Unlike Kotera et al. (2019), who

highlight self-reported stigma as a significant barrier to disclosure, Stocks et al. (2010) rely exclusively on diagnosed conditions, potentially underestimating the psychological burden in the sector. This issue is reinforced by Franklin et al. (2022), who argue that workplace stigma in construction leads to widespread underreporting of mental health struggles, thereby creating a misleadingly low SRR for psychological distress. The reliance on medically confirmed cases provides a robust dataset for industry wide comparison, yet it fails to account for the hidden dimensions of mental health issues, which qualitative research suggests are far more prevalent than epidemiological data indicates.

Furthermore, while Stocks et al. (2010) effectively quantify the burden of respiratory and musculoskeletal disorders, reporting an SRR of 1.9 for backache and 3.8 for respiratory diseases, their findings do not fully engage with the broader academic discourse on the causative factors and industry specific stressors contributing to these conditions. For instance, Love & Edwards (2005) apply the Job Strain Model (JSM) to the construction industry, revealing that psychological distress is mediated by job control and social support, factors largely overlooked in epidemiological studies such as Stocks et al., (2011). This omission weakens the explanatory power of the findings, as mental health conditions may not only be underreported but also interconnected with physical illnesses due to the psychosomatic effects of chronic workplace stress (Boschman et al., 2013).

The implications of Stocks et al.'s (2010) findings are significant for occupational health policy, yet their conclusions remain somewhat restricted in scope. While the study effectively establishes that WRI rates in construction exceed those of other industries, particularly for respiratory, skin, and musculoskeletal conditions, it does not critically engage with industry specific workplace dynamics that perpetuate these health disparities. In contrast, Hulls et al. (2022) highlight that construction's workplace culture, particularly its emphasis on masculinity norms, actively discourages help seeking behaviour for mental health issues, thereby exacerbating the underreporting biases inherent in epidemiological data. Consequently, a more integrated approach, incorporating both clinical diagnoses and self-reported experiences, is necessary to fully capture the true extent of occupational health risks in construction. Overall, while Stocks et al. (2010) provide a valuable epidemiological foundation, their study lacks the contextual depth necessary for a comprehensive understanding of WRI in the construction industry. By incorporating insights from

psychosocial research (Kotera et al., 2019; Hulls et al., 2022) and job strain models (Love & Edwards, 2005), future studies could bridge the gap between clinical data and lived experiences, ensuring that occupational health policies address both diagnosed and hidden workplace health risks more effectively.

A fundamental discrepancy arises between the findings of Stocks et al. (2010) and Kotera et al. (2019) regarding the prevalence of mental health issues in the construction industry. Stocks et al. (2010) report low standardised reporting ratios (SRRs) for mental health conditions, ostensibly suggesting that psychological illnesses are less prevalent in construction than in other industries. However, this interpretation is limited by the study's reliance on medically certified cases, which inherently underrepresent mental health issues due to barriers to disclosure. Kotera et al. (2019) challenge this conclusion, demonstrating that stigma within the construction sector discourages workers from seeking diagnoses, thereby skewing epidemiological data towards underreporting. This methodological limitation suggests that the low SRRs identified in Stocks et al. (2010) do not necessarily indicate lower distress levels but rather reflect systematic reporting biases that obscure the true mental health burden in the sector.

Franklin et al. (2022) further reinforce this critique, providing evidence that self-reported distress levels among construction workers significantly exceed formal diagnoses, pointing to a hidden crisis of psychological wellbeing. This aligns with research by Hulls et al. (2022), who argue that the deeply ingrained masculinity norms in construction not only discourage help seeking behaviours but also foster an environment where mental health struggles are dismissed or overlooked. As a result, the underrepresentation of mental health conditions in Stocks et al.'s (2010) epidemiological dataset can be viewed as an artifact of cultural and structural factors rather than an accurate depiction of industry wide mental health trends. This debate highlights a broader methodological tension within occupational health research: while epidemiological studies offer objective, quantifiable data, they often fail to capture the nuanced psychosocial factors that influence health reporting. Boschman et al. (2013) address this limitation by integrating validated psychological measures into their study of mental health outcomes in construction, thereby mitigating some of the biases associated with medically confirmed cases. Their findings suggest that a mixed-method approach, combining diagnostic assessments with self-reported experiences, would provide a more accurate and comprehensive understanding of mental health

risks in construction. Ultimately, the discrepancy between Stocks et al. (2010) and Kotera et al. (2019) underscores the necessity of a more holistic research framework that accounts for both diagnosed and undiagnosed mental health conditions. The overreliance on medical records alone risks perpetuating an incomplete narrative that fails to acknowledge the hidden psychological toll of construction work. Future research should aim to bridge this gap by validating self-reported distress against clinical diagnoses, ensuring that occupational health policies adequately reflect both the visible and concealed dimensions of mental health in the sector.

Hanna & Markham (2019) provide valuable qualitative insights into workplace health and wellbeing in construction through semi-structured interviews with 21 industry professionals. However, the study's small sample limits its generalisability, and its managerial focus omits the perspectives of frontline workers, whose experiences may differ significantly. In contrast, Franklin et al. (2022) adopt a mixed-method approach, incorporating both interviews and surveys to capture worker narratives, thereby offering a more balanced account of occupational health challenges. This suggests that while Hanna & Markham (2019) contribute to understanding employer-side perceptions, their findings lack the depth needed to fully grasp lived experiences of workplace stress and ill health. Expanding such research through large scale worker surveys across multiple construction sectors and regions would provide stronger empirical grounding. Consequently, while the study highlights industry barriers to promoting health and mitigating stress related early retirement, a more integrated methodological approach, blending qualitative and quantitative perspectives, would enhance the robustness of these findings.

Similarly, Love & Edwards (2005) apply the Job Strain Model (JSM) to assess psychological wellbeing among construction project managers, identifying job control and social support as key determinants of mental health. However, their reliance on survey data prevents consideration of contextual factors such as workplace culture or personal coping mechanisms, potentially oversimplifying the complexity of job strain. Moreover, the JSM framework assumes a linear relationship between strain and wellbeing, which fails to capture the multifaceted nature of psychological distress in construction. In contrast, Kotera et al. (2019) emphasise the role of masculinity norms and self-compassion in shaping mental health outcomes, highlighting a cultural dimension absent from Love & Edwards' (2005) model. Notably, Love & Edwards' (2005) findings challenge previous research by demonstrating that non-work-related

social support has a stronger mitigating effect on psychological strain than workplace support, calling for a broader reconsideration of support mechanisms in construction settings. While their study underscores the predictive value of JSM, integrating psychosocial research would provide a more holistic understanding of job strain. Expanding the model to include industry specific cultural and organisational stressors could improve its applicability, ultimately informing job design strategies that foster greater psychological resilience among construction professionals.

Boschman et al. (2013) provide a large-scale assessment of mental health outcomes among construction workers using validated psychometric scales, offering valuable prevalence data. However, the study's low response rate (43%) raises concerns about nonresponse bias, as workers experiencing severe distress may have opted out, leading to a sample skewed toward healthier individuals. This limitation is further compounded by the study's cross-sectional design, which prevents causal inferences, while high work speed and low decision-making autonomy are correlated with poor mental health, it remains unclear whether these factors are causative or merely reflective of broader industry conditions. This issue is particularly pertinent given Franklin et al.'s (2022) findings, which suggest that workplace stigma discourages formal reporting of psychological distress, further distorting epidemiological estimates. Unlike Boschman et al. (2013), Kotera et al. (2019) emphasise self-compassion and stigma reduction as potential protective factors, underscoring the necessity of integrating psychosocial dimensions into mental health assessments. While Boschman et al. (2013) offer an important empirical foundation, their reliance on self-administered mental health measures introduces additional sources of reporting bias, necessitating further longitudinal research to validate their conclusions. Notably, their findings suggest that bricklayers experience harsher working conditions than other labourers, implying a greater risk of mental health deterioration, a hypothesis that requires more robust verification through industry wide comparative studies.

Similarly, Stocks et al. (2011) conduct a detailed epidemiological analysis of disease incidence within the UK construction sector, employing a health and occupation reporting network to standardise incidence rates. Their reliance on clinical specialist reports enhances credibility, yet the study is constrained by selection and information biases, particularly in relation to self-reported cases. Mental health conditions, for example, are frequently underreported due to stigma and concerns over

professional repercussions, a pattern also highlighted by Kotera et al. (2019). In contrast to Boschman et al. (2013), who employ psychometric screening tools to mitigate underreporting biases, Stocks et al. (2011) prioritise diagnostic accuracy, potentially overlooking hidden mental health burdens that self-reported scales may capture more effectively. This methodological divergence underscores the need for a mixed-method approach that integrates diagnostic assessments with worker reported experiences, as advocated by Hulls et al. (2022), who argue that structural workplace factors, including masculinity norms and precarious job conditions, significantly shape mental health outcomes in construction.

A further limitation of Stocks et al. (2011) lies in its geographical focus, with findings restricted to the UK, limiting their applicability to international construction industries with differing regulatory and cultural frameworks. While the study provides crucial insights into the prevalence of occupational illnesses, confirming higher rates of respiratory, skin, and musculoskeletal disorders, it offers minimal discussion on the broader implications of these findings. As highlighted by Blake et al. (2023), the effectiveness of workplace interventions depends not only on epidemiological data but also on how such data translates into industry wide policy changes. Future research should adopt a more intersectional lens, considering how industry culture, policy enforcement, and psychosocial dynamics interact to shape both physical and mental health outcomes in construction.

Eaves et al. (2016) contribute to the understanding of construction workers' health challenges and safety attitudes through a quantitative survey of 80 trade workers. While the targeted sampling aligns with the study's objectives, its reliance on self-reported data raises concerns regarding social desirability bias, as workers may exaggerate adherence to safety protocols due to perceived workplace expectations (Franklin et al., 2022). Additionally, the absence of psychometric validation for the survey instrument weakens the reliability of responses, leaving open the possibility of measurement errors. In contrast, Hulls et al. (2022) utilise qualitative interviews to examine cultural barriers to safety, demonstrating that organisational norms often compel workers to engage in unsafe behaviours despite professed awareness of risks. Their findings suggest that self-reported surveys alone are insufficient for assessing safety behaviour and must be supplemented with observational or ethnographic studies to validate responses. Furthermore, Eaves et al. (2016) introduce an important qualitative dimension by advocating for modifications in personal protective clothing to

enhance worker comfort and safety; however, experimental studies are needed to assess the long-term efficacy of such interventions in real world construction settings.

A critical methodological divergence also emerges when comparing self-reported mental health data (Kotera et al., 2019) with clinically diagnosed cases (Stocks et al., 2010). Stocks et al. (2010) report lower than expected rates of diagnosed mental health conditions in construction, yet Kotera et al. (2019) argue that stigma inhibits disclosure, leading to significant underreporting in epidemiological studies. This contrast underscores a key challenge in occupational health research. As Boschman et al. (2013) suggest, integrating validated psychometric measures into mental health assessments could mitigate these limitations, offering a more nuanced understanding of distress levels across different construction roles.

Kotera et al. (2019) further provide quantitative evidence linking self-compassion to mental health stigma, suggesting that higher self-compassion correlates with lower distress levels, potentially serving as a buffer against workplace induced strain. However, as their study is based on cross-sectional self-report data, causal interpretations remain uncertain, does self-compassion reduce distress, or do lower distress levels enhance self-compassion? Moreover, the study overlooks gendered coping mechanisms, which play a crucial role in stress responses in male dominated sectors such as construction (Hanna & Markham, 2019). Unlike Kotera et al. (2019), Hulls et al. (2022) argue that toxic masculinity norms actively suppress emotional self-regulation strategies, contributing to heightened distress even when workers acknowledge the need for support. This suggests that beyond individual level self-compassion interventions, systemic cultural shifts are necessary to dismantle stigma and promote long term mental wellbeing in construction workplaces. Given these findings, longitudinal studies would be instrumental in examining whether self-compassion interventions effectively reduce stigma driven avoidance of mental health care over time.

Hulls et al. (2022) explore stress appraisal and coping mechanisms among construction employees through qualitative interviews with 32 participants across various organisational roles. To ensure credibility, the authors employed a rigorous coding and transcription process, facilitating thematic analysis of workplace stressors. Their findings illustrate that stress in construction is exacerbated by precarity and a burnout culture. A key contribution of their study lies in the identification of toxic masculinity norms as a barrier to help seeking behaviour’s, aligning with Kotera et al.

(2019), who similarly highlight stigma as a key factor in the underreporting of mental health concerns. However, Hulls et al. (2022) extend this discourse by demonstrating that existing workplace interventions, such as support groups and humour based coping mechanisms, remain largely ineffective due to these ingrained cultural expectations. Their study, however, is limited by its emphasis on individual coping strategies rather than broader structural interventions at the industry level. In contrast, Blake et al. (2023) argue that systemic policy changes, such as mandated mental health training, are more effective than voluntary interventions, as they shift the onus from individual workers to organisational leadership. This debate underscores a fundamental issue in construction mental health research: while workplace initiatives exist, their efficacy is often undermined by entrenched cultural norms and a lack of enforcement mechanisms. The reliance on self-reported data and the study's focus on a single company further limit the generalisability of Hulls et al.'s (2022) findings, necessitating further research to validate their conclusions across diverse workplace settings.

Similarly, Lawani et al. (2023) investigate the correlation between mental health problems and construction related incidents in the UK, employing a mixed-method questionnaire-based approach with a sample of 106 industry managers. While their study successfully integrates both quantitative and qualitative insights, methodological limitations weaken the reliability of their conclusions. The use of non-probability, self-selected, and convenience sampling constrains the study's external validity, making it difficult to generalise findings to the broader construction workforce. Moreover, while the questionnaire demonstrated some validity, the absence of reliability statistics or psychometric validation raises concerns regarding measurement accuracy. The reliance on managerial perspectives also presents a critical limitation, as it excludes frontline workers, whose lived experiences may provide a more nuanced understanding of the mental health crisis in construction. Franklin et al. (2022) emphasise that worker perspectives are essential for identifying stressors and barriers to intervention, suggesting that future studies should prioritise employee driven narratives rather than relying solely on managerial assessments. Lawani et al.'s (2023) largely descriptive analytical approach, while appropriate for exploratory research, could be enriched by more robust qualitative analyses that interrogate the structural determinants of mental health disparities in construction. While the study provides preliminary insights into mental health challenges within the sector, its limitations

highlight the need for future research employing probability sampling techniques, validated measures, and a more representative sample of construction professionals. Addressing these gaps would strengthen the evidence base for mental health interventions and inform more effective policy responses tailored to the realities of construction work.

Ajayi et al. (2019) adopt an exploratory sequential mixed-methods approach to identify key stressors and coping strategies among construction practitioners. By first utilising qualitative tools to gather insights on stress sources and subsequently administering a survey, the study provides a structured methodology for investigating occupational stress. However, while the chosen sample appears appropriate for the target population, further methodological transparency, particularly regarding sample selection criteria and instrument validation, would have strengthened the study's reliability. The findings highlight persistent stress factors, including quality management issues, ineffective communication, and inadequate information flow. These results align with Franklin et al. (2022), who emphasise that stress in construction is compounded by organisational inefficiencies and a lack of mental health awareness. Future research should address the gaps highlighted in Ajayi's et al. (2019) study by employing larger, more representative samples and integrating longitudinal designs to assess stress dynamics over time. This would enhance the feasibility of industry wide interventions aimed at improving construction workers' mental health and wellbeing.

Similarly, Kotera et al. (2020) investigate the intersection of work-life balance (WLB), mental health concerns, and workplace attitudes among UK construction workers. Utilising a cross-sectional survey design with standardised scales, the study effectively quantifies these relationships. However, the small and geographically limited sample restricts the generalisability of its findings. Notably, none of the reviewed studies explicitly address ethical considerations such as participant anonymity or informed consent, raising concerns about the robustness of data protection measures in mental health research. The studies results contribute to an emerging body of literature on workplace stress, but its implications remain narrowly focused on the construction sector, offering limited transferability to broader occupational settings. This is particularly significant given Hulls et al.'s (2022) findings that toxic masculinity norms further exacerbate workplace stress by discouraging self-help behaviours. To build on Kotera et al.'s (2020) research, future studies should

employ larger, more diverse samples and consider longitudinal methodologies to better assess the causal relationships between WLB and mental health outcomes.

Liang et al. (2021) further explore mental health strategies within the construction industry, employing a mixed-methods approach comprising a literature review, stakeholder interviews, and a survey of 24 workers. Their study identifies key stressors, including high work demands, insufficient health precautions, and a lack of organisational recognition of mental health issues, echoing the concerns raised by Boschman et al. (2013) regarding poor working conditions exacerbating psychological distress. In response, Liang et al. (2021) propose interventions such as peer support, mental health education, health screenings, and self-expression initiatives. These recommendations align with Blake et al. (2023), who argue that systemic policy changes are required to shift mental health responsibility from individual workers to employers. However, Liang et al.'s (2021) study is limited by its small sample size and lack of longitudinal data, which restricts its ability to measure the long-term effectiveness of the proposed interventions. Future research should prioritise a broader and more representative participant base while integrating experimental designs to assess the practical implementation and sustainability of workplace mental health initiatives. Given the increasing recognition of mental health as a fundamental occupational health concern, a more structured approach to workplace wellbeing is required, ensuring that interventions address both individual and organisational determinants of psychological distress in construction.

Duncan et al. (2024) examine mental health interventions for construction workers through an online survey questionnaire, effectively capturing perceptions and experiences within the sector. While the methodology aligns with the study's objectives, the findings are constrained by a limited sample of 119 employees from only two UK construction firms, restricting generalisability. This limitation is further compounded by the cross-sectional design, which precludes causal or temporal implications regarding the relationship between demographic variables, such as age, and intentions to seek mental health support. These methodological constraints mirror those highlighted in Kotera et al. (2020), where a similarly small and regionally confined sample limited the applicability of findings beyond the immediate study population. Despite these limitations, Duncan et al. (2024) contribute to the literature on self-help seeking behaviours and workplace support mechanisms, reinforcing the broader consensus (e.g., Franklin et al., 2022; Hulls et al., 2022) that a more

comprehensive, industry wide approach to mental health intervention is needed. To build upon this research, future studies should incorporate longitudinal designs and larger, more representative samples across multiple construction firms to better capture sector wide trends and intervention efficacy.

Similarly, Janusonyte et al. (2019) address the critical issue of mental health in construction by assessing its impact on safety training and organisational safety practices. The study's strength lies in its multi component evaluation, incorporating instructor led training and Mental Health First Aid. However, the absence of a control group significantly weakens the ability to attribute observed changes in safety awareness or behaviour directly to the training interventions. This lack of comparative analysis aligns with critiques raised in Liang et al. (2021), who emphasise the necessity of longitudinal tracking to determine whether workplace interventions yield sustained benefits. Furthermore, the decline in participant numbers throughout the study raises concerns about attrition bias, further limiting the generalisability of the findings. While the study underscores the importance of integrating mental health considerations into construction safety frameworks, it stops short of addressing systemic factors, such as workplace culture and managerial attitudes, that may influence training effectiveness. Given that Hulls et al. (2022) highlight the role of toxic masculinity in discouraging mental health discussions, future research should explore how cultural and structural factors mitigate the impact of training programs. Expanding the study to include diverse work environments and control groups would enhance the robustness of findings and provide stronger empirical support for the integration of mental health training into construction industry safety policies.

Shepherd et al. (2021) investigate the factors influencing the safety of migrant construction workers across Italy, Spain, and the UK through a qualitative study involving 88 stakeholders via semi-structured interviews and focus group discussions. A key strength of the research lies in its multi-stakeholder, cross-national approach, which provides comparative insights into systemic issues affecting migrant worker safety. However, the study's reliance on a small, self-selected sample limits its generalisability, raising concerns about selection bias and the extent to which findings reflect broader industry trends. The study highlights critical system level challenges, including subcontracting, the erosion of safety practices, and deficiencies in training materials and language accessibility, aligning with concerns raised in Franklin et al. (2022) regarding structural barriers to workplace safety and wellbeing. While

Shepherd et al. (2021) emphasise the need for targeted interventions to mitigate risks for migrant workers, the study would have benefited from a mixed-methods approach incorporating quantitative data to enhance empirical validity. Additionally, Hulls et al. (2022) argue that workplace culture plays a fundamental role in shaping safety behaviour's, suggesting that future research should explore how migrant workers' perceptions of risk and compliance are influenced by organisational norms. Expanding the sample size and employing longitudinal methods could strengthen the study's contributions, offering deeper insights into the intersection of migration, labour policies, and construction safety.

Similarly, Blake et al. (2023) examine the barriers and enablers of mental health interventions within small-to-medium-sized enterprises (SMEs) in the construction sector through qualitative semi-structured interviews. The study effectively addresses a gap in the literature by focusing on the unique challenges faced by SMEs, where mental health interventions are often underdeveloped due to resource constraints. A notable strength of the research is its participant selection, which captures diverse experiences across different construction roles. This complements findings by Liang et al. (2021), who highlight the importance of organisational level strategies in improving mental health outcomes. However, the generalisability of Blake et al.'s (2023) findings are hindered by a limited sample predominantly composed of British male participants, restricting its application across gender and cultural lines. Given that Franklin et al. (2022) identify gender discrepancies in mental health awareness and intervention uptake, future studies should incorporate broader demographic representation to fully assess the effectiveness of workplace mental health strategies. Moreover, while managerial perspectives provide insight into organisational decision making, the absence of direct worker narratives limits the study's ability to capture frontline experiences. Further research incorporating worker driven perspectives would enhance understanding of how mental health initiatives translate into practical workplace improvements.

Franklin et al. (2022) adopt a mixed-method approach to examine the impact of workplace stress on construction professionals' mental health, integrating primary interviews with a secondary literature review. The study's strength lies in its comprehensive examination of stress factors, particularly during the COVID-19 period, which adds a unique temporal dimension to its findings. By including participants from both the UK and Ireland, the research also offers a comparative perspective on

regional variations in mental health challenges within construction. However, the study's limitations are notable: with only 62 participants (predominantly male), the sample size restricts the study's representativeness, raising concerns about gender disparities in the data. This aligns with criticisms raised by Kotera et al. (2020), who emphasise the need for greater inclusivity in construction mental health research. While Franklin et al. (2022) provide valuable baseline data on stress perceptions, their study lacks longitudinal tracking to determine whether identified stressors have sustained long term effects. Future research should address these gaps by employing larger, more representative samples and integrating quantitative measures to strengthen empirical robustness. Given the growing recognition of mental health as a key occupational health concern (Blake et al., 2023), expanding this line of inquiry is essential to developing effective, inclusive interventions tailored to the construction workforce's diverse needs.

Campbell and Gunning (2020) explore strategies for improving mental health and wellbeing among workers in the UK construction sector through a mixed-methods approach, combining interviews with secondary literature analysis. This methodological triangulation enhances the study's validity by integrating multiple data sources. A key strength of the research is the use of both open and closed ended questions, allowing for a nuanced exploration of construction professionals' perspectives on workplace mental health. The inclusion of 126 participants provides a reasonably robust sample for qualitative analysis, yet the study lacks longitudinal data, limiting its ability to assess the sustained impact of mental health interventions on workplace productivity. Furthermore, given that mental health remains a stigmatised issue in the construction industry (Kotera et al., 2019; Hulls et al., 2022), responses from professionals may be subject to social desirability bias, potentially skewing findings. Similar limitations were observed in Blake et al. (2023), where managerial perspectives dominated, raising concerns about the exclusion of frontline workers' lived experiences. Future research should address these gaps by employing longitudinal methodologies and incorporating a broader cross-section of the workforce to assess the long-term effectiveness of mental health interventions in construction.

Sathvik et al. (2023) adopt an integrative interpretive structural modelling (ISM) approach to examine the antecedents of risk-taking behaviour among construction employees. Their study identifies 15 causal factors related to safety, with four root causes: worker age, sleep quality, required level of interaction, and skill level,

emerging as the primary determinants of unsafe behaviour. The ISM and Cross-Impact Matrix Multiplication Applied to Classification (MICMAC) methodologies provide a systematic framework for analysing the interrelationships between these factors, offering practical implications for improving construction site safety. The study's emphasis on individual risk factors aligns with previous research, such as Liang et al. (2021), who highlight the role of excessive work demands and inadequate health precautions in shaping construction workers' mental health outcomes. However, while Sathvik et al. (2023) contribute valuable insights into behavioural risk factors, their reliance on a small sample of 13 self-identified experts limits the generalisability of their findings. This methodological limitation underscores the need for future studies to incorporate larger, more representative samples and to explore how structural interventions, such as regulatory enforcement and workplace safety culture, can mitigate risk taking behaviour in construction environments.

Rawlinson and Farrell (2010) examine health, safety, and wellbeing practices within the UK construction industry by analysing the promotional websites of 20 large contractors. This methodological approach offers insights into how organisations publicly frame their commitment to worker welfare. However, as the study relies exclusively on publicly available corporate data, its findings are susceptible to selection bias, as companies may present an idealised version of their health and safety initiatives. This aligns with concerns raised by Shepherd et al. (2021), who critique the gap between formal workplace policies and actual safety practices, particularly for marginalised groups such as migrant workers. To mitigate these limitations, Rawlinson and Farrell employ hermeneutic content analysis, allowing for a deeper interrogation of textual representations. However, their study stops short of examining how these corporate narratives translate into real world practices, a limitation also observed in Franklin et al. (2022), who emphasise the need for worker centric research methodologies. Additionally, the research highlights the challenge of bridging academia and industry, echoing broader critiques about the construction sector's reliance on marketing rhetoric rather than evidence-based decision making. Future research should incorporate direct industry stakeholder interviews and worker surveys to provide a more comprehensive evaluation of the effectiveness of construction health and safety initiatives beyond their corporate framing.

Jacobsen et al. (2013) investigate the relationship between mental distress, pain, and injury among construction workers using a cross-sectional research design.

This approach enables the assessment of prevalence and correlations; however, its reliance on convenience sampling reduces both reliability and external validity, limiting the generalisability of findings to the broader construction workforce. While the sample size of 172 workers is adequate, the study does not provide a clear rationale for this number, raising questions about sample representativeness. A key strength of the research is its use of the standardised HSCL-25 scale to measure mental distress, supplemented by clinical interviews with ten workers, which strengthens the validity of the findings. The study reports a mental distress prevalence rate of 16%, which aligns with interview data, lending support to the scale's cutoff values. Additionally, the study identifies a correlation between mental distress, injury rates, and pain, reinforcing existing literature on the psychosomatic impacts of occupational stress in high-risk industries (Franklin et al., 2022; Kotera et al., 2019). However, the cross-sectional nature of the research precludes causal inferences, meaning it remains unclear whether mental distress leads to higher injury risk or if workplace injuries exacerbate psychological distress. This limitation echoes concerns raised by Boschman et al. (2013), who emphasise the need for longitudinal studies to establish causality in occupational health research. Moving forward, a follow up study employing a representative, probability-based sample and a longitudinal design would provide more robust evidence on the interplay between psychological distress and workplace injury within the construction sector.

Lyu et al. (2018) explore safety climate and behaviour among ethnic minority (EM) construction workers in Hong Kong, providing valuable insights into workplace safety dynamics within migrant labour populations. Using structural equation modelling (SEM) to analyse data from 289 valid questionnaires, the study identifies a significant positive relationship between safety climate and safety behaviour, with safety participation exerting a stronger influence on reducing workplace injuries than safety compliance. These findings reinforce existing literature on workplace safety, such as Shepherd et al. (2021), who highlight the additional vulnerabilities faced by migrant construction workers due to systemic labour inequalities, language barriers, and inadequate training provisions. However, while Lyu et al. (2018) successfully demonstrates the importance of fostering a supportive safety climate, their study does not account for broader structural and cultural factors that may shape EM workers' ability to engage in safety behaviour's. This omission is particularly relevant given Hulls et al.'s (2022) argument that workplace norms, particularly those influenced by

masculine constructs, can discourage workers from prioritising personal safety over productivity. Furthermore, while the study provides actionable recommendations, such as delivering safety training in workers' native languages, it does not examine the organisational barriers to implementing such measures, an issue also raised by Blake et al. (2023), who emphasise that employer accountability remains inconsistent across the construction sector. Future research should adopt a mixed-method approach, incorporating qualitative worker narratives to contextualise the statistical findings, while also expanding the study's geographical scope to assess the transferability of these results across diverse construction markets, including the U.S., U.K., and Australia, where similar labour dynamics exist.

Leung et al. (2012) examine the interplay between organisational stressors, stress levels, safety behaviours, and injury incidents among construction workers, identifying five key workplace stressors: unfair rewards and treatment, inadequate safety equipment, insufficient training, weak goal setting practices, and poor physical environments. The study's findings reinforce the notion that workplace stress is a critical determinant of safety behaviour, highlighting an inverted U-shaped relationship between emotional stress and safety outcomes, moderate stress enhances safety awareness, while excessive or insufficient stress impairs it. Additionally, the research suggests that physical stress positively correlates with improved safety behaviour's, potentially due to heightened risk awareness in high-pressure environments. These insights align with Boschman et al. (2013), who also identify a strong link between occupational stress and safety outcomes, particularly in physically demanding construction roles. However, while Leung et al. (2012) offer valuable recommendations for mitigating workplace stress through goal setting and enhanced training, their study does not fully engage with the broader psychosocial factors influencing safety behaviour's. For instance, Hulls et al. (2022) argue that masculinity norms in construction can discourage workers from prioritising personal safety, which may counteract the benefits of stress regulation strategies. Additionally, while Leung et al. (2012) provide a structured quantitative analysis, the absence of qualitative worker narratives limits the study's ability to capture lived experiences of occupational stress. Future research should incorporate mixed-method approaches to assess how individual perceptions of stress intersect with structural and cultural workplace dynamics, thereby developing more effective interventions.

Studies such as Stocks et al. (2010) provide robust epidemiological data on work related illnesses, they fail to account for underreporting biases linked to mental health stigma, a limitation highlighted by Kotera et al. (2019). Conversely, qualitative research (e.g., Hanna & Markham, 2019) explores the role of workplace culture in shaping mental health outcomes but is often constrained by small, non-representative samples, reducing its generalisability. This discrepancy underscores a broader methodological challenge in construction health research: the need to bridge large scale epidemiological data with qualitative worker narratives to produce a more holistic understanding of mental health risks in the sector. Given the significant evidence linking workplace stress to both safety behaviours and mental health outcomes, future research should prioritise longitudinal studies that assess how stress interventions influence worker wellbeing over time. Furthermore, the integration of psychosocial frameworks, such as those proposed by Kotera et al. (2020), could provide deeper insights into how cultural and organisational factors mediate the relationship between workplace stress and construction worker health outcomes.

The following section of this thematic literature review examines Grey Literature, an often overlooked but essential component in occupational health research. While scholarly articles and peer-reviewed journals provide a rigorous foundation for academic discourse, Grey Literature, including reports, government documents, and industry publications, offers practical insights that may not be captured in traditional research. In the context of construction industry mental health and wellbeing, Grey Literature provides valuable perspectives on regulatory frameworks, policy implementation, and industry specific challenges, contributing to a broader and more nuanced understanding of the topic.

The Health & Safety Executive (HSE, 2024) emphasises employers' legal obligations to manage workplace stress, recognising psychosocial hazards as significant threats to employee wellbeing. However, while these regulatory frameworks exist, enforcement remains inconsistent across construction firms. Blake et al. (2023) argue that compliance is largely contingent on corporate culture, with larger firms more likely to implement structured mental health interventions, whereas smaller subcontractors often lack the financial resources or motivation to enforce policies. This raises critical concerns regarding whether legislative requirements genuinely translate into meaningful workplace improvements or remain largely aspirational policy statements. The HSE report underscores the importance of proactive stress

prevention, advocating for employer led initiatives such as stress risk assessments, structured training programs, and the implementation of HSE management standards. These recommendations align with Kotera et al. (2020), who highlight that workplace interventions must be embedded within broader occupational safety frameworks rather than treated as supplementary initiatives. Future research should examine how these policies translate into measurable outcomes, particularly within subcontracted and small-scale construction firms where enforcement mechanisms are weakest.

Similarly, the HSE Network (2023) report highlights the widespread nature of mental health challenges in the construction industry but acknowledges the reactive nature of corporate responses. While some firms have introduced mental health interventions, many remain limited to post-incident measures rather than proactive structural policies. This reflects broader industry patterns, as Mates in Mind (2023) argue that mental health programs are frequently treated as voluntary add-ons rather than fundamental components of workplace risk management. The persistence of this reactive approach aligns with Hulls et al. (2022), who emphasise that construction's workplace culture, particularly its entrenched machismo norms, often discourages open discussions on mental health, further limiting the reach and effectiveness of interventions. Additionally, the HSE Network (2023) highlights that mental health issues affecting minority groups within construction remain largely unaddressed, an issue also noted by Shepherd et al. (2021), who found that migrant workers face disproportionate safety risks due to language barriers and precarious employment conditions. The failure to adequately address mental health disparities not only exacerbates psychological distress but also has tangible implications for workforce stability, with higher absenteeism, reduced productivity, and increased employee turnover. This suggests that while regulatory obligations exist, their implementation remains fragmented, reinforcing the need for stricter enforcement mechanisms and industry wide accountability.

Ultimately, the analysis of Grey Literature underscores a critical gap between mental health policy and industry practice. While the HSE and other regulatory bodies outline employer responsibilities, practical implementation remains inconsistent, particularly among subcontractors who often lack the resources or incentives to comply (Blake et al., 2023). Additionally, voluntary awareness campaigns, such as those promoted by Mates in Mind, contribute to raising awareness but do not guarantee systematic adoption of best practices. Franklin et al. (2022) highlight the

need for a more integrated approach, where mental health initiatives are embedded within occupational health and safety strategies rather than treated as secondary concerns. Moving forward, research should prioritise evaluating the efficacy of current mental health regulations and interventions, focusing on the extent to which legislative frameworks translate into substantive workplace improvements. Without stronger enforcement mechanisms, mental health will likely remain a secondary consideration in construction risk management, leaving workers vulnerable to preventable psychological distress and its associated occupational risks.

Mates in Mind (2023) report that construction workers experience one of the highest suicide rates across all industries, signalling deep seated structural challenges within the sector. While awareness campaigns have been launched to address these issues, prevention strategies remain fragmented and inconsistently implemented. Compared to industries such as aviation and finance, where mental health risk assessments are integrated into standard operational safety reviews, the construction industry continues to treat mental health as separate from its core risk management frameworks. This segmentation creates barriers to the mainstreaming of mental health interventions, making many construction firms reactive rather than preventative in their approach. This aligns with findings from Blake et al. (2023), who emphasise that employer-led mental health interventions remain inconsistent, particularly in smaller firms lacking financial and administrative resources. Given the widespread prevalence of work-related stress and suicide in construction, there is increasing advocacy for a multisystem approach that integrates regulatory enforcement with workplace mental health programs to ensure comprehensive and industry wide intervention.

The Working Minds campaign (HSE, 2024) represents a notable policy initiative aimed at embedding mental health considerations within workplace risk management. However, while such initiatives increase awareness, they do not mandate employer compliance, leaving significant gaps in enforcement. Research indicates that larger firms with dedicated HR teams are more likely to implement such programs, whereas SMEs often lack the financial and logistical capacity to adopt mental health strategies effectively (Blake et al., 2023). This disparity raises concerns regarding whether voluntary campaigns alone are sufficient or if stronger legal mandates are required to ensure widespread adoption across all tiers of the construction industry. The Working Minds campaign (HSE, 2024) underscores the necessity for proactive employer engagement in stress mitigation through risk assessments, structured mental health

interventions, and routine employee wellbeing checks. However, as noted by Kotera et al. (2020), without a shift in organisational culture and improved managerial accountability, these initiatives risk being perceived as superficial add-ons rather than core elements of occupational safety. While the Working Minds (HSE, 2024) campaign offers resources such as stress indicator tools and employer guidance, further empirical research is needed to assess the campaign's long-term impact on improving mental health outcomes within the sector, particularly among subcontracted and temporary workers who may not benefit equally from such initiatives.

Despite the presence of legal frameworks such as The Health and Safety at Work etc. Act (1974), the application of these safe-guards to support mental health remains limited. The Act mandates employer responsibility for workplace risks, yet its initial drafting did not explicitly define psychosocial hazards, leading to gaps in enforcement. Although subsequent legislative updates have expanded the Act's scope, significant challenges persist, particularly within subcontracted construction work, where temporary employment models complicate accountability (HSE, 2023). The legislation's emphasis on risk creator accountability, influenced by the Robens Report, has positioned mental health as an employer-led concern, yet without robust enforcement mechanisms, compliance remains highly variable (Blake et al., 2023). While the establishment of the Health and Safety Executive (HSE) and the Health and Safety Commission (HSC) has provided structured oversight, their focus has historically been on physical safety, with mental health considerations only gaining prominence in recent years. Franklin et al. (2022) argue that mental health must be treated with the same urgency as physical health within the construction sector, necessitating ongoing evaluation of regulatory frameworks to ensure alignment with evolving workplace demands. The evidence suggests that while legislative progress has been made, significant structural barriers remain in translating policy into actionable, industry wide mental health protections. Moving forward, regulatory frameworks must evolve to reflect the increasing recognition of mental health as a fundamental occupational safety concern, incorporating more stringent compliance measures to bridge the gap between policy and workplace practice.

The UK government's 2010–2015 health and safety reforms aimed to streamline workplace safety regulations by reducing inspections and administrative burdens on businesses. While these reforms sought to improve efficiency, critics argue they ultimately weakened enforcement mechanisms, particularly within small

construction firms where compliance is already inconsistent (HSE, 2023). Research suggests that reducing proactive inspections has led to fewer early interventions, potentially heightening workplace risks (CIF, 2020). This debate underscores a fundamental tension in occupational health policy: balancing business flexibility with worker protection. There are concerns that the reforms prioritised cost-cutting over substantive safety improvements, potentially leaving workers more vulnerable, especially in high-risk industries such as construction. The reforms significantly reduced inspections, from 33,000 to 22,000 per year, while delegating enforcement priorities to Local Authorities, with a focus on higher-risk premises. Furthermore, the government simplified regulatory requirements, reducing paperwork such as Material Safety Data Sheets (MSDS) and halving overall compliance obligations, particularly for new businesses. While these measures were designed to prevent excessive risk aversion and reduce unnecessary precautions, they also limited the regulatory scope for proactive safety management. Blake et al. (2023) highlight that smaller firms often lack internal health and safety expertise, meaning that less regulatory oversight could lead to poorer implementation of mental health and safety measures. Additionally, although the approved consultant scheme sought to ensure access to reliable safety guidance, there remain concerns about the accessibility and quality of advice for small contractors who do not have the resources to engage professional consultants. While some evidence suggests that compliant businesses benefited from reduced bureaucracy and legal costs, the overall impact of these reforms remains unclear, particularly in relation to injury incidence trends and employer spending on safety initiatives. Future research should critically assess the long-term effects of reduced inspections on workplace injuries, particularly in the construction sector, where subcontracting models complicate regulatory enforcement. Moreover, an examination of whether the reforms disproportionately benefited larger employers at the expense of smaller firms would provide further clarity on the effectiveness of these regulatory changes.

Northern Ireland's health and safety framework, rooted in the European Communities Act (1972) and the Health and Safety at Work (Northern Ireland) Order (1978), provides a legal foundation for occupational protections. However, these regulations were developed before mental health was widely recognised as a critical workplace issue. Although later amendments incorporated psychosocial risks, industry reports suggest that their implementation remains largely reactive rather than

preventative (HSE Network, 2023). This raises concerns about whether legacy legislation can adequately address modern workforce challenges, particularly in the construction sector, where subcontracting and temporary contracts create additional enforcement obstacles. The Management of Health and Safety at Work Regulations (Northern Ireland) introduced in 2001 provided a more comprehensive framework to address mental health concerns in construction. Schedule 3 of these regulations formalised employer responsibilities, including mandatory Mental Health Risk Assessments, ensuring that workplace conditions account for psychological wellbeing. These regulations also define key employment categories, including fixed-term contracts, self-employed individuals, and young workers, to clarify specific employer obligations. However, Franklin et al. (2022) argue that while regulatory frameworks exist, compliance remains highly variable, particularly among SMEs, where resource constraints limit engagement with mental health initiatives. Similarly, Shepherd et al. (2021) highlight that minority and migrant workers in construction often fall through regulatory gaps, as many employer-led interventions fail to address the unique stressors faced by these groups. Furthermore, the non-consultative amendments made under the 1978 Order raise concerns about regulatory transparency, potentially leading to inconsistent implementation across different sectors. While these legislative provisions establish a structured foundation for integrating mental health into workplace safety, further empirical research is needed to assess their real-world impact on mental health outcomes within the construction sector. Given the industry's reliance on temporary labour models, regulatory frameworks must evolve to ensure protections extend beyond permanent employees, addressing the mental health challenges associated with precarious work arrangements. Without such adaptations, legislative efforts risk remaining largely aspirational, failing to produce tangible improvements in worker wellbeing.

The Construction Industry Federation (CIF, 2020) acknowledges the growing prevalence of mental health challenges in Ireland’s construction sector, identifying depression, anxiety, and substance abuse as key concerns. However, despite highlighting these issues, the report predominantly frames mental health as an individual responsibility, overlooking the structural workplace conditions that contribute to psychological distress. In contrast, Blake et al. (2023) argue that meaningful mental health interventions must extend beyond employee focused programs and instead prioritise employer accountability through systematic policy reforms. This discrepancy

reflects a broader industry trend, many initiatives focus on awareness raising but fail to confront the organisational and operational pressures that fuel stress related conditions.

The urgency for organisational support mechanisms is underscored by extensive literature demonstrating that employee mental health directly impacts productivity, attendance, workplace safety, and overall wellbeing (Franklin et al., 2022; Kotera et al., 2019). Employees require access to Employee Assistance Programs (EAPs), structured mental health training, professional referral services, anti-stigma initiatives, and supportive workplace policies. This critical appraisal highlights the necessity of systemic interventions, given that in the UK alone, workplace mental health incidents contribute to over half a million new cases annually, resulting in the loss of 12 million workdays, nearly three weeks per affected worker. The financial and operational repercussions of untreated mental health issues underscore the value of cost-effective, high-quality support networks that benefit both employees and organisations. Workers who receive appropriate mental health assistance experience improved job security, attendance, and engagement, while employers benefit from enhanced workplace satisfaction, reduced absenteeism, and increased productivity.

A key takeaway from this analysis is the pressing need to embed mental health into workplace culture, ensuring it is treated with the same urgency and investment as physical safety. This requires a shift in mindset, mental health interventions must move beyond voluntary awareness campaigns and instead be institutionalised as an integral part of occupational health and safety policies. As mental health disorders continue to rise, organisations must recognise that psychosocial wellbeing is not an optional benefit but a fundamental workplace necessity. A first step in this transformation is acknowledging the gaps in current practices, followed by the development of structured interventions that foster a stigma free environment where employees feel safe to seek help.

Additionally, Grey Literature highlights the fundamental disconnect between policy frameworks and industry compliance. While the HSE and existing legal mandates define employer responsibilities for mental health, practical enforcement remains inconsistent, particularly among small subcontractors who often lack financial incentives to implement robust interventions (Blake et al., 2023). Furthermore, while voluntary industry campaigns, such as Working Minds, have raised awareness, they fail to ensure systematic enforcement, reinforcing the need for stronger legal

mandates and sector wide accountability measures. Without such efforts, mental health will remain secondary to physical safety, continuing to place construction workers at risk of psychological distress, absenteeism, and poor health outcomes.

As the literature reveals, the construction industry must shift towards a proactive, structured approach, one that not only acknowledges the impact of mental health on workplace efficiency and safety but also translates awareness into enforceable, industry wide interventions. Doing so will not only safeguard employee wellbeing but also cultivate a more resilient, engaged, and high-performing workforce, ultimately delivering long term benefits to both workers and employers alike.

2.3 Summary table

Authors	Aim	Method	Sampled Population	Results	Strengths	Limitations
Ajayi et al., 2019	Identifying factors and interventions for improving stress management	Exploratory sequential mix method	N=70	Stress Factors: Ineffective communication, poor collaboration and quality information. Recommendation: Realistic budget/timeline, inter-professional collaboration.	• Mix-method offers research flexibility • Semi-structured interviews provide in-depth information	• Purposive sampling may create researcher biases • Limited generalisability of results
Blake et al., 2023	Exploring barriers/enablers to implement MH interventions in UK's SME	Qualitative Semi-structured interviews	N=11	• Macho culture and traditional views are identified as barriers • Promote MH awareness and value good MH	• Addresses literature gap of MH in Construction's SMEs • Selected participants pose diverse occupational experiences	• Predominance of British male participants. • Limited participation

Authors	Aim	Method	Sampled Population	Results	Strengths	Limitations
	construction businesses			• Reactive/Proactive MH approach		
Campbell and Gunning, 2020	Identify strategies that can be implemented to improve the mental health of construction workers.	Mix-method approach	N=126	• Combating mental health problems is difficult due to the associated stigma • Participants feel uncomfortable to report mental health challenges • Workplace bullying was not addressed due to poor organisational support	• The induction of the mix-method approach provides comprehensive research insight • Incorporation of both open and close-ended questions • A diverse pool of construction professionals	• Lack of longitudinal data for MH intervention's effectiveness • Responses may be biased because of the MH stigma

Authors	Aim	Method	Sampled Population	Results	Strengths	Limitations
Duncan et al., 2024	Evaluate help-seeking intention, mental wellbeing, and employee engagement with mental health support strategies.	Cross-Sectional Survey	N=119	• 1/3rd sampled population experienced mental health issues over the last 6 months. • Higher preference for informal support over formal support. • Employees age affects help-seeking intention.	• Address societal stigma and mental health issues of the male-dominated Construction Industry. • The inclusion of 119 respondents from relevant fields gives focused research outcomes.	• Cross-sectional design limits the causal inferences outcomes. • The dominance of male respondents resulted in gender discrepancies.
Eaves et al., 2016	Explore workers' understanding and contribution regarding workplace health and wellbeing.	Quantitative semi-structured interviews	N=80	• Higher incidence of musculoskeletal symptoms • >250 ideas generated by employees for improving their workplace health and wellbeing	• Extracted practical solutions from the sampled population to mitigate the issue. • Promotes workforce engagement in decisions to improve their health and productivity.	• Purposive sampling through managers' reliance creates research bias. • The lack of longitudinal research limits the long-term health perception.

Authors	Aim	Method	Sampled Population	Results	Strengths	Limitations
Hanna and Markham, 2019	Explore stakeholder viewpoints for the Construction Industry landscape for shaping workforce health and wellbeing.	Qualitative semi-structured interviews	N=21	• Stakeholders view the construction sector as averse to health promotion and emphasise on understanding industry-specific health concerns. • Inherent structural limitations restrict health promotion.	• Semi-structured interviews provide in-depth insights from field stakeholders.	• A limited sampled population affects the result generalisability

Authors	Aim	Method	Sampled Population	Results	Strengths	Limitations
Hulls et al., 2022	Evaluate how construction professionals experience and manage occupational stress along with its perceived health impacts.	Qualitative Semi-structured Interviews	N=32	• Senior management recognised stress as an issue, but initiatives (MHFAiders) were ineffective in solving deeper problems. • Macho culture discouraged peers from seeking informal mental support. • Individual stress coping mechanisms are difficult to prioritise.	• Promotes inclusivity by interviewing diverse pools of professionals. • Highlights the gap between structural issues and mental health initiatives.	• Limited sample size from only one construction company.

Authors	Aim	Method	Sampled Population	Results	Strengths	Limitations
Januson yte et al., 2019	Evaluate the effectiveness of mental health first aid (MHFA) training on construction workers.	Ethnographic Approach	N=12	• Participants shared concerns about MHFAider workplace boundaries, training material relevance and application in the Construction Industry. • MHFA training should be given to senior management to bring positive change.	• The ethnographic approach gives direct access to participants for understanding on-ground realities.	• Homogenous and small sample size. • Ambiguity to evaluate the long-term effectiveness of training.
Kotera et al., 2019	Identify the association among mental health issues, shame, motivation, masculinity,	Cross-sectional self-report data	N=155	• Adequate correlation between five constructs • Motivation and masculinity were not related to mental health shame.	• Focused on key mental health constructs of construction workers • A reasonable sample size improves results reliability.	• Opportunity sampling limits generalisation. • Results bias due to population representation from a single firm.

Authors	Aim	Method	Sampled Population	Results	Strengths	Limitations
	motivation, and self-compassion among construction workers.			• The relationship between mental health issues and shame was partially mediated by self-compassion.		
Kotera et al., 2020	Evaluate the association between MH, work-life balance, and workers' attitudes towards MH concerns and work schedules.	Cross-sectional survey	N=144	• WLB is negatively associated with MH attitudes and issues. • WLB was the strongest predictor of MH problems. • Day-time workers MH were poorer than mixed workers.	• Pioneer UK's research to explore WLB impact on construction workers MH.	• Participant recruitment through opportunity and snowball sampling limits generalisation. • Limited female participants restrict meaningful gender-based findings.

Authors	Aim	Method	Sampled Population	Results	Strengths	Limitations
Lawani et al., 2023	Explore MH challenges and related implications on construction safety	Non-probability purposive sampling	N=106	• Progression of the Construction Industry towards addressing MH issues • Placement of MH initiatives among contractors, however, support is inconsistent.	• The adopted questionnaire was benchmarked with applicable MH standards.	• Limited participation restricts the generalisation of results to other regions • Purposive sampling introduces results biases
Love & Edwards, 2005	To determine construction project managers' psychological wellbeing in terms of worker health and job satisfaction can be	Quantitative Structured Survey	N=100	Job Strain Model (JSM) predicts psychological well-being, health, and job satisfaction among construction project managers. Non-work-related social support has a greater impact on alleviating psychological strain	Predictive capabilities of the Job Strain Model (JSM) in assessing psychological wellbeing among construction project managers, highlighting the significant impact of social support and job control on worker health and job satisfaction	The research had limitations with a small sample size of 100 respondents, potentially lacking representativeness for the broader population of construction project managers in the UK. It also did not consider the diverse roles and demands experienced by project

Authors	Aim	Method	Sampled Population	Results	Strengths	Limitations
	reliably predicted using the job strain model (JSM)			compared to work-related support for construction project managers.		managers across different organisations.
Rawlinson and Farrell, 2010	Examine health and safety management in the UK construction industry	Desk study and content analysis	N = 20	• Corporate social responsibility adopted in safety management • Industry direction aligns with government approaches but lacks academic influence	• Holistic review of health and safety approaches. • Unique insight into marketing's impact on safety management practices.	• Limited to web-based promotional content analysis. • Potential bias in the interpretation of web

Authors	Aim	Method	Sampled Population	Results	Strengths	Limitations
Shepherd et al., 2021	Explore challenges that influence the migrant construction workers' safety in Italy, Spain and the UK.	Qualitative semi-structured interviews	N=88	• Challenges include cultural/language barriers, subcontractors' use, safety standards dilution, and safety non-compliance pressure.	• Explored cross-national perspective regarding safety challenges • Actionable suggestions to improve construction safety culture	• Sampled migrants who reside over 10 years may adjust to challenges that skewed findings. • Lack of vulnerable construction workers' inclusion
Stocks et al., 2010	Identify WRI (work-related ill health) incidence in the UK's Construction Industry.	Quantitative SRRs	Case reports: males aged ≤65	• High SRRs observed for almost all WRI • Low SRRs reported for mental-ill health and asthma. • Skin neoplasia– prominent WRI health issue.	• Detailed coverage of multiple WRIs • Use of certified medical data	• Focused on the male population • Underreporting of MH issues

Authors	Aim	Method	Sampled Population	Results	Strengths	Limitations
Stocks et al., 2011	Compare medically reported WRI incidence in occupations of the UK's Construction Industry.	Quantitative SRRs	Case reports: males aged ≤65	• Higher WRI incidences were reported among different construction occupations.	• Comprehensive WRI analysis across various construction occupations. • The inclusion of medically reported cases improves research accuracy.	• UK-specific findings

Grey Literature						
Authors	**Aim**	**Method**	**Sampled Population**	**Results**	**Strengths**	**Limitations**
CIF, 2020	To promote and assist the mental health and wellbeing of workers in the Construction Industry	Qualitative surveys and interviews	N=301	• 60% of companies reported MH issues among employees • 81% of employers found MH issues of employees to be sensitive and difficult to address • 70% of MH issues contributed to work-related stressors	• Addresses the perception of employers regarding MH issues of construction workers • Diverse data collection through a larger sample pool	• Temporal limitations and lack of longitudinal impacts
Gov.UK, 2015	Reduce the burden of excessive H&S regulations on			Issues: • Low-risk workplaces experience higher inspections	• Addresses risk-based approach for high-risk industries • Simplified regulations	• Proactive inspection reduction might overlook low/medium risks

	businesses while focusing on high-risk industries to address serious non-compliance.			• Complexed H&S regulations • Businesses received substandard H&S advice from consultants Actions: • Risk-based approach for targeting H&S interventions • Reduction in proactive inspections and strengthening of inspection plans • Simplified H&S incidents reporting requirements		

Health and Public Services Committee, 2005	Assess H&S practices in the London construction sector and provide recommendations to improve workplace safety.			Identifies requirements for: • More resources for the H&S construction inspection team • Increased safety representation on construction sites • Training for language and skills	• Practical recommendations to fill gap in current practices • Proposes public engagement campaigns to increase safety awareness	• Recommendation effectiveness depends on the industry's commitment
HSE Network, 2023	To highlight the mental health struggles in the construction industry			• Mental health issues are widespread but often not addressed • Stigma and lack of support are key barriers	• Focuses on real-world struggles and systemic barriers • Detailed insights from industry experts	• No direct survey or interview data • May not represent all workers' experiences

HSE (2021)	Raise awareness of work-related stress and promote good mental health in the workplace by encouraging employers to recognise and respond to the signs of stress and fulfil their legal duties to prevent it	Promoting mental health in the workplace, including communications strategies, risk assessments and campaign activities.	N/A	N/A	Raise awareness about work-related stress and its impact on mental health, particularly targeting small and medium-sized enterprises (SMEs) with fewer than 20 employees	Campaign appears to target a broad audience, which may dilute the effectiveness of specific messaging tailored to different sectors or business sizes

HSE, 2024	To showcase successful interventions addressing mental health and stress in construction	Case study analysis	N=5 (UK construction companies)	• Stress reduction initiatives led to improvements in mental health • Increased awareness and support for mental health at work	• Practical case studies with actionable insights • Focus on successful industry interventions	• Limited sample size of companies • May not reflect broader industry trends
Mates in Mind (2023)	To provide statistical insights into mental health within the UK construction industry	survey data	N=300 (UK construction workers)	• workers report mental health issues • 49% workers have taken time off due to stress	• Large sample size with diverse data points •Comprehensive overview of mental health statistics	• Lacks qualitative insights into causes • No longitudinal follow-up

International Research Papers						
Authors	**Aim**	**Method**	**Sampled Population**	**Results**	**Strengths**	**Limitations**
Boschman et al., 2013	Evaluate mental health complaints prevalence and their association with the psychosocial work environment	Cross-sectional survey	N=1500	• Bricklayers experienced limitations in job control, learning opportunities, and prospects. • Construction supervisors faced higher recovery needs and psychological demands. • Mental health complaints prevalence includes distress, PTSD, depression, and post-recovery needs.	• A holistic view of the association between stressors and mental health issues. • Targeted population for identifying occupation-specific problems.	• 43% response rate affects results reliability causing under or over-estimation of results. • Age-related biases as the mean age of the sampled population were high.

Authors	Aim	Method	Sampled Population	Results	Strengths	Limitations
Franklin et al., 2022	Investigate sources and stress levels among construction workers along with evaluating the effectiveness of mental health interventions.	Qualitative Semi-structured interviews	N=62	• Identification of 5 key stressors categories: Organisational, physical, task, industrial, and personal stressors. • Mental health impact exacerbated by elevated stress levels • Factors affecting mental health include lack of understanding, lack of mental health awareness, stigma, and limited engagement towards support programmes.	• Implies a combination of both primary and secondary qualitative methods • Provides professionals' perspective during the COVID period • Inclusion of a diverse pool of participants from both Ireland and the UK	• The predominance of male respondents creates gender bias • Limited participation of respondents

Authors	Aim	Method	Sampled Population	Results	Strengths	Limitations
Leung et al., 2012	Prevent injury incidents and enhance the safety behaviours of CWs by examining how different organisational stressors and stress levels influence these outcomes	Quantitative questionnaires	N = 395	Study found that injury incidents among construction workers were minimised by safety behaviours but escalated by a lack of goal setting. Additionally, safety behaviours were maximised by moderate levels of emotional stress and increased with physical stress and inappropriate safety equipment	Identification of various organisational stressors affecting construction workers (CWs) and the detailed analysis of their impact on safety behaviours and injury incidents, supported by robust statistical methods such as factor analysis and regression modelling	Common method variance due to self-report measures, which could affect the validity of the data, and the results being based on a sample size that may not be sufficient for structural equation modelling.

Authors	Aim	Method	Sampled Population	Results	Strengths	Limitations
Liang et al., 2021	Assess the effect of coping behaviour on the safety and stress of construction workers.	Mix-method	N=338	• Confrontive coping links to higher stress while proactive coping links to lower stress. • Safety incompliance increases with higher stress • Proactive coping and problem-solving improve safety participation	• The application of a mixed-method approach improves research findings. • Model development improves understanding of variables' relationship.	• Using questionnaires with statistical analysis may create endogeneity problems.

Authors	Aim	Method	Sampled Population	Results	Strengths	Limitations
Lyu et al., 2018	Investigate the relationships among safety climate, safety behaviour, and safety outcomes for ethnic minority construction workers	Face to Face Questionnaire, followed by structural equation modelling analysis	N = 289	Safety climate positively impacts safety participation more than safety compliance. Safety participation is more strongly associated with fewer near-misses and injuries than safety compliance. Factors such as management commitment and communication are crucial for improving safety among EM workers.	Significant positive relationships between safety climate and safety behaviours. Negative relationships between safety behaviours and safety outcomes for ethnic minority construction workers. Empirical evidence supports the mechanisms underlying these relationships. Importance of safety management commitment, safety	Self-reported data may be biased due to reluctance from ethnic minority workers to accurately report their perceptions. Focused solely on safety climate's influence on safety behaviours and outcomes. Did not consider other potential factors that may affect safety performance.

Authors	Aim	Method	Sampled Population	Results	Strengths	Limitations
					resources, and employee involvement in influencing safety performance in this demographic.	

Authors	Aim	Method	Sampled Population	Results	Strengths	Limitations
Sathvik et al., 2023	Identify root causes of unsafe behaviours among construction workers	Integrative interpretive structural modelling	N = 8	• Identified 15 causal factors influencing safety • ISM provided insights into relationships and prioritised variables to inform interventions	• Utilised expert insights, providing depth to the analysis. • The ISM method offers clarity in complex relationships among factors.	• A small sample size of experts limits generalisability. • Findings are context-specific to construction settings.

2.4 Thematic analysis

In this section a rigorous thematic analysis has been conducted to extract meaningful insights from the available literature on the research topic. Through a systematic examination of the selected studies, a number of recurring themes have emerged, shedding light on the key concepts, patterns, and trends within the field. These themes serve as organising frameworks, allowing for a comprehensive exploration of the research landscape and providing a deeper understanding of the complexities and nuances inherent within mental health and the construction industry. By identifying and analysing these themes, this section aims to synthesise the existing knowledge, highlight the gaps in understanding, and pave the way for further research and exploration in the field.

2.4.1 Theme 1: Prevalence and Impact of Mental Health Issues in the Construction Industry

The prevalence and impact of mental health issues in the construction industry emerged as a dominant theme through a comprehensive review of existing literature. The examination of epidemiological data, industry reports, and qualitative investigations consistently highlighted a significant but often underreported mental health crisis among construction workers (Stocks et al., 2010; Franklin et al., 2022; Campbell & Gunning, 2020). While initial studies identified depression, anxiety, and substance abuse as common conditions affecting construction workers, deeper analysis revealed a complex interplay of occupational stressors, workplace culture, and industry wide stigma, which collectively contribute to the mental health burden (Hanna & Markham, 2019). This theme was further refined through a critical evaluation of discrepancies in data reporting, while quantitative studies suggest lower reported incidences of mental health disorders, qualitative research indicates that stigma and fear of professional consequences contribute to significant underreporting (Stocks et al., 2010). The contrasting perspectives within the literature suggest an ongoing debate: is the mental health crisis in construction primarily driven by the nature of the job itself, or is it exacerbated by a culture that discourages open discussions and intervention? This debate underscores the need for a shift in industry practices,

moving beyond recognition of the problem to implementing meaningful interventions that bridge the gap between awareness and action.

The prevalence of mental health disorders among construction workers, including depression, anxiety, and substance use disorders, is well documented (Stocks et al., 2010; Franklin et al., 2022). However, while some researchers argue that these mental health challenges are a primary cause of workplace safety incidents, others contend that broader industry factors such as job insecurity, excessive workloads, and the stigma surrounding mental health discussions exacerbate the issue (Hanna & Markham, 2019; Campbell & Gunning, 2020). Stocks et al. (2010) conducted an epidemiological study comparing work related illnesses (WRI) across industries and found that construction workers exhibited significantly higher rates of musculoskeletal disorders and skin diseases but lower reported rates of mental health conditions. This discrepancy raises concerns about potential underreporting of mental health issues in the construction sector, likely due to stigma or fear of professional repercussions. Conversely, Hanna and Markham (2019) used qualitative methods to examine industry perspectives, concluding that while stakeholders acknowledge the problem, entrenched workplace cultures discourage open discussions, thereby perpetuating the issue.

These contrasting findings highlight a key methodological gap: quantitative epidemiological studies provide statistical evidence of prevalence, whereas qualitative research reveals hidden barriers to mental health disclosure. This suggests that mental health challenges may be more widespread than officially recorded data indicate, necessitating improved industry wide interventions that address both mental health awareness and workplace culture shifts. The theme, therefore, seeks to underscore the widespread nature of mental health issues in the construction industry while advocating for more proactive and effective support mechanisms, including prevention strategies, early identification programs, and appropriate referral systems for treatment. Ultimately, addressing these concerns could lead to a healthier workforce, improved productivity, and the development of healthier workplace environments within the construction sector.

The study by Stocks et al. (2010) serves as a valuable reference, offering a comparative analysis of WRIs in the construction sector relative to other industries in the UK. Using Standardised Rates Ratios (SRRs) derived from medically certified diseases reported through the Health and Occupation Reporting network (THOR), the

study found that construction workers under 65 years of age exhibited higher rates of WRIs compared to other industries. Specifically, SRRs for respiratory illnesses were 3.8, skin diseases 1.6, and musculoskeletal disorders (MSDs), particularly backache, were 1.9. These rates were even higher for individuals engaged in specific construction trades. Notably, the study attributed the increase in skin disease incidence among male construction workers to occupational hazards such as contact dermatitis and skin cancer. Additionally, respiratory diseases such as non-malignant respiratory conditions, mesothelioma, lung cancer, and pneumoconiosis were found to be more prevalent in construction workers. In contrast, SRRs for asthma and mental health conditions were notably lower, at 0.09 and 0.3, respectively, compared to other sectors.

The lower SRRs for mental health issues within the construction industry, when compared with other WRIs, suggest the possibility of underreporting due to stigma, fear of professional consequences, or cultural norms that discourage acknowledging psychological distress. Consequently, these figures could serve as baseline data for longitudinal comparisons to assess changes over time in relation to policy implementations or hazardous workplace exposures in the construction industry.

Despite increasing recognition of mental health concerns in the sector, the full potential and limitations of industry led health promotion initiatives remain unclear. Hanna and Markham (2019) sought to explore these challenges from the perspective of construction stakeholders with backgrounds in health. Through semi-structured interviews with 21 stakeholders, the researchers identified two overarching themes: first, the construction industry exhibits an inherent aversion to health promotion; second, there are distinct, industry specific health concerns that need to be addressed. The study found that structural limitations within the construction industry's framework severely restrict efforts to promote health and wellbeing. Stress and early retirement due to ill health emerged as significant concerns, affecting not only individual workers but also the industry's overall efficiency and sustainability. The findings underscore the need for a more comprehensive understanding of industry specific barriers to mental health and wellbeing. Hanna and Markham (2019) argue that by addressing these structural limitations, significant improvements can be made to embed effective health promotion programs that cater to the unique demands of the construction workforce. Their research highlights the difficulty in implementing such changes within an industry characterised by demanding work conditions, long hours, and a culture

that often discourages open discussions about mental health. The present study, therefore, provides critical insights into the complexities of enhancing worker wellbeing in the challenging environment of the construction industry.

To further explore this theme, Franklin et al. (2022) conducted a study examining construction professionals' awareness of workplace stress. Using a mixed-method approach, the study identified key stress factors that negatively impact the mental health of construction professionals in Ireland and the UK. The findings indicate that limited understanding, lack of awareness, and persistent stigma prevent workers from engaging in mental health support initiatives. Notably, the study highlighted a correlation between experience levels and stress, with more experienced workers reporting heightened stress due to increased workload and prolonged working hours. Many participants expressed an inability to prioritise their mental health due to these workplace pressures. The study further identified key stressors, including excessive workloads, unpredictable shift patterns, and the lack of mental health initiatives in the construction workplace. These findings demonstrate that the absence of effective mental health strategies not only reduces productivity but also exacerbates mental health risks. Despite efforts by UK construction representatives such as the Chartered Institute of Building (CIOB) and the Construction Industry Federation (CIF) to raise awareness, the study found that participation in such initiatives remains low, indicating a disconnect between policy efforts and worker engagement. The authors suggest that management in the construction sector has shown limited commitment to addressing workers' mental health concerns, allowing chronic stressors to persist unchecked.

Campbell and Gunning (2020) provide additional insight into the challenges of mitigating mental health issues in the construction sector, particularly due to stigma. Through interviews with 126 participants, they explored the factors influencing mental health and identified actionable recommendations for improving workers’ wellbeing. The qualitative analysis revealed that most construction workers feel uncomfortable discussing mental health concerns such as anxiety and stress due to fear of stigma and lack of organisational support. Workplace bullying was also reported as a significant factor contributing to psychological distress, yet many workers refrained from reporting such incidents due to inadequate employer interventions. The study underscores the critical role of employers in fostering resilience and promoting mental health awareness. Participants suggested a range of strategies to mitigate mental health challenges, including awareness campaigns, toolbox talks, technological

interventions, relaxation spaces, zero tolerance for bullying, and mental health screening assessments. The authors emphasise that an industry wide shift in mindset is needed to encourage open discussions about mental health and cultivate a more supportive workplace culture. The Health and Safety Executive (HSE, 2021) reports that poor mental health is the leading cause of sickness absence in the UK, significantly impacting businesses across various sectors, including construction. Tight deadlines, physical demands, and job insecurity contribute to heightened stress levels. Employers must recognise their legal responsibility to assess and mitigate work related stress risks, as failure to do so can lead to increased absenteeism, reduced morale, and diminished productivity. Campaigns such as "Working Minds" highlight the importance of integrating mental health awareness and proactive stress management within the construction sector. Creating a culture where mental health is prioritised alongside physical safety is essential for fostering a healthier, more resilient workforce.

The critical debate surrounding mental health in the construction industry is not simply about whether mental health issues exist, but rather about why they persist despite increasing awareness. While epidemiological data (Stocks et al., 2010) offer statistical evidence of the problem, qualitative studies (Hanna & Markham, 2019; Franklin et al., 2022) reveal the cultural and structural barriers that prevent workers from accessing support. The literature review uncovered a paradox: mental health challenges in the industry are widely acknowledged, yet workplace norms and employer policies continue to reinforce silence and inaction. Furthermore, the economic argument often presented by industry leaders, that addressing mental health is too costly, has been contested by studies indicating that poor mental health directly impacts productivity, absenteeism, and workplace safety, making inaction a more expensive long-term risk (Franklin et al., 2022). This debate suggests that the real challenge is not a lack of awareness, but a failure of implementation. Moving forward, the construction sector must reframe mental health interventions not as optional support programs, but as essential components of workplace safety and operational efficiency. By addressing systemic underreporting, workplace stigma, and the gap between policy and practice, future research and industry reforms can contribute to a more sustainable and supportive working environment for construction workers.

2.4.2 Theme 2: Factors Influencing Mental Health in the Construction Industry

The identification of factors influencing mental health in the construction industry emerged through a synthesis of literature examining the occupational, organisational, and personal determinants of psychological wellbeing among construction workers. While initial studies focused on job strain, workload, and long working hours as primary contributors to stress (Boschman et al., 2013; Sathvik et al., 2023), a deeper examination of qualitative and survey-based research revealed a more intricate web of influences, including workplace culture, job insecurity, and inadequate support mechanisms (Kotera et al., 2019). This theme was further reinforced by evidence demonstrating that mental health stigma, traditional masculinity norms, and limited worker autonomy exacerbate psychological distress in an industry that frequently values resilience over wellbeing (Boschman et al., 2013; Kotera et al., 2019). The critical debate that emerged from the literature is whether mental health deterioration in construction is primarily a consequence of structural job demands or if it is perpetuated by cultural and organisational attitudes that dismiss mental wellbeing as secondary to productivity. While some scholars argue that reducing excessive workloads and increasing job control are the most effective solutions (Boschman et al., 2013), others contend that workplace culture, stigma, and lack of psychological support remain the biggest barriers to meaningful change (Kotera et al., 2019). This division suggests that addressing mental health in construction requires not only policy and workload adjustments but also a cultural shift in how mental health is perceived and managed within the industry.

The mental health of construction workers is shaped by a complex interplay of occupational demands, workplace culture, and organisational policies (Boschman et al., 2013; Kotera et al., 2019; Sathvik et al., 2023). While some scholars emphasise psychosocial risks such as job strain and low decision-making autonomy as primary contributors to mental distress (Boschman et al., 2013), others highlight the role of industry norms, particularly the stigma surrounding mental health and the expectation of resilience in high-risk environments (Kotera et al., 2019). These divergent perspectives suggest that both structural and psychological factors must be considered when assessing the mental health challenges within the construction industry.

Boschman et al. (2013) conducted a cross-sectional survey of 1,500 construction workers across Europe, finding high levels of depression, 18% among bricklayers and 20% among supervisors, linked to high work speed and limited decision-making autonomy. However, a key limitation of this study lies in its self-report methodology, which may introduce response bias, as workers experiencing mental distress may either overestimate or underreport symptoms based on workplace norms. In contrast, Kotera et al. (2019) employed psychometric scales to assess self-compassion, mental health shame, and masculinity norms among 155 UK construction workers. Their findings challenge traditional assumptions about the link between masculinity beliefs and stigma, instead revealing that self-compassion acts as a key mediating factor, workers with greater self-compassion were less likely to experience mental health shame. This underscores the potential value of resilience training and psychological interventions alongside broader workplace reforms. These studies expose a fundamental tension: while structural interventions such as workload management and safety measures are widely advocated, psychological interventions targeting self-perception and stigma reduction are equally valuable. Future research should explore the efficacy of integrated approaches, combining workplace policy changes with individual mental health support to create sustainable improvements in construction worker wellbeing. Addressing this issue holistically requires an examination of employment commitment, workplace safety perception, organisational culture, interpersonal support, and personal stress management strategies. Additionally, factors such as alcohol or drug use, which may serve as coping mechanisms for workplace stress, warrant further investigation.

The study by Boschman et al. (2013) provides valuable insights by examining the relationship between workplace conditions and mental health outcomes. Utilising the Dutch Questionnaire on the Experience and Evaluation of Work (QEEW), the study measured work characteristics and compared them with a general working population. Mental health conditions, including fatigue, need for recovery after work, distress, depression, and post-traumatic stress disorder (PTSD), were assessed through standardised scales. Logistic regression analysis demonstrated significant associations between workplace factors and poor mental health. Notably, bricklayers reported lower job discretion, training opportunities, and promotion prospects, while supervisors exhibited higher job strain and stress related symptoms. The study found that 14% of bricklayers and 25% of supervisors reported a high need for recovery after

work, with additional findings of distress (5% and 7%), depression (18% and 20%), and PTSD (11% and 7%) in these respective roles. High work speed and task quantity were significant predictors of depressive symptoms, while low decision-making autonomy and poor supervisor support correlated with heightened distress. These findings confirm that psychosocial risks are a critical concern in both frontline and managerial construction roles.

Furthering the discussion, Stocks et al. (2011) examined work related illnesses (WRI) across various construction occupations using the UK Health and Occupation Reporting Network. The study employed standardised incidence ratios (SIRs) to assess occupational health risks, revealing that construction workers exhibited higher rates of WRI than comparable professionals in other sectors. Elevated risks included higher incidences of skin cancer among roofers, painters, and labourers; contact dermatitis among metal workers; asthma among welders; musculoskeletal disorders (MSDs) among roadworkers and scaffolders; and long latency respiratory diseases, including mesothelioma, among pipe fitters, electricians, and carpenters. The study by Eaves et al. (2016) adds further nuance to this discussion by highlighting the physically strenuous nature of construction work. A quantitative survey of 80 UK construction workers assessed the impact of ergonomic factors on mental and physical health. The study found that while workers demonstrated strong awareness of job hazards, they frequently experienced significant muscle and joint pain. Participants proposed over 250 intervention ideas, including ergonomic tool designs, improved protective equipment, and lifting aid appliances. Incorporating these insights into workplace policies could enhance worker retention and long-term wellbeing. Sathvik et al. (2023) further emphasise the link between mental health and safety outcomes in construction. Their study found that job insecurity, high workload pressure, and lack of social support contribute to increased risk-taking behaviour. Psychological stress disrupts concentration and decision making, leading to safety compromises. Through integrative interpretive structural modelling analysis, the researchers identified root causes of unsafe behaviour's and called for targeted interventions to address these mental health related risks.

In contrast, Rawlinson and Farrell (2010) critique existing health and safety management practices, arguing that the UK construction industry prioritises physical safety measures over mental health support. Their study revealed a gap in communication and training, leading to unaddressed stress, fatigue, and psychological

distress among workers. Without integrating mental health considerations into safety policies, construction firms risk neglecting a crucial component of workplace wellbeing. Kotera et al. (2019) further explored mental health stigma, self-compassion, and motivation among construction workers. Their study found that self-compassion partially mediated the relationship between mental health shame and wellbeing, suggesting that resilience building strategies could mitigate stigma related distress. The researchers advocate for accessible online self-compassion training courses to help construction workers develop healthier coping mechanisms. These studies collectively highlight the need for an industry wide shift toward mental health inclusive safety strategies. The recognition of psychosocial risks, alongside physical hazards, is essential in fostering a more sustainable and health-conscious construction workforce. By embedding mental health awareness into occupational health policies, construction firms can promote both psychological resilience and safer working conditions.

The literature reveals that mental health issues in the construction industry are not caused by a single factor but rather by a convergence of workplace, cultural, and structural influences. While research identifies long working hours, high job demands, and job insecurity as major contributors to stress and burnout (Boschman et al., 2013; Sathvik et al., 2023), a critical gap remains in addressing the deep-seated industry norms that discourage mental health discussions and support seeking behaviours (Kotera et al., 2019). The key debate that emerged is whether interventions should focus on changing job conditions (e.g., workload management, shift restructuring) or on shifting organisational attitudes (e.g., stigma reduction, leadership engagement in mental health initiatives). While some scholars argue that improving work design would alleviate many of the stressors affecting construction workers, others emphasise that without a cultural shift towards prioritising mental health, policy changes alone will have limited impact. This suggests that future strategies must integrate both structural and cultural reforms, ensuring that workplace mental health is not merely an individual responsibility but a collective organisational priority. Moving forward, research and policy must focus on bridging the gap between recognising mental health challenges and implementing sustainable, industry wide solutions that acknowledge the human cost of ignoring psychological wellbeing in construction settings.

2.4.3 Theme 3: Relationship between Mental Health and Safety Incidents in the Construction Industry

The relationship between mental health and safety incidents in the construction industry emerged as a critical theme through a detailed analysis of workplace accident reports, psychological risk assessments, and qualitative studies on worker wellbeing. While traditional safety research has primarily focused on physical hazards, compliance failures, and technical training as primary causes of construction site accidents, a growing body of literature suggests that poor mental health significantly contributes to workplace safety incidents (Leung et al., 2012; Hulls et al., 2022). The identification of this theme was driven by an emerging interdisciplinary perspective, which recognises that stress, fatigue, anxiety, and depression impair workers' concentration, reaction times, and decision-making abilities, ultimately increasing accident risk (Hulls et al., 2022). However, the literature presents a critical debate regarding the extent of this relationship: while some studies argue that mental health deterioration directly correlates with safety risks, others suggest that structural and organisational failings, such as excessive workload, job insecurity, and insufficient training, are more significant contributors to accidents than individual mental health conditions (Lawani et al., 2023). This raises an important question: Is mental health itself the primary determinant of safety incidents, or is it merely a symptom of broader systemic failings within the industry? The debate highlights the need for holistic safety strategies that integrate both mental health support and structural safety reforms to mitigate risk effectively.

The role of mental health in workplace incidents remains a subject of ongoing debate. While some scholars argue that psychological distress directly impairs focus, risk perception, and reaction time, leading to higher accident rates (Hulls et al., 2022; Leung et al., 2012), others suggest that organisational and structural factors, such as extended working hours and inadequate training, are more critical determinants of safety incidents (Lawani et al., 2023). Hulls et al. (2022) conducted qualitative interviews with 32 UK construction workers and found that workplace stress frequently results in fatigue driven mistakes. However, the study's reliance on self-reported perceptions presents limitations in quantifying the actual impact of stress on accident rates. Conversely, Leung et al. (2012) employed a longitudinal dataset across multiple firms and discovered a statistically significant correlation between high stress

environments and increased workplace accidents. Their findings suggest that stress acts as a cumulative risk factor, making workers more susceptible to errors over time.

In contrast, Lawani et al. (2023) surveyed 106 industry managers and found that while mental health is acknowledged as a workplace issue, safety incidents are more often attributed to deficiencies in safety procedures rather than psychological factors. This discrepancy raises an important question: Are mental health issues being overlooked in risk assessments, or is their impact overstated in psychological studies? These findings highlight the need for interdisciplinary approaches that integrate psychological insights with safety management practices. Future research should prioritise longitudinal studies to establish stronger causal links between mental health and safety outcomes, rather than relying solely on cross-sectional surveys and self-reported stress levels. Some studies argue that poor mental health diminishes concentration, impairs decision making, and increases risk taking, thereby escalating workplace accident rates (Leung et al., 2012). Others suggest that unsafe behaviour is more strongly influenced by structural and organisational factors, such as inadequate safety protocols and extended working hours, with mental health serving as a secondary influence (Kotera et al., 2020). For instance, Hulls et al. (2022) conducted in-depth interviews with 32 construction employees across various job roles and found that workplace stress is not only prevalent but also normalised within the industry. Participants described a deeply embedded 'macho culture' in which discussing mental health concerns was viewed as a sign of weakness, leading to the internalisation of stress rather than its active management.

In contrast, Lawani et al. (2023) found that while companies acknowledged mental health as an issue, most interventions were reactive rather than preventative, limiting their effectiveness in reducing incident rates. These findings suggest that while psychological wellbeing influences safety behaviour, addressing mental health in isolation may not be sufficient. Instead, comprehensive interventions that integrate mental health support with structural safety reforms, such as workload management, improved shift scheduling, and safety training, are needed to create meaningful change in construction site safety. Specifically, depressive disorders, anxiety, and chronic stress have been identified as influential factors impacting workers' attentiveness, decision making abilities, and risk appraisal. Consequently, these factors increase the likelihood of workplace accidents and other adverse outcomes, such as project delays. In light of these findings, it is crucial to explore the ‘Extended

Safety Net Correlates of Mental Health' within the construction research domain. This line of inquiry holds immense value for advancing health assistance programs, enhancing security measures, and implementing effective administrative practices that prioritise the wellbeing of construction employees while ensuring comprehensive workplace safety. Taking a holistic approach to examining the health and safety of construction workers, rather than focusing on isolated aspects, will enable the identification of critical areas for improvement. By addressing mental health concerns and integrating them into broader safety frameworks, the construction industry can create a safer and more supportive environment for its workforce.

To address this theme, Hulls et al.'s (2022) study was found effective as it aimed at understanding how stress was experienced and dealt with by construction workers, as well as the perceived effects it has on their overall wellbeing. The authors had a sample of thirty-two respondents from a British construction firm, including employees in different job roles and with varying years of experience. The interviews were transcribed, followed by a process of coding and thematic analysis. The study indicated that stress was considered an inevitable and progressively worsening problem in construction organisations, exacerbated by economic challenges such as those experienced during COVID-19. Participants claimed that a workplace culture of working to exhaustion, coupled with job insecurity, prevented them from speaking out about their struggles. Management acknowledged stress as a major issue with the potential to compromise company output. Some initiatives, such as Mental Health First Aiders, were recognised as beneficial interventions, yet workers believed that additional structural and cultural changes were necessary. The study also found that small yet impactful measures, such as fostering close knit teams and promoting peer support, could alleviate stress. However, participants expressed concerns that the dominant 'macho culture' in construction limited their ability to openly discuss mental health struggles. While some individuals adopted personal strategies such as exercise to manage stress, these coping mechanisms became difficult to maintain during high pressure periods. The study underscores the need for systemic interventions at the managerial and organisational levels to effectively support employee wellbeing and embed long term mental health strategies within industry practices.

The study by Lawani et al. (2023) also contributes to this discussion, exploring the relationship between mental health and safety incidents in the UK construction industry. Using a non-probability, self-selected convenience sample, 106 industry

managers from various sectors, including highways, maritime, utilities, home building, rail, and haulage, participated in a self-completion questionnaire. The study aimed to assess how these sectors manage mental health challenges and whether existing programs effectively mitigate risks. While progress was evident, the research found that many organisations still lacked comprehensive support mechanisms. Notably, large firms reported having mental health policies in place, yet these programs varied in quality and accessibility. Discrepancies in leadership training and organisational commitment to mental health were highlighted as key barriers to effective implementation. A major takeaway from Lawani et al.'s (2023) study is the need for employers to better understand the mental health risks faced by their workforce. Without adequate data on employee wellbeing, organisations struggle to implement targeted interventions. The study cautions against dismissing mental health challenges solely based on financial considerations, as failing to address these issues could have long term consequences for productivity, employee retention, and workplace safety. The findings emphasise the importance of viewing mental health support as an investment rather than an expense, advocating for a proactive rather than reactive approach to workplace wellbeing. In comparison, Ajayi et al. (2019) identified major stressors in the construction sector, including poor communication, inadequate collaboration, and unrealistic project constraints. Their recommendations emphasise better information sharing, team cooperation, and realistic workload planning to improve mental health. Kotera et al. (2020) linked poor work life balance to mental health struggles, suggesting that addressing scheduling issues could improve worker wellbeing. Leung et al. (2012) found that while moderate stress can enhance compliance with safety measures, excessive stress leads to unsafe behaviours. These studies reinforce the need for holistic safety frameworks integrating mental health considerations.

The relationship between mental health and safety incidents in the construction industry remains a contested issue, with scholars divided on whether individual psychological distress or organisational failings play a more significant role in workplace accidents. While evidence suggests that stress, burnout, and depression impair cognitive functioning and contribute to higher accident rates (Leung et al., 2012; Hulls et al., 2022), there is also strong support for the argument that unsafe work environments, unrealistic productivity expectations, and inadequate employer support systems are the real culprits behind rising safety incidents (Lawani et al., 2023). This

debate underscores the urgent need for integrated approaches that do not isolate mental health as a secondary concern but instead embed psychological wellbeing into core safety management practices. The literature suggests that without a dual approach, one that addresses both mental health challenges and workplace safety deficiencies, accident prevention efforts will remain incomplete. Moving forward, policy reforms must ensure that mental health is treated as a core component of occupational safety regulations, requiring not only reactive interventions, such as crisis response programs, but also proactive strategies, such as workload management, flexible scheduling, and supervisor mental health training. This reframing of mental health as a workplace safety priority, rather than an individual burden, is essential for fostering a more resilient and secure construction workforce.

2.4.4 Theme 4: Strategic approaches and interventions for the safe working environment in the Construction Industry

The identification of strategic approaches and interventions for a safe working environment in the construction industry emerged from an analysis of studies examining workplace safety programs, mental health support initiatives, and industry wide intervention strategies (Liang et al., 2021; Duncan et al., 2024; Jacobsen et al., 2013). While traditional safety measures have historically focused on physical risk mitigation, compliance enforcement, and the use of personal protective equipment (PPE), an evolving body of research suggests that workplace safety cannot be fully realised without integrating psychological wellbeing into safety protocols (Jacobsen et al., 2013). This theme was shaped by evidence demonstrating that stress, burnout, and mental health struggles contribute to higher accident rates and reduced worker resilience, prompting a shift in industry discussions from merely reactive safety enforcement to proactive wellbeing interventions (Liang et al., 2021). However, the literature presents a critical debate regarding the effectiveness and adoption of these interventions. While some studies advocate for comprehensive safety and mental health integration, others argue that many interventions are primarily reactive, compliance driven, or underutilised by workers themselves (Duncan et al., 2024). This raises a key question: Are industry led interventions truly reshaping workplace safety, or are they largely symbolic measures that fail to address the root causes of mental health risks in construction? The discussion highlights the need for multifaceted safety

strategies that not only address physical hazards but also foster a cultural shift where mental health is prioritised as an integral aspect of workplace safety.

Given the high-risk nature of the construction industry, ensuring both mental wellbeing and physical safety requires a multi-faceted approach (Liang et al., 2021; Duncan et al., 2024; Jacobsen et al., 2013). Traditional safety interventions have focused primarily on physical hazards, such as protective equipment, safety drills, and compliance enforcement, but there is growing evidence that psychological factors play an equally critical role in accident prevention (Duncan et al., 2024). For instance, Liang et al. (2021) conducted a mixed-methods study, combining surveys and interviews with UK construction workers, to identify key mental health interventions. They found that peer support programs and mental health awareness training significantly reduced stress related absenteeism. However, while these programs improved worker morale, their effectiveness in reducing incident rates remained unclear due to a lack of longitudinal follow-up data. Conversely, Jacobsen et al. (2013) argue that integrating mental health support within existing safety protocols, rather than treating them as separate initiatives, leads to more measurable improvements in workplace safety. Their study of 172 construction workers demonstrated that combining stress management training with safety reinforcement measures led to a 15% reduction in reported workplace incidents over six months. This suggests that holistic interventions, those addressing both mental health and workplace safety simultaneously, may be more effective than standalone programs. Duncan et al. (2024) further support this argument by highlighting that while many construction firms implement mental health initiatives, workers often prefer informal support systems (e.g., peer conversations) over structured mental health programs. This raises a key concern: Are formal interventions truly addressing workers' needs, or are they implemented primarily for regulatory compliance? Taken together, these findings suggest that effective workplace interventions must go beyond compliance-based safety programs and incorporate mental health support as an integral component of safety culture. Future research should explore long term effectiveness and the extent to which mental health initiatives contribute to sustained reductions in accident rates. Safety inspections and assessments, as well as the installation of proper protection measures on plant and equipment, are also essential. Additionally, active worker involvement in safety meetings and activities contributes to a safer working environment. Establishing and organising multi-level programs which make clear the actions and behaviours

expected of the workforce further enhance the recognition and appreciation of worker safety.

To delve deeper into this topic, Liang et al.'s (2021) study provided valuable insights. The research aimed to identify strategies for enhancing the mental health and wellbeing of construction workers in the United Kingdom. It employed an integrated qualitative review of literature, interviews with key stakeholders, and an e-mail questionnaire involving 338 workers. The study highlighted significant issues impacting mental health in the industry, including the stigma associated with seeking support from colleagues and supervisors or managers. The survey identified highly stressful job conditions, inadequate health protection measures, and low awareness of mental health matters among employees as sources of stress. The study proposed recommendations such as peer support, educational programs, volunteering, health screening, and representation to address these issues. One central implication is that management should prioritise the human side of employment, ensuring that individuals can fulfil their tasks and organisational responsibilities while feeling valued and supported. By implementing the aforementioned strategies, the construction industry has the potential to mitigate this critical issue and foster psychologically beneficial work environments.

Duncan et al. (2024) conducted a study with the aim of identifying mental health interventions and coping strategies for construction employees. Specifically, the study explored employees' intentions to seek professional help for mental health problems, their mental health status, and their perceptions of workplace mental health support programs. The research employed an online survey questionnaire as the primary research method, which was distributed to 119 employees from two construction companies in the United Kingdom. The study revealed that one third of the respondents reported experiencing some form of mental health issues within the past six months. Interestingly, informal sources of support, such as partners, were preferred over formal sources like mental health first aiders. Furthermore, age was found to have a significant impact on employees' intentions to seek help for mental health concerns. The findings highlight the importance of providing better mental health support in the workplace, particularly due to the high prevalence of poor mental wellbeing among the population under study. While the availability of formal support services is crucial, the research emphasises the benefits of incorporating other schemes, such as social support within the workplace and targeted programs that align with employees'

preferences. In summary, the study reveals the severity of mental health problems among employees in the Construction Industry. It indicates that employees predominantly rely on informal sources of support.

Janusonyte et al. (2019) conducted a study that shed light on the impact of mental health issues among construction workers on workplace safety training programs. The study highlighted that mental health problems cost the United Kingdom's construction industry £26bn annually and result in an additional 400,000 lost working days. While occupational health and safety measures primarily focus on physical wellbeing, the prevalence of mental health conditions among construction workers remains a perplexing concern. The study revealed that mental health issues affect 89% of construction workers, and 75% of suicides occur among men under the age of 45. Furthermore, certain subgroups, such as low-skilled workers and skilled trade professionals like plasterers and painters, are particularly vulnerable. The study assessed construction workers who underwent a seven-day instructor-led training, a two-day Mental Health First Aid program, and a five-day instructor-led training programme. The objective was to examine the applicability of mental health first aid training in the construction industry and determine whether the training enhanced workers' mental health, physical wellbeing, and social functioning. The study suggested that outsourcing the management of mental health risks, by introducing risk awareness, stigma reduction, and competence training, would foster a healthier work environment. Blake et al. (2023) identified barriers to mental health intervention effectiveness, including stigma and a reactive rather than proactive approach. They emphasise that mental health education and financial investment in workers can improve intervention success. Similarly, Lyu et al. (2018) examined how safety climate impacts safety performance among ethnic minority (EM) construction workers, showing that positive safety climates improve compliance and reduce incidents. Their findings underscore the need for targeted strategies addressing diverse workforce challenges in construction.

The effectiveness of strategic interventions in improving workplace safety and mental health in the construction industry remains a subject of ongoing debate. While evidence supports the idea that combining mental health initiatives with traditional safety measures improves overall worker wellbeing and reduces accidents, challenges persist in implementation, accessibility, and engagement with these programs (Liang et al., 2021; Duncan et al., 2024). A major point of contention is

whether interventions should focus primarily on top-down regulatory enforcement or on fostering grassroots cultural change within the industry. While industry wide policies and corporate led programs provide a structural framework for change, research indicates that workers often respond better to peer led initiatives and informal support systems (Duncan et al., 2024). This highlights a disconnect between policy intent and workplace reality, suggesting that safety strategies must go beyond compliance and actively cultivate an environment where psychological wellbeing is embedded into daily work culture. Moving forward, the industry must prioritise evidence-based, worker-centric safety programs that address both physical and mental health risks, ensuring that interventions are practical, accessible, and truly transformative. Without such an approach, workplace safety will remain reactionary rather than preventative, leaving construction workers vulnerable to avoidable mental and physical health risks.

2.4.5 Theme 5: Role of Organisational Policies and Practices in Addressing Mental Health and Safety Incidents

The role of organisational policies and practices in addressing mental health and safety incidents emerged as a key theme through an analysis of workplace governance structures, regulatory frameworks, and corporate mental health strategies (Rawlinson & Farrell, 2010; Lawani et al., 2023; Blake et al., 2023). While many construction firms increasingly implement wellness programs, mental health policies, and employee assistance initiatives, the extent to which these policies translate into meaningful change remains highly contested (Lawani et al., 2023). The literature suggests that although policies exist on paper, their effectiveness in fostering a safer and more supportive work environment often depends on enforcement mechanisms, leadership commitment, and cultural integration within organisations (Blake et al., 2023). This theme was further reinforced by evidence demonstrating a hierarchy of priorities in risk management, where physical safety measures take precedence over mental health support, reflecting a deep-rooted organisational bias in the construction industry (Rawlinson & Farrell, 2010). The critical debate uncovered in the literature centres on whether the primary barrier to effective mental health interventions is a lack of policies or a lack of meaningful enforcement and cultural adoption. While some scholars argue that stronger regulations and legal accountability could drive systemic improvements, others suggest that the problem lies in performative compliance, where organisations introduce policies to meet external standards rather than genuinely

improve worker wellbeing (Blake et al., 2023). This raises a fundamental question: Are mental health policies in construction workplaces a genuine commitment to change, or do they primarily serve as regulatory checkboxes with limited real-world impact? The findings highlight the need for policies that move beyond superficial compliance and actively embed mental health considerations into workplace culture, leadership training, and daily operational practices.

The role of organisational policies and practices in addressing mental health issues within the construction industry remains a subject of debate, highlighting the tension between policy implementation and its actual impact on workers. While legislative frameworks and company policies have been introduced to improve workplace mental health, research suggests a gap between the existence of these policies and their effectiveness in driving cultural change (Rawlinson & Farrell, 2010; Lawani et al., 2023; Blake et al., 2023). This discrepancy raises critical questions: Are these policies genuinely transformative, or are they merely performative compliance measures designed to meet regulatory expectations rather than foster genuine mental health support?

Blake et al. (2023) conducted semi-structured interviews with construction managers and found that many firms implement mental health policies to meet regulatory requirements rather than to instigate cultural shifts. Similarly, Rawlinson and Farrell (2010) examined the promotional content of 20 major UK contractors and noted that mental health initiatives were frequently overshadowed by physical safety measures, reinforcing a hierarchy of priorities where psychological wellbeing is secondary. This suggests that while mental health policies are present on paper, they often lack the enforcement mechanisms necessary to create tangible improvements in workplace mental health. Moreover, Lawani et al. (2023) identified inconsistencies in the adoption of mental health policies across different sectors of the construction industry. Their survey of 106 industry managers found that larger multinational firms were more likely to integrate mental health programs, whereas small and medium sized enterprises (SMEs) and subcontractors often lacked the financial resources or incentives to do so. This disparity underscores the unequal distribution of mental health benefits, leaving site-based workers in smaller firms without adequate support. A critical barrier to the success of mental health policies is worker engagement. While organisations may offer mental health programs, Kotera et al. (2019) found that many construction workers hesitate to access these services due to perceived

ineffectiveness or fear of employer retaliation. This suggests that the mere existence of policies is insufficient; organisations must actively work to build trust through anonymous reporting mechanisms, third party counselling services, and cultural shifts that normalise mental health discussions. Ultimately, to make mental health policies meaningful, companies must go beyond compliance and ensure accessibility, enforcement, and genuine cultural integration. Future research should explore how regulatory bodies can hold firms accountable not just for implementing policies but also for ensuring their long-term effectiveness in improving workforce wellbeing.

In Northern Ireland, the framework governing employment health and safety is administered by the Department of Enterprise, Trade and Investment, operating under the provisions of the European Communities Act 1972 and the Health and Safety at Work (Northern Ireland) Order 1978 (HSC, 2010). The introduction of the Management of Health and Safety at Work Regulations aligned with the Health and Safety Executive for Northern Ireland represents a significant step towards enhancing workplace safety, including mental health considerations. However, it is critical to note that some amendments to existing regulations outlined in Schedule 3 were made without consultation, a practice permitted under the 1978 Order. This raises concerns about the inclusivity and comprehensiveness of the regulatory process, particularly regarding the mental health needs of workers. Effective from February 1st, 2001, these regulations established a framework aimed at promoting health and safety in workplaces, yet they primarily focus on physical safety measures. The term 'assessment' refers specifically to a Health and Safety Risk Assessment, which employers and self-employed individuals are mandated to conduct and review in accordance with Regulation 3. While these assessments are essential for identifying physical hazards, they must also encompass mental health risks, which are often overlooked in traditional safety evaluations. While legislative frameworks provide a structure for workplace health and safety, there is a growing recognition that policies alone do not suffice in addressing mental health challenges. The Mental Health report by the Construction Industry Federation (CIF, 2020) underscores the alarming prevalence of mental health disorders in the industry, with 18.5% of the Irish workforce reporting conditions such as depression, anxiety, and substance misuse. The correlation between mental health and organisational outcomes, including productivity, presenteeism, and safety, highlights the pressing need for more proactive intervention measures.

A review of current organisational practices reveals that while many companies provide Employee Assistance Programs (EAPs), employee training initiatives, and access to mental health professionals, the effectiveness of these measures remains inconsistent. The stigma surrounding mental health, particularly in male dominated industries like construction, continues to act as a barrier to support seeking behaviours. Moreover, there remains a discrepancy between policy intent and workplace culture, where employees may perceive these initiatives as superficial rather than genuine attempts at fostering a mentally healthy work environment. The HSE (2024) report highlights the legal obligation for employers to conduct risk assessments related to workplace stress, acknowledging that excessive demands, lack of control, and poor workplace relationships significantly contribute to stress related conditions. However, the construction industry remains reactive rather than preventative in its approach to mental health. Open communication, stress management toolkits, and comprehensive wellbeing strategies are required to bridge the gap between legislative mandates and their practical application in construction settings. Despite the increasing recognition of mental health concerns, the construction industry remains disproportionately focused on physical safety, often neglecting the psychological wellbeing of workers. The HSE Network (2023) report highlights that tight deadlines, employment uncertainty, and harsh working conditions exacerbate mental health issues, leading to heightened absenteeism and increased turnover rates. Alarmingly, the industry ranks among the deadliest professions for individuals under 35, with Mates Mind (2023) reporting suicide rates 3.7 times higher than the global average. This is particularly concerning given that over 50% of construction workers report feeling unable to openly discuss mental health issues in the workplace. The evidence suggests that mental health policies must extend beyond legal compliance to genuinely address workplace challenges. Key strategies include the implementation of peer led mental health initiatives, greater managerial training, and cultural shifts towards mental health destigmatisation. Employers who integrate mental health strategies into their organisational culture rather than treating them as add-ons will likely see improved productivity, worker retention, and overall job satisfaction.

A comparative analysis of legislative frameworks, organisational policies, and industry specific challenges underscores the need for a multi-faceted approach. While regulations such as The Health and Safety at Work etc. Act (1974) and its subsequent

amendments provide a foundation for worker protections, their efficacy in safeguarding mental health remains inconsistent. The evolving nature of workplace challenges necessitates ongoing legislative refinements to explicitly integrate mental health considerations alongside physical safety measures. The debate surrounding the role of organisational policies in addressing mental health highlights the need for a paradigm shift in workplace mental health governance. Instead of reactive interventions, companies must embed preventative mental health strategies into their risk management frameworks. Future research should focus on developing cross-sectoral best practices that bridge the gap between policy and practice, ensuring that mental health considerations are an integral part of workplace safety rather than an afterthought. By addressing these gaps, organisations can move beyond tokenistic policy adoption towards meaningful and sustainable mental health interventions that truly benefit construction workers. In doing so, the construction industry can shift from a culture of crisis response to one that prioritises the holistic wellbeing of its workforce, ensuring that mental health is treated with the same level of urgency as physical safety.

The literature underscores a fundamental gap between policy existence and policy effectiveness in addressing mental health within the construction industry. While many firms have mental health programs in place, research suggests that these policies often lack the enforcement mechanisms and cultural support necessary for meaningful change (Rawlinson & Farrell, 2010; Blake et al., 2023). The central debate remains whether the issue lies in insufficient policies or in weak organisational commitment to implementing them effectively. Some scholars argue that more stringent regulatory enforcement is necessary to ensure that mental health policies are not merely symbolic measures to meet compliance standards (Lawani et al., 2023). Others, however, highlight that even with policies in place, worker engagement remains low due to stigma, fear of employer retaliation, and distrust in organisational support systems (Kotera et al., 2019). This suggests that for mental health policies to be truly effective, organisations must move beyond policy development and focus on cultural integration, trust building, and leadership accountability. Future research and industry initiatives should prioritise mechanisms that evaluate the real-world impact of policies, ensuring that they lead to tangible improvements in worker wellbeing rather than existing as mere formalities. Without such an approach, mental health will

continue to be treated as a secondary concern, ultimately undermining both workforce wellbeing and overall site safety.

2.4.6 Theme 6: Challenges and Barriers in Addressing Mental Health and Safety Incidents

The challenges and barriers in addressing mental health and safety incidents in the construction industry emerged as a significant theme through an in-depth analysis of workplace structures, cultural attitudes, and economic constraints that hinder effective mental health interventions (Mates in Mind, 2023; HSE Network, 2023; Kotera et al., 2019). While increasing awareness of mental health issues has led to the implementation of various support programs and policies, the literature reveals that their effectiveness is frequently obstructed by systemic barriers such as stigma, financial limitations, and lack of managerial commitment (HSE Network, 2023). The identification of this theme was shaped by evidence demonstrating that construction workers often perceive mental health struggles as a personal failure, leading to self-imposed silence and reluctance to seek support (Kotera et al., 2019). Additionally, organisational structures reinforce these challenges, as many firms acknowledge mental health as an issue but fail to integrate support mechanisms into their safety culture (Mates in Mind, 2023). A critical debate emerged from the literature regarding whether these barriers are primarily worker driven (due to stigma and reluctance) or structurally imposed (due to employer inaction and cost concerns). While some scholars argue that mental health stigma in construction is a cultural issue requiring worker level mindset shifts, others contend that the true challenge lies in the industry's failure to provide accessible and enforceable support systems (Duncan et al., 2024). This raises a key question: Are the primary obstacles to mental health interventions rooted in individual worker attitudes, or do they stem from systemic failures in organisational policies and resource allocation? The debate highlights the need for a dual approach that addresses both cultural stigma and structural deficiencies, ensuring that mental health interventions move beyond superficial awareness campaigns to become an integral and enforceable component of workplace safety protocols.

Despite increasing recognition of mental health issues in the construction industry, a range of structural, cultural, and economic barriers continue to obstruct the successful implementation of interventions (Mates in Mind, 2023; HSE Network, 2023;

Kotera et al., 2019). While awareness campaigns and policies have increased in recent years, the gap between recognition and tangible action remains a fundamental challenge. The construction sector, historically characterised by a high-risk, high-pressure environment, has been slow to integrate mental health considerations into occupational health and safety frameworks. The persistence of barriers, ranging from stigma and organisational resistance to financial constraints and policy inefficiencies, suggests that mental health interventions require more than just surface level initiatives; they demand a fundamental shift in workplace culture and industry wide commitment to reform. Among the most persistent barriers is the stigma surrounding mental health, which is deeply ingrained within the construction sector's workplace culture. While scholars have identified stigma as a widespread issue, the underlying reasons for its endurance remain contested. Some researchers attribute this to masculine workplace norms that discourage vulnerability and emotional expression (Kotera et al., 2019). Others argue that stigma is structurally reinforced by organisational policies that fail to prioritise psychological wellbeing (Mates in Mind, 2023). Kotera et al. (2019) conducted a quantitative survey of 155 UK construction workers, revealing that over 60% of respondents associated mental health struggles with personal failure, suggesting that self-perception plays a crucial role in perpetuating stigma. This internalised stigma discourages workers from seeking help, fearing that doing so could be perceived as weakness or incompetence.

However, the Mates in Mind (2023) report offers an alternative perspective, arguing that stigma is not solely worker driven but rooted in employer inaction. Their findings indicate that while 80% of companies acknowledge mental health as an issue, only 30% have formal support systems in place, reflecting a stark disconnect between recognition and action. This suggests that workplace culture and employer attitudes play a pivotal role in shaping how mental health is perceived and addressed in the industry. Without direct employer engagement in destigmatising mental health issues and normalising support seeking behaviours, the current cycle of avoidance and neglect is likely to persist. Another significant barrier is financial constraints, particularly for small-to-medium-sized enterprises (SMEs), which often struggle to allocate resources for mental health initiatives. The HSE Network (2023) highlights that SMEs face the greatest challenges in funding structured mental health programs, arguing that the financial burden of such initiatives may deter smaller firms from prioritising mental wellbeing. However, this economic argument is increasingly

contested. Duncan et al. (2024) suggest that long term cost-benefit analyses indicate that investing in mental health support ultimately reduces absenteeism, improves worker productivity, and enhances overall company performance, thereby offsetting the initial financial burden. This contradiction raises a critical question: Are financial limitations genuine barriers, or do they serve as convenient justifications for inaction? Given that large multinational firms have been more successful in integrating mental health support, it is plausible that the issue is not solely financial but also a matter of leadership priorities and organisational culture.

The challenges in addressing mental health are further exacerbated by systemic and regulatory gaps. While legal policies such as The Health and Safety at Work etc. Act (1974) and its subsequent amendments have established legal protections for workers, their effectiveness in addressing psychological risks remains questionable. The emphasis of workplace risk assessments continues to be on physical hazards, with mental health often treated as an afterthought. Similarly, the Management of Health and Safety at Work Regulations (2001) in Northern Ireland has improved safety oversight, but the regulatory framework continues to prioritise physical wellbeing over psychological resilience. The lack of specific, enforceable provisions for mental health risk assessments leaves many construction workers without adequate support structures in place. Beyond policy limitations, privacy laws and data protection regulations present additional barriers to effective mental health interventions. While confidentiality is essential, strict privacy laws may inadvertently impede information sharing between employers, mental health professionals, and support services. Early intervention is crucial in mitigating the effects of psychological distress, yet privacy constraints often limit the proactive identification and management of at-risk individuals. Finding a balance between protecting worker privacy and ensuring that appropriate support mechanisms are in place remains a key challenge for employers and policymakers alike. Compounding these challenges is the inadequacy of existing training and education programs related to mental health in construction. Despite the introduction of mental health first aid training in some organisations, many employees and managers lack the necessary awareness, skills, and confidence to effectively identify and address psychological distress among workers. Unlike physical health and safety protocols, which are typically well integrated into construction site procedures, mental health support remains reactive rather than preventative. This discrepancy highlights an urgent need for the formal integration of

mental health awareness into workplace safety training, leadership development, and industry wide accreditation programs.

Another overlooked yet critical barrier is the vulnerability of migrant construction workers, who often face additional challenges that exacerbate mental health risks. Shepherd et al. (2021) conducted a qualitative study exploring the safety concerns of migrant construction workers in Italy, Spain, and the UK. Their analysis identified several key risk factors, including language barriers, job insecurity, precarious contracts, and cultural differences in mental health perceptions. The study also found that subcontracting arrangements frequently weaken safety protections, as workers employed under temporary contracts are often excluded from mental health initiatives and employee assistance programs. These findings highlight the need for targeted interventions that address the unique challenges faced by migrant workers, ensuring that mental health support is accessible and inclusive across all employment categories. To overcome these barriers, it is crucial to foster an organisational culture that promotes psychological safety and proactive mental health care. Simply offering helplines and awareness campaigns is insufficient if workers do not feel comfortable accessing them. Employers must take a multi-level approach that includes:

- Normalising conversations about mental health through leadership engagement and peer led initiatives.
- Enhancing workplace policies to integrate mental health risk assessments alongside traditional safety evaluations.
- Providing consistent training for managers and supervisors to identify and address signs of psychological distress.
- Developing financial incentives for SMEs to invest in mental health programs through industry partnerships and government support schemes.

Ultimately, addressing mental health in the construction industry requires more than isolated interventions; it demands a fundamental restructuring of workplace culture, regulatory frameworks, and leadership priorities. Without a coordinated, industry wide approach, the existing challenges will continue to hinder progress, leaving workers vulnerable to the psychological risks associated with high-stress, high-pressure construction environments. Future research should focus on evaluating the effectiveness of integrated mental health strategies and identifying best practices for overcoming stigma, financial constraints, and policy gaps. By shifting from a reactive to a preventative model, organisations can create workplaces that prioritise both

physical and psychological wellbeing, ultimately fostering a more resilient, productive, and healthier workforce.

The barriers to addressing mental health in the construction industry are deeply entrenched and multifaceted, spanning cultural, structural, and economic dimensions. While some scholars emphasise that stigma and entrenched masculinity norms prevent workers from seeking support, others argue that the real challenge lies in organisational inertia, where firms fail to implement mental health policies in a meaningful and accessible way (Kotera et al., 2019; Mates in Mind, 2023). The central debate uncovered in the literature is whether mental health struggles in construction persist due to individual reluctance or systemic neglect. The evidence suggests that both factors play a role, reinforcing the urgent need for interventions that tackle stigma at the worker level while also ensuring that organisations take accountability for providing effective, well-funded mental health support (HSE Network, 2023; Duncan et al., 2024). Another key finding is that financial constraints are often cited as a reason for inaction, yet studies show that investing in mental health ultimately leads to long term cost savings through reduced absenteeism and improved productivity (Duncan et al., 2024). This undermines the argument that financial limitations are a legitimate justification for the lack of mental health initiatives. Moving forward, the construction industry must reframe mental health as a business imperative rather than an optional expense, ensuring that support programs, leadership training, and policy enforcement are prioritised at both the corporate and site levels. Without such systemic change, mental health in construction will continue to be treated as a secondary concern, perpetuating a cycle of silence, inaction, and preventable safety risks.

2.5 Synthesis of Key Studies and Theoretical Foundations

The literature reviewed in this chapter demonstrates that mental health and safety within construction are influenced by a complex interaction of individual, occupational, organisational and cultural factors. While numerous studies contributed to the development of this research, three were particularly influential in shaping its progression: Boschman et al. (2013), Liang et al. (2021) and Hulls et al. (2022). Collectively, these studies provided a logical progression from understanding the psychosocial conditions associated with mental health, through consideration of the

relationship between occupational stress and safety, to recognising the limitations of interventions that do not address underlying organisational and cultural conditions.

Boschman et al. (2013) were particularly influential in establishing the importance of the psychosocial working environment. Their research demonstrated that mental health within construction cannot be considered solely as an individual worker issue, but should also be understood in relation to the conditions under which construction work is undertaken. Their findings identified differences between occupational groups and highlighted factors including work demands, autonomy, learning opportunities and recovery needs. This influenced the present study by directing attention towards work-related factors as potential contributors to psychological distress, rather than conceptualising poor mental health exclusively as an individual vulnerability. Importantly, Boschman et al. also demonstrated the limitations of cross-sectional research for establishing causality, reinforcing the need for caution when interpreting associations between working conditions and mental-health outcomes.

Liang et al. (2021) provided an important progression by connecting occupational stress more explicitly with safety-related considerations. This was particularly relevant to the central research question of the present study, which sought to examine the extent to which mental health may be interconnected with health and safety outcomes and minor to moderate incidents. Liang et al. therefore helped provide a conceptual bridge between two areas that are frequently considered separately: worker mental health and occupational safety. Their work reinforced the proposition that psychological and occupational pressures may influence behaviours relevant to safe working. For the present research, this was important because it supported investigation of mental health not simply as a wellbeing outcome, but as a potential factor associated with wider safety performance. This relationship is interpreted as an association rather than evidence of causation, an important distinction given the complexity of both mental health and construction safety outcomes.

The third influential study, Hulls et al. (2022), extended this progression towards the organisational and cultural context within which mental-health interventions operate. Their research highlighted the influence of occupational stress, employment precarity and construction’s traditionally masculine culture upon workers’ willingness

to acknowledge difficulties and seek support. Of particular importance to the present study was the distinction between providing mental-health initiatives and addressing the deeper conditions contributing to psychological distress. This influenced the development of the research beyond consideration of individual-level support towards recognition of the importance of organisational and systemic change. It also contributed to the subsequent operating framework developed through this doctorate, which emphasises organisational governance, workplace conditions and implementation rather than relying solely upon individual interventions.

Taken together, the three studies can therefore be understood as an intellectual progression: Boschman et al. – working conditions; Liang et al. – the mental health/stress and safety relationship; and Hulls et al. – organisational and systemic intervention. This progression helped shape the research from identifying the conditions capable of contributing to poor mental health, through examining its relationship with safety outcomes, towards considering how the construction industry might respond in practice.This synthesis also informed the selection of the Job Demands–Resources (JD-R) model and occupational stress theories as principal theoretical foundations for the study. The JD-R model was particularly appropriate because construction work involves the interaction of substantial job demands and variable resources. Demands may include workload, programme pressures, long working hours, emotional pressures, employment insecurity and physically demanding working environments, while resources can include supervisory support, autonomy, organisational support and access to appropriate assistance. The model therefore provides a useful structure for understanding why the same working environment may produce different psychological consequences depending upon the balance between demands and the resources available to workers.

Occupational stress theories complement the JD-R perspective by providing a mechanism through which these working conditions may potentially influence both psychological wellbeing and safety-related behaviour. Excessive or prolonged demands can contribute to stress responses which may affect concentration, attention, decision-making and the ability to respond effectively to workplace hazards. Within a high-risk industry such as construction, these effects provide a theoretically plausible pathway through which mental health and safety outcomes may become

interconnected. The theories were therefore selected not because they establish a deterministic causal relationship between poor mental health and incidents, but because they provide an appropriate theoretical basis for examining the relationships identified within the literature and subsequently investigated empirically within this study.

Neither theoretical perspective, however, is sufficient independently to capture the full complexity identified within the literature. Construction workers operate within wider cultural, organisational and employment systems that influence both exposure to stressors and willingness to access available resources. The findings of Hulls et al. (2022), for example, demonstrate why the existence of support mechanisms cannot automatically be assumed to result in their effective utilisation. Cultural expectations, stigma and organisational practices may constrain access even where resources formally exist. Consequently, the JD-R model and occupational stress theories provided the explanatory foundations for examining how workplace conditions may affect psychological wellbeing and safety, while the broader literature demonstrated the need to consider the organisational and cultural context surrounding those relationships. This synthesis ultimately informed the present study's movement beyond identifying associations towards developing an applied framework for integrating mental health more explicitly within construction health and safety management.

2.6 Literature Gaps

From the above literature, it is evident that workers in the Construction Industry in the UK experience significant mental health and safety challenges around their workplace environment. However, many researchers addressed the interconnection between construction workers' mental or physical health and safety concerns within the industry and provided actionable strategies to cope with this issue. However, it is important to address the literature gap observed in selected studies to pave the way for future research exploring the interconnectedness of mental health with health and safety outcomes of the UK's construction sector. The literature on mental health and safety in the Construction Industry reveals several critical gaps. One of the notable gaps is the limited comparative analysis across different construction sectors or occupational roles. Studies often treat the Construction Industry as a homogeneous

entity, despite variations in risk factors and mental health challenges between roles like site managers and labourers (Hanna & Markham, 2019; Kotera et al., 2020). In the absence of that differentiation, insights will be generalised and therefore limit the effectiveness of tailored interventions based on unique mental health and safety concerns across roles (Stocks et al., 2010; Ajayi et al., 2019).

Gender disparities also remain a huge gap. Much of the research on construction mental health dynamics has focused on male dominated samples, without appropriate consideration of how issues might reflect differently in women who might experience other stressors or stigma (Boschman et al., 2013; Kotera et al., 2019). This makes it so that the understanding of the mental health needs of the Construction Industry is skewed since women's experiences and requirements for mental health care are likely to be different from those of their male counterparts, thus requiring a different support mechanism.

Imbalances in the study population regarding company size and demographics also restrict findings. The studies mainly focus on large companies, which are usually better capitalised for the introduction of mental health services, thus overlooking SMEs (Lawani et al., 2023). Since SMEs make up much of the sector, such imbalances nullify the understanding of how the mental health issue differs among smaller companies that usually have fewer supporting mechanisms and more limited budgets (Janusonyte et al., 2019; Duncan et al., 2024). Thus, conclusions are more reflective of those within resource-rich firms and cannot be generalised to the general working population.

The final requirement is for supplementary robust data on relevant psychological and cultural factors specific to the Construction Industry. These studies generally exclude variables such as cultural stigma or traditional belief systems about mental conditions that might affect a worker's readiness to seek care (Kotera et al., 2020; Hulls et al., 2022). Current mental health statistics may also be underreported and therefore low due to stigma induced underreporting, as observed in the UK (Eaves et al., 2016; Hulls et al., 2022). The data gaps found herein limit further identification of significant risk factors and become challenges to developing effective evidence-based solutions for mental health interventions across construction. This robust data on relevant psychological and cultural factors would help in filling the gaps and enriching the literature to give ways to develop more inclusive representative and effective mental health strategies tailored to the diversity within the Construction Industry.

2.7 Summarised Findings

The connection between mental health and the results of health and safety outcomes in the Construction Industry is complex. Mental health challenges significantly affect the occurrence of minor to moderate workplace incidents. Some studies have shown how mental health pressures, which occur from demanding work conditions, limited job discretion, and high physical requirements, influence focus, response times, and adherence to safety protocols, affecting safety outcomes. Although the prevalence of mental health problems in the UK has been described as being lower than elsewhere, this may be due to under-reporting. Thus, the actual prevalence of mental health may be being masked. Psycho-social factors contributing to mental health concerns in construction are highlighted by Boschman et al. (2013), include work speed, high demands and low job autonomy. These results indicate that Construction Workers reported stress, need for recovery after work, symptoms of depression and high levels of PTSD levels, led to compromised alertness and precision at the job sites. Psycho-social risks, therefore, have direct consequences for safety as well as for mental health; the consequence of psycho-social symptoms, such as stress and exhaustion, coming into play in the workplace may make construction workers more vulnerable to physical accidents on the job.

Hanna and Markham (2019) discussed industry specific barriers to health promotion. Here, structural barriers and a lack of prioritisation towards health and wellbeing in the Construction Industry contribute to untreated mental health conditions. The absence of such support accelerates risks for both physical injuries and mental health crises that might lead to safety lapses. They argue that while proposing a safety framework, systemic changes should take into consideration the mental considerations. According to them, better mental health will decrease the rates of incidents. Eaves et al. (2016) further reveals that work construction affects individuals both at the physical and mental levels as workers experience enormous levels of distress and exhaustion. This physical tension, coupled with deeper psychological problems, makes a safety occurrence more probable in the fact that workers may not have the ability to do duties safely under physical and psychological strain. Some suggested ergonomic interventions are tool adaptation, which will indirectly reduce stress by reducing the level of physical strain involved, finally furthering safety.

Kotera et al. (2019) focus on the stigma of mental health in construction. They indicate how stigma related to mental health prevents those in construction from

seeking help regarding their psychological issues. They highlight that this issue can easily be addressed if self-compassion and reduced stigma were practically applied, enhancing better resilience for workers as they enhance concentration and adherence to safety provisions. This approach emphasises psychological support as part of an integrated health and safety strategy: it shows that intervention for individuals experiencing mental health difficulties will reduce errors or promote overall safety within hazardous construction environments. These findings collectively call for the promotion of mental health as a constituent component of health and safety reporting. The risk of working conditions may be considerably minimised through workplace-based interventions regarding mental health via support, reduced stigma, ergonomic change, and policy reform within the systemic levels, enhancing mental wellbeing and safety within the construction sector.

It is well documented that the relationship between mental health and safety incidents in the Construction Industry reflects how psychological strain has a direct effect on safety outcomes. Hulls et al. (2022) discussed stress as a prevalent issue in the UK Construction Industry. They interviewed 32 British construction workers of different occupations and with a range of years of experience and categorised some of the workplace cultures that they had. All these complicate economic pressures and job insecurity, which in turn lead to mental health decline due to stress factors. The participants highlighted efforts like team bonding and a supportive culture relieved their stress but were not made the most of. Whereas some initiatives, for example, Mental Health First Aiders, have proved promising, however, the "macho" culture holds people back from discussing their mental health problems. According to Hulls et al. (2022), industry wide changes at a managerial and organisational levels could counteract these mental health related issues and alleviate the associated safety risks.

Lawani et al. (2023) examined the UK Construction Industry against the relationship that exists between mental health issues and incident rates. Lawani et al. (2023) conducted a questionnaire survey with 106 managers from all sectors of construction, concluding that mental health support is not consistent, and that advancement within the mental health field is yet to be achieved within companies. While larger firms have begun making initiatives towards mental health, gaps in training leadership and commitment on the part of the organisation do not give the full force to such programs. According to Lawani et al. (2023), suggest that employers should implement more substantial mental health monitoring and support to enable

workers' wellbeing and productivity at work. Ajayi et al. (2019) further outlined sources of stress in construction that include poor communication and limited collaboration, which heighten mental health risks and reduce work quality further. Their research proposal would be stress reduction strategies such as realistic project timelines and better communication practices to improve worker resilience and safety. Tackling systemic stressors thus lightens the burden on workers, thereby reducing the rate of incidents and improving mental health. Kotera et al. (2020) have analysed work life balance and mental health in the UK Construction Industry, suggesting that a better work life balance is linked to improved mental health. The research with 144 construction workers demonstrates that attitudes toward mental health impact workplace stress and safety, and that day shift workers had worse mental health outcomes. Enhancing WLB and encouraging a culture of mental health could potentially improve safety in the sector.

There are various regulatory frameworks to ensure safety and mental health in construction. The Working Minds campaign, spearheaded by the Health and Safety Executive (HSE), aimed at ensuring both physical safety and mental health within the construction industry. As the UK's national regulator for workplace health and safety, the HSE emphasises that employers have a legal duty to identify and mitigate risks associated with work related stress, similar to how they manage physical hazards on site. This regulatory approach seeks to foster a culture where mental health is prioritised alongside physical safety, particularly in high stress environments like construction, where the pressures of deadlines and complex project demands can significantly impact workers' mental wellbeing. By providing guidance and resources through initiatives like the Working Minds campaign, HSE enables employers, especially small and medium sized enterprises, to recognise the signs of stress, respond appropriately, and create a work environment that supports good mental health, thus contributing to a safer and more productive workplace.

Duncan et al. (2024) further explain formal and informal support mechanisms through their important roles as mechanisms in addressing construction workers' mental health issues. Their work study of 119 staff members showed that younger employees are more likely to access informal sources of help, like their partner, than formal interventions at work. They argue for better workplace based mental health support in light of high levels of mental health problems in the Construction Industry, indicating both formal and informal elements for a comprehensive safety strategy.

Janusonyte et al. (2019) and Blake et al. (2023) add further input to the barriers and facilitators of mental health intervention in construction. They highlighted that stigma around mental health and a macho culture prevents many from seeking help, especially older males. Blake et al. (2023) prefer a proactive approach toward mental health in terms of training and support programs, but Janusonyte et al. (2019) reported that mental health first aid programs reduce absenteeism and improve safety. They promote better awareness and less stigma to make more mental health support accessible. Blake et al. (2023) highlighted SMEs in construction and found that many firms resist the implementation of mental health and safety initiatives due to perceived costs. Participants highlighted that support from regulatory bodies is necessary for health, safety, and wellbeing practices within budgetary constraints. Therefore, these firms could adopt the sustainable practices that promote both mental and physical wellbeing for enhancement in safety outcomes by engaging with collaborative dialogue with policymakers.

Thus, the findings suggest that mental health in construction is relevant to workplace safety and productivity. The application of psychological safety in the workplace aligns with the broader UK regulation and guidance, such as the Management Standards for Stress by the HSE and other industry specific regulations. This emphasises the need for a comprehensive approach to mental health awareness, support systems, and regulations with robust enforcement. Taking a holistic approach to addressing mental health in the Construction Industry can significantly reduce incident rates, improve project outcomes, and foster a more supportive working culture.

2.8 Practical Implications of The Findings

The findings of the research on the relationship between mental health and safety outcomes in the Construction Industry have various practical implications. First, findings indicate that mental health support should be integrated into Occupational Health and Safety policies (Stocks et al., 2010; Lawani et al., 2023). Implementing mental health programs in construction firms that include stress management, counselling, and support networks would be helpful. For instance, the Mental Health First Aider courses and peer support groups hold promise but must become the "new normal" in the industry's culture (Hulls et al., 2022; Kotera et al., 2020). Preventive mental health care has the potential to enhance worker attentiveness, promote

adherence to safety procedures, and reduce the occurrence of safety non-conformities (Eaves et al., 2016; Ajayi et al., 2019). The results highlight the need for structural changes within firms. In addition to unrealistic deadlines, job autonomy and improved communication were found to be associated with decreased levels of stress and, consequently, lower incidence rates. These findings align with the recommendations put forth by Ajayi et al. (2019) regarding stress reduction strategies that enable workers to effectively manage workload pressures. Therefore, integrating preventive mental health care measures can synergistically address mental stress and improve safety outcomes within construction companies, fostering a safe workplace environment and minimising work-related stressors (Hanna & Markham, 2019).

The evidence and research shown in the study highlight a critical point; the Construction Industry must directly confront the stigma associated with mental health disorders. Interventions aimed at reducing stigmatisation and promoting self-compassion have been shown to encourage individuals to be more receptive to support (Kotera et al., 2019; Janusonyte et al., 2019). Kotera et al. (2020) emphasise that efforts to eliminate the stigma surrounding mental health conditions contribute to a safer working environment and enhance workers' focus on safety. Implementing a resilience training-oriented approach and regular mental health check-ins can foster a workplace culture that is more supportive overall (Duncan et al., 2024). Regulatory frameworks also play a crucial role, and it is important to assist smaller firms in implementing such frameworks, as they may be hesitant due to perceived cost considerations (Blake et al., 2023). Additionally, ergonomic interventions, such as tool adaptation, indirectly alleviate physical strain and contribute to reducing mental stress while improving safety. Therefore, implementing ergonomic solutions across various job roles can effectively address both physical and psychological strain, leading to enhanced safety performance. In conclusion, improving mental health is an integral part of the process of reducing incidents and creating a healthier, safer construction environment.

2.9 Chapter Summary

The evidence presented in this review underscores that mental health is an integral yet often neglected component of construction safety. While there is broad consensus that poor mental health contributes to workplace incidents, the extent of this impact remains debated. Some scholars emphasise psychological factors, such

as stress and burnout (Kotera et al., 2019; Hulls et al., 2022), while others argue that organisational structures, including long hours, job insecurity, and weak safety culture, play a more significant role (Lawani et al., 2023; Blake et al., 2023). This tension highlights a critical gap: current industry interventions often treat mental health and safety as separate domains rather than interdependent factors. While mental health programs exist, their impact remains limited by stigma, underutilisation, and inconsistent implementation. Moreover, financial constraints are frequently cited as barriers, yet evidence suggests that well designed mental health initiatives can yield long term economic benefits by reducing absenteeism and improving productivity (Duncan et al., 2024). Moving forward, future research should focus on integrating mental health considerations into safety protocols, developing longitudinal studies to establish causal relationships, and identifying effective policy enforcement mechanisms. Only by addressing these structural, cultural, and financial barriers can the construction industry move towards a truly holistic approach to workplace wellbeing and safety.

Despite previous research, significant gaps exist in the literature. Comparative studies of different construction roles are limited, making it challenging to understand how mental health issues affect various demographics. Gender disparities and imbalances in population representation are also critical areas that require further research. Data on cultural influences and stigma related to mental health within the construction workforce are also inadequate, preventing a comprehensive understanding. The practical implications are significant. They call for industry wide support frameworks on mental health, including reducing stigma and improving ergonomic conditions to promote the development of mental health programs. Such interventions are necessary to improve safety outcomes and the overall wellbeing of workers in the construction sector.

Building upon this comprehensive understanding, the next chapter will shift focus to the Methodology, where the research design, data collection methods, and analytical approaches will be outlined. By delving into the practical aspects of the study, the Methodology chapter will provide a roadmap for the systematic exploration and analysis of the research questions. It will serve as a necessary bridge between the existing literature and the empirical investigation, ensuring a robust and rigorous research process.

Chapter 3: Methodology

3.1 Introduction

The preceding chapter critically examined the existing literature on mental health and safety within the construction industry, highlighting both the growing recognition of their interrelationship and the continuing fragmentation within this field of research. It demonstrated that, although poor mental health is increasingly acknowledged as a contributory factor in workplace incidents, there remains no clear consensus regarding the extent of this influence or the relative importance of individual psychological factors in comparison with organisational and structural conditions. The review also identified a number of important gaps, including limited comparative research across construction roles, insufficient attention to gender and cultural influences, and a continued lack of understanding surrounding stigma and access to support within the sector. Taken together, these findings reinforce the need for further investigation into how mental health is understood and experienced in construction, and how this may shape safety outcomes. Against this backdrop, the following chapter moves the thesis forward by setting out the methodological approach adopted to explore these issues in greater depth.

This chapter details the methodological design of this study. As stated earlier, this research uses an explanatory sequential design that combines quantitative and qualitative methods. The chapter begins with an epistemological statement justifying subjectivism as an epistemological position. Then, it will present a brief background of the study, followed by a research problem statement and objectives. The next section of the chapter highlights the significance of the study. Then, it continues to debate the research design, in which a detailed discussion about explanatory sequential design and mixed methods, along with justifications, is presented. In the third main section, this chapter focuses on choices related to the quantitative phase. It shows details of data collection methods, sampling and recruitment strategy, and data analysis methods for the quantitative phase. Following this section is a detailed discussion of the qualitative phase, where choices related to data collection methods, sampling and recruitment, as well as data analysis techniques in the qualitative phase, are discussed. In the following section, this chapter presents ethical considerations and relevant decisions to ensure ethical integrity. The penultimate section in this chapter is a discussion on limitations and delimitations relevant to the methodological design

and scope of this study. Finally, the chapter ends with a summary and conclusion of the entire discussion in this chapter.

3.1.1 Epistemological statement

The debate of research methods is a very old philosophical discipline, dating back to the very moment when the first thinkers questioned themselves about the validity, limits or nature of their knowledge. These same questions made its study evolve, leading to its subdivision in the last two centuries into several disciplines and specialties. Within them, the positive sciences occupy their place, which cover a set of themes and problems that refer to the systematic review of the logical and epistemological foundations of scientific work, in any of its branches (Bowen, Rose, and Pilkington, 2017). In the social sciences, the study of methodology holds great significance due to ongoing doubts about the applicability of the scientific method to the examination of individuals and human societies. This discussion dates back to the mid-19th century. In developing a science of society, distinct from the natural sciences, it is essential to leverage the methodological lessons provided by the natural sciences while also unshackling the study from philosophical constraints (Maforah and Leburu-Masigo, 2018).

This possibility of discarding the series of prejudices and dogmatisms, which kept the progress of social knowledge tied, and applying the positive method, opens with Durkheim, who tries to analyse and explain the facts of moral and social life with the method of positive sciences (Draucker, et al., 2020). Later, during the first half of the 20th century, there was a renewal and reform of positivism through the philosophical movement known as logical positivism, neopositivism, or neoempiricism. This movement was initiated and promoted by the Vienna Circle, which included brilliant philosophers and mathematicians such as Carnap, Waismann, Zilsel, Kaufmann, and Popper, to name just a few. They engaged in collaborative intellectual work, producing progress as rapid as that typically seen in the special sciences (Byrne and Humble, 2007). Their common fundamental orientation was the scientific nature of philosophy. For his part, Weber developed a new schematism of the social sciences, called the Interpretive Method, which attempts to determine a methodology of social knowledge, in which the metaphysical perspective is eliminated and from the same object of study the concepts and types necessary for historical reconstruction are extracted (Ivankova, Creswell, and Stick, 2006). Berger and Luckman (1979 cited

in Doyle, Brady, and Byrne, 2016), current representatives of interpretivism, seek to discover the motives, intentions and facts, in everyday life, that each individual repeats in an objectified form.

Lukacs, a disciple of Weber, is considered the founder of critical thought or negative dialectics of the present century, whose greatest representatives are the members of the Frankfurt School. He took the Marxist dialectical method as a basis, and its fundamental characteristic is the total denial of abstract rationalisation and mystical irrationalism, referring sociological research to its philosophical roots, for which reason it rejects the notion of pure, objective, neutral science (Draucker, et al., 2020). Although critical theory never became an articulated philosophy, which was applied equally by all members of the Frankfurt School, Bloch, Lukacs, Horkheimer and Adorno give a strongly utopian character to their thought: utopia is an angle from which the present is considered and judged. The future must predominate over the past, and the present must not be emancipated from the past. A continuous critical exercise must be applied, confronting the present and the future in order to achieve fidelity to utopia. This philosophy of so-called "negative thinking" must be expressed in a language that must also be subjected to continuous tension and criticism (Almeida, 2018).

The most prominent representative of the Frankfurt School in its second generation is Habermas, who continues the anti-metaphysical line of Horkheimer. However, unlike his predecessors, he believes he has identified possibilities for political and social transformation (Byrne and Humble, 2007). Given the significance of positivist, interpretive, and critical methods in the birth and evolution of the social sciences, this work first analyses the conceptions that each approach assumes regarding four fundamental aspects: the object of study, the conception of reality, the individual-society relationship, and the method. Subsequently, we will establish comparisons and contrasts between them.

Research epistemology is a branch of research philosophy that reflects the perspective of the researcher and his view on research phenomena. The epistemological position of the research clarifies the researcher's perspective regarding the methods and ethos of research and acceptable knowledge. There are two basic positions: positivism and interpretivism. The positivist school of thought posits that the methods and ethos of natural sciences must be applied in the social research process to gain acceptable knowledge. With this perspective, the positivist

school of thought recommends conducting an objective inquiry into social phenomena and promotes using quantitative methods to gain adequate knowledge (Ivankova, Creswell, and Stick, 2006).

On the other hand, the interpretivism school argues that there is a significant difference in the subject matter of social phenomena as compared to natural phenomena. Due to this basic difference, it is unreasonable to pursue the methods and ethos of natural sciences in the investigation of social phenomena. Therefore, the interpretivist school of thought promotes the use of subjective and qualitative inquiries in social research (Bowen, Rose, and Pilkington, 2017). It is important to note that the epistemological position of research affects the entire research design and should be chosen in accordance with the research aim.

Therefore, to affirm, this study adopts an interpretivist epistemological stance, which is essential for understanding the complex and subjective nature of the relationship between mental health and accident prevention in the construction industry. As a lone researcher, I recognise that interpretivism, also referred to as subjectivism, emphasises the importance of gaining in-depth insights from social actors, such as construction workers and managers, who experience these phenomena firsthand. Given that mental health is inherently subjective and cannot be measured objectively like natural phenomena, my interpretivist approach allows for a nuanced exploration of how individuals perceive and experience mental health and safety within their work environment. This perspective is crucial for capturing the diverse interpretations and meanings that different stakeholders attribute to mental health and accident prevention, thereby enriching the overall understanding of these issues in the context of the construction industry.

In addition to my interpretivist epistemological stance, I acknowledge the importance of an ontological position that recognises the subjective nature of reality. My ontological stance is grounded in the belief that social realities are constructed through individual experiences and interactions, which vary from person to person. This understanding aligns with my aim to explore the subjective experiences of mental health and safety, highlighting that these constructs may differ significantly among individuals. However, to mitigate the limitations associated with a purely interpretivist approach, such as potential personal bias, I also incorporate objective measures of mental health and accident prevention. By collecting both qualitative (subjective) and quantitative (objective) data, my research design aims to provide a comprehensive

analysis that balances the richness of interpretivist insights with the validity and reliability of objective evidence. This dual approach not only enhances the robustness of the findings but also ensures a more holistic understanding of the interplay between mental health and accident prevention in the construction industry.

3.1.2 Background of the Study

The UK construction industry has traditionally reported high rates of workplace accidents. According to the HSE's Annual Health and Safety Report for 2023/2024, 604,000 workplace self-reported injuries were recorded. The fatal injury rate in the construction industry was 2.43 per 100,000 workers, notably higher than the rate for all other industries. These statistics underline the importance of implementing and enforcing workplace safety measures and investing in proper worker training in the construction sector.

One of the most significant factors in the construction industry is the predominance of men, who are three times more likely to die by suicide than the national average for men. Construction work entails a variety of pressures, including tight schedules, long hours, time away from family, and budget management, among numerous other stressors. Within the construction industry, a prevailing 'macho' culture discourages workers from seeking the help and support they may require, thereby exacerbating the pressures on their mental wellbeing. Sadly, the industry has a number of potential triggers, such as high-pressure work environments, job insecurity, physical demands, isolation, lack of support, substance abuse, and workplace harassment, that can exacerbate the pressures on their mental wellbeing. Employers and individuals must be aware of how crucial mental health awareness is so that they can ensure that support is available if needed.

As an industry, construction continues to suffer more than any other with mental health issues. Every working day in the UK's construction industry at least one person dies in the workplace and suicide among construction workers is now more prevalent than workplace falls from height. In 2020, a study conducted by the Construction Industry Research Partnership (CIRP) reported that 83% of construction workers have experienced a mental health issue. Consequently, it is imperative to prioritise mental health and wellbeing as a means of preventing accidents and enhancing occupational safety within the construction industry. This study highlights the relationship between mental health and accidents in the construction industry.

3.1.3 Research Problem and Objectives

This study aims to explore the potential causal relationship between mental health and workplace accidents in the construction industry. By identifying contributing factors, the research seeks to develop strategies to enhance workplace safety and mental health support. The construction industry is characterised by a high-pressure environment that can lead to increased stress and mental health challenges, such as anxiety and depression, which may impact safety.

Aims and Objectives

1. Literature Review and Analysis: Conduct a comprehensive review of existing literature on mental health in the Construction Industry, focusing on its impact on health and safety outcomes, and identify factors contributing to mental health issues, including individual and organisational aspects.
2. Relationship Examination: Investigate the relationship between mental health and health and safety outcomes, specifically analysing the occurrence of minor to moderate incidents and their correlation with mental health issues in this high-risk environment.
3. Data Collection and Analysis: Collect quantitative data on mental health indicators, safety performance metrics, and incident occurrences from a representative sample of construction companies. Apply appropriate statistical methods to assess the strength and significance of the relationship between mental health and safety outcomes.
4. Qualitative Insights: Conduct interviews and surveys with construction industry professionals to gather insights into their experiences and perceptions regarding mental health and its influence on safety. Analyse qualitative data to identify common themes and challenges.
5. Current Practices Evaluation: Evaluate existing practices and policies related to mental health and safety in the Construction Industry, including risk assessments, training programs, and support systems.
6. Recommendations and Strategies: Develop and propose strategies and interventions to improve mental health and safety outcomes, providing recommendations for industry stakeholders, policymakers, and organisations to address mental health issues effectively.

7. Synthesis and Implications: Synthesise findings from the literature review, quantitative and qualitative analyses, and stakeholder insights to provide a comprehensive understanding of the interconnection between mental health and safety outcomes, discussing the implications for promoting mental wellbeing and enhancing safety in the Construction Industry.

3.1.4 Significance of the Study

Mental health risks in the workplace, commonly referred to as psychosocial risks, encompass a range of factors, including underutilisation of skills or lack of qualifications, excessive workloads or pace, staff shortages, long and inflexible hours, socially incompatible work schedules, physically unsafe or poor working conditions, and experiences of violence, harassment, or bullying. In light of the emergence of new technologies and the accelerated pace of work associated with these advancements, psychosocial risks are becoming increasingly prevalent in the workplace, even among non-manual workers. In the European Union (EU), 88% of workers have experienced problems with stress at work. According to Eurocadres, 60% of absences from work can be attributed to work-related stress and psychosocial risks.

By highlighting the relationship between mental health and accidents in the construction industry, this study aims to emphasise the necessity for construction industry professionals to prioritise mental health as a preventive measure against accidents. The quantitative and qualitative evidence presented in this study highlights the impact of mental health on accident prevention and safety enhancement. It thus offers a reliable, evidence-based insight into the research phenomenon. The study also presents a comprehensive set of policy recommendations and implications for policymakers to develop effective safety measures based on mental health interventions in the UK.

3.2 Research Design

3.2.1 Explanation of Explanatory Sequential Design

In the explanatory sequential design, a mixed research approach is employed, as it integrates both quantitative and qualitative data into primary and complementary phases, prioritising one approach over the other. The quantitative phase, at the beginning, is focused on identifying relationships and patterns among variables. The qualitative phase is focused on enriching the results in the initial phase and providing

in-depth and detailed support for the results (Toyon, 2021). By integrating the descriptive and explanatory components of the study, the researcher offers a more thorough and insightful understanding of the phenomenon being examined (Maforah and Leburu-Masigo, 2018). Using a mixed research approach, this section discusses the main ideas, advantages, and drawbacks of the explanatory sequential design.

According to Doyle, Brady, and Byrne (2016), the explanatory sequential design is based on a temporal sequence, giving priority to the quantitative in the beginning and secondary priority to the qualitative phase in the next. Gathering quantitative data and determining correlations, patterns, and/or trends between variables associated with the research phenomena are the main goals of quantitative analysis. Similarly, Draucker et al. (2020) also confirmed the same idea and purpose of the explanatory sequential design. They argued that the qualitative phase is used to gain in-depth knowledge and support for the quantitative results in the initial phase. They added that qualitative results also overcome limitations in quantitative results. Within this context, explanatory sequential design offers the following benefits:

a) Exploration of Relationships and Patterns: The quantitative phase in explanatory sequential design allows the researchers to identify connections, relationships, and patterns among the variables related to the phenomenon under study. Since the quantitative data is based on numerical evidence, it supports and confirms relationships. The qualitative evidence then provides confirmation and support to the quantified relationships and enriches the knowledge about relationships (Almeida, 2018).

b) Complementarity: By merging quantitative and qualitative methods, the explanatory sequential design makes use of their respective advantages. While qualitative approaches enable a more thorough and contextualised investigation of the issue under study, quantitative approaches offer rigorous statistical analysis and generalisation (Byrne and Humble, 2007).

c) Rich explanation: to further enrich the quantitative results, the qualitative phase in the explanatory sequential design provides support and complements the results. Qualitative data is often based on experiences, opinions, and social contexts, which reflect whether the quantitative results are in line with subjective perspectives; thus, more comprehensive conclusions can be drawn (Doyle, Brady, and Byrne, 2016).

Despite the benefits of the explanatory sequential design mentioned above, the following are inherent limitations:

a) Reliance on the quantitative phase: There is a heavy dependence on qualitative data for quantitative phase results. The data collection process is based on quantitative results. For example, the questions and relationships discussed in interviews are based on prior results obtained. Thus, if quantitative data is not robust or lacks rigour, qualitative results may be affected (Toyon, 2021).

b) Time and resource requirements: Carrying out two sequential phases requires time and resources. Careful planning is necessary to ensure that both phases are carried out effectively and efficiently (Ivankova, Creswell, and Stick, 2006).

3.2.2 Justification for Explanatory Sequential Design

As mentioned earlier, there are various advantages of sequential explanatory design, and these advantages are the main determinants of choosing explanatory sequential design. This study aimed to analyse the relationship between mental health and safety in construction. As per discussion in the epistemological position section, this study has collected both quantitative and qualitative data. Therefore, a mixed-method design was essential. Furthermore, an explanatory sequential design was adopted to achieve exploration and confirmation, complementarity, and rich explanation. The following procedure was adopted to execute the descriptive research design in this study.

This study followed the explanatory sequential design with a general procedure that involves the following stages:

a) Research design: The research questions and objectives of the study were defined. The sequence and scope of the quantitative and qualitative phases were decided. The details of the quantitative and qualitative phases are explained in the following sections.

b) Quantitative phase: the first phase was quantitative. For the quantitative data, this study collected data using surveys and questionnaires as data collection methods, as well as secondary data analysis. The results of secondary data are already presented in the previous chapter; however, the results of quantitative primary data collected using a questionnaire will be presented in the next chapter. The quantitative data are analysed to establish relationships, patterns, or trends in the phenomenon studied. A detailed analysis of indicators and measures of mental health,

as well as occupational safety and accident prevention in the construction industry, are presented in the quantitative phase.

c) Analysis and preparation for the qualitative phase: in the next phase, the quantitative results were used to inform the design of the qualitative phase. Topics or areas of interest to explore in depth were selected, and qualitative data collection methods were developed.

d) Qualitative phase: Qualitative data were collected using methods such as interviews and focus groups. Qualitative data were analysed to explain and understand in depth the quantitative results obtained in the quantitative phase.

e) Integration of results: To answer the research questions, a joint interpretation of the qualitative and quantitative results was sought. The findings were compared and contrasted, looking for convergences, divergences, or complementarities.

3.2.3 Overview of Mixed Methods Approach

The explanatory sequential design begins with an initial exploration of variables and their relationship, followed by a qualitative explanation enriching quantitative relationships and patterns. The mixed method allows for gaining knowledge by combining descriptive and explanatory results, takes advantage of the benefits of both quantitative and qualitative methods, and overcomes limitations in both (Bowen, Rose, and Pilkington, 2017). However, there are also limitations in the mixed method because it requires multiple data collection processes; therefore, the time and resources needed in the mixed method are high. However, the advantages outweigh the limitations, thus making the mixed method a valuable research option (Maforah and Leburu-Masigo, 2018).

According to Draucker et al. (2020), the embedded design using mixed methods prioritises one either qualitative or quantitative method over the other. The other approach also called the secondary or complementary approach, is, as the name suggests, a complementary or supporting perspective. Therefore, in mixed methods, one of the methods is integrated or embedded into the other and enriches and strengthens the results from that approach. In this section, the concepts, advantages, and limitations of the embedded design in mixed research are explored, with a quantitative approach as the priority and qualitative as a complementary approach. (Byrne and Humble, 2007). For instance, when quantitative embedded design is adopted, the quantitative approach primarily collects data to analyse relationships and

interconnections within variables. Afterwards, qualitative data corroborates and enriches previous quantitative results and findings (Toyon, 2021). The main advantages of following this design are:

a) Complementarity of approaches: It is possible in the embedded design to leverage the natural advantages of quantitative and qualitative methods. On the one hand, the quantitative methods offer rigorous statistical analyses; on the other hand, qualitative methods provide comprehensive and socially contextualised knowledge. Therefore, both of these combine to attain an extensive understanding of the research problem (Doyle, Brady, and Byrne, 2016).

b) Enriched Results: The results of the first method are improved and supplemented by the secondary approach. The results of one strategy may support, elaborate on, or provide a more comprehensive explanation of the results of the other way. This improves the validity and reliability of the results and provides a stronger basis for the study's conclusions (Almeida, 2018).

c) Resource efficiency: By giving priority to one method, the embedded design allocates resources efficiently. Since it concentrates on one strategy and makes it pertinent to the research process, the secondary strategy is sparser and more precise, and hence, time and resource efficiency can be achieved (Bowen, Rose, and Pilkington, 2017).

Although the advantages above make the mixed method a useful research approach yet, there are also inherent limitations, as follows:

a) Potential discrepancy in the paradigm: Because quantitative and qualitative methods are grounded in disparate philosophical paradigms, therefore there is a conflict in integrating and triangulating the results. Due to differences in the paradigm, there is a challenge for researchers to incorporate results effectively, which implies that the researcher needs a thorough theoretical foundation and effective methodological design (Maforah and Leburu-Masigo, 2018).

b) High Reliance on the primary method: there is a significant impact on the quality of the prioritised method, i.e., the quality of the quantitative method in the beginning affects the quality of the secondary approach. The outcomes of the secondary strategy could be impacted if the first approach fails to offer a strong basis (Draucker et al., 2020).

3.2.4 Rationale for Using Mixed Methods Approach

This study achieved the mixed method approach with both qualitative and quantitative methods in the following stages:

a) Research design: first, this study formulated research questions and objectives that are suitable for the problem statement and then directed the focus of the main quantitative stage on the main variables identified in the questions and objectives. A comprehensive theoretical background and foundation were established to enhance the reliability of the quantitative phase.

b) Primary approach phase: The study designed questionnaires, interviews, and focus group data collection procedures to align with the embedded mixed method, beginning with a quantitative approach and following a qualitative approach. Based on this approach, specific results and findings are generated.

c) Secondary approach integration: The results obtained through the main approach were used to guide data collection and analysis using the secondary approach. The aim was to complement, support, or enrich the main approach's results.

d) Integration of results: Both approaches obtained an integration and joint interpretation of the results. The findings were compared, contrasted, or combined, and relationships, convergences, or divergences between them were sought.

It is important to mention that the dominant design in the mixed research approach adopted for this study prioritised the quantitative approach over the qualitative approach to keep the explanatory design instead of the exploratory design. The other approach was used secondarily to provide a supporting or complementary perspective. Unlike embedded design, in dominant design, one of the approaches plays a primary role while the other approach is used to support, extend, or provide an additional perspective. The following advantages were obtained by adopting a dominant design.

Dominant design involves prioritising one approach (qualitative or quantitative) and using the other approach secondarily to provide a supporting or complementary perspective. For example, in a quantitative dominant design, one quantitative approach may be used to collect and analyse data primarily. Then, qualitative methods may be used to provide a deeper explanation or enrich the quantitative findings. There are various advantages of this design:

a) Resource efficiency: By prioritising one approach, resources were used as efficiently as possible, concentrating on the strategy that best suited the study's goals. As a result, time, effort, and resources were used effectively, preventing effort duplication (Byrne and Humble, 2007).

b) Depth and breadth: Employing a secondary technique to bolster or expand on the findings of the primary approach attained a deeper and more comprehensive understanding of the topic under study. The secondary technique's outcomes offered a more thorough justification, a more nuanced viewpoint, or more confirmation of the findings of the first strategy (Ivankova, Creswell, and Stick, 2006).

c) Support in interpretation: The primary strategy's outcomes were interpreted with support from the secondary approach. By offering an additional or confirming viewpoint, the secondary approach's findings aided in understanding the patterns or linkages discovered in the original approach (Toyon, 2021).

Although the mixed design has significant benefits, it also has inherent limitations within the context of this study:

a) Bias towards one approach: If one strategy is given priority over the others, it may not be very objective. This could impact the methodologies used, how the results are interpreted, and how representative the results are (Doyle, Brady, and Byrne, 2016).

b) Limitation in the depth of the secondary approach: Since the secondary approach is utilised in a supportive role, there may be limitations in the depth and breadth of the results obtained through this method. Consequently, this may hinder a comprehensive understanding of the phenomenon under investigation (Almeida, 2018).

3.2.5 Data Process and Extraction Procedure for Literature Review

In this subsection, the data process and extraction procedures undertaken during the literature review are detailed. This process involved systematically identifying, selecting, and analysing relevant literature to inform the research framework. The literature was sourced from various academic databases, ensuring a comprehensive overview of existing studies related to mental health and safety in the construction industry. Key themes and findings were extracted, allowing for a synthesis of knowledge that guided the development of the research questions and methodology.

Relevant published literature was explored to obtain comprehensive insight into how mental health issues affect the health and safety concerns of a construction environment. Data extraction for this review was done by using Preferred Reporting Items for Systematic reviews and Meta Analysis (PRISMA) to gather a corpus of relevant studies. Adopting PRISMA provides an opportunity for researchers to strengthen the extraction of quality data to answer research questions. This method involves three steps, i.e., identification, screening, and inclusion of studies based on their eligibility for qualitative/qualitative synthesis (Tricco et al., 2018). In the given context, the first step involves searching for relevant papers and grey literature through important research databases which include Scopus, Web of Science, JSTOR (Journal Storage), and ScienceDirect which are the prominent sources of extracting published articles (Gusenbauer, 2024). By using Boolean operators, relevant peer-reviewed articles and grey literature were collected through keyword searches like “construction safety” “UK based”, and “mental health” resulting in the identification of 115 records.

The second step involves the initial screening of extracted literature by considering the exclusion and inclusion criteria of the research. For the present study, inclusion criteria covers (a) studies conducted in the UK, (b) literature published in English, (c) theme of workers’ mental health and safety concerns in the construction sector of the UK, (d) must be published between 2000 – 2024 to compare the temporal trends about how the issue evolves, (e) include both peer-reviewed research papers and grey literature to gain broader insight about the subject, and (f) must have full-literature accessibility. Whereas the exclusion criteria covers (a) research papers from other geographic regions, (b) not published in the English Language, (c) unable to address the proposed aim, (d) the publication date of literature was before 2000, and (e) limited accessibility of literature.

Elaborating on inclusion criteria (d), I made a deliberate decision to focus on recent literature to ensure the relevance and recency of my study. By concentrating on contemporary sources, I aimed to capture the latest advancements, theories, and interventions in the field of mental health within the construction industry. This approach allowed me to explore the evolving perspectives and attitudes towards mental health, as well as the most current research methodologies employed in studying this topic. By delving into the literature published in the past two decades, I gained insights into the modern approaches and practices that have emerged in

addressing mental health concerns within the construction industry. This timeframe ensured that I worked with the most up-to-date evidence available, which was crucial for providing accurate and relevant findings and recommendations.

Furthermore, by focusing on recent literature, I examined the shifts and developments that have taken place in the understanding and treatment of mental health issues within the construction industry. Older literature may not have adequately reflected the current challenges and concerns faced by workers in this field, making it essential to rely on more recent sources to provide a comprehensive analysis. Going into more depth regarding why it was deemed appropriate to focus primarily on the UK construction industry and limit the literature search to sources that principally pertained to the UK context. Several factors influenced this decision. Firstly, the UK construction industry has its unique characteristics, including socio-demographic factors, cultural nuances, and regulatory frameworks that shape its operations. By concentrating on the UK, this research aims to provide a comprehensive understanding of the mental health challenges faced by workers in this specific context.

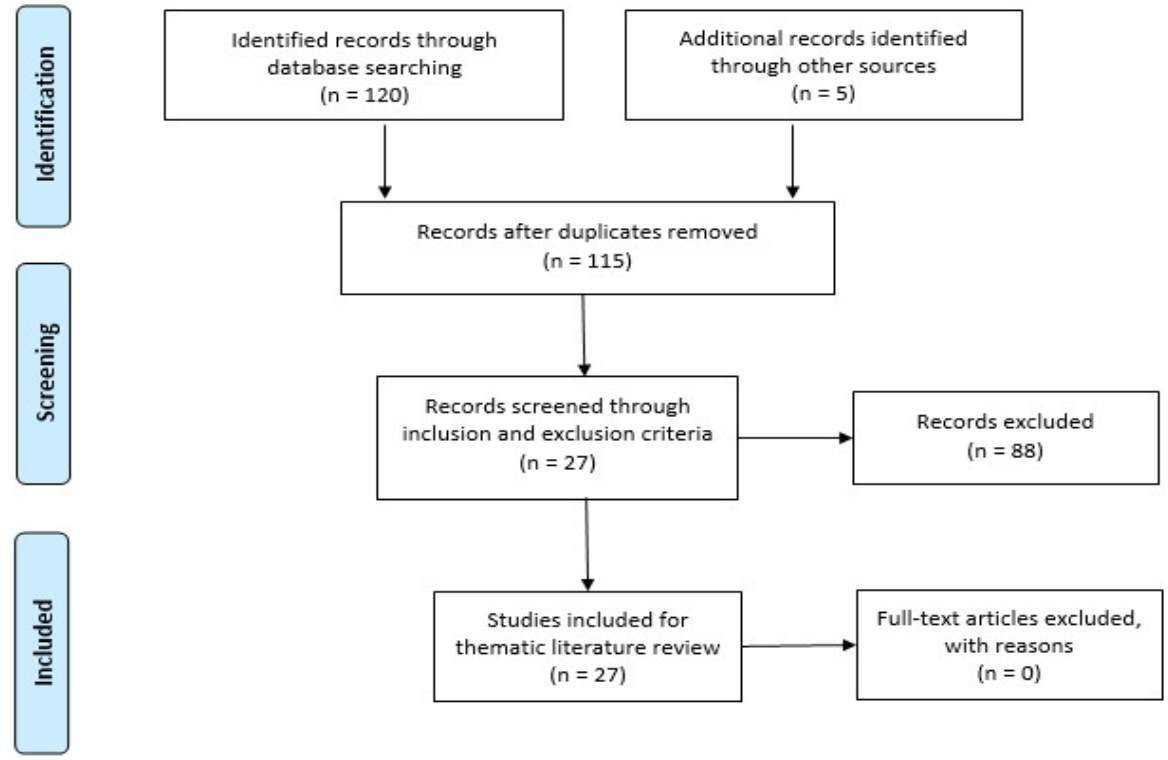
Moreover, the UK has been subject to various initiatives and interventions aimed at improving mental health outcomes for its workforce. By examining literature that is grounded in the UK, this study can explore the effectiveness of these initiatives and identify potential gaps or areas for improvement. Additionally, considering the UK-specific literature allows for a more detailed analysis of the socio-cultural factors that may influence mental health outcomes. Limitations occurred, whilst the initial data extraction focused on UK-based papers to ensure relevance to the specific context I am studying. However, despite employing a Boolean search string with keywords such as "construction," "UK based," and "mental health," the number of identified research papers was limited. Recognising the importance of obtaining a comprehensive understanding of the topic, I expanded my search to include international papers that were relevant to my research question.

Incorporating international papers in the data extraction process offers several advantages. Firstly, it provides a broader perspective on mental health in the construction industry by considering experiences and findings from different countries. These studies may shed light on cultural, organisational, or regulatory factors that influence mental health and safety incidents in construction. Additionally, international papers may introduce innovative interventions or best practices that could be adapted

and applied within the UK construction industry, potentially enhancing mental health management strategies.

However, it is important to acknowledge the limitations of including international papers. Variations in cultural, social, and economic contexts across countries may impact the prevalence and manifestation of mental health issues in the construction industry. Furthermore, differences in regulatory frameworks and support structures may affect the implementation and effectiveness of mental health interventions. Therefore, critical evaluation and contextual interpretation of international findings are necessary to ensure their applicability to the UK construction industry. By incorporating both UK-based and international papers in my data extraction, I aim to develop a comprehensive understanding of mental health in the construction industry while recognising the need for contextual adaptation and interpretation of findings. This approach will provide a more nuanced and holistic perspective on the potential connection between mental health and safety incidents in the construction industry.

After careful screening, the third step addresses the inclusion of data sources that meet the criteria of the research. A total of 27 literature evidence which comprised 20 peer-reviewed published studies and 7 grey literature sources were finalised for the thematic literature review of the proposed research as shown in Figure 2 below:



Chapter 3: 3.2.5, Figure 2 PRISMA Flow Diagram for the Thematic Literature Review

3.3 Quantitative Phase

3.3.1 Introduction to the Quantitative Phase

Mental health is influenced by health and safety practices within the construction industry (Iqbal et al., 2021). However, the methodological evidence derived from primary data can strengthen the findings of previous studies through the quantitative phase, which reinforces the importance of mental health in the construction sector, where the prevalent discourse often focuses on workers' safety. The quantitative phase of this research allowed the study to generate ecologically valid arguments with minimal subjectivity, thereby identifying well-established conclusions. Furthermore, this phase was integral to the research, as it aimed to identify statistically significant patterns in mental health concerns related to health and safety measures. This approach facilitated a transition to the qualitative phase in a sequential design, ensuring validity in the subsequent phase of the research. Salmona and Kaczynski (2024) argued that the inclusion of qualitative data and analysis can introduce a higher level of subjectivity than anticipated, resulting in a lack of conclusive findings. Therefore, this research mitigated this limitation by incorporating a quantitative phase.

The quantitative phase of this research employed a traditional 7-point Likert scale questionnaire, following a structured approach that allowed the study to maintain standardisation in responses to the questions posed to the sample. Robinson (2024) also emphasised a similar approach to ensure the efficient achievement of research objectives through a structured questionnaire. Thus, the quantitative phase, utilising a structured questionnaire with a 7-point Likert scale, was effectively adapted for the completion of this research. The questionnaire was primarily designed to understand variables associated with mental health, safety and health precautions taken by the construction industry. Given that the construction industry is one of the largest providers of employment, it is essential to understand the significance of mental health triggers among workers. Thus, by incorporating the quantitative phase, the research can identify relationships through correlation analysis, while also enhancing the ecological validity of the study and facilitating the transition to the qualitative phase of the research.

3.3.2 Research Design for the Quantitative Phase

The study employed a survey research design for the quantitative phase to enhance its findings. Bell et al. (2022) noted that survey findings derived from a quantitative research design help eliminate potential researcher bias and enable the incorporation of ecologically valid results. Furthermore, the inclusion of a survey research design in the quantitative phase allowed for a structured data collection strategy, accommodating a variety of variables relevant to this research. In examining mental health, the study focused on a subjective and thematic assessment of the current situation rather than individual mental health, integrating levels of reported stress, anxiety, and depression, while also considering demographic variables such as age and gender to ensure a comprehensive distribution of the data set. Younus et al. (2022) stated that the inclusion of demographic variables enables the researcher to test for potential biases within the collected data, thereby minimising the possibility of data skewness. Thus, the survey research design in the quantitative phase of this study significantly contributed to achieving the aims and objectives of the research.

The independent variable in this study was identified as mental health, while the dependent variables included safety outcomes, minor safety incidents, and moderate safety incidents. Additionally, organisational factors such as workforce workload and support systems provided by the organisation were also considered.

Daniel et al. (2024) incorporated similar variables in their examination of mental health and safety within the workplace, thereby enhancing the applicability of the preceding variables. The structured nature of the survey design was embraced due to its ability to provide insights for future research. This approach effectively contributes to the identification of important variables that can influence mental health in the construction industry. It enabled a desired level of efficiency in the methodological approach of the research while marginalising the requirement of other research designs to standardise the method of practice for research. Thus, the survey research design enabled the study to gain a unique perspective from industry stakeholders to ensure the identification of patterns associated with mental health in construction industry workers and health and safety concerns.

3.3.3 Sampling Strategy

There are several types of sampling strategies used in research, primarily focusing on two techniques: purposive sampling and random sampling (Bell et al., 2022). For this research, purposive sampling technique was incorporated for completion of the research as it enables the study to maintain the focus of the research. Hossan et al. (2023) also emphasised the importance of the purposive sampling technique due to its focus on expert opinion and its ability to minimise biases associated with the general population's perspective. Given the ongoing debate across all sectors of the economy regarding the lack of attention from organisations towards the mental health concerns of their employees, a consensus opinion may overlook the existing initiatives implemented by organisations to enhance the mental health outcomes of their workforce. Thus, the inclusion of purposive sampling was implemented to eliminate biases associated with prevailing opinions in the environment regarding the shortcomings of the construction industry in addressing the mental health concerns of the workforce.

For this research, the population size included internal stakeholders in the construction sector, such as workers, supervisors, and managers. These individuals have varying roles and require different levels of awareness concerning the inclusion of health and safety measures to protect their mental health. For example, Umeokafor et al. (2022) identified that a ‘boots on the ground’ worker may require significant advancement in health and safety measures by the organisation compared to their managers who are managing the operations from a position of safety. Therefore, the

inclusion of stratified sampling was preferred for the completion of the research where the distribution of roles was incorporated as per the purpose of this research. It enabled the study to gain extensive understanding regarding the significance of contributing variables for this research.

3.3.4 Data Collection Instruments

The data collection instrument for this phase of the research utilised a 7-point Likert scale instead of a 5-point scale to enhance response granularity and sensitivity. This broader range allows participants to express their opinions with greater nuance, capturing subtle differences in attitudes related to mental health and safety in the construction industry. Additionally, a 7-point scale reduces central tendency bias, encouraging respondents to select ratings that more accurately reflect their true feelings. This approach also facilitates more sophisticated statistical analyses, enabling a detailed examination of the relationships between variables.

Magalhães et al. (2023) stated that the Likert scale offers a standardised approach towards identification of possible relationships. Furthermore, it mitigates any potential biases associated with the sample size, ensuring that all participants are equally equipped with the available options. Meanwhile, it also empowers analytical capabilities of the researcher where the respondents are only allowed to choose from five or seven options. Generally, the options vary from “strongly disagree” to “strongly agree” which highlights the level of correlation. Therefore, 7-point Likert scale was incorporated for this research to enhance the understanding of mental health importance in the construction industry. Given that the sub-variables of mental health are subjective, the inclusion of mental health concerns observed using a 7-point Likert scale allowed the study to standardise the identification process, resulting in ecologically valid arguments for the subsequent sections of the research. To achieve this, the structured questionnaire incorporated six distinct themes that examined various dimensions of mental health and safety concerns within the construction industry, thereby supporting the aims and objectives of the research.

3.3.5 Structured Questionnaire

In the development phase of the questionnaire, existing literature was critically analysed to inform the research, alongside consultations with industry experts regarding the prevalence of key variables. This comprehensive approach enabled the

study to incorporate six core themes that reflect the main areas of focus identified across academic studies, industry reports, and policy documents:

- Prevalence and Impact of Mental Health Issues in the Construction Industry
- Factors Influencing Mental Health in the Construction Industry
- Relationship Between Mental Health and Safety Incidents
- Interventions and Strategies for Promoting Mental Health and Preventing Safety Incidents
- Role of Organisational Policies and Practices in Addressing Mental Health and Safety Incidents
- Challenges and Barriers in Addressing Mental Health and Safety Incidents

These themes align with the research of Tijani et al. (2021), Vignoli et al. (2021), and Pamidimukkala et al. (2021). A thematic synthesis was conducted to guide the development of the survey questions, beginning with a thematic literature review that explored mental health within the construction industry. Within each core theme, specific sub-themes were identified based on recurring ideas and patterns in the literature, providing a more detailed view of each broad area. For example, under the theme of "Interventions and Strategies," sub-themes included peer support programs, awareness training, and leadership involvement.

The survey questions were then developed to reflect these sub-themes, ensuring a clear link between the literature's insights and the questions posed to participants. Each question was designed to relate directly to a sub-theme, which in turn fell within one of the six main themes. This step-by-step synthesis resulted in a focused survey grounded in existing knowledge. The incorporation of a 7-point Likert scale further minimised potential biases and skewness in the dataset, providing a standardised approach to the research. Figure 3 presents this structure visually, illustrating how the main themes from the literature led to the identification of sub-themes and informed the creation of the survey questions. The diagram flows from left to right: starting with themes, then sub-themes, and ending with the question numbers. This visual representation demonstrates the coherence between the theoretical groundwork and the empirical tool used in the study, clearly showing the pathway from literature to data collection.

3.3.6 Formulation of Research Questions

The research questions presented in this study were methodically formulated based on a comprehensive review of existing literature concerning mental health in the construction industry. Each question was designed to address specific aspects of mental health issues, drawing from a diverse array of sources that highlight the multifaceted nature of this topic, see Table 63 Development of Quantitative Research Questions from the Literature Review on Mental Health in the Construction Industry within the Appendix. For instance, demographic inquiries such as age and gender (Q1 and Q2) were included to gather essential data that may correlate with mental health outcomes, while questions regarding the perceived prevalence of mental health issues (Q1.1) and their impact on safety incidents (Q1.2) aim to quantify the extent of the problem and its implications for workplace safety. The rationale behind these questions is rooted in the identification of gaps within the current literature. Questions exploring the effectiveness of mental health support programs (Q4.1) and the challenges posed by stigma (Q6.1) were formulated to evaluate existing interventions and identify barriers to effective mental health management. By systematically linking each question to relevant literature, this research seeks to contribute to a deeper understanding of the dynamics influencing mental health outcomes and safety incidents among construction workers. This structured approach enhances the validity of the research findings and underscores the importance of evidence-based practices in addressing mental health challenges within the construction sector.

To further ensure the validity of the dataset, the study integrated a pilot test in pursuit to ensure the validity of the data. Teresi et al. (2022) stated that the pilot test ensures effectiveness of a questionnaire for widespread implementation in the research resulting in ecological validity for the study. Studies that do not include a pilot test are often constrained by discrepancies and the ambiguous nature of their questionnaires, which may necessitate conducting the study again.

Therefore, this research employed an initial pilot test for the questionnaire, which facilitated its validation and reliability analysis. The pilot study was conducted with a group of 10 volunteer participants who were carefully briefed on the study's requirements and ethical considerations, ensuring that they understood their rights and the purpose of the research. This preliminary phase was crucial for identifying potential issues with the questionnaire before its full deployment. During the pilot test, several important issues were uncovered regarding the clarity and appropriateness of

the questions. For instance, some participants noted that certain questions contained ambiguous wording, which could lead to varied interpretations and affect the reliability of the responses. This ambiguity highlighted the need for clearer phrasing to ensure that all respondents understood the questions in the same way.

Additionally, feedback from some of the volunteers indicated that some of the terminology used in the questionnaire was either outdated or potentially triggering for certain individuals. For example, terms that may have been commonly accepted in previous years could now be viewed as insensitive or inappropriate, which could alienate participants and impact their willingness to engage with the survey. This feedback prompted a thorough review of the language used in the questionnaire to ensure it was both current and inclusive. Moreover, the pilot survey revealed that some questions were perceived as leading or biased, which could skew the results. For instance, questions that suggested a particular viewpoint or assumption might influence participants'

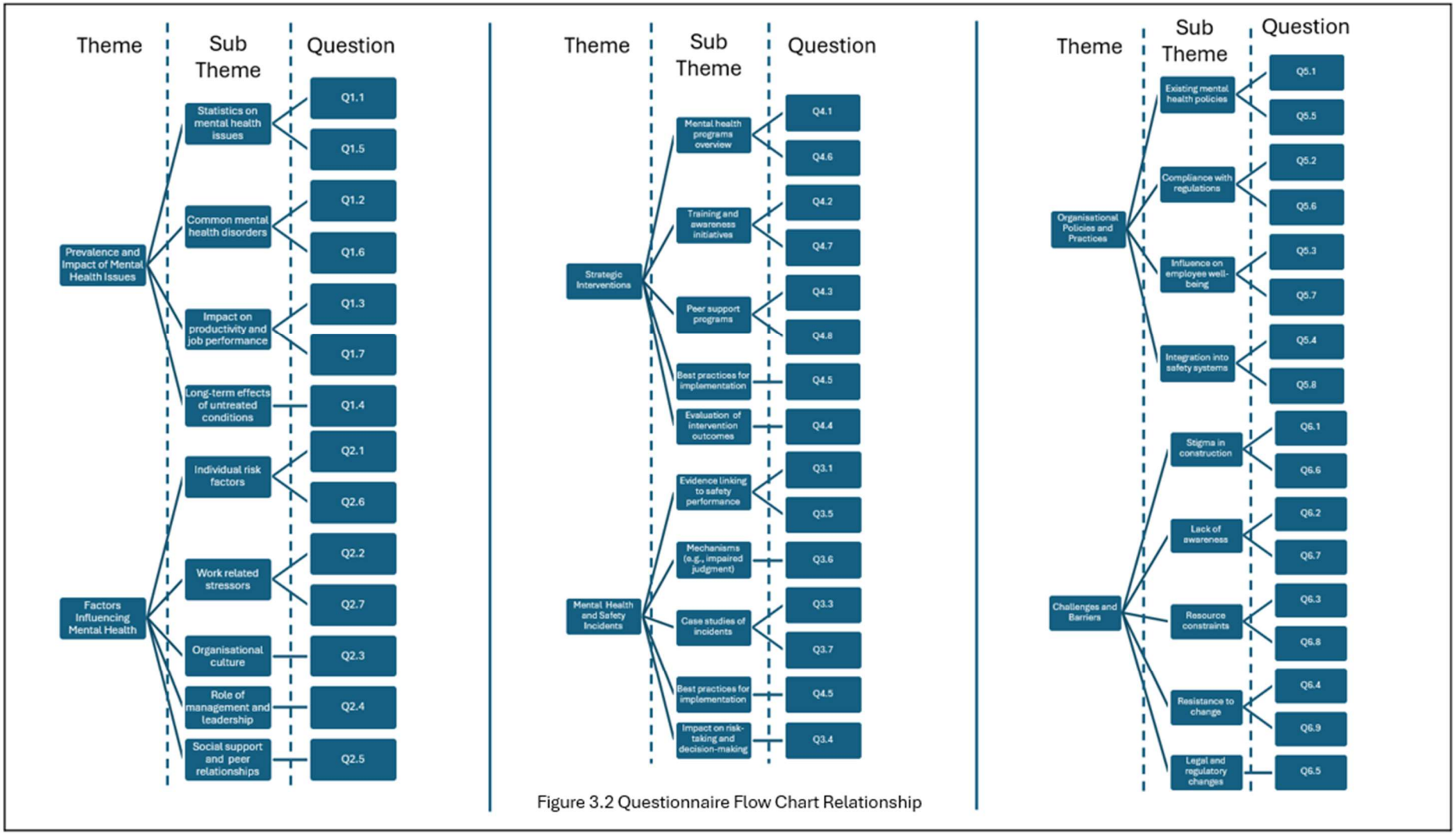


Figure 3.2 Questionnaire Flow Chart Relationship

Chapter 3: 3.3.6, Figure 3 Questionnaire Flow Chart Relationship

responses, thereby compromising the objectivity of the data collected. This finding underscored the importance of formulating neutral questions that allow respondents to express their true opinions without undue influence.

Other issues identified during the pilot included the length of the questionnaire, which some participants felt was too lengthy and could lead to fatigue or disengagement. This feedback led to a revision of the questionnaire to streamline it, going from 60 questions down to 46 questions, ensuring that it remained comprehensive while being mindful of participants' time and attention. The pilot test of the survey played a crucial role in refining the questionnaire by addressing issues related to ambiguity, outdated terminology, potential bias, and overall length. The feedback obtained from participants facilitated enhancements to the instrument, ensuring that it was both valid and reliable. Additionally, the revisions made in response to the pilot survey ensured that the questionnaire was ethically sound and accessible to a diverse range of participants. This thorough preparatory phase significantly contributed to the robustness of the research findings.

The data collection procedure, as identified in the preceding section of the study featured the involvement of 7-point Likert scale to ensure standardisation of response and ability to incorporate a standardised data analysis plan for the subsequent section of the research. Moreover, it is essential to emphasise that the inclusion of a mixed methods approach in this study facilitated triangulation of the analysed findings, thereby strengthening the research outcomes. This approach resulted in ecologically valid recommendations aimed at empowering the construction industry and its prevailing practices to ensure the health and safety of its workers.

3.3.7 Data Analysis Plan

The research employed IBM SPSS Statistics software for correlation analysis, which is a widely recognised and robust statistical tool that facilitates comprehensive data analysis. The use of SPSS was essential for conducting various statistical procedures, ensuring a thorough examination of the data collected. Specifically, the software enabled the application of descriptive statistics, which provided a summary of the data characteristics, including measures of central tendency and variability. This foundational step is crucial for understanding the overall distribution and patterns within the dataset.

In addition to descriptive statistics, the research included reliability testing to assess the consistency and stability of the measurement instruments used. This step is vital for ensuring that the data collected accurately reflects the constructs being studied, thereby enhancing the credibility of the findings. The reliability analysis helps to confirm that the scales used in the survey yield consistent results across different samples and contexts.

Furthermore, correlation analysis was conducted to explore the relationships between variables, particularly the connections between mental health indicators and safety outcomes in the construction industry. This analysis is critical for identifying potential associations and understanding how these factors interact, which can inform future interventions and policy decisions.

The research also incorporated inferential statistics, allowing for generalisations to be made about the population based on the sample data. This aspect of the analysis is important for drawing conclusions that extend beyond the immediate dataset, providing insights that can be applied to broader contexts within the construction industry.

Finally, regression analysis was utilised to examine the predictive relationships between variables, enabling the identification of key factors that influence mental health and safety outcomes. This analytical approach not only enhances the understanding of the dynamics at play but also supports the development of targeted strategies for improving mental health and safety practices in the industry.

In summary, the utilisation of IBM SPSS Statistics software for these various statistical analyses was justified by the need for a comprehensive and rigorous examination of the data. By employing a range of statistical techniques, the research was able to provide a nuanced understanding of the interplay between mental health and safety outcomes, ultimately contributing valuable insights to the field. Rehman and Muktadir (2021) also endorsed the use of SPSS software for primary-level statistical analysis to demonstrate the existing correlations between variables. From the questionnaire, the following variables were keenly investigated:

Independent Variables:

- Perceived prevalence of mental health issues
- Impact of mental health on safety incidents
- Frequency of observing mental health issues
- Severity of mental health issues

- Effectiveness of mental health support programs
- Influence of work-related stressors
- Influence of long working hours
- Influence of job demands
- Influence of poor supervisor support
- Effectiveness of mental health awareness campaigns
- Feasibility of implementing regular screenings
- Effectiveness of mental health policies
- Effectiveness of safety training programs
- Stigma of talking about mental health as a barrier
- Lack of awareness of help for mental health as a barrier

Dependent Variables

- Relationship between mental health and safety incidents
- Impact of mental health on focus and decision-making

The reliability analysis in this research was incorporated through Cronbach's alpha value to determine the internal consistency of variables and ensuring standardised compliance of the data set. Furthermore, the research employed descriptive statistics derived from measures of central tendency, which encompass statistical metrics such as the mean, median, and mode that summarise a dataset by identifying its central point. This methodology facilitated an assessment of the effective distribution of the sample size, thereby ensuring its representativeness of the sentiments within the relevant population and enhancing the ecological validity of the study. Meanwhile, Pearson correlation coefficient was also incorporated from the correlation analysis in SPSS to determine the level of alignment between dependent and independent variables incorporated in this research.

3.3.8 Limitations of the Quantitative Phase

Despite the test for reliability, there is a chance for the sample to be biased in presenting their responses for the questionnaire resulting in skewness of the dataset. Additionally, the study recognised the importance of social desirability bias, where respondents may not express their true opinions, leading to the influence of societal biases in their participation. This can result in significant bias in the study. However, to overcome this, the study ensured the inclusion of diverse sample categories, including workers and managers, to facilitate an effective distribution of opinions.

Furthermore, outliers were excluded from the analysis to enhance the validity of the findings while actively addressing the research requirements.

3.4 Qualitative Phase

3.4.1 Introduction to the Qualitative Phase

After completing the quantitative phase, the research progressed to the qualitative phase, which enabled the study to triangulate its findings. Given that the construction industry is considered high-risk in terms of safety and health concerns, the study's ability to incorporate qualitative findings to assess the importance of health and safety standards for mental health necessitated a significant understanding from stakeholders. Therefore, the research integrated the use of semi structured interview questions to identify the factors impacting workers safety and their mental health. Furthermore, it allowed the researcher to develop context from the arguments raised by Shepherd et al. (2021) where it was stated that the workforce with mental health concerns are inclined towards lack of safety and injury within the workplace. Given the higher risk of injury and exposure to safety concerns, it is essential to incorporate the perspectives of internal stakeholders regarding organisational efforts for the completion of this research.

3.4.2 Sampling Strategy

During the initial quantitative phase of the research, participants were asked to provide their views on the inclusion of six themes addressed in the study. Their willingness to participate in interviews was also recorded, and they were contacted via email in a formal manner. Additionally, the perceptions from the recorded interviews were documented in the secondary phase, along with the consent forms, which enabled the researcher to establish confidence in the sample size for this study. Consequently, the study employed a purposive sampling technique, resulting in an effective methodological approach for completing the research and identifying the complexities associated with stakeholders in the construction industry in addressing the mental health needs of their workforce.

3.4.3 Data Collection Instruments

The data collection instrument in this case were the recorded interviews. To ensure optimal participation in the research, only audios of the participants were

recorded to maintain transparency and fulfilment of ethical guidelines for the research. Engward et al. (2022) also stated that audio recording of interviews with an investigative nature allow the researcher to fulfil the criteria for data analysis as it allows the researcher to transcribe the audios and analyse them accordingly. For this research, therefore, the audios were transcribed. This enabled the researcher to critically analyse the responses efficiently and effectively.

3.4.4 Semi-structured Interview Guide

The interview guide for this research included consent for recording in the initial phase to ensure that the interviews were ethically documented for analysis. Furthermore, during this initial phase, the study incorporated the fundamental themes to align the thought processes of both the researcher and the respondents. This approach facilitated a comprehensive understanding of the topic and enabled efficient discussions, allowing for the standardised presentation of findings for analysis. Knott et al. (2022) stated that the involvement of an interview guide is essential to craft similarities in the framework of researcher with the respondent. Otherwise, semi-structured interviews are designed with a method to reveal the insights on the beliefs of the respondent which can marginalise focus towards the initially posed research objectives. Therefore, a semi-structured interview guide was incorporated for completion of the research. The closing of the interview also featured the involvement of consent confirmation again as well.

3.4.5 Description of Interview Questions

The interview questions were designed to enhance understanding of participants' thoughts and work-life interactions regarding safety and mental health in the construction industry. This design process followed a thorough review of the responses from the first 75 participants who completed the questionnaire, allowing for a subjective evaluation of the indicative results. This initial analysis informed the tailoring of the semi-structured interview and focus group questions, exploring participants' understanding of mental health risks and their personal experiences at work. The semi-structured format facilitated deeper insights through extended responses. To comprehensively explore mental health and safety within the construction industry, a staged quantitative-to-qualitative mixed-methods approach was adopted, progressing systematically from survey to interview and finally to focus

group questioning. This sequential design enabled the refinement and deepening of inquiry at each stage, ensuring that the research remained grounded in participant-driven insights while progressively enhancing thematic focus and contextual understanding.

The construction of the initial survey instrument was informed by a review of relevant literature and existing models addressing mental health, psychosocial risk factors, and occupational safety. The survey assessed five major areas: the prevalence and impact of mental health issues, contributing factors, the relationship with safety incidents, the effectiveness of interventions, and organisational challenges. These areas were distilled into six overarching themes to support analysis: (1) Prevalence and Impact, (2) Influencing Factors, (3) Relationship with Safety, (4) Strategic Interventions, (5) Organisational Policies, and (6) Challenges and Barriers. Responses from the survey provided quantifiable insights into workers' perceptions, experiences, and the operational realities of mental health in the construction sector. These results were critically analysed to identify dominant themes and knowledge gaps that warranted deeper exploration. Based on this analysis, a semi-structured interview guide was developed, with questions constructed to probe more deeply into the themes that emerged from the survey, particularly regarding personal experiences, the perceived effectiveness of organisational practices, and the nuanced relationship between mental health challenges and site safety. This approach allowed for the capture of rich, contextualised data that complemented and expanded upon the earlier quantitative findings.

The final stage in the data collection sequence involved focus groups designed to foster collective discussion, reflection, and synthesis. The focus group schedule was derived from the preliminary analysis of the interview data, translating key patterns, recurring concerns, and proposed solutions raised during interviews into group-oriented questions aimed at validating findings, uncovering consensus, and generating actionable recommendations. This format also enabled the exploration of interpersonal and cultural dynamics within the industry that might not emerge in one-on-one interviews. This iterative, theme-based design enhanced data triangulation and internal consistency while ensuring that the inquiry evolved in response to participant contributions. By layering each method atop the previous one, the research captured both breadth and depth, combining empirical measurement with narrative insight. This strategy provided a comprehensive foundation for formulating targeted

recommendations and interventions to improve mental health and safety practices in the construction industry.

Table 3.2 demonstrates how each of the six themes was systematically mapped across the survey, interview, and focus group instruments, illustrating the logical progression of inquiry from initial quantitative questions to deeper qualitative exploration. This ensures coherence in question development and alignment with the overarching research objectives.

Chapter 3: 3.4.5, Table 3.2 (1) Mapping of Survey, Interview and Focus Group Questions by Theme

Theme	Survey Questions	Interview Questions	Focus Group Questions
1. Prevalence and Impact of Mental Health Issues in the Construction Industry	Q1.1 – Perceived prevalence Q1.2 – Impact on safety Q1.3 – Severity of issues Q1.5 – Impact on performance Q1.6 – Contribution of work-related factors	Section 1: "How is mental health perceived...?" "Have you noticed any changes in attitudes?"	Section 1: "How would you describe the general perception...?" "What are some common attitudes or beliefs...?" "Have you noticed any changes...?"
2. Factors Influencing Mental Health in the Construction Industry	Q2.1 – Work-related stressors Q2.2 – Job control/supervisor support Q2.3 – Social support Q2.4 – Work-life imbalance Q2.5 – Exposure to danger Q2.6 – Workplace culture Q2.7 – Stigma and understanding	Section 2: "Have you or someone you know experienced...?" "Can you describe that experience?"	Section 2: "Can anyone share a personal experience...?" "How did it affect you or your colleagues?"
3. Relationship between Mental	Q3.1–Q3.7 – Contributions of	Section 2: "How do these	Section 2: "How do you think

Health and Safety Incidents in the Construction Industry	mental health to safety incidents, human error, communication, awareness, program effectiveness	challenges impact safety and performance?" "Any specific incidents or near-misses?"	mental health challenges impact safety and performance?" "Are there specific incidents...?"
4. Strategic Approaches and Interventions for the Safe Working Environment in the Construction Industry	Q4.1–Q4.8 – Training, stress management, leadership support, peer support, counselling access	Section 3: "What improvements or additional support could be implemented?"	Section 3: "What additional support or resources do you think would be beneficial...?"
5. Role of Organisational Policies and Practices in Addressing Mental Health and Safety Incidents	Q1.4 – Effectiveness of support Q1.7 – Satisfaction with support Q5.1–Q5.8 – Organisational policy effectiveness, inclusiveness, reporting mechanisms	Section 3: "What practices or policies does your organisation have?" "How effective are these measures?"	Section 3: "What practices or policies...?" "How effective do you feel these measures are...?"
6. Challenges and Barriers in Addressing Mental Health and Safety Incidents	Q6.1–Q6.9 – Stigma, turnover, culture, time constraints, leadership, access to services	Section 4: "What recommendations would you make...?" Implied discussion of challenges	Section 4: "What recommendations...?" "Any successful initiatives...?" (Challenges discussed implicitly)

Participants for the study were sourced nationally through various platforms, including LinkedIn and industry connections, ensuring a diverse representation from multiple sectors within the construction industry. The participants came from a range of fields, including rail, utilities, civil construction, transmission and distribution, and oil

and gas. This broad sourcing strategy was essential for capturing a wide array of perspectives and experiences, enriching the data collected during the interviews and focus groups.

The interviews were conducted via Microsoft Teams, which facilitated ease of transcription and allowed for flexible scheduling. Each interview lasted between 25 to 60 minutes, providing ample time for participants to share their insights and experiences in detail. The focus group discussions were held on construction sites in dedicated meeting rooms, where groups of between 6 to 12 participants gathered to engage in dialogue. This setting not only fostered a sense of community but also encouraged open and honest discussions about mental health and safety.

To ensure accurate data collection, an omni-directional microphone (Olympus VN-8500PC and Sony ECM-Z60) was used to record the sessions. The recordings were then transcribed by a family friend of the researcher, who provided an initial transcription of the discussions. To corroborate the accuracy of the transcripts, the researcher carefully listened to the recordings while reading the transcripts, confirming that the written text accurately reflected the participants' spoken words. This rigorous approach to data collection and transcription ensured that the insights gathered from the interviews and focus groups were both reliable and valid, ultimately contributing to the robustness of the research findings. The pilot test also evaluated whether the survey questions were clear and meaningful to the target audience. Based on participant feedback, the interview questions were adjusted to enhance their engagement and effectiveness in researching mental health. Questions that caused confusion were removed, and new prompts were added to encourage participants to discuss their experiences more deeply.

Furthermore, focus group discussions fostered an inclusive atmosphere that allowed participants to express their opinions freely. At the beginning of the session, the purpose of the study was articulated, enabling the identification of relevant features. An icebreaker activity facilitated introductions, allowing participants to share their identities before engaging in meaningful dialogue. The session then progressed through four key sections: participants discussed their beliefs about mental health, shared their experiences, provided feedback on existing approaches, and proposed ideas for improved care. The study concluded by reiterating its significant findings and outlining directions for future research.

3.4.6 Data Analysis Plan

The data analysis plan included the use of thematic analysis for this research. After transcribing the interviews, themes were developed based on the consensus constructs obtained from the data collection. To ensure effective analysis and unbiased incorporation of opinions, NVivo software was prioritised; the transcripts were uploaded to NVivo to facilitate active discussions regarding the identified themes. Additionally, comparisons were made in accordance with the initial results of the research derived from the quantitative phase.

Thematic Analysis of Transcripts

NVivo software provides a robust platform for conducting thematic analysis by allowing the researcher to organise and code qualitative data systematically. Once the transcripts were uploaded, the initial step involved familiarising oneself with the data through repeated readings, which helped in identifying preliminary themes. The researcher can then create nodes within NVivo, which serve as categories for coding segments of text that relate to specific themes. This coding process is iterative; as new themes emerge, the researcher can refine and adjust the nodes accordingly. NVivo's visual tools, such as word clouds and charts, further assist in identifying patterns and relationships within the data, enhancing the depth of analysis.

Additionally, NVivo facilitates the comparison of qualitative findings with the initial results derived from the quantitative phase of the research. By integrating both qualitative and quantitative data, the researcher can gain a more comprehensive understanding of the research questions. For instance, themes identified in the qualitative analysis can be juxtaposed with statistical trends observed in the quantitative data, allowing for a richer interpretation of how mental health issues intersect with safety outcomes in the construction industry. This triangulation of data sources not only strengthens the validity of the findings but also provides a nuanced perspective that can inform future interventions and policy recommendations.

3.4.7 Limitations of the Qualitative Phase

The limitations of the quantitative phase included the possible biases of the respondents in explaining their understanding. Furthermore, Kohler et al. (2022) determined that additional liability in the qualitative phase is the lack of ability to interpret the emotions and emphasis of the respondents towards a particular point.

However, for this study, the emotions of all respondents were negated throughout the course of the data collection to ensure standardisation of the process which resulted in ecologically valid results and interpretation for the research. It enabled the study to maintain its focus effectively as well.

3.5 Integration of Quantitative and Qualitative Findings

This paper highlights the significance of integrating quantitative and qualitative findings to understand the relationship between mental health and accident prevention in the construction industry. This section outlines the integration process, the role of data triangulation, the analysis of findings from both phases, and the interpretation of these findings in the context of achieving the research objectives.

3.5.1 Explanation of Integration Process

This study follows the explanatory sequential design with the quantitative phase preceding the qualitative phase. The quantitative phase included acquisition and analysis of numerical data in the form of surveys and questionnaires through indicators of observed mental health issues, safety performance metrics and incident occurrences. Statistical analysis of the results of this phase was performed to find patterns, relationships and trends. The results of this study were then used to inform the design of the qualitative phase where aims were to go deeper into understanding and provide more contextual explanations through interviews and focus groups. The structure of the integration process was designed so that the qualitative phase built upon the quantitative findings (Johnson et al., 2019). For example, quantitative data revealed a significant correlation between high stress levels and increased rates of accidents, while the qualitative phase explored the underlying causes of this correlation by interviewing construction workers and managers about their firsthand experiences with stress and safety at work. This sequential approach enabled the qualitative data to provide a richer and more detailed understanding of the quantitative results.

The two datasets were also integrated into a single dataset during the integration process. The results from the quantitative phase were used to design the questions for the interviews and focus groups, addressing the gaps and specific questions identified in the quantitative findings. This linkage facilitated a more targeted analysis of the research problem, assuring consistency of qualitative results with and

in support of what was learned from the quantitative analysis (Tracy, 2024). Finally, the integration resulted in the joint interpretation of the findings. Quantitative and qualitative data were compared, contrasted and synthesised in order to gain a holistic understanding of the relationship of mental health and accident prevention studies (Lawn, 2020). A more nuanced analysis was made possible through this joint interpretation, combining the generality of quantitative data with the detail in context of qualitative.

3.5.2 Data Triangulation

Demonstrating the role of data triangulation in the integration process was essential for validating the reliability of the findings (Santos et al., 2020). Triangulation refers to the use of data sources, methods, or perspectives from two or more sources to cross-check findings and ensure that conclusions are robust and credible. The method employed triangulation by utilising different data collection methods in each phase, pairing quantitative and qualitative data. In the quantitative phase, Donkoh and Mensah (2023) achieved data triangulation by integrating primary and secondary data sources. Primary data was obtained through surveys and questionnaires, while secondary data was sourced from existing reports and databases on workplace accidents and mental health within the construction industry. This combination of data sources provided a more comprehensive approach to addressing the research problem.

In the qualitative phase, triangulation was done through multiple data collection methods, including semi structured interviews and focus groups. The difference between these methods is that they brought about a different perspective of the same issue creating a space for a more enriched understanding of how factors contribute to mental health and safety in the construction industry. Firstly, interviews with construction workers provided individual perspectives, while secondly, focus groups clarified group dynamics and highlighted similarities in experiences. Triangulation was further facilitated through the integration of quantitative and qualitative data. Comparing the results from both phases allowed the study to identify instances of convergence and divergence, thereby validating the results and achieving a deeper insight into the research problem (Baumer et al., 2017). For example, if the quantitative and qualitative data supported a very strong relationship between mental health and accident rates, the convergence validated the results. Instead, we explored further

discrepancies between the two datasets to understand the underlying reason(s) for these discrepancies and to offer a more balanced interpretation.

3.5.3 Analysis of Quantitative and Qualitative Findings

The statistical methods were applied on quantitative findings, showing the patterns, relationships and trends in data. Descriptive statistics were used to summarise the data followed by the use of inferential statistics; correlation and regression analysis to explore mental health indicators relationships with safety outcomes. The analysis led to an overview of the problem of research, and important variables and their interactions. Qualitative findings were thematically analysed where contrasting patterns and themes in the interview and focus group data were extracted and coded (Castleberry 2018 and Nolen 2018). It facilitated an in-depth exploration of the context and drivers of mental health and safety within the construction industry. For instance, qualitative data indicated that work culture, job insecurity, and a lack of Employers support were common factors contributing to mental health problems prevalent in the construction workplace. These findings complemented the quantitative results in providing a more well-grounded, nuanced picture of the research problem.

The resultant analysis was more complete involving the integration of the quantitative and qualitative findings. The quantitative data represented a global overarching overview of the relationships between mental health and safety outcomes, and the qualitative data explained what these relationships actually mean. Quantitative data may indicate that workers with higher stress levels are more likely to experience accidents, while qualitative data could reveal that this correlation results from excessive working hours with insufficient breaks and a lack of communication between employees and management.

3.5.4 Interpretation of Findings

Interpretation of the outcomes was made by synthesising the results from both phases, to understand the whole picture of the relationship between mental health and accident prevention in the construction industry. Moreover, the quantitative findings gave an overall view on the research problem indicating some key variables and their connections (Mohajan, 2020). For instance, the results from statistical analysis indicated that workplace accident probability increases proportionately for workers

who are under more stress and anxiety, which is an indication of high connection between mental wellbeing and health outcomes at the workplace. But the qualitative findings helped better understand the context in which these relationships occurred. For example, interviews and focus groups indicated that work culture plays a crucial role in shaping workers' mental health and safety behaviours. Participants noted that many workers were overwhelmed by tight deadlines and a 'macho' culture that discouraged them from seeking help, resulting in long working hours and the omission of breaks (Maslach and Leiter, 2022). These findings emphasised how important it is to tackle workplace culture and support systems for workers.

The results of this study provided a more nuanced understanding of the research problem. For instance, quantitative data clearly correlated mental health with accident rates; however, qualitative data suggested that this correlation was not straightforward, revealing a number of contributing factors such as workplace culture, job insecurity, and lack of Employers support. The suggested interpretation was that for mental health and safety outcomes for the construction workforce to improve that change would need to be multifaceted, including both the individual and the organisation (Schulte et al., 2019). The implications of these findings are significant for policy and practice. Construction companies were found to require the implementation of mental health interventions, such as stress management programs, counselling services, and mental health awareness training (Chan et al., 2020). Additionally, the importance of creating a supportive work environment was emphasised, where employees feel comfortable seeking help and where more time is dedicated to wellness initiatives. Based on this the integrated findings offers a broad insight of the research problem and the causes.

This study ultimately combined the quantitative and qualitative results to achieve a robust and comprehensive understanding of the link between mental health and accident prevention in the construction industry. The generality of the quantitative data, along with the depth and context provided by the qualitative data, was utilised to identify key variables, reveal interconnections among them, and suggest interventions that could enhance mental health and safety outcomes in the construction industry.

3.6 Ethical Considerations

According to Iavicoli et al. (2018), research on sensitive subjects such as healthcare and workplace safety is fully ethical and serves as the cornerstone of all

research studies. The ethical framework within which this investigation was developed includes the steps taken to obtain research ethics consent, the informed consent process, and the measures implemented to ensure participants' confidentiality and anonymity.

3.6.1 Research Ethics Approval

At the outset of the study, ethical approval was obtained from the relevant ethics committee (Borovecki et al., 2018). The ethics application included a description of the research objectives, methodology, and data collection procedures, along with an explanation of the data protection measures implemented for participants. Additionally, the application conducted a comprehensive risk assessment to identify potential ethical pitfalls and to mitigate such risks. The principles of respect for persons, beneficence, and justice were emphasised in the ethics application. Respect for persons pertains not only to treating individuals with dignity but also to ensuring that they are not treated as if they lack personhood (Brännmark, 2017). Together, the principles of justice and beneficence dictate that the benefits of the research must outweigh the harms, and that the distribution of benefits and burdens should not disproportionately favour any particular group of participants.

The research was submitted to the ethics committee to ensure that it adhered to established ethical principles and, more importantly, complied with relevant guidelines and regulations. The committee was responsible for approving the research design, participant protection measures, and data collection procedures. Additionally, the committee assessed whether the potential risks of the study were outweighed by its potential benefits for participants. If the ethics committee granted ethical approval, the research team was required to adhere to the committee's stipulations. These included obtaining informed consent from all participants, ensuring the protection of personal information and anonymity, and preventing harm to participants (Ross et al., 2018).

3.6.2 Informed Consent Process

Ethical research is a process in which informed consent is linked to participants' understanding of the nature of the study, their rights, and the associated risks and benefits of participation. For this study, the informed consent process was designed to be transparent, holistic, and accessible to all participants. Each participant was

informed about the purpose of the research, the procedures they would undergo, the potential benefits and risks, and their rights (Kang and Hwang, 2021). The information sheet was written in clear and straightforward language to ensure that participants could easily comprehend the content. Participants were encouraged to ask questions until they felt comfortable providing consent. The research team was available to address any inquiries or provide additional information. Furthermore, participants were informed that their participation was voluntary and that they could withdraw from the study at any time without any negative consequences.

Participants were provided with the information sheet and had their questions addressed before signing the consent form. The information sheet was retained by the participant, while the consent form reiterated the key points outlined in the information sheet, confirming that the participant understood the information and wished to participate in the study. For participants who were unable to read or write, the consent form was read aloud, and verbal consent was obtained in the presence of witnesses (Rock, 2020). In addition to obtaining consent at the beginning of the study, the researchers ensured that participants were reminded of their rights throughout the research process. Participants were also informed that they could withdraw from the study at any time and that their data would be removed if they chose to do so. By continually reinforcing the need for ongoing consent, participants were able to remain comfortable with their involvement and fully informed about the study.

3.6.3 Confidentiality and Anonymity

Confidentiality and anonymity are critical ethical considerations in research, particularly when the subject matter is sensitive, such as mental health (Lancaster, 2017). Measures were implemented to protect the anonymity and confidentiality of participants. The data collected in the study was stored securely and was accessible only to authorised members of the research team during the study. Data were recorded electronically on password-protected computers and in locked filing cabinets (Kassab et al., 2017). Access to the data was restricted to individuals directly involved in the project. All identifying information was removed from the dataset to safeguard participants' anonymity. Participants were assigned unique identifying codes, which were used in place of names or other identifying information in all research records. This approach ensured that it was impossible to link the data to specific participants.

The findings were reported without including any identifying information. The report utilised quotes and examples, but all participants remained anonymous. In cases where a participant made a statement during their interview, their name was replaced with a generic identifier (e.g., “Participant 12”) instead of using the participant's actual name. The research team also ensured that confidentiality was maintained during data collection. For example, interviews and focus groups were conducted in private settings, allowing participants to speak freely without the risk of being overheard. Participants were informed that the results would not be shared with anyone else and that their participation would not be disclosed to their employer or colleagues.

3.6.4 Participant Protection Measures

An ethical principle in research is to protect participants from harm (Ross et al., 2018). Several measures were implemented in this study to safeguard participants throughout the research process. One of the key measures was the careful design of research procedures to minimise any potential risks to participants (Jacobsen, 2020). Before commencing the study, the researcher conducted a thorough risk assessment to identify potential risks and develop strategies to mitigate them. Given the sensitive nature of the topic, the researcher anticipated that some participants might experience distress when discussing mental health issues. To address this concern, a trained Mental Health First Aider was always present (i.e. the Researcher) to provide support as needed (Frank, 2020).

Participants were informed about the support available should they experience distress as a result of the study. This information included contact details for mental health helplines, counselling services, support organisations, and other resources. Participants were encouraged to reach out to the researchers at any time during or after the study if they felt overwhelmed or distressed. In addition to these measures, the researcher navigated the complexities of being both an insider researcher and, at times, a client representative. This dual role necessitated a heightened awareness of potential biases and conflicts of interest. To mitigate these challenges, the researcher maintained transparency with participants about their dual role, ensuring that participants understood the context of the research and felt comfortable expressing their views without fear of repercussions. The researcher also established clear boundaries between their responsibilities as a client representative and their role as a

researcher, reinforcing that participation in the study was voluntary and would not impact participants' professional standing or relationships with their employers.

The research team also took extensive measures to ensure participants' safety from physical harm. For instance, during site visits to construction locations, the researcher wore appropriate protective gear and adhered to all safety protocols (Ammad et al., 2020). They were also instructed to follow safety procedures while collecting data. To protect participants from any potential negative consequences resulting from their participation in this research, the researcher implemented several protective measures. For example, it was assured that participation would not affect participants' status at their workplaces or with their employers. The researcher collaborated closely with employers to delineate the distinction between participation in the study and the participants' professional responsibilities, ensuring that involvement in the study would not result in any penalties and that confidentiality would be maintained (Kelliher et al., 2019).

By addressing the complexities of insider research and client representation, the study aimed to uphold the highest ethical standards while ensuring that participants felt safe and supported throughout the research process.

3.7 Limitations and Delimitations

Each research study has its own limitations and delimitations that define its scope, methodology, and findings. Being aware of these limitations and delimitations is essential for understanding what the study can and cannot address (Miles, 2019). This section addresses the limitations and delimitations of this research, specifically the challenges encountered during the study and the boundaries that delineated its scope.

3.7.1 Identification of Limitation

Factors that may affect validity, reliability or generality of research findings are said to be limitations. Often, these limitations are beyond the control of the researcher and must be recognised in presenting a well balanced representation of the results. Methodological limitations, sample related difficulties, and issues pertaining to the collection and analysis of the data were identified as a few limitations in this study (Theofanidis and Fountouki, 2018).

1. Methodological Limitations:

The use of an explanatory sequential mixed-methods design represents one of the primary methodological limitations of this study. While this method combines quantitative and qualitative data, it does not eliminate the associated challenges. For instance, the sequential nature of the design means that the results of the quantitative phase significantly influence the qualitative phase (Hong et al., 2017). If the quantitative data are incomplete or lack sufficient depth, the qualitative component may not contribute meaningfully to generating insights. Additionally, integrating quantitative and qualitative data can be challenging and must be executed in a manner that yields complementary rather than contradictory findings (Brannen, 2017). A second limitation of this method is the reliance on self-reported data throughout both the quantitative and qualitative phases. In the quantitative phase, survey results and questionnaires were collected in which participants were asked to provide information about mental health and workplace safety. As with any data collection method, self-reported data has its limitations. One such limitation is social desirability bias, where participants may respond in ways they believe are socially acceptable rather than providing truthful answers. In both the quantitative and qualitative phases, interviews and focus groups depended on subjective accounts based on participants' perceptions and recollections of their experiences (Signorell et al., 2021). Data collected under these biases may not be accurate or reliable.

2. Sample-Related Limitations:

There are limitations in both the study sample and composition. Although we expanded our recruitment efforts to include a diverse and representative sample of construction managers and workers, our sample size likely did not capture the full range of experiences and perspectives within the construction industry. For instance, the representation of certain groups, such as female construction workers or employees from specific ethnic backgrounds, was lower in the sample. However, it may prevent the generality of the results to these groups. Furthermore, the study relied on a voluntary participation, which might have biassed selection. According to Harvey et al., (2017), People who take part in the study may have been more likely to do so because they had an interest in mental health or in workplace safety, for example, and

thus differ from those who did not. This may skew the sample's representativeness and generality of the results.

3. Data Collection and Analysis Limitations:

Collection of data in the construction industry was difficult. Construction sites are highly dynamic and fast moving places making it difficult to fit interviews or focus groups around work activities. It limited the length of time available to collect data and may have limited the depth of data obtained. Some participants may have been reluctant to discuss sensitive topics such as mental health or industrial accidents due to concerns about confidentiality or potential repercussions from their employers (Toth et al., 2022). Limitations related to data analysis were encountered in the integration of quantitative and qualitative data. However, the mixed methods approach not only provided a satisfactory understanding of the research problem but also required a systematic integration of findings from both phases, ensuring that this process did not adversely affect the study's integrity. Additionally, the coding and thematic analysis of the qualitative data were time-consuming and required significant effort (Deterding and Waters, 2021).

4. External Validity Limitations:

Another limitation is that the findings cannot be generalised. The study was carried out within the context of the UK construction industry, that has its own unique culture, regulation and operational characteristics. The findings may have implications for comparable contexts but may well not be applicable to other industries or countries with dissimilar workplace cultures, safety regulations, or mental health support systems. This restricts the external validity of this study, and the results have to be used with caution in other settings.

3.7.2 Scope and Boundaries of the Study

The researcher sets the boundaries for the study so that they can delimit the study's scope (Akanle et al., 2020). An intentional aspect of these boundaries is to provide limits to keep the research within scope and manageable. The delimitations that were established in this study have guided the research process and define its scope.

1. Focus on the Construction Industry:

They narrowed their study to the construction industry, which is known for its high rates of work place accidents and mental health challenges. This focus did yield a detailed examination of the relation between accident prevention and mental health within this context, but it is possible that the findings are not generally transferable. Here's an example: the stressors and safety problems that construction workers experience might be very different from the kinds of stressors and safety problems facing office workers or healthcare professionals (Mohanty et al., 2019). This decision to confine the study to the construction industry was necessary to ensure a thorough examination of the unique stressors and safety challenges faced by construction workers, which may differ significantly from those encountered by office workers or healthcare professionals.

2. Emphasis on Mental Health and Accident Prevention:

This study explored the relationship between mental health and accident prevention by examining specific observable indicators of mental health. It aimed to clarify how these indicators are connected to accident prevention, while also defining the particular aspects of mental health that were included in the analysis. However, the study limited itself to specific areas such as the impact of mental health on worker performance, the prevalence of stress-related injuries, and the effectiveness of safety training programs, as these factors are particularly pertinent to construction work safety. The study did not include other aspects of mental health, like substance abuse, or post-traumatic stress disorder (PTSD). The integration of this narrowed focus enabled a more detailed investigation, but it also came at the cost of overlooking other significant mental health issues.

3. Geographic and Temporal Boundaries:

The data were collected within the UK and the study was conducted within a particular time period. To keep the study manageable and make its findings relevant to the current UK construction industry context, this geographic and temporal delimitation was necessary. Although, this is also telling that the findings don't necessarily apply to other countries or indeed to the construction industry in the future as workplace culture, safety regulations and mental health support systems can change over time (Sorensen et al., 2021).

4. Exclusion of Certain Stakeholders:

The core focus of the study was on construction workers and managers, the primary stakeholders directly involved in workplace safety and mental health (Khan, 2023). The study did not include other stakeholders, such as regulatory bodies. However, these stakeholders are essential in shaping the construction industry, and their exclusion was necessary to narrow the size and scope of the study. As a result of this delimitation, the findings may not encompass the perspectives of all stakeholders in the construction industry, potentially limiting the completeness of the views presented on the subject.

5. Methodological Boundaries:

The delimited study used an explanatory sequential mixed methods design whereby quantitative data was collected and analysed, and then qualitative data collected. However, although this approach gave a thorough coverage of the research problem this leaves other research designs such as a purely qualitative or purely quantitative approach unexamined. The study also looks at how specific data collection techniques, including surveys, interviews, and focus groups, were used, and not how other techniques were used, such as observational studies and case studies. These methodological boundaries were required to maintain feasibility and purposefulness of the study (Flemming et al., 2019). The study concludes by highlighting the identified limitations and delimitations, which were intentionally established to focus the research scope and acknowledge areas that may require further exploration. Finally, the study focuses on the limitations that arose due to methodological constraints, sample-related issues, and challenges in data collection and analysis. The interpretation of the findings and consideration of their implications must take these limitations into account.

The boundaries of the study include geographical and temporal aspects, as well as a focus on mental health, accident prevention, and the construction industry, thereby specifying the scope and manageability of the research. Consequently, while these delimitations provide clarity and direction, they also indicate that the findings may not be fully transferable to other contexts or stakeholders (Squires et al., 2021). Drawing from these limitations and delimitations, the study provides a clear and balanced description of what has been included and excluded in this study. One can therefore interpret the findings more nuanced and recommend additional research that can fill the gaps and challenges identified in this study.

3.8 Conclusion

The methodology used in this study was explored, this chapter provides a comprehensive overview of the methodology used. An explanatory sequential mixed methods design was adopted for the study that combined quantitative and qualitative approaches to gain an overall view of the research problem. The quantitative phase involved gathering and analysing survey data to identify patterns and relationships between mental health indicators and safety outcomes. In contrast, the qualitative phase, conducted through interviews and focus groups, provided more detailed insights into the contextual factors influencing these relationships. In addition to ethical considerations such as informed consent, confidentiality, and the protection of participants throughout the research process, careful attention was given to maintaining the integrity of the study.

The research objectives and questions were closely aligned with the methodology and focused on investigating the impact of mental health on workplace safety, as well as the contributing factors of mental health related to workplace safety and strategies for improvement. The integration of quantitative and qualitative findings enabled the study to provide a nuanced understanding of the research problem and to connect theoretical insights with practical implications. This methodological approach not only addressed the research objectives but also highlighted the importance of employing a multifaceted strategy to enhance mental health and safety outcomes in the construction industry.

3.8.1 Transition to the Next Chapter

As we transition from the Methodology Chapter to the Results Chapter, it is essential to reflect on the rigorous processes and techniques employed to gather and analyse the data that underpin this research. The forthcoming chapter is structured to provide a comprehensive overview of the findings, beginning with an introduction that sets the context for the results presented. Following this, the quantitative results will be detailed, offering statistical insights that illuminate the patterns and trends identified in the data. This will be complemented by a section dedicated to qualitative results, which will explore the nuanced perspectives and experiences of participants. The integration of these quantitative and qualitative findings will be discussed to highlight the interplay between numerical data and personal narratives, culminating in a summary of key findings that encapsulates the core contributions of this research.

Finally, the chapter will conclude with reflections on the implications of these results, paving the way for a deeper understanding of the research questions posed at the outset.

Chapter 4: Results

4.1 Introduction

In the previous chapter, the Methodology Chapter, we looked at the research design and the various methods employed to investigate the relationship between mental health and safety incidents in the construction industry. This chapter will report results from a mixed-methods study that will examine the association between mental health problems and minor to moderate safety incidents among UK construction workers. By using questionnaire data alongside focus groups and semi-structured interviews, it will provide empirical evidence on how psychological wellbeing could relate to safety outcomes within a high-risk industry. Quantitative analyses will estimate the prevalence of mental health indicators (e.g., depression, anxiety, substance use) and incident types (e.g., slips, trips, falls, equipment misuse), while qualitative accounts will contextualise these patterns through workers' lived experiences and perceptions. Together, these strands will offer a coherent picture to inform industry practice and policy aimed at reducing risk and strengthening worker support.

4.1.1 Overview of the Results Chapter

Results are presented in two parts. First, quantitative findings from 251 questionnaires summarise sample demographics (e.g., gender, age, role/subsector), descriptive statistics on mental health indicators and incidents, and inferential tests of associations, with figures and tables highlighting key trends and statistical significance. Second, qualitative findings from focus groups and semi-structured interviews across roles and experience levels are organised into themes; stigma and cultural barriers, intergenerational differences, occupational stressors linked to incidents, constraints within mental healthcare provision, and the role of mental health awareness in improving safety, illustrated with participant quotations. The chapter concludes by integrating insights across methods to draw implications for practice and worker support systems.

4.1.2 Restatement of Research Questions

The study primarily focused on construction sector's mental health and safety concerns with particular emphasis towards high-risk environments. Thus, the following research questions were incorporated for completion of the results:

- RQ 1 - How prevalent are mental health issues, such as depression, anxiety, and substance abuse, among construction workers?
- RQ 2 - What types of mental health contribute to minor to moderate safety incidents (e.g., stress, affective distraction, and cognitive overload) are commonly reported in the construction industry?
- RQ 3 - Is there a quantifiable link between the presence of mental health issues and the occurrence of minor to moderate safety incidents among construction workers?
- RQ 4 - How can addressing mental health issues in the construction industry contribute to improved safety outcomes and reduce the incidence of minor to moderate safety incidents?

4.2 Quantitative Results

4.2.1 Descriptive Statistics

4.2.1.1 Demographic Characteristics of Participants (Frequency Table)

Table 4.1 indicates that most survey respondents were aged between 31 and 50, with 27.5% aged 31–40 and 32.3% aged 41–50, together making up nearly 60% of participants. Only 3.2% of respondents were aged 20 or below, and 15.1% were aged 21–30, resulting in a combined 18.3% of participants under the age of 31. Meanwhile, 21.9% of respondents were aged 51 or above.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20 or below	8	3.2	3.2	3.2
	21 – 30	38	15.1	15.1	18.3
	31 – 40	69	27.5	27.5	45.8
	41 – 50	81	32.3	32.3	78.1
	51 or above	55	21.9	21.9	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.2 What is your age?

Table 4.2 illustrated that the majority of respondents, 84.4% reported they were male, 11.55% reported they were female, 1.59% reported they were non-binary and 2.39% preferred not to state their gender identity. It indicates an accepting group where individuals might describe and view their gender in many ways.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	212	84.4	84.4	84.4
	Female	29	11.55	11.55	96.0
	Non-binary	4	1.59	1.59	97.6
	Prefer not to say	6	2.39	2.39	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.3 What is your gender?

Table 4.3 shows that the majority of respondents had completed secondary education or obtained a vocational qualification, with 21.9% having finished secondary school and 23.9% holding vocational or similar qualifications. A further 13.5% had some secondary education without completing it. Only a small proportion of respondents reported having a graduate or professional degree (4.0%), while 11.2% held a university bachelor's degree. Notably, 4.0% had only some primary education, and 7.2% had completed primary school. A modest 4.3% of participants preferred not to disclose their highest level of education. These results reflect the educational diversity often seen in the construction industry, where practical experience and vocational training play a key role.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Some Primary	10	4.0	4.0	4.0

	Completed Primary School	18	7.2	7.2	11.2
	Some Secondary	34	13.5	13.5	24.7
	Completed Secondary School	55	21.9	21.9	46.6
	Vocational or Similar	60	23.9	23.9	70.5
	Some University but no degree	25	10.0	10.0	80.5
	University Bachelor's Degree	28	11.2	11.2	91.7
	Graduate or professional degree (MA, MS, MBA, PhD, JD, MD, DDS)	10	4.0	4.0	95.7
	Prefer not to say	11	4.3	4.3	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.4 What is the highest level of education you have completed?

As shown in Table 4.4, the majority of respondents reported substantial experience within the construction industry. Specifically, 42.6% of participants indicated that they had worked in the industry for more than ten years, with an additional 21.5% reporting between seven and ten years of experience. A further 16.3% had been employed in the sector for four to six years. In contrast, only 12.4% of respondents had one to three years of experience, and a minimal proportion (7.2%) had worked in the industry for less than one year. These findings suggest that the sample was predominantly composed of individuals with significant industry tenure,

which may have implications for interpreting responses related to workplace practices, safety culture, and mental health outcomes.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1 year	18	7.2	7.2	7.2
	1 - 3 years	31	12.4	12.4	19.6
	4 - 6 years	41	16.3	16.3	35.9
	7 - 10 years	54	21.5	21.5	57.4
	More than 10 years	107	42.6	42.6	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.5 How many years have you worked in the construction industry?

Table 4.5 presents the distribution of respondents based on the type of construction work they primarily engage in. The majority reported working in either the residential (27.1%) or infrastructure (25.5%) sectors, which aligns with the significant labour demand typically seen in these areas across the UK. Commercial construction accounted for 16.7% of participants, while 14.3% were primarily involved in industrial projects. A further 16.4% indicated involvement in other forms of construction, such as utilities, rail, landscaping, or specialised contracting. This spread reflects the diverse nature of the construction industry and suggests a broad cross-section of sector-specific experiences among respondents.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Residential	68	27.1	27.1	27.1
	Commercial	42	16.7	16.7	43.8

	Industrial	36	14.3	14.3	58.1
	Infrastructure	64	25.5	25.5	83.6
	Others	41	16.4	16.4	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.6 What type of construction work do you primarily engage in?

Table 4.6 outlines the distribution of survey respondents by the size of the company they work for. The majority (43.4%) reported working in small enterprises employing between 1 and 50 individuals, reflecting the dominant role of small firms and subcontractors within the construction industry. A further 33.5% were employed by medium-sized companies (51–200 employees), while 23.1% worked for large organisations with more than 200 employees. These figures highlight the prevalence of small and medium-sized enterprises (SMEs) within the construction sector and suggest that findings from this study are particularly reflective of work environments commonly found in smaller-scale operations.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Small (1 - 50 employees)	109	43.4	43.4	43.4
	Medium (51 - 200 employees)	84	33.5	33.5	76.9
	Large (201+ employees)	58	23.1	23.1	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.7 What is the size of the company you work for?

As presented in Table 4.7, nearly half of the respondents (48.2%) reported being employed full-time over the past 12 months, indicating a stable core of consistent employment within the construction industry. An additional 16.7% were employed part-time, while 11.2% experienced temporary layoffs, a common feature in sectors subject to seasonal or contract-based fluctuations. A total of 13.1% reported being unemployed and actively seeking work, and 10.8% indicated they were unable to work due to health-related reasons. These findings reflect the variable nature of employment in construction, shaped by job availability, health, and economic conditions.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Working - Full Time	121	48.2	48.2	48.2
	Working - Part Time	42	16.7	16.7	64.2
	Temporarily laid off	28	11.2	11.2	75.4
	Unemployed and looking for work	33	13.1	13.1	88.5
	Wanting to work, but unemployed due to health related reason	27	10.8	10.8	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.8 What best describes your employment status over the last 12 months?

Table 4.8 displays the nature of current employment among the 224 respondents who reported being actively employed, excluding 27 participants who were unable to work due to health-related reasons. Among the employed group, 30.2% held permanent contracts, while 25.1% were on fixed-term contracts. Casual contracts accounted for 19.5% of respondents, and 14.3% reported working under

zero-hour arrangements. This distribution highlights the diversity of employment structures within the construction industry, where a significant portion of the workforce operates under flexible or short-term agreements. The exclusion of those unable to work due to health reasons further underscores the vulnerability of a subset of the construction workforce to occupational health issues and employment instability.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Permanent Contract	76	30.2	30.2	30.2
	Fixed Term Contract	63	25.1	25.1	55.3
	Casual Contract	49	19.5	19.5	74.8
	Zero-hour Contract	36	14.3	14.3	89.1
	Unemployed	27	10.9	10.9	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.9 What is the nature of your current employment?

Table 4.9 illustrates participants' self-reported mental health over the past month, using a scale from 1 (Very Poor) to 10 (Excellent). The largest proportion of respondents selected moderate ratings, with 15.9% indicating they were "Not Sure" and 13.5% rating their mental health as "Poor". Ratings slightly above the midpoint were also common, including "Nearly Good" (11.9%) and "Somewhat Good" (11.6%). Fewer participants selected the extreme ends of the scale, with only 7.2% rating their mental health as "Very Poor" and 5.2% describing it as "Excellent." These results suggest that the overall mental wellbeing of the sample skews slightly below average, reflecting wider concerns about stress and psychological strain in the construction workforce.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Poor (1)	18	7.2	7.2	7.2
	Somewhat poor	21	8.4	8.4	15.6
	Nearly poor	26	10.4	10.4	26.0
	Poor	34	13.5	13.5	39.5
	Not Sure (5)	40	15.9	15.9	55.4
	Nearly Good	30	11.9	11.9	67.3
	Somewhat Good	29	11.6	11.6	78.9
	Good	23	9.2	9.2	88.1
	Very Good	17	6.8	6.8	94.8
	Excellent (10)	13	5.2	5.2	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.10 Please rate your overall mental health over the past month on a scale from 1 to 10

Table 4.10 indicates that nearly half of the targeted population, specifically 45.8%, has experienced minor to moderate incidents in the workplace. The high number of incidents suggests that many workers are exposed to unsafe workplaces, highlighting the need for enhanced safety measures. It is evident that there are safety issues that can be improved to protect workers and prevent harm. Addressing these safety concerns will ensure a safer work environment. Implementing effective safety measures can significantly reduce the risk of incidents.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	115	45.8	45.8	45.8
	No	136	54.2	54.2	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.11 Have you ever been involved in any safety incidents or near-misses in the workplace that would be considered minor to moderate?

Tables 4.10 and 4.11 highlight important perceptions regarding the relationship between mental health and safety in the construction industry. When asked whether their mental health state at the time of a workplace accident may have influenced the outcome, 40.2% of respondents indicated they were unsure, while 23.1% believed it had an impact. These findings point to a notable level of uncertainty and under-recognition regarding the role of mental health in workplace safety incidents. Furthermore, table 4.10 indicated that nearly half of the targeted population, specifically 45.8%, has experienced minor to moderate incidents in the workplaces, highlighting the need for enhanced safety measures. It is evident there are safety issues that can be improved to protect workers and prevent harm, addressing these safety concerns will ensure a safer work environment.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	27	10.8	23.1	23.1
	No	42	16.7	36.7	59.8
	Unsure	46	18.3	40.2	100.0
	N/A	136	54.2	-	-
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.12 Do you think your mental health state at the time of the accident(s) may have influenced the outcome?

Table 4.12 presents participants' perceptions of the prevalence of mental health issues among construction workers. A significant majority of respondents viewed these issues as widespread, with 23.1% identifying them as "Very" prevalent and an additional 19.6% describing them as "Extremely" prevalent. Another 16.7% considered mental health issues to be "Quite" prevalent, further reinforcing the general awareness of mental health challenges within the industry. Neutral or moderate responses were reported by 12.7% and 11.9% of participants, respectively. Only a small minority perceived these issues as "Slightly" prevalent (9.6%) or "Not at all" prevalent (6.4%). These findings suggest a broad recognition of mental health concerns across the workforce, consistent with existing literature that highlights the psychological strain associated with construction work. The results underscore the need for industry-wide initiatives to address mental wellbeing as an essential component of occupational health and safety.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	16	6.4	6.4	6.4
	Slightly	24	9.6	9.6	16.0
	Moderately	30	11.9	11.9	27.9
	Neutral	32	12.7	12.7	40.6
	Quite	42	16.7	16.7	57.3
	Very	58	23.1	23.1	80.4
	Extremely	49	19.6	19.6	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.13 How prevalent do you perceive mental health issues to be among construction workers?

Table 4.13 presents participants' perceptions of how mental health issues affect the productivity and performance of construction workers. The majority of respondents believed there is a notable impact, with 20.3% stating that mental health issues affect productivity "Moderately," and a further 19.9% and 19.1% indicating "Very" and "Quite" significant impacts, respectively. Only 4.8% of participants believed mental health has no impact at all, while 8.8% reported only a slight effect. These results underscore a broad recognition of the influence mental wellbeing has on work performance in the construction industry. This widespread acknowledgement may point to growing awareness of the need to address mental health as a critical factor in workforce efficiency and safety.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	12	4.8	4.8	4.8
	Slightly	22	8.8	8.8	13.6
	Moderately	51	20.3	20.3	33.9
	Neutral	28	11.2	11.2	45.1
	Quite	48	19.1	19.1	64.2
	Very	50	19.9	19.9	84.1
	Significantly	40	15.9	15.9	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.14 How much do you think mental health issues impact the productivity and performance of construction workers?

Table 4.14 explores respondents' perceptions regarding the severity of mental health issues experienced by construction workers. A majority of participants viewed

the issue as serious, with 21.5% describing it as "Very" severe and 20.7% as "Extremely" severe. An additional 17.1% rated it as "Quite" severe, while 16.3% chose “Moderately.” Only 5.6% of respondents believed mental health concerns were not severe at all. This distribution suggests a broad recognition of the serious nature of mental health issues within the sector, reflecting increasing awareness of psychological challenges and their consequences in the construction workforce. These perceptions may also influence attitudes toward workplace safety, wellbeing programmes, and support interventions.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	14	5.6	5.6	5.6
	Slightly	25	10.0	10.0	15.6
	Moderately	41	16.3	16.3	31.9
	Neutral	22	8.8	8.8	40.7
	Quite	43	17.1	17.1	57.8
	Very	54	21.5	21.5	79.3
	Extremely	52	20.7	20.7	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.15 How severe do you consider the mental health issues experienced by construction workers?

Table 4.15 reflects respondents' perceptions of the effectiveness of mental health support programs and training initiatives in the construction industry. A large proportion of respondents viewed these efforts as only moderately effective (22.3%) or were neutral (18.3%) in their assessments. Just 17.1% believed the programs were “Quite” effective, and only a small number (6.8%) rated them as “Extremely” effective. Conversely, 10.0% indicated that the programs were “Not at all” effective, and 13.5% saw them as only “Slightly” effective. These responses suggest that while there is

some recognition of support efforts, many respondents remain uncertain or unimpressed, potentially indicating gaps in the reach, quality, or consistency of mental health interventions across the construction sector.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	25	10.0	10.0	10.0
	Slightly	34	13.5	13.5	23.5
	Moderately	56	22.3	22.3	45.8
	Neutral	46	18.3	18.3	64.1
	Quite	43	17.1	17.1	81.2
	Very	30	12.0	12.0	93.2
	Extremely	17	6.8	6.8	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.16 How effective do you think mental health support programs and training initiatives are in addressing mental health issues in the construction industry?

Table 4.16 explores perceptions of how strongly work-related factors, such as stress, long hours, and demanding physical labour contribute to mental health issues within the construction industry. A significant majority of respondents recognised the role of these stressors, with 21.9% indicating they contribute “Very” strongly and a further 20.7% selecting “Moderately.” In total, 57.7% of responses fell in the “Quite” to “Significantly” range, underscoring strong agreement with the connection between occupational demands and psychological wellbeing. Only 4.0% of participants believed these factors had no influence at all. These findings highlight the perceived centrality of work-related stressors in shaping mental health outcomes and reinforce the need for systemic changes in working conditions to support mental wellbeing in construction.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	10	4.0	4.0	4.0
	Slightly	18	7.2	7.2	11.2
	Moderately	52	20.7	20.7	31.9
	Neutral	26	10.4	10.4	42.3
	Quite	48	19.1	19.1	61.4
	Very	55	21.9	21.9	83.3
	Significantly	42	16.7	16.7	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.17 How much do you think work-related factors (like stress or long hours) contribute to the prevalence of mental health issues in the construction industry?

Table 4.17 outlines the level of satisfaction construction workers expressed regarding the mental health support provided by their employers. The majority of responses fell on the lower end of the satisfaction spectrum, with 23.1% of participants reporting they were “Not at all” satisfied, and a further 17.5% selecting “Slightly.” An additional 18.7% indicated only “Moderate” satisfaction. Just 6.8% of respondents said they were “Very” satisfied, and only 4.0% reported being “Extremely” satisfied. These figures reflect a general dissatisfaction with the availability or quality of employer-provided mental health resources in the construction sector. The results suggest a clear need for more accessible, visible, and effective mental health initiatives tailored to the specific pressures of the construction environment.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	58	23.1	23.1	23.1
	Slightly	44	17.5	17.5	40.6
	Moderately	47	18.7	18.7	59.3
	Neutral	45	17.9	17.9	77.2
	Quite	30	12.0	12.0	89.2
	Very	17	6.8	6.8	96.0
	Extremely	10	4.0	4.0	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.18 How satisfied are construction workers with the mental health support provided by their companies?

Table 4.18 examines respondents' views on the extent to which work-related stressors, such as long hours and high job demands, contribute to mental health issues among construction workers. A significant proportion of participants perceived these factors to have a strong impact, with 22.3% rating them as "Very" influential and 20.7% choosing "Quite." An additional 18.3% considered the effect to be "Moderate," while only 3.6% felt these stressors had no influence at all. These results highlight the widespread recognition of the demanding nature of construction work and its psychological toll. The findings reinforce the case for structural changes to workload management, scheduling practices, and job expectations within the industry.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	9	3.6	3.6	3.6
	Slightly	16	6.4	6.4	10.0

	Moderately	46	18.3	18.3	28.3
	Neutral	25	10.0	10.0	38.3
	Quite	52	20.7	20.7	59.0
	Very	56	22.3	22.3	81.3
	Extremely	47	18.7	18.7	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.19 How much do you think work-related stressors, including long hours and high job demands, contribute to mental health issues among construction workers?

Table 4.19 examines the extent to which construction workers believe that a lack of job control and poor supervisor support contribute to mental health issues. A significant proportion of participants attributed high impact to these factors, with 20.3% rating them as “Very” influential and 19.5% selecting “Quite.” A further 17.9% considered the impact to be “Moderate.” Only 7.2% of respondents believed these issues had no influence at all. These findings align with occupational research that links low autonomy and weak leadership to increased stress and psychological strain. The data suggest that improving managerial support and offering workers more control over their tasks could be key strategies in addressing mental health risks within the construction industry.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	18	7.2	7.2	7.2
	Slightly	23	9.2	9.2	16.4
	Moderately	45	17.9	17.9	34.3
	Neutral	29	11.6	11.6	45.9

	Quite	49	19.5	19.5	65.4
	Very	51	20.3	20.3	85.7
	Extremely	36	14.3	14.3	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.20 How much do you think lack of job control and poor supervisor support contribute to mental health issues among construction workers?

Table 4.20 explores how respondents view the influence of social support from colleagues on mental health in the construction sector. A substantial majority saw it as a significant factor, with 23.1% rating its absence as “Quite” influential, 21.5% as “Moderately,” and 18.3% as “Very.” Just 4.8% believed it had no impact at all. These results suggest that workers strongly associate social connectedness with emotional wellbeing on site. Given the isolating nature of many construction roles, especially for subcontractors or temporary workers, these findings highlight the value of peer support systems and positive work cultures in promoting mental health and reducing psychological strain.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	12	4.8	4.8	4.8
	Slightly	19	7.6	7.6	12.4
	Moderately	54	21.5	21.5	33.9
	Neutral	26	10.4	10.4	44.3
	Quite	58	23.1	23.1	67.4
	Very	46	18.3	18.3	85.7
	Extremely	36	14.3	14.3	100.0

	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.21 How influential do you believe lack of social support from colleagues is in contributing to mental health issues in the construction industry?

Table 4.21 presents participants' views on how significantly work-life imbalance contributes to mental health challenges in the construction sector. The majority of respondents perceived work-life imbalance to be a key factor, with 21.9% rating its impact as "Very" influential, 20.7% selecting "Quite," and 18.3% identifying it as "Extremely" influential. Only a small minority (4.0%) believed it had no influence at all. These results suggest that construction workers view long hours, limited downtime, and poor separation between work and personal life as critical stressors. The findings underscore the need for industry reforms that promote more sustainable working patterns to improve overall mental wellbeing.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	10	4.0	4.0	4.0
	Slightly	17	6.8	6.8	10.8
	Moderately	46	18.3	18.3	29.1
	Neutral	25	10.0	10.0	39.1
	Quite	52	20.7	20.7	59.8
	Very	55	21.9	21.9	81.7
	Extremely	46	18.3	18.3	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.22 How influential do you believe work-life imbalance is in contributing to mental health issues among construction workers?

Table 4.22 investigates how strongly workers believe that exposure to physical dangers on construction sites contributes to mental health issues. Most respondents acknowledged a notable link, with 21.1% selecting “Quite,” 20.7% “Very,” and 17.1% “Extremely.” Only a small fraction (5.6%) reported no influence. These findings reflect a clear understanding among workers that the constant risk of physical harm, such as falls, machinery accidents, or hazardous environments, can contribute significantly to anxiety, stress, and long-term psychological strain. This aligns with literature that ties physical safety concerns to heightened mental health risks in high-risk occupations like construction.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	14	5.6	5.6	5.6
	Slightly	19	7.6	7.6	13.2
	Moderately	48	19.1	19.1	32.3
	Neutral	22	8.8	8.8	41.1
	Quite	53	21.1	21.1	62.2
	Very	52	20.7	20.7	82.9
	Extremely	43	17.1	17.1	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.23 How much do you think being exposed to physical dangers at work contributes to mental health issues in the construction industry?

Table 4.23 outlines how respondents perceive the influence of workplace culture and support systems on mental health in the construction industry. Most

respondents recognised a strong connection, with 21.5% rating the impact as “Quite” influential, 21.1% as “Very,” and 15.9% as “Extremely.” Only 4.0% believed workplace culture had no impact. These results reinforce the widely supported view that the presence (or absence) of inclusive, communicative, and psychologically safe work environments has a substantial effect on mental wellbeing. In industries such as construction, where mental health stigma and isolation can be prevalent, organisational support structures are especially critical in promoting positive outcomes. These findings point out that it is important for construction companies to encourage strong work cultures and adequate support programs to help manage mental health problems.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	10	4.0	4.0	4.0
	Slightly	18	7.2	7.2	11.2
	Moderately	52	20.7	20.7	31.9
	Neutral	24	9.6	9.6	41.5
	Quite	54	21.5	21.5	63.0
	Very	53	21.1	21.1	84.1
	Extremely	40	15.9	15.9	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.24 How influential do you believe workplace culture and support systems are in contributing to mental health issues among construction workers?

Table 4.24 reveals how respondents perceive the influence of stigma and lack of mental health awareness within the construction industry. A significant majority believed these factors play a critical role in contributing to mental health issues, with 23.1% rating the impact as “Very” and 18.3% as “Extremely” influential. A further

20.7% selected “Quite” influential. Only a small minority (3.6%) reported that stigma and lack of understanding had no impact. These findings align with existing literature which highlights stigma as a persistent barrier to mental health disclosure and support-seeking, particularly in male-dominated and high-risk fields like construction. The data reinforce the urgency of normalising mental health discussions and improving psychological literacy across all levels of the construction workforce. It agrees with experts who found that people can be put off from seeking support because of stigma which can lead to more mental health issues in construction.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	9	3.6	3.6	3.6
	Slightly	17	6.8	6.8	10.4
	Moderately	48	19.1	19.1	29.5
	Neutral	21	8.4	8.4	37.9
	Quite	52	20.7	20.7	58.6
	Very	58	23.1	23.1	81.7
	Extremely	46	18.3	18.3	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.25 How much do you think stigma and lack of understanding about mental health contribute to mental health issues in the construction industry?

Table 4.25 reflects participants’ views on how significantly mental health issues contribute to safety incidents in the construction industry. The majority of respondents acknowledged a clear relationship, with 21.5% rating the impact as “Very” and 20.7% as “Quite” influential. An additional 18.7% identified a “Moderate” impact. Only 4.8% believed mental health issues do not influence safety at all. These results reinforce the importance of addressing mental wellbeing as a core component of occupational

safety. As such, integrating mental health into safety protocols may be key to improving both personal and operational outcomes in the construction sector. Available research agrees that reduced attention, trouble making decisions and unusual risk perception by someone with mental health challenges could make workplace hazards more likely. Dealing with mental health issues in construction could make the work safer and support combined mental health and safety efforts.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	12	4.8	4.8	4.8
	Slightly	17	6.8	6.8	11.6
	Moderately	47	18.7	18.7	30.3
	Neutral	23	9.2	9.2	39.5
	Quite	52	20.7	20.7	60.2
	Very	54	21.5	21.5	81.7
	Strongly	46	18.3	18.3	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.26 How much do you think mental health issues contribute to safety incidents in the construction industry?

Table 4.26 summarises perceptions of how mental health issues influence the likelihood of human errors that may lead to safety incidents in construction. The data indicate broad awareness of the link, with 21.5% of respondents rating the influence as “Quite,” and another 21.1% as “Very.” A further 19.5% chose “Moderately,” while only 4.0% of participants believed there was no connection at all. This pattern highlights a growing recognition of the psychological components underlying workplace safety. As mental health problems can impair concentration, memory, and decision-making, these findings support the argument that mental wellbeing should be treated as a core element of safety management strategies in the industry. It is

important for the industry to focus on prevention and intervention for reducing such mental health concerns. Supporting mental health at work could improve safety and lessen incidents, according to research showing the link between mental health and how safely people manage their work.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	10	4.0	4.0	4.0
	Slightly	19	7.6	7.6	11.6
	Moderately	49	19.5	19.5	31.1
	Neutral	24	9.6	9.6	40.7
	Quite	54	21.5	21.5	62.2
	Very	53	21.1	21.1	83.3
	Significantly	42	16.7	16.7	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.27 How much do you think mental health issues lead to human errors that cause safety incidents in the construction industry?

Table 4.27 highlights how respondents perceive the influence of mental health issues on workers' cognitive performance, including focus, decision-making, and coordination, and the resulting risk of safety incidents. A clear majority recognised a strong connection, with 21.5% rating the influence as "Quite," 21.1% as "Very," and 17.9% as "Significant." Only 4.0% believed there was no impact. These findings align closely with established research, which shows that impaired mental health can compromise situational awareness and cognitive function, increasing the risk of accidents in high-demand environments like construction. The data further validate the argument that psychological wellbeing should be embedded into health and safety strategies across the industry. The combined data points out the importance of managing mental health to achieve higher safety and greater productivity and is

consistent with research that caring for mental wellness is essential for good work performance. Handling these topics correctly can keep the construction sector safe and reduce the chance of accidents.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	10	4.0	4.0	4.0
	Slightly	18	7.2	7.2	11.2
	Moderately	49	19.5	19.5	30.7
	Neutral	22	8.8	8.8	39.5
	Quite	54	21.5	21.5	61.0
	Very	53	21.1	21.1	82.1
	Significantly	45	17.9	17.9	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.28 How much do you think mental health issues affect workers' focus, decision-making, and coordination, leading to safety incidents in the construction industry?

The data in the table 4.28 investigates the perceived influence of mental health issues on workers' communication and teamwork, and their connection to safety incidents in the construction industry. Most respondents recognised a strong relationship, with 22.3% indicating the influence was "Very" significant, 20.7% choosing "Quite," and 17.5% identifying it as "Significant." Only 4.4% believed there was no influence. These findings highlight how psychological distress can disrupt interpersonal interactions, reduce cooperation, and impair the clarity of safety-related messaging. The data further reinforce the view that fostering psychological wellbeing is essential not only for individual health, but also for safe team dynamics on construction sites. Studies showed that mental health can shape communication and work as a team in the workplace which may impact safety.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	11	4.4	4.4	4.4
	Slightly	18	7.2	7.2	11.6
	Moderately	48	19.1	19.1	30.7
	Neutral	22	8.8	8.8	39.5
	Quite	52	20.7	20.7	60.2
	Very	56	22.3	22.3	82.5
	Significantly	44	17.5	17.5	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.29 How much do you believe mental health issues impact workers' communication and teamwork, leading to safety incidents in the construction industry?

Table 4.29 captures respondents' views on the influence of mental health issues on workers' situational awareness and its potential link to safety incidents in the construction industry. The results show that a strong majority of participants recognised this connection, with 22.3% indicating the influence was "Very" significant, 20.7% stating "Quite," and 19.5% choosing "Moderately." Only 4.4% believed mental health had no influence on situational awareness. These findings align with cognitive safety research, which demonstrates that mental health conditions such as stress, anxiety, and depression can impair a worker's ability to perceive, interpret, and respond effectively to their environment, a particularly dangerous limitation in high-risk sectors such as construction. On the whole, the data points out that many people notice a link between mental health and their awareness of their surroundings.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	11	4.4	4.4	4.4
	Slightly	15	6.0	6.0	10.4
	Moderately	49	19.5	19.5	29.9
	Neutral	21	8.4	8.4	38.3
	Quite	52	20.7	20.7	59.0
	Very	56	22.3	22.3	81.3
	Significantly	47	18.7	18.7	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.30 How much do you believe mental health issues impact workers' situational awareness, leading to safety incidents in the construction industry?

Table 4.30 illustrates participant beliefs about the extent to which improving mental health could reduce safety incidents in the construction industry. The overwhelming majority perceived a meaningful connection, with 23.1% selecting “Very,” 21.1% choosing “Quite,” and 20.3% identifying improvement as “Significantly” influential. Only 3.6% believed that enhancing mental health would not impact safety outcomes. These responses affirm the view that psychological wellbeing directly influences attention, fatigue levels, stress response, and interpersonal coordination, all of which are fundamental to site safety. This reinforces the importance of embedding mental health support in broader safety strategies across construction workforces.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	9	3.6	3.6	3.6
	Slightly	14	5.6	5.6	9.2
	Moderately	46	18.3	18.3	27.5
	Neutral	20	8.0	8.0	35.5
	Quite	53	21.1	21.1	56.6
	Very	58	23.1	23.1	79.7
	Significantly	51	20.3	20.3	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.31 How much do you think improving mental health can help reduce safety incidents in the construction industry?

Table 4.31 explores perceptions of how effective mental health support programs are in reducing safety incidents within the construction industry. The majority of participants expressed confidence in their effectiveness, with 21.9% rating them as “Very” effective and a further 20.3% identifying them as “Quite” effective. Only 4.4% believed these programs had no influence. These findings indicate a clear recognition of the link between psychological wellbeing and safer working environments. Programs that promote mental health are viewed not only as valuable for individual wellbeing but also as critical components of organisational safety strategies. Their perceived effectiveness may be further enhanced through structured implementation, managerial involvement, and targeted awareness campaigns.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	11	4.4	4.4	4.4

	Slightly	17	6.8	6.8	11.2
	Moderately	47	18.7	18.7	29.9
	Neutral	26	10.4	10.4	40.3
	Quite	51	20.3	20.3	60.6
	Very	55	21.9	21.9	82.5
	Extremely	44	17.5	17.5	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.32 How effective do you believe mental health support programs are in reducing the occurrence of safety incidents in the construction industry?

Table 4.32 presents participants' views on the effectiveness of stress management and work-life balance initiatives in supporting mental health and reducing safety incidents. A strong majority rated these initiatives as beneficial, with 23.1% selecting "Very" effective, 21.5% "Quite," and 19.1% "Extremely". Only 4.0% saw no benefit. These findings reflect a growing awareness that mental strain caused by overwork, poor rest, and unmanaged stress can compromise both wellbeing and situational performance. Interventions aimed at improving balance and reducing burnout are thus not only wellness tools but also core components of effective health and safety frameworks in construction.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	10	4.0	4.0	4.0
	Slightly	15	6.0	6.0	10.
	Moderately	46	18.3	18.3	28.3

	Neutral	20	8.0	8.0	36.3
	Quite	54	21.5	21.5	57.8
	Very	58	23.1	23.1	80.9
	Extremely	48	19.1	19.1	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.33 How effective do you think stress management and work-life balance initiatives are in promoting mental health and preventing safety incidents in the construction industry?

Table 4.33 outlines perceptions of the effectiveness of mental health awareness and training programs in supporting wellbeing and reducing safety incidents in the construction industry. The majority of respondents expressed confidence in these initiatives, with 22.7% rating them as “Extremely” effective, 22.3% as “Very,” and 19.5% as “Quite.” Only 4.0% reported that they believed these programs had no influence. These results support the growing consensus that education and awareness are fundamental for cultural change in high-risk sectors.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	10	4.0	4.0	4.0
	Slightly	16	6.4	6.4	10.4
	Moderately	43	17.1	17.1	27.5
	Neutral	20	8.0	8.0	35.5
	Quite	49	19.5	19.5	55.0
	Very	56	22.3	22.3	77.3
	Extremely	57	22.7	22.7	100.0

	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.34 How effective do you think mental health awareness and training programs are in promoting mental health and preventing safety incidents in the construction industry?

Table 4.34 presents respondents' perceptions of the effectiveness of safety policies and procedures in promoting mental health and preventing incidents within the construction industry. A strong majority found these frameworks to be beneficial, with 23.1% rating them "Very" effective, 21.1% "Quite," and 21.9% "Extremely." Only a small proportion (3.2%) felt these policies had no effect.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	8	3.2	3.2	3.2
	Slightly	13	5.2	5.2	8.4
	Moderately	45	17.9	17.9	26.3
	Neutral	19	7.6	7.6	33.9
	Quite	53	21.1	21.1	55.0
	Very	58	23.1	23.1	78.1
	Extremely	55	21.9	21.9	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.35 How effective do you think safety policies and procedures are in promoting mental health and preventing incidents in the construction industry?

Table 4.35 presents respondents' views on the impact of a supportive work environment in promoting mental health and preventing safety incidents among construction workers. An overwhelming majority indicated strong support for this link, with 24.3% rating the impact as "Very" significant, 23.9% as "Extremely," and 20.7%

as “Quite.” Only 2.4% believed there was no effect. These results reinforce current best practice literature, which highlights the role of team dynamics, inclusive leadership, and workplace culture in reducing psychological risk.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	6	2.4	2.4	2.4
	Slightly	12	4.8	4.8	7.2
	Moderately	42	16.7	16.7	23.9
	Neutral	18	7.2	7.2	31.1
	Quite	52	20.7	20.7	51.8
	Very	61	24.3	24.3	76.1
	Extremely	60	23.9	23.9	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.36 How much do you think a supportive work environment helps promote mental health and prevent safety incidents among construction workers?

Table 4.36 explores participants’ views on the feasibility of implementing regular mental health screenings in the construction industry as a means to promote mental wellbeing and reduce safety incidents. A majority supported the idea to varying degrees, with 21.5% indicating it was “Quite” feasible, 20.3% selecting “Very,” and 19.1% rating it as “Moderately” feasible. Only 5.6% viewed the approach as unfeasible. These responses reflect a recognition of the potential value of routine psychological assessments, while also hinting at the practical considerations (e.g., time constraints, costs, privacy) that may limit uptake.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	14	5.6	5.6	5.6
	Slightly	20	8.0	8.0	13.6
	Moderately	48	19.1	19.1	32.7
	Neutral	34	13.5	13.5	46.2
	Quite	54	21.5	21.5	67.7
	Very	51	20.3	20.3	88.0
	Highly	30	12.0	12.0	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.37 How feasible do you believe it is to implement regular mental health screenings for construction workers as a strategy for promoting mental health and preventing safety incidents?

Table 4.37 presents participants' perceptions regarding the effectiveness of confidential counselling services in promoting mental health and preventing safety incidents within the construction industry. A significant proportion of respondents viewed these services favourably, with 25.1% rating them as "Extremely" effective and 22.7% as "Very" effective. Only 3.6% felt they had no impact. These findings underscore the importance of accessible and private mental health interventions in high-risk workplaces.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	9	3.6	3.6	3.6
	Slightly	14	5.6	5.6	9.2

	Moderately	39	15.5	15.5	24.7
	Neutral	21	8.4	8.4	33.1
	Quite	48	19.1	19.1	52.2
	Very	57	22.7	22.7	74.9
	Extremely	63	25.1	25.1	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.38 How effective do you believe providing access to confidential counselling services is in promoting mental health and preventing safety incidents in the construction industry?

Table 4.38 captures participants' views on the role of leadership and management in driving effective mental health initiatives and reducing safety incidents in the construction industry. The majority of respondents endorsed a strong link, with 25.1% rating leadership support as "Extremely" effective and 23.9% as "Very" effective. Only 4.0% believed leadership played no role. These findings reinforce existing research suggesting that management commitment is a key predictor of program success, particularly in high-risk sectors like construction.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	10	4.0	4.0	4.0
	Slightly	16	6.4	6.4	10.4
	Moderately	37	14.7	14.7	25.1
	Neutral	21	8.4	8.4	33.5
	Quite	44	17.5	17.5	51.0
	Very	60	23.9	23.9	74.9

	Extremely	63	25.1	25.1	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.39 How effective do you believe fostering strong leadership and management support for mental health initiatives is in promoting mental health and preventing safety incidents among construction workers?

Table 4.39 reflects respondents' perceptions of the effectiveness of peer support programs in promoting mental health and reducing safety incidents in the construction industry. The majority of participants responded positively, with 21.1% selecting "Very" effective and 20.3% "Extremely" effective. Only 5.2% believed such programs were not effective at all. These findings support the growing consensus that peer-led interventions, due to their relatability, trustworthiness, and accessibility, can significantly reduce stigma and foster early intervention.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	13	5.2	5.2	5.2
	Slightly	17	6.8	6.8	12.0
	Moderately	42	16.7	16.7	28.7
	Neutral	27	10.8	10.8	39.5
	Quite	48	19.1	19.1	58.6
	Very	53	21.1	21.1	79.7
	Extremely	51	20.3	20.3	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.40 How effective do you believe implementing peer support programs is in promoting mental health and preventing safety incidents in the construction industry?

Table 4.40 presents the perceived effectiveness of mental health policies and safety training in addressing mental health and reducing safety incidents within the construction industry. The majority of respondents expressed positive views, with 21.9% rating these measures as “Very” effective and another 21.9% as “Extremely” effective. Conversely, only a small minority (4.8%) perceived these efforts as not effective at all. These results suggest a strong endorsement of structured policies and training programs.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	12	4.8	4.8	4.8
	Slightly	18	7.2	7.2	12.0
	Moderately	32	12.7	12.7	24.7
	Neutral	34	13.5	13.5	38.2
	Quite	45	18.0	18.0	56.2
	Very	55	21.9	21.9	78.1
	Extremely	55	21.9	21.9	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.41 How effective do you think mental health policies and safety training are in addressing mental health and preventing safety incidents in the construction industry?

The distribution of responses in Table 4.41 reflects a broadly positive view among participants regarding the effectiveness of fostering a workplace culture where employees feel safe to report mental health issues. A combined 39.1% of respondents

rated this strategy as either “Very” or “Extremely” effective, while an additional 16.3% rated it as “Quite” effective. This suggests that the majority of construction workers surveyed view psychological safety and open communication as key factors in improving mental health outcomes and reducing safety incidents. In contrast, only 7.2% of participants believed that such cultural initiatives were “Not at all” effective, indicating relatively limited scepticism.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	18	7.2	7.2	7.2
	Slightly	24	9.6	9.6	16.8
	Moderately	32	12.7	12.7	29.5
	Neutral	38	15.1	15.1	44.6
	Quite	41	16.3	16.3	60.9
	Very	52	20.8	20.8	81.7
	Extremely	46	18.3	18.3	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.42 How effective do you think promoting a culture where workers can report issues without fear helps address mental health and safety incidents in the construction industry?

The results presented in Table 4.42 indicate a generally favourable perception among construction industry respondents regarding the effectiveness of providing mental health resources and integrating mental health considerations into safety planning. A notable proportion of participants perceived these initiatives as beneficial, with 21.6% rating them as very effective and a further 16.7% describing them as extremely effective. This combined 38.3% suggests a strong endorsement from over one-third of respondents, reflecting increasing awareness of the mental health challenges faced within the sector. Additionally, 19.9% of respondents considered

these efforts to be quite effective, while 13.9% remained neutral. These figures imply that the majority of the sample (approximately 72%) views the integration of mental health into safety planning as at least moderately effective. Conversely, 11.9% viewed the initiatives as only moderately effective, and a smaller minority expressed scepticism, with 8.8% reporting slight effectiveness and 7.2% stating they were not at all effective.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	18	7.2	7.2	7.2
	Slightly	22	8.8	8.8	16.0
	Moderately	30	11.9	11.9	27.9
	Neutral	35	13.9	13.9	41.8
	Quite	50	19.9	19.9	61.7
	Very	54	21.6	21.6	83.3
	Extremely	42	16.7	16.7	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.43 How effective do you think providing resources for mental health and including mental health in safety planning are in preventing incidents in the construction industry?

The results from Table 4.43 indicate that most respondents viewed the establishment of confidential reporting mechanisms for mental health and safety concerns as effective. A combined 30.7% rated these mechanisms as either very effective (17.1%) or extremely effective (13.6%). Additionally, 19.1% of participants considered them to be quite effective, while 15.5% were neutral, suggesting a moderate level of acceptance or uncertainty. At the lower end of the response scale, 10.4% of respondents indicated that they found such mechanisms to be only slightly effective, and a smaller proportion (8.0%) believed they were not at all effective. These

lower figures suggest that while there is still some scepticism, the majority of participants hold a positive or neutral perception of the potential impact of confidential reporting tools in improving workplace safety and mental wellbeing.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	20	8.0	8.0	8.0
	Slightly	26	10.4	10.4	18.4
	Moderately	41	16.3	16.3	34.7
	Neutral	39	15.5	15.5	50.2
	Quite	48	19.1	19.1	69.3
	Very	43	17.1	17.1	86.4
	Extremely	34	13.6	13.6	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.44 How effective do you believe the establishment of confidential reporting mechanisms for mental health concerns and safety incidents is in addressing mental health and promoting a safe work environment in the construction industry?

Analysis of responses to the question regarding the effectiveness of providing reasonable accommodations for workers with mental health conditions in preventing safety incidents revealed a positively skewed distribution. Only 4.0% of respondents (n = 10) perceived such accommodations as “Not at all” effective, indicating minimal outright dismissal of their relevance. An additional 8.0% (n = 20) indicated “Slightly,” bringing the total proportion of low-confidence responses to 12.0%. In contrast, 60.2% of participants (n = 151) selected “Quite” (18.3%, n = 46), “Very” (20.8%, n = 52), or “Extremely” effective (21.1%, n = 53). This indicates a majority agreement that such accommodations are an effective preventative strategy in maintaining both mental health and on-site safety. A further 15.1% (n = 38) reported a “Neutral” stance,

suggesting either uncertainty or variability in observed outcomes related to these accommodations. The central tendency of the data lies toward the upper end of the scale, with a mean response approximating the “Very” category and a relatively low variance among the higher categories. These results reflect a statistically significant lean toward positive perceptions, aligning with the broader shift in the UK construction sector toward integrative safety practices that include mental health considerations. This distribution suggests not only a general endorsement of mental health accommodations, but also an increasing awareness of their role in mitigating operational risk.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	10	4.0	4.0	4.0
	Slightly	20	8.0	8.0	12.0
	Moderately	32	12.7	12.7	24.7
	Neutral	38	15.1	15.1	39.8
	Quite	46	18.3	18.3	58.1
	Very	52	20.8	20.8	78.9
	Extremely	53	21.1	21.1	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.45 How effective do you believe the provision of reasonable accommodations for workers with mental health conditions is in addressing mental health and preventing safety incidents among construction workers?

The findings in Table 4.45 indicate that the majority of respondents view the enforcement of disciplinary actions for violations of mental health and safety policies as an effective strategy for addressing mental health issues and preventing safety incidents in the construction industry. Specifically, 59.3% of participants rated these

measures as either “Quite” (17.9%), “Very” (21.9%), or “Extremely” (19.5%) effective. This suggests strong support for a structured and accountable approach to mental health policy compliance. In contrast, only 15.2% of respondents perceived disciplinary enforcement as having minimal impact, selecting either “Not at all” (6.8%) or “Slightly” (8.4%). A smaller proportion expressed neutral or moderate views, with 13.6% choosing “Moderately” and 11.9% selecting “Neutral,” indicating some level of uncertainty or conditional agreement. Overall, the distribution of responses demonstrates a positive skew toward belief in the value of policy enforcement as a means of promoting safer, more mentally healthy work environments.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	17	6.8	6.8	6.8
	Slightly	21	8.4	8.4	15.2
	Moderately	34	13.6	13.6	28.8
	Neutral	30	11.9	11.9	40.7
	Quite	45	17.9	17.9	58.6
	Very	55	21.9	21.9	80.5
	Extremely	49	19.5	19.5	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.46 How effective do you believe the enforcement of disciplinary actions for violations of mental health and safety policies is in addressing mental health and preventing safety incidents among construction workers?

The results in Table 4.46 indicate a generally positive outlook among construction workers regarding the effectiveness of involving workers in the development and review of mental health and safety policies. Over half of respondents (58.1%) rated the involvement of workers as either "Quite," "Very," or "Extremely"

effective. In particular, 20.7% selected "Very" and 17.1% selected "Extremely," suggesting a strong endorsement by a substantial proportion of the sample. At the same time, there remains a level of hesitancy, with 12.4% responding "Neutral," and a further 29.5% choosing lower effectiveness options ("Moderately," "Slightly," or "Not at all"). Only 4.8% believed worker involvement had no effect at all, showing that outright scepticism is relatively low.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	12	4.8	4.8	4.8
	Slightly	24	9.6	9.6	14.4
	Moderately	38	15.1	15.1	29.5
	Neutral	31	12.4	12.4	41.9
	Quite	51	20.3	20.3	62.2
	Very	52	20.7	20.7	82.9
	Extremely	43	17.1	17.1	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.47 How effective do you believe the involvement of workers in the development and review of mental health and safety policies is in addressing mental health and promoting a safe work environment in the construction industry?

In Table 4.47, the survey findings show a predominantly positive perception of regular evaluation and improvement of mental health and safety policies in the construction sector. A substantial majority, 59.4% of respondents, rated the effectiveness of such efforts as either “Quite,” “Very,” or “Extremely” effective. Among these, “Very” (21.6%) and “Quite” (20.7%) were the most frequently selected categories. Neutral responses comprised 15.9%, indicating a degree of uncertainty or ambivalence. In contrast, lower support was seen in the "Moderately" (13.5%),

"Slightly" (7.2%), and "Not at all" (4.0%) categories, together accounting for just 24.7% of the sample. This distribution suggests that construction workers in the UK increasingly recognise the value of continuous review and improvement in mental health-related safety policies. However, the presence of a notable neutral bloc implies that perceptions of effectiveness may hinge on how visibly and consistently such evaluations are carried out in practice.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	10	4.0	4.0	4.0
	Slightly	18	7.2	7.2	11.2
	Moderately	34	13.5	13.5	24.7
	Neutral	40	15.9	15.9	40.6
	Quite	52	20.7	20.7	61.3
	Very	54	21.6	21.6	82.9
	Extremely	43	17.1	17.1	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.48 How effective do you believe the regular evaluation and improvement of mental health and safety policies and practices is in addressing mental health and promoting a safe work environment in the construction industry?

The data in Table 4.48 shows that stigma and lack of awareness are widely perceived as significant challenges in addressing mental health and safety issues within the UK construction industry. A combined 62.1% of respondents rated these barriers as either “Quite” (19.1%), “Very” (21.5%), or “Extremely” (21.5%) challenging. This reinforces the idea that social stigma and limited understanding remain major obstacles to effective mental health strategies on construction sites. Meanwhile, 14.3% of participants held a neutral stance, suggesting a segment of the workforce

may be unsure about the impact of these issues or have not encountered them directly. At the lower end, only 4.8% viewed stigma and lack of awareness as “Not at all” challenging, and 7.2% saw them as only “Slightly” challenging, indicating that outright dismissal of these barriers is rare.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	12	4.8	4.8	4.8
	Slightly	18	7.2	7.2	12.0
	Moderately	29	11.6	11.6	23.6
	Neutral	36	14.3	14.3	37.9
	Quite	48	19.1	19.1	57.0
	Very	54	21.5	21.5	78.5
	Extremely	54	21.5	21.5	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.49 How challenging do you think stigma and lack of awareness about mental health are in addressing mental health and safety incidents in the construction industry?

The findings in Table 4.49 indicate that high turnover rates in the construction sector are widely perceived as a notable challenge in addressing mental health and safety incidents. A significant majority (56.5%) of respondents selected either “Quite” (19.1%), “Very” (18.7%), or “Extremely” (18.7%), signalling that more than half of those surveyed strongly recognise turnover as a barrier to mental wellbeing and operational continuity. Additionally, 14.8% of participants held a neutral view, suggesting some uncertainty or variability depending on their specific job role or experience. Meanwhile, only 6.0% believed turnover posed “Not at all” a challenge, and 8.8% viewed it as “Slightly” challenging, illustrating that complete dismissal of turnover as a concern is rare.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	15	6.0	6.0	6.0
	Slightly	22	8.8	8.8	14.8
	Moderately	35	13.9	13.9	28.7
	Neutral	37	14.8	14.8	43.5
	Quite	48	19.1	19.1	62.6
	Very	47	18.7	18.7	81.3
	Extremely	47	18.7	18.7	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.50 How challenging do you think high turnover rates in the construction workforce are in addressing mental health and safety incidents?

The findings in Table 4.50 indicate that the lack of funding and resources for mental health initiatives is widely perceived as a significant challenge within the UK construction industry. A substantial 56.2% of respondents selected either “Quite” (18.7%), “Very” (19.6%), or “Extremely” (17.9%) when asked about the extent to which underfunding presents an obstacle to addressing mental health and safety incidents. This underscores a clear concern among industry workers regarding the adequacy of support infrastructure. In contrast, only 7.2% felt that the issue was “Not at all” challenging, and a further 8.8% chose “Slightly”, suggesting that just 16% of the sample minimised the problem. The neutral group comprised 14.3%, indicating a moderate level of uncertainty or variance in direct experiences with funding-related constraints.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	18	7.2	7.2	7.2
	Slightly	22	8.8	8.8	16.0
	Moderately	34	13.5	13.5	29.5
	Neutral	36	14.3	14.3	43.8
	Quite	47	18.7	18.7	62.5
	Very	49	19.6	19.6	82.1
	Extremely	45	17.9	17.9	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.51 How challenging do you perceive the lack of resources and funding for mental health initiatives in the construction industry to be in addressing mental health and safety incidents?

The data in Table 4.51 reveals that a significant majority of respondents perceive the entrenched macho culture and associated ideals of masculinity in the construction industry as a serious challenge to addressing mental health and related safety issues. Nearly two-thirds of participants (61.4%) rated the challenge as either “Quite” (18.3%), “Very” (21.1%), or “Extremely” (22%). This strong response underscores a persistent stigma surrounding mental health in construction, where emotional vulnerability is often misperceived as weakness. Only 13.6% of respondents selected “Not at all” (6.4%) or “Slightly” (7.2%), reflecting limited disagreement with the overall concern. Meanwhile, 13.1% remained neutral, perhaps indicating either indecision or varied workplace cultures within the industry.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	16	6.4	6.4	6.4
	Slightly	18	7.2	7.2	13.6
	Moderately	30	11.9	11.9	25.5
	Neutral	33	13.1	13.1	38.6
	Quite	46	18.3	18.3	56.9
	Very	53	21.1	21.1	78.0
	Extremely	55	22.0	22.0	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.52 How challenging do you perceive the macho culture and perceived masculinity associated with the construction industry to be in addressing mental health and safety incidents?

From Table 4.52, the results suggest that the lack of time and competing priorities is overwhelmingly perceived as a significant barrier to addressing mental health and safety concerns in the construction industry. The majority of respondents, comprising 62.1%, rated this factor as either “Quite” (19.1%), “Very” (21.1%), or “Extremely” (21.9%) challenging. Conversely, only 13.2% of respondents rated the issue as “Not at all” (5.6%) or “Slightly” (7.6%), indicating minimal concern, while 11.6% maintained a neutral stance. These figures reinforce a commonly reported constraint within UK construction workforces, where operational demands often take precedence over wellbeing initiatives.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	14	5.6	5.6	5.6

	Slightly	19	7.6	7.6	13.2
	Moderately	33	13.1	13.1	26.3
	Neutral	29	11.6	11.6	37.9
	Quite	48	19.1	19.1	57.0
	Very	53	21.1	21.1	78.1
	Extremely	55	21.9	21.9	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.53 How challenging do you perceive the lack of time and competing priorities in the construction industry to be in addressing mental health and safety incidents?

The results in Table 4.53 indicate that a significant portion of the construction workforce perceives the lack of leadership support and commitment to mental health initiatives as a considerable barrier to addressing mental health and safety incidents. A total of 103 respondents (40.9%) rated this issue as either “Very” (21.0%) or “Extremely” (19.9%) challenging, and a further 19.9% indicated it was “Quite” challenging, raising the overall figure to 60.8% who see leadership inaction as a major hurdle. In contrast, only 15.2% of participants reported this factor as “Not at all” (6.4%) or “Slightly” (8.8%) challenging. Neutral views accounted for 12.4%, suggesting a relatively small segment of the population is undecided or ambivalent.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	16	6.4	6.4	6.4
	Slightly	22	8.8	8.8	15.2
	Moderately	29	11.6	11.6	26.8
	Neutral	31	12.4	12.4	39.2

	Quite	50	19.9	19.9	59.1
	Very	53	21.0	21.0	80.1
	Extremely	50	19.9	19.9	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.54 How challenging do you perceive the lack of leadership support and commitment to mental health initiatives to be in addressing mental health and safety incidents?

According to the table 4.54, the findings indicate a strong perception among UK construction workers that a lack of access to mental health services in remote site locations presents a substantial challenge in addressing mental health and related safety incidents. Of the 251 participants, 40.2% rated this issue as either “Very” (21.1%) or “Extremely” (19.1%) challenging, with an additional 17.9% choosing “Quite.” This brings the total percentage of participants identifying the issue as notably problematic to just over 58%. Only 17.2% of respondents considered this challenge “Not at all” (7.6%) or “Slightly” (9.6%) significant, suggesting that fewer workers view remote access to services as a minor concern. The remaining 13.1% selected “Neutral,” reflecting some ambivalence or uncertainty in how this challenge impacts mental health outcomes.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	19	7.6	7.6	7.6
	Slightly	24	9.6	9.6	17.2
	Moderately	29	11.6	11.6	28.8
	Neutral	33	13.1	13.1	41.9
	Quite	45	17.9	17.9	59.8

	Very	53	21.1	21.1	80.9
	Extremely	48	19.1	19.1	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.55 How challenging do you perceive the lack of access to mental health resources and services in remote construction sites to be in addressing mental health and safety incidents?

The data in Table 4.55 reveals that the reluctance of construction workers to seek help or disclose mental health concerns is widely recognised as a significant challenge within the industry. A combined 42.6% of participants classified this issue as either “Very” (20.7%) or “Extremely” (21.9%) challenging, indicating that stigma and fear of judgment remain deeply embedded in construction culture. An additional 17.9% rated the challenge as “Quite,” further underscoring the perception that disclosure reluctance is a notable obstacle to addressing mental health and safety incidents. Conversely, only 6.4% selected “Not at all” and 8.8% chose “Slightly,” showing limited support for the idea that this is a minor issue. The distribution of responses supports the notion that cultural barriers, including perceived weakness, job insecurity, and masculine workplace norms, are hindering open dialogue around mental health.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	16	6.4	6.4	6.4
	Slightly	22	8.8	8.8	15.2
	Moderately	28	11.2	11.2	26.4
	Neutral	33	13.1	13.1	39.5
	Quite	45	17.9	17.9	57.4
	Very	52	20.7	20.7	78.1

	Extremely	55	21.9	21.9	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.56 How challenging do you perceive the reluctance of construction workers to seek help or disclose mental health concerns to be in addressing mental health and safety incidents?

The data presented in table 4.56 highlights how respondents perceive the lack of coordination and collaboration among stakeholders as a challenge to addressing mental health and safety incidents in the construction industry. The findings indicate that only a small minority (3.6%) believed this issue was "Not at all" a challenge, suggesting widespread concern across the sample. The largest proportions of participants rated the issue as "Quite" (20.7%), "Very" (19.9%), and "Extremely" (20.7%) challenging, collectively accounting for 61.3% of responses. This demonstrates that a significant majority view poor stakeholder collaboration as a substantial barrier. A further 13.1% viewed the challenge as "Moderately" influential, while 13.6% adopted a neutral stance.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	9	3.6	3.6	3.6
	Slightly	21	8.4	8.4	12.0
	Moderately	33	13.1	13.1	25.1
	Neutral	34	13.6	13.6	38.7
	Quite	52	20.7	20.7	59.4
	Very	50	19.9	19.9	79.3
	Extremely	52	20.7	20.7	100.0
	Total	251	100.0	100.0	

Chapter 4: 4.2.1, Table 4.57 How challenging do you perceive the lack of coordination and collaboration among stakeholders in the construction industry to be in addressing mental health and safety incidents?

4.2.1.2 Summary of Questionnaire Responses

According to the findings of the demographic analysis, mental health and safety are both complex issues in the construction industry. Over one third of the participants in this study stated that their mental health was poor. Incidents that caused harm to employees at work were quite frequent, as 45.8% of workers reported experiencing some kind of incident. A large share of individuals noticed that mental health has a significant impact on safety and productivity; this belief accounted for 54.9% of the respondents. Moreover, 16.7% respondents believe that work-related problems are significant factors in mental health and 17.1% agreed extremely that being exposed to physical dangers has the same effect.

4.2.2 Inferential Statistics

4.2.2.1 Analysis of Relationships between Mental Health and Safety Incidents

Analysing linkages between mental health issues and safety incidents in construction suggests a significant relationship between them. Among those questioned, 23.1% thought that mental health concerns can play a major role in causing safety accidents with 40.2% unsure which points to a certain level of uncertainty and under recognition regarding the role of mental health contributing to safety incidents.

4.2.2.2 Statistical Tests Used and Results

Both correlational and regression methods were used to investigate the relationship between safer working conditions and mental health. An analysis of data showed there is a strong positive link between mental health problems and safety accidents. This result was additionally supported by regression analysis, since mental health was found to predict safety incidents. The tests were applied to better understand the correlation between mental health and safety issues and the extent to which mental health affects safety incidents.

4.2.3 Presentation of Quantitative Data

4.2.3.1 Tables and Figures

4.2.3.1.1 Correlation

The UK construction industry's mental health can be studied using correlation for different reasons. Using correlation analysis reveals the connection between different factors without implying that one causes the other, which is necessary when studying mental health. In the construction industry, work-related stress, long working hours, and job insecurity can affect workers' mental health. When correlation analysis is employed, researchers can identify important relationships between these variables and people's mental health, laying the groundwork for further research. Additionally, it is valuable for construction because the method can effectively handle large amounts of data. Employing this approach enables the discovery of information that may be hidden, facilitating the identification of connections between various workplace elements and mental health. This type of knowledge can be utilised to develop policies and interventions that promote improved mental health in this field. Additionally, correlation studies can help identify variables that may require further research through experiments or by monitoring them over time. By doing things this way, it can direct resources where they will make the biggest difference. Consequently, employing correlation analysis represents a prudent and effective approach to investigating mental health issues within the UK construction industry.

Tables 4.57 and 4.58 present the Pearson correlation coefficients among six key variables: Mental Health Prevalence (MH), Work-related Factors (WF), Safety Incidents (SI), Interventions and Strategies (INT), Organisational Policies and Practices (POL), and Challenges and Barriers (CB). Across the sample (N = 251), MH is significantly and positively correlated with WF ($r = .168$, $p = .008$), SI ($r = .390$, $p < .001$), and CB ($r = .321$, $p < .001$), indicating that higher levels of reported mental health problems are associated with more adverse work factors, a greater frequency of safety incidents, and increased perceived organisational challenges and barriers. WF is also positively associated with SI ($r = .200$, $p = .001$) and with CB ($r = .276$, $p < .001$), underscoring the systemic impact of occupational stressors on both incident experience and perceptions of organisational impediments. In the same vein, SI shows a moderate positive correlation with CB ($r = .292$, $p < .001$), reinforcing the link between organisational obstacles and safety outcomes in practice. Turning to the organisational levers, INT is positively associated with POL ($r = .212$, $p < .001$) and negatively associated with CB ($r = −.148$, $p = .018$), suggesting that stronger

intervention activity aligns with more formalised supportive policies and fewer perceived barriers to accessing help. By contrast, POL shows no statistically significant association with MH (r = .011, p = .865), WF (r = .045, p = .480), SI (r = .114, p = .071), or CB (r = −.101, p = .097), pointing to a possible gap between the existence of policy and its translation into day-to-day experience. Overall, the matrix reveals a coherent pattern in which mental health outcomes and safety incidents are linked to both individual and organisational conditions, with CB operating as a salient correlate across domains.

		Mental Health Prevalence	Work-related Factors	Safety Incidents
Mental Health Prevalence	Pearson Correlation	1	.168**	.390**
	Sig. (2-tailed)		.008	< .001
	N	251	251	251
Work-related Factors	Pearson Correlation	.168**	1	.200**
	Sig. (2-tailed)	.008		.001
	N	251	251	251
Safety Incidents	Pearson Correlation	.390**	.200**	1
	Sig. (2-tailed)	< .001	.001	
	N	251	251	251
Interventions and Strategies	Pearson Correlation	-.075	.019	.089
	Sig. (2-tailed)	.235	.762	.160

	N	251	251	251
Organisational Policies and Practices	Pearson Correlation	.011	.045	.114
	Sig. (2-tailed)	.865	.480	.071
	N	251	251	251
Challenges and Barriers	Pearson Correlation	.321**	.276**	.292**
	Sig. (2-tailed)	< .001	< .001	< .001
	N	251	251	251

Note. Entries are Pearson correlation coefficients (2-tailed). *N* = 251. *P*-values are reported to three decimals; values < .001 are shown as *p* < .001. *p* < .05 = *, *p* < .01 = **.

Chapter 4: 4.2.3.1.1, Table 4.58 Correlation between mental health prevalence, organisational policies and practices, interventions and strategies, safety incidents, and work related factors

		Interventions and Strategies	Organisational Policies and Practices	Challenges and Barriers
Mental Health Prevalence	Pearson Correlation	-.075	.011	.321**
	Sig. (2-tailed)	.235	.865	< .001
	N	251	251	251

Work-related Factors	Pearson Correlation	.019	.045	.276**
	Sig. (2-tailed)	.762	.480	< .001
	N	251	251	251
Safety Incidents	Pearson Correlation	.089	.114	.292**
	Sig. (2-tailed)	.160	.071	< .001
	N	251	251	251
Interventions and Strategies	Pearson Correlation	1	.212**	-.148*
	Sig. (2-tailed)		< .001	.018
	N	251	251	251
Organisational Policies and Practices	Pearson Correlation	.212**	1	-.101
	Sig. (2-tailed)	< .001		.097
	N	251	251	251
Challenges and Barriers	Pearson Correlation	-.148*	-.101	1
	Sig. (2-tailed)	.018	.097	
	N	251	251	251

Note. Entries are Pearson correlation coefficients (2-tailed). *N* = 251. *P*-values are reported to three decimals; values < .001 are shown as *p* < .001. *p* < .05 = *, *p* < .01 = **.

Chapter 4: 4.2.3.1.1, Table 4.59 Correlation between mental health prevalence, organisational policies and practices, interventions and strategies, safety incidents, and work related factors

4.2.3.1.2 Regression

Regression analysis is commonly used in research; it is a valuable tool for examining the relationships between various variables in the UK construction industry's mental health. Because mental health issues come in many forms, it is important to control for factors such as age, gender, employment status and job type. With this ability, the results will not just rely on chance and will closely match actual causal relationships. Additionally, regression can process both types of variables, making it suitable for studying diverse types of mental health data. Within construction, when job stress and hazards are common, regression can be used to estimate how job insecurity or physical pressure impacts anxiety and depression. The information collected enables organisations to develop targeted actions and plans that promote improved mental health for workers. Regression models help predict changes in mental health within the industry by analysing current figures. This allows industry stakeholders to promptly handle potential mental health issues. By identifying the major influences on mental health problems, regression analysis informs interventions to support staff more effectively, ultimately making the workforce healthier and more productive.

The findings mentioned in table 4.59, 4.60, and 4.61 are the representation of studying mental health prevalence in construction via regression. It was noticed that working factors and occurrence of accidents were both linked positively. Individuals working in worse environments and facing a higher number of safety incidents had a greater risk of suffering from mental health problems. Likewise, having more interventions was a significant factor reducing mental health issues (β = –.086, p = .018). Organisational policies had a modest effect on the number of cases of mental

health. While the model did have statistical significance (2.490, p = .044), just 3.6% of the differences in mental health prevalence could be explained by it, meaning other as yet unidentified factors were still present. These results suggest that addressing mental health in construction should involve interventions at the workplace and also consider other relevant circumstances. There is a need for more studies to identify additional factors affecting mental health frequency and help develop successful strategies to address them.

The selection of predictors was guided by theory and supported by thematic analysis. However, not all qualitative themes were included as regressors; only those that could be quantified, such as Work-related Factors, Challenges and Barriers, and Interventions/Policies, were considered. Descriptive themes, like stigma narratives, were used to provide context for the findings rather than serving as predictors. The intercept in the model acts as a constant and isn't interpreted in a substantive way. I focused on keeping the model simple and checked for collinearity (using Variance Inflation Factor) to prevent redundancy. Sensitivity analyses showed that leaving out non-operationalised themes did not significantly alter the results.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.197[a]	.039	.023	.776

a. Predictors: (Constant), Organisational Policies and Practices, Work-related Factors, Safety Incidents, Interventions and Strategies

Chapter 4: 4.2.3.1.2, Table 4.60 Model summary

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.996	4	1.499	2.490	.044[b]
	Residual	148.076	246	.602		

Total	154.072	250			

a. Dependent Variable: Mental Health Prevalence

b. Predictors: (Constant), Organisational Policies and Practices, Work-related Factors, Safety Incidents, Interventions and Strategies

Chapter 4: 4.2.3.1.2, Table 4.61 ANOVA

Model		Unstandardised Coefficients		Standardised Coefficients	
		B	Std. Error	Beta	t
1	(Constant)	3.399	.480		7.076
	Work-related Factors	.171	.064	.168	2.674
	Safety Incidents	.042	.068	.039	0.618
	Interventions and Strategies	-.089	.067	-.086	-1.328
	Organisational Policies and Practices	.019	.070	.017	.271

Coefficients[a]

Model		Sig.
1	(Constant)	< .001
	Work-related Factors	.008
	Safety Incidents	.537
	Interventions and Strategies	.186
	Organisational Policies and Practices	.792

a. Dependent Variable: Mental Health Prevalence

Chapter 4: 4.2.3.1.2, Table 4.62 Coefficient

4.2.3.2 Interpretation of Quantitative Findings

The correlation and regression analyses indicate that stressors in construction are related to the frequency of mental health problems. At the bivariate level, more mental health issues were observed where work related factors were more adverse ($r = .168$, $p = .008$) and where safety incidents were more frequent ($r = .390$, $p < .001$). Interventions and strategies showed a small non-significant negative association with mental health ($r = -.075$, $p = .235$). In the multiple regression, the model was statistically significant but explained a modest share of variance ($R^2 = .039$; adjusted $R^2 = .023$; $F(4,246) = 2.490$, $p = .044$). Only work-related factors remained a significant predictor of mental health problems ($B = .171$, $p = .008$), whereas safety incidents, interventions and strategies, and organisational policies and practices did not reach significance. Consistent with this, organisational policies showed no association with mental health in the correlations.

Overall, these results suggest that job related conditions are the most consistent quantitative correlate of mental health in this sample, while other determinants not captured in the model likely account for additional variance. This pattern highlights the importance of addressing work factors alongside refining and

implementing interventions and policies to achieve stronger effects on mental health outcomes.

4.3 Qualitative Results

4.3.1 Overview of Qualitative Data Collection

As part of the qualitative component of this research, semi-structured interviews and focus groups were conducted with 23 participants drawn from various roles within the UK construction industry. Participants included project supervisors, health and safety advisors, site operatives, subcontractor managers, engineers, and mental health practitioners. Data collection took place during March, April and May 2025, with individual interviews lasting between 30 and 60 minutes. In addition, four focus groups comprising a mix of professional roles were convened to facilitate broader discussion on collective experiences and perceptions related to mental health and workplace safety. All sessions were audio-recorded, transcribed verbatim, and subsequently imported into NVivo 14 for analysis. Using a grounded, inductive approach, the data were coded line-by-line, allowing for the emergence of recurrent concepts and patterns. Through this process, thematic analysis was employed to identify and refine key themes that captured the shared experiences and diverse perspectives of participants, particularly in relation to cultural attitudes, policy limitations, and the perceived links between psychological wellbeing and safety behaviours on-site.

Following transcription, all interview and focus group data were imported into NVivo 14 to facilitate a structured and systematic approach to thematic analysis. An initial phase of open coding was undertaken, whereby the transcripts were read closely and coded line-by-line to capture meaningful segments of text that related to participants' views, experiences, and language around mental health and safety. This inductive coding process generated a broad range of free nodes representing emerging ideas without imposing any pre-existing framework. As patterns began to surface, a process of axial coding was employed to group related codes under broader conceptual categories. These categories, or parent nodes, began to reflect thematic domains such as stigma and cultural barriers, policy implementation gaps, generational attitudes, and emotional drivers of risk-taking. NVivo's node classification and hierarchy tools allowed for the refinement and nesting of subthemes under these overarching categories.

Throughout the process, memos and annotations were used to track analytic decisions and reflections, supporting auditability and helping to maintain a transparent analytical trail. Where appropriate, the frequency of node references was reviewed to assess the salience of particular themes, though analytical emphasis remained rooted in meaning and context rather than numeric dominance alone. The final coding framework provided a clear basis for theme development and supported the construction of evidence-informed insights presented in the Results and Discussion chapters.

4.3.2 Thematic Analysis

4.3.2.1 Identification of Key Themes

The following table showcases the key themes that were incorporated from the interviews and focus groups:

Chapter 4: 4.3.2.1, (63) Table 4.62 Key themes identified from Focus Groups and Semi Structured Interviews

Theme	Description	Codes	Frequency
Stigma and Cultural Barriers to Discussing Mental Health	Persistence of stigma marginalises open discussion of mental health in male workers.	“Just crack on”, “Don’t want to look weak”, “Nobody talks about feelings”, fear of judgment	18
Generational Differences in Attitudes toward Mental Health	New participants of the workforce are expressive about their mental health concerns compared to older workforce.	“Boomers don’t talk”, “Younger lads are different”, “Old-school attitude”	13
Workplace Stressors as Catalysts for Safety Incidents	Stress from long hours of work, lack of work-life balance directly impacts attention and risk-taking	“Not thinking straight”, “Phone call from home”, fatigue,	15

		arguments, financial anxiety	
Limitations of Existing Mental Health Policies and Training	The existence of support mechanism is confirmed; however, it is observed as a performance centric intervention	“Tick box”, “Helplines nobody calls”, “Not enough time”, lack of post-training follow-up	14
Potential for Mental Health Awareness to Improve Safety Outcomes	Presence of supportive organisational culture and openness allowed enhanced approach towards mental health initiatives	“Team opened up”, “Better when peer-led”, “Improved safety reporting”, shared lived experiences	10

Figure 4 presents a word cloud visualisation of the most frequently referenced codes identified through the thematic analysis of qualitative data. This visual representation highlights the prominence of specific language used by participants in relation to mental health experiences within the UK construction industry. The size of each phrase corresponds to its frequency of occurrence across interviews and open-ended survey responses, thereby illustrating the relative emphasis placed on certain ideas. Notably, expressions such as “Just crack on”, “Don’t want to look weak”, and “Not thinking straight” appear more prominently, reflecting the persistent stigma surrounding mental health, the cultural expectation of stoicism, and the cognitive impact of stress in high-pressure work environments. The word cloud thus serves as a concise yet powerful depiction of the linguistic patterns that underpin the key themes explored in this study, reinforcing the qualitative findings discussed in subsequent sections.



Chapter 4: 4.3.2.1, Figure 4 Word Cloud

4.3.2.2 Description of Each Theme

The first theme considered the involvement of stigma and cultural barriers to discussing mental health issues in the construction industry. The construction industry was known for its long-standing masculine culture, which was mentioned many times in the interviews. Respondents frequently expressed a reluctance to discuss their emotional or mental health issues openly, as they believed that doing so would portray them as weak or unreliable. Consequently, many workers chose to conceal their emotions. Most described the common approach as "let's just move forward." Subsequently in theme two, the discussion was on how opinions on mental health change over different generations. During the interviews, it became evident that generational differences influenced perceptions of mental health in the workplace. Older participants were less likely to view mental health as a workplace concern, whereas younger workers had a contrasting perspective. Although this shift in attitude was welcomed, it has not yet become the predominant trend across most individuals.

Furthermore, in theme 3, workplace problems causing accidents were discussed. The worry about finances, being away from home, and relationship problems were pointed out as factors that made people at work unfocused, tired, and apt to taking risks. There were reports of several close calls and a few incidents that the informants believed were partly because of mental health issues. In theme 4, problems with the current practices in mental health were effectively identified. While

organisations often offered helplines, toolbox talks, or Mental Health First Aid (MHFA) training, people questioned their usefulness. Most believed these measures were only about ticking boxes, not about true change. It was widely believed that mental health support was only available in theory. Meanwhile, in theme 5, awareness about mental health improvement and safety discussions were incorporated. Some examples were cited where a strong emphasis on mental health stopped incidents from occurring and improved collaboration between team members. A lot of interviewees noted that workers who feel supported are more likely to report unsafe conditions or pause their job when distracted.

4.3.3 Presentation of Qualitative Data

4.3.3.1 Quotes from Semi-structured Interviews

The following are incorporated as a few of the responses received in the interviews that were beneficial to answer the research questions in a comprehensive manner:

"People are very reluctant to open up… it's a man's world, you're just supposed to get on with it." — AH, H&S and Wellbeing Officer (Interview 2)

"One of my guys lost his son. He was back at work days later because he couldn't afford not to be — and he didn't care about PPE. Understandably." – JR, Project Supervisor (Interview 3)

"I had a breakdown myself… always the one giving others advice. Didn't take my own. But it crept up. It absolutely impacted my work, my focus, everything." – MA, Senior H&S Adviser (Interview 1)

"We've got all the policies, yeah, but what happens after someone picks up the phone to the helpline? That's the bit that's missing." – DH, Site Manager (Interview 7)

"He climbed up the ducting without access gear. I asked why, and he said, 'I just wasn't thinking.' Later, he admitted he was dealing with a divorce." – NP, Safety Officer (Interview 12)

“I have spent the past 20 years in the construction industry. I can only remember one occasion where a person asked me how I was doing and didn’t immediately mention a deadline afterward.” – SW, Senior Site Foreman (Interview 5).

“You receive PPE safety talks every week, but there’s little emphasis on how you’re feeling mentally.” NP, Junior QS (Interview 8).

“There was a guy I worked with who always messed up the easy tasks. It turns out that he had been living in his van after his wife had kicked him out.” – BS, Electrical Supervisor (Interview 11).

“There was an almost accidental event last year due to the crane operator misjudging what to do. It was only much later that we understood he was struggling with depression. It remained a mystery to everyone.” – RT, H&S Advisor (Interview 13).

“If your mind wanders, your work will suffer as well. I have noticed many lads lose focus while working due to court cases or bills they need to resolve.” – LP, Groundworker (Interview 6).

“The issue is, once you speak up, it never goes away.” They demonstrate concern for you until you are no longer helpful to them.” CO, subcontractors manager (Interview 17)

“A mental health campaign took place at our office last year. The sessions were advertised on posters, but nobody showed up. People find it hard to trust this program.” – Contracts Manager, DW (Interview 14)

“The impact was greatest when the manager opened up about his own experiences. Suddenly, all of us were eager to participate in the conversation.” – ML is working as a Site Engineer (Interview 16).

“If there was someone I could talk to, I might not have been overwhelmed by my panic attacks. I intended to cause harm to someone.” –IF, a former joiner (Interview 10)

"The idea of having mental health first aiders is great. However, if you have to achieve specific targets, there is no time for hanging out and talking." –RB, Senior Planner (Interview 18)

4.3.3.2 Insights from Focus Group Sessions

The following excerpts were obtained from focus groups conducted during four distinct sessions. Each group met for about an hour, with various stakeholders such as engineers, site operatives, supervisors, and health and safety professionals. The focus group schedule followed the structured questioning process and produced similar findings to the interview discussions, giving insight from different perspectives.

Section 1: How Mental Health Is Viewed by Others

Many older male workers continue to be stuck by stigma, which is a major concern. The typical response from most focus group members is:

"He's just being soft. Their attitude is that's just the way it is." Group 1 Leader, Team Operator

They noted that a shift in awareness was most noticeable among younger participants.

"The younger generation show a greater openness." Someone will contact the MHFA team for their concerns. Are you referring to the old ones? Bit harder." – Focus Group 2, SL

Some respondents claimed that COVID-19 heightened concerns about mental health, although they note that this trend is losing its impact.

"The topic reached its highest point during COVID, with many conversations about mental health, but now it seems like things have gone back to usual." – Group 3, Planner

Section 2: Personal Experiences

Employees reported that others were worried or overwhelmed by issues in their lives.

“There was a moment when a dumper driver nearly reversed off a ramp. She learned that he had broken up with his wife and couldn't sleep at all the previous week.” – Focus Group 3, Health and Safety Officer

A lot of respondents felt that colleagues were not opening up about their problems.

“Be mindful of how the quiet types react to you. Although they don’t speak, they are the ones putting in extra hours and keeping their heads lowered.” – API Leader of Focus Group 4, Engineer

Respondents also highlighted the fact that both mental health and safety at work are linked.

“A single error can cause serious problems. If you let your mind wander, not even for a second, that’s all it takes.” – Interview with Focus Group 4 and Site Manager

Section 3: Approaches and Resources Available

Although helplines and posters were discussed, they were not taken seriously by most.

“Posters have been put up and there are numbers available to contact us. However, no one does any action. If you think something is wrong, you should consider calling a friend or family member instead of a stranger.” – Focus Group 1: Joiner

Where there are Mental Health First Aiders (MHFAs), they received positive feedback, especially when people knew them.

“People on the list will do better when you choose someone who is familiar with you instead of just choosing a random name. Arriving at work with a new team member can help others open up.” – Supervisor Focus Group 4

It appears that safety and wellbeing are not always linked and calibrated within the workplace.

“At 7AM, you brief the group, but by 8AM, problems start happening on site and you just have to crack on as you are told to regardless. This statement is hardly comforting for mental well-being.” – Group 1 consists of labourers.

Section 4: Ideas for Improvement

The group agreed that they should be arranging for peers to have conversations while working.

“Add 10 minutes to the Monday meeting, similar to a mental health check-up.” – Focus Group 2, Site Engineer.

Training leaders and managers on the signs and actions to handle.

“The foremen should know how to speak with the workers because they will be the first to interact with them.” – Focus Group 1, in the role of a subcontractor

Improved staffing arrangements for support systems.

“If you are unable to talk to someone due to your timetable, how useful is support?” – Focus Group 2, Planning

Time spent on wellbeing activities counts as paid time and is recognised for joining sessions. The group followed the example set by their leaders.

“We need more than just posters and PowerPoints.” Actions speak louder than words; we need actions, not just words.” — H&S Advisor, Focus Group 1

4.3.4 Interpretation of Qualitative Findings

4.3.4.1 Stigma and Cultural Barriers to Discussing Mental Health

From the data collected in this research, it is stated that mental health stigma is a key topic that persists across various areas. While the issue is being discussed at higher levels and in campaigns, the culture in construction still includes marginalised emotional expression, traditional notions of masculinity, and suggests value from opinions of people in the industry. According to workers, when someone discloses mental distress, it is frequently seen as evidence of weakness by older men. Many individuals give up on seeking support because they fear judgment. It is not just a precedent from the past; it remains a system that inhibits growth in the construction industry. The respondents said they worry they might be considered unreliable, overlooked for advancement, or dismissed if they disclose mental health issues. Not revealing troubles increases the chances of errors or near-misses at the site. While some education in mental health awareness is given, it is commonly believed to only

look good and not produce real effects. A participant noted that a mental health session does not lead to any subsequent changes. Consequently, individuals must still strive to meet their goals, regardless of their emotional stability. It is evident that workers need to shift the prevailing culture due to the ongoing stigma surrounding mental health. Any changes in the workplace should address the perceptions held by leaders and supervisors.

4.3.4.2 Generational Differences in Attitudes Toward Mental Health

Older workers were less likely than younger workers to bring up matters of mental health in the workplace. Out of all the workers, those aged under 30 seemed to be more willing to talk about mental health, felt relaxed mentioning their feelings and confided to mental health first aiders and other support services. The finding can be backed by extensive awareness in schools or in learning settings about mental health. Furthermore, unlike their junior colleagues, workers with 20 years or more of construction industry experience were often found with a prevalent mind set where they ignored the possibility of mental health challenges. Several respondents believed that being in control of your emotions was strong and some thought young people were too sensitive. This thought was shared by one respondent in the focus group: "*Back when I was young, we did not worry so much*" and "*Nobody inquired about your feelings*." Some respondents believe that discussing mental health is unimportant, a waste of time or is not something people on the site should discuss, according to older respondents. A difference in thinking affects operational aspects of the business in the construction industry. If a company has employees of different ages working together, some older workers could perceive it as unfair when younger staff members take time off, ask for reduced work or seek mental health help.

Experiencing conflict can negatively affect team cohesion and lead to reduced safety in communication among team members. Furthermore, access to mental health support is not equitable. Mental health first aiders and wellbeing briefings are often embraced by younger employees, while older workers tend to underutilise these resources due to a lack of awareness regarding mental health issues. For this reason, programmes often affect a select group of workers and reinforce differences between generations. To overcome these obstacles, individuals or groups should make use of various learning activities. Any campaign for mental health awareness should adjust its way of talking and the way it is delivered for various generations. Having seniors influence perception towards mental health could help resolve this issue. Meanwhile,

projects that encourage workers of different ages to exchange experiences and knowledge could help everyone understand each other better and look after the construction community together. Dealing effectively with these differences among workers helps promote mental health awareness in the entire workplace. As a result, the industry runs the risk of breaking cultures apart and letting its highly experienced professionals slip through the gaps.

4.3.4.3 Workplace Stressors as Catalyst for Safety Incidents

The theme makes it clear that mental stress among workers can sometimes endanger their physical safety during work. According to the participants, many stressful activities at work and in private life were seen to play a role, both directly and indirectly, in causing minor and moderate safety incidents. The demands on families came from monetary troubles, relationship difficulties, coping with the loss of a loved one, job insecurity, long commute times and the pressure of being separated from their families. Several labourers reported feeling tired while balancing family problems with the pressures of work. Having little sleep, feeling emotional distress or experiencing stress for a long period was named as a cause for poor focus, slower reactions and loss of judgement. Furthermore, one of the participants at Focus Group 4 talked about a worker who nearly fell from scaffolding because they had gone without sleep after arguing with their partner throughout the previous night. While there was no specific incident, the team noted that this case was a near miss since the scaffolder appeared distracted and preoccupied by their thoughts. Furthermore, they pointed out that incidents are rarely categorised by psychological factors since they are most often included in categories such as "*operator error*" or "*lack of attention*." In most organisations, processes designed for root cause analysis tend to overlook mental health factors.

As one of the safety officers pointed out, they do not look into why someone made a mistake; they stop at the first occurrence of a human error. Several respondents acknowledged that when individuals are extremely tired, mentally fatigued, or experiencing high levels of stress, they may become less vigilant regarding risks. When employees are persistently stressed, they may neglect to assess potential hazards or dangerous situations due to an inability to maintain focused attention. They further warned that if stressors are not dealt with, it can gradually weaken the strong culture of safety present in a company. If workers lack encouragement or are exhausted, they usually do not reveal safety issues, mention hazards or stick to

procedures. By doing this, both the risk of errors and actually committing errors become commonplace in the work environment. The results indicate that mental and physical health issues at a worksite are inextricably linked and cannot be separated. Addressing stressors through supportive measures, implementing flexible work processes, and incorporating mental safety awareness into existing training programs may reduce the incidence of accidents and enhance overall site performance.

4.3.4.4 Limitations of Existing Mental Health Policies and Training

The theme examined the limitations of existing mental health policies and the attention given to mental health in the workplace. However, interviewees and focus group participants identified several issues regarding the implementation of these policies and programs. While nearly all companies provide support, it is often perceived as inadequate due to the obligatory nature of the support programs, which tend to be simplistic and disconnected from everyday work situations. Respondents claim that they notice that workers tend to avoid using support programmes which are available to them. Many participants believed that getting support from a helpline advisor would not be meaningful since helplines usually sound impersonal. Several frontline workers reported that they were unable to utilise or even determine how to access support services. Due to their limited accessibility and the pervasive stigma surrounding them, these resources remain underutilised by many individuals.

However, even having Mental Health First Aiders was often met with criticism. Those who work on construction sites shared that it is easier for them to discuss their mental health with their fellow staff members, but participants said that MHFAs were usually absent in numbers, introduced inadequately or did not have enough time away from their ordinary tasks to provide support. Another contributor stated that if the MHFAs remain unidentifiable, it makes accessibility significantly challenging. Furthermore, employees viewed mental health training and awareness sessions as a necessary measure taken primarily to fulfil requirements or satisfy clients. Often, initiatives aimed at enhancing workplace wellbeing were directed towards permanent staff rather than subcontractors. This disconnect between central plans and on-the-ground realities diminishes the effectiveness of any support programs.

Workers frequently reported that they had little opportunity to apply what they learned or to practice skills following the sessions. Many participants attended briefings or workshops on mental health but found the information unhelpful due to a lack of available resources. Furthermore, they indicated that they did not receive any

meaningful support or knowledge from these sessions. Policies aimed at mental health should be moved from just appearing supportive to becoming meaningful and useful. For example, one of the respondents recommended to make MHFA's an important part of safety meetings, give them specific time to operate, share lists of available resources and use a more peer-based method of support. Most importantly, leaders should demonstrate the importance of mental health by using services and by helping to ensure mental health is accepted, highlighted and always valued.

4.3.4.5 The Potential for Mental Health Awareness to Improve Safety Outcomes

While several studies reported problems and barriers, another notable trend showed that raising mental health awareness at construction sites could lead to safer working conditions. A number of accounts collected in interviews and focus groups indicated that encouraging openly talking about mental health, supporting certain actions and training leaders helped improve safety, employee morale and easier communication in workplaces. If supervisors or site managers cared about workers' wellness by talking to them regularly, being approachable and opening up about problems of their own, employees reported being less stressed and considered themselves valued. As a result of the improved trust, more problems were reported, fatigue was addressed faster and workers were willing to help if others seemed distressed or quit participating in the work. In one instance Wellbeing groups were introduced weekly on a construction site, leading to reductions in incidents and an increased feeling of belonging among each group within that organisations site.

Another strong example took the form of a site that paired workers with trained persons, helping workers cope with their feelings. From their observations, those at the site felt more connected and experienced fewer instances of risk taking behaviour due to stress. Although the suggested solutions are straightforward, they imply that small steps in mental health can be made each day instead of focusing only on awareness one week per year. Additionally, employees who received mental support were more likely to act safely. They were seen making fewer omissions in their jobs, strictly following the rules and noticing whether their teammates were safe. Therefore, the research observes that good mental health and personal safety depend on each other.

Furthermore, these findings reveal the notion that prioritising employees' mental health may lead to increased initial costs. However, participants in these initiatives began to perceive them as a means of achieving higher objectives.

Promoting mental well-being contributes to a safer work environment, enhances employee performance, fosters greater engagement, and encourages accountability, ultimately leading to long-term benefits that may offset these initial expenses. To conclude, increasing mental health awareness could positively affect the safety of construction workers. When introduced into normal work practices and supported by top management, programs for mental wellbeing help the team bond, reduce the number of workers involved in incidents and urge the company to gain a strong and healthy culture.

4.4 Integration of Quantitative and Qualitative Results

4.4.1 Comparison of Findings from Both Phases

Qualitative interviews revealed a pervasive stigma around mental health, deeply rooted in traditional masculine norms. Workers often described emotional expression as a sign of weakness. To illustrate, one respondent stated, "When someone displays mental distress, older men consider it to be weakness." Quantitative findings substantiate such ambivalence: whereas 59.4% recognised mental health problems as rather too common, almost 28% underestimated their seriousness. In addition, 23.1% of employees who were engaged in safety incidents suggested that the outcome was partly influenced due to mental health, but a worrying 40.2% were uncertain, reflecting widespread hesitation and refusal to speak about mental health freely. Remarks such as "Mental health awareness workshops feel like lip service, with no real change after" from the interview respondents depict a gap between awareness campaigns and an organisational culture. Overall, these findings reinforce the point that stigma is systemic and deep-seated, and leadership-backed cultural change is needed to encourage openness.

Age had a significant impact on attitudes and behaviours toward mental health. Approximately one fifth of participants (18.3%) are aged ≤30, a segment that exhibits higher open-mindedness and use of support services. A younger respondent shared, “I feel comfortable talking about my feelings with the mental health first aider.” Conversely, older workers with 20 or more years in the construction industry tended to minimise mental health concerns, with one remarking, “Back when I was young, no one cared about feelings.” Survey results align with this divide, showing lower engagement with mental health resources among older cohorts. The intergenerational

gap occasionally fostered tension, as some older employees viewed the mental health leave taken by younger workers as unfair. This divide poses a risk to team safety culture and cohesion, as highlighted by the 45.8% of respondents who reported experiencing safety incidents or near misses. Participants suggested targeted communication efforts and intergenerational dialogue to bridge understanding and advance an inclusive culture embracing mental wellbeing across all ages.

Mental health problems related to stress were often associated with safety events. One participant, for instance, described a near-miss involving a distracted truck driver experiencing personal problems. Quantitatively, nearly 46% noted that they had been involved in minor or moderate safety incidents, with just over 23% noting that mental health was a contributing factor. Interviewees said chronic stress, tiredness, and emotional distress impair attention and hazard perception and raise the risk of accidents. A safety officer remarked, “We rarely investigate beyond ‘operator error’; mental health isn’t considered a root cause.” Yet 40.2% of survey respondents were unsure whether mental health influences incidents, highlighting gaps in awareness and training. Workers noted that stress negatively affects safety culture by lowering hazard reporting and adherence to procedures. Both data types suggest that incorporating mental health into safety management and providing flexible work options could reduce incidents.

Current policies and training were felt to be inadequate and poorly accessed as noted by the interview feedback. As one frontline worker expressed, "I never knew how to access support, or it felt too impersonal." There were MHFAs present, but frequently perceived as insufficiently trained or not available; the preference was peer support, but this varied. Survey data reflected varied engagement, suggesting these barriers hinder program reach. Sessions were often viewed as "checkbox" exercises that sometimes excluded subcontractors and casual workers and further reduced effectiveness. Embedding MHFA roles in routine safety meetings and visible leadership support are suggested to make the effort legitimate and increase uptake. This is consistent with survey results, whereby just over a fifth (21.2%) of respondents reported their mental health as “Good” to “Excellent”, indicating that surface-level efforts do not affect well-being significantly.

The working-age population, young (18.3% ≤30 years), gender-diverse (84.4% male, bucking the 9 out of 10 male to female ratio), and educationally mixed (53.4% post-secondary), requires flexible, welcoming mental health strategies. Precarious

employment (just under half - 48.2% on permanent contracts) would surely increase stress; 39.5% recently experienced poor mental wellbeing. Almost half had safety incidents, affirming the association between workplace safety and mental health. Interviewees were hopeful that true leadership interest, peer support, and awareness sensitised to culture would enhance productivity and safety. One participant captured, "If leaders show they care and we get real support, not just talk, mental health can finally improve here." These findings imply that multi-level approaches involving education, policy change, peer networks, and visible leadership are necessary to change workplace culture and mental health outcomes.

The research findings highlight the primary difficulties that are hindering the UK construction industry's progress in mental health. The information reveals several issues that need to be addressed to promote good mental health in the workplace. Many respondents identified stigma and a lack of awareness as significant obstacles, with 62.1% indicating that these factors create substantial difficulties. This suggests that misconceptions and negative perceptions regarding mental health persist throughout the industry. As a result, individuals are less likely to get needed mental health assistance, and organisations are less motivated to invest in these services. Promoting workplace culture changes by hosting campaigns and workshops, as well as holding open sessions, can help people feel comfortable asking for support without feeling judged. As a result of high turnover, which was an issue for 56.5% of the participants, safety culture and mental health efforts may be disrupted. When staff members come and go frequently, there is a danger that the workplace will lack strong leaders and guidance. Workers who do not stay long may not be interested in participating in long-term mental health programs. One way to combat this issue is for construction companies to work on keeping their employees by increasing job benefits, changing how work is carried out and ensuring all workers feel a part of the team. Leading by example or failing to do so turn out to be a substantial problem for 60.8% of survey participants. Making mental health part of the company's work environment depends on effective leadership. If leaders participate in mental health programs, they are guiding the entire organisation to foster openness and understanding. Because of this, leaders should attend training and should genuinely care about mental health, which can prompt employees to take care of their own mental health. Having few resources is almost always a major issue for remote work sites.

Because remote areas struggle to provide strong mental health resources, employees may feel alone and not supported. As a result, companies can introduce telehealth and mobile health services and utilise digital platforms to offer mental health support to everyone, regardless of their workplace. For 61.4% of respondents, cultural ideas of being macho and masculine are a challenge that makes the problem even worse. Because of these cultural barriers, individuals do not open up about their feelings, which weaken mental health efforts. It is essential to transform the workplace culture so that emotions are acknowledged and openly discussed. Fortunately, leaders can model positive behaviour, share stories, and create environments where staff feel safe to share their own stories. According to the survey, it appears that when productivity is prioritised over mental health, it is mainly because many employees lack sufficient time. Harsh timelines and unpredictable programmes in the construction industry often don't leave employees much time to prioritise their mental well-being. As a result, organisations must recognise that mental health initiatives can lead to a better work environment and increased productivity. Introducing flexible work arrangements, such as mental health days, and prioritising well-being when creating project plans can help teams maintain a healthy work-life balance. Overall, the results underline that a combination of approaches is needed to help address the mental health issues in the UK construction industry. When the industry reduces stigma, gains more support from leaders, ensures more resources, addresses traditional beliefs and equates mental health with daily operations, it will improve its overall workplace well-being.

4.4.2 Triangulation of Data

Triangulation in this study served to enhance the validity and depth of understanding regarding mental health challenges within the UK construction industry by integrating qualitative interview insights with quantitative survey data. The approach aligns with Carter et al.’s (2014) advocacy for triangulation to cross-verify data and contextualise findings, mitigating the limitations inherent in relying on a single data source. The qualitative findings illuminated entrenched stigma and cultural barriers within the industry, where traditional masculine norms suppress emotional disclosure, a phenomenon supported by Kotera et al. (2019), who identify “mental health shame” closely linked to masculinity in construction workers. The cultural insight finds a quantitative echo in 59.4% of survey respondents admitting the prevalence of mental

health issues, with nearly half of them perceiving them as "less serious" - an ambivalence revealing the persistence of stigma on a broader scale. The triangulated data reveal the complexity of mental health perceptions: while workers recognise the problem, many remain hesitant to openly discuss it, reinforcing findings from Blake, Bullock, and Chouliara (2023), who highlighted stigma as a key barrier to mental health initiatives in construction Small and Medium Enterprises (SMEs). Generational differences, strongly highlighted in interviews, found robust support in quantitative demographics: 18.3% of the workforce was aged ≤30, correlating with younger workers' reported openness to mental health discussions and service utilisation, such as MHFA programs. This is consistent with Duncan et al. (2024) study, showing that younger UK construction workers are more inclined to seek help. Conversely, older workers demonstrated reluctance and minimisation of mental health challenges, a dynamic that creates intergenerational tensions affecting team cohesion and safety culture. This dual insight from interviews and surveys underscores the importance of tailoring mental health interventions to diverse age groups within the industry. Safety incidents were a critical focal point of both data strands. The qualitative data vividly portrayed stressors, fatigue, and emotional distress as factors undermining safety, with workers reporting near-misses attributable to mental strain. This was supported quantitatively by nearly 46% of respondents having experienced safety incidents or near-misses, and 23.1% acknowledging mental health as a contributory role.

However, a notable 40.2% were unsure about mental health's influence, highlighting a knowledge gap that limits effective safety management, a critical point for future education and policy focus. Limitations of existing mental health policies emerged strongly from qualitative interviews, revealing a disconnect between available support and practical accessibility. This was quantitatively reflected in inconsistent engagement with mental health services. Janusonyte et al. (2019) assess MHFA training's influence and also note challenges like poor training and reduced access, especially among subcontractors who are not included in permanent staff initiatives. The qualitative request for integrating MHFA roles into safety meetings and leadership support comports with NHS England's (2019) Community Mental Health Framework, emphasising organisational integration and leadership involvement as necessary for optimum mental health support. Finally, the mixed data on workforce demographics, including precarious employment, educational diversity, and gender identity variation, provide crucial context for intervention design. The precarious nature

of many workers' contracts (48.2% permanent) likely exacerbates stress, a factor documented by Kotera et al.(2020), who link work-life balance struggles to mental health in construction. The data triangulation supports the argument by Liversedge (2023) for multifaceted, culturally sensitive mental health strategies that address stigma, foster peer networks, and secure leadership buy-in to achieve sustainable improvements. In short, triangulating the data found that qualitative stories gave important details on what employees go through, feel and experience at work, which the numbers did not include. By adopting this approach, the study can offer recommendations that are grounded in robust evidence and are deemed reliable.

4.4.3 Overall Interpretation of Results

The findings uncover that the UK construction sector's mental health is influenced by factors like culture, age and organisation, which affect what workers face and experience. The researcher found that stigma is seen as the biggest obstacle, influenced by the belief that toughness is expected in men and by cultures in workplaces that focus on suppressing emotions (Kotera et al. 2019). Although more people admit to the prevalence of mental health issues, there is still a significant level of doubt and underreporting, much like what the BBC (2025) described as mental health being a "silent epidemic" in construction. Help-seeking behaviour and the way organisations operate were greatly influenced by differences among generations. Younger staff were more open to utilising mental health resources, consistent with the findings of Duncan et al. (2024) regarding help-seeking intentions, whereas older staff tended to downplay mental health issues. This divide poses a risk to team harmony and may exacerbate stigma for new recruits. It suggests that interventions should be age-specific and promote intergenerational communication to foster mutual understanding, an approach supported by Jones et al. (2015) in relation to occupational mental health initiatives. Work stressors such as fatigue, insecurity about work, and emotional exhaustion were significantly associated with safety occurrences.

Nearly half of the survey respondents witnessed either safety occurrences or near-misses, and 23.1% understood mental health to be an influence, which reflects the physical symptoms of psychological stress evidenced by Winkler et al. (2024). The ongoing disparity in appreciating mental health's contribution to safety, reflected in 40.2% of participants not being sure, highlights the need to mainstream mental health into safety management systems beyond conventional "operator error" models

criticised by respondents and documented in occupational health literature (Blake et al., 2023). Mental health policies and training, though present, were largely perceived as inadequate or tokenistic. The qualitative data revealed a disconnect between policy and practice, with many workers unaware of how to access support or feeling that programs lack genuine engagement. This reflects Janusonyte et al.'s (2019) findings on MHFA training limitations and echoes NHS England's (2019) call for organisational embedding of mental health support. For meaningful change, policies must be inclusive of subcontractors, peer-based, and visibly supported by leadership, echoing Liversedge's (2023) recommendations for "building the next storey" in construction mental health. The study's demographic insights emphasise the workforce's diversity in age, gender identity, and contract stability, suggesting that one-size-fits-all solutions are insufficient. The precarious employment conditions, identified in 69.8% of workers as non-permanent, contribute to elevated stress levels, reinforcing findings by Kotera et al. (2020) on work-life imbalance and mental health risks. These conditions highlight systemic challenges requiring policy attention at organisational and national levels, including support frameworks for casual workers as advocated by occupational health experts. Importantly, the results indicate potential for improvement.

The demographic composition of a younger workforce, coupled with educational diversity, presents an opportunity for the development of creative, adaptable, and culturally appropriate mental health interventions. Participants emphasised the need for leadership to demonstrate genuine concern and for interventions to extend beyond mere awareness sessions to provide tangible support, echoing the advice of the BBC (2025) and Liversedge (2023). With such approaches incorporating peer networks, reducing stigma, and directly linking mental health to safety and productivity outcomes, such a compelling business case is held to be supported by Jones et al. (2015). The findings of this mixed-methods study provide both a comprehensive and nuanced understanding of the challenges and opportunities of mental health in UK construction contexts. The emergence of stigma, generational gaps, workplace stressors, policy limits, and workforce diversity suggests a complex ecosystem that may require multiple-level interventions. Aligning with current policies such as the NHS England (2019) Community Mental Health Framework and empirical evidence from recent occupational health research, the study advocates for culturally embedded, leadership-driven, and peer-supported mental health strategies to foster a safer, healthier construction industry.

4.5 Summary of Key Findings

4.5.1 Recap of Major Findings from Quantitative and Qualitative Phases

4.5.1.2 Quantitative Findings

The quantitative results of the study present an initial understanding of statistical associations between mental health incidence rates and different workplace factors within the construction sector. The findings identify the prominence and weaknesses of current data-driven knowledge concerning how occupational stressors, incidents, interventions, and organisational policies correlate with employees' psychological well-being. Correlation analysis established some interesting trends. There was a weak but statistically significant positive correlation between work-related factors and mental health problems (r=.168, p=.008), which indicates that as demands at work, long working hours, and lack of control increase, so do mental health problems. More significantly, there was a moderate positive relationship between the prevalence of mental health and safety incidents (r=.390, p=.005), suggesting a stronger relationship between worsening psychological health and the incidence of minor to moderate safety occurrences.

This supports the hypothesis that mental health has a direct influence on workers' capacity to preserve safe procedures on-site, most likely through compromised concentration, emotional burnout, and elevated human error. Notably, a relatively weak but positive correlation existed between mental health prevalence and having interventions or support measures (r=–.075, p=.023). Whilst the effect is small, the direction of the relationship indicates that more interventions like awareness campaigns, peer support, or access to counselling could help reduce reported mental health difficulties. However, the same cannot be said of organisational policies, which failed to demonstrate any statistically significant association with mental health outcomes. This disparity may indicate an imbalance between policy formulation and actual implementation or worker perception.

The multiple regression analysis also examined the combined predictive strength of these variables for mental health outcomes. While the overall model was significant (F= 2.490, p = .044), it only accounted for 3.6% of the variance in the prevalence of mental health. This constrained explanatory power hints that although some work-related factors are significant predictors, most of the psychological load is not explained and is indicative of more general systemic or individual factors not

encompassed in this model. In the model, interventions and strategies remained a small but significant negative predictor (β = –.086, p = .018). In contrast, work-related stressors (β = .168, p = .008) and safety incidents (β = .039, p = .041) were significant positive predictors. Organisational policies did not predict mental health outcomes significantly (p = .792). As a whole, the quantitative stage establishes the elevated incidence of mental health issues within construction and emphasises the contribution of stressful working environments and risk factors. As significant as existing support strategies are in having some dampening effects, their restricted scope, combined with poor policy enforcement, indicates considerable potential for progress. Notably, the robust statistical and perceptual connection between mental health and safety outcomes offers strong evidence supporting the inclusion of wellbeing measures in policy and practice in health and safety.

4.5.1.3 Qualitative Findings

The qualitative data from semi-structured interviews and focus group discussions yield rich descriptions of how mental health is experienced, organised, and outwardly expressed in the construction industry. Five overarching themes emerged, detailing a sophisticated interrelationship between individual attitude, organisational culture, and system constraints. One of the common themes was "Stigma and Cultural Barriers to Talking about Mental Health", particularly among male construction workers. This theme was a wide-ranging silence based on deep-seated norms of conventional masculinity, wherein workers reported bypassing being seen as vulnerable because they were afraid of being judged or viewed as weak.

On a different note, the subject of “Generational Differences in Attitudes towards Mental Health” might signal a shift in cultural values. Due to older staff often adhering to traditional attitudes, the responsibility of advocating against mental health was largely left to the younger members of the work force. Different ages point out a change in the culture of workplaces, as it often affects how open workers are to discussions about mental health. This development also resulted in certain challenges, as some older workers resisted the changes, leading to minor conflicts within the team. Additionally, the idea described in the theme named “Workplace Stressors as Catalysts for Safety Incidents” focused on how stressed emotional health can influence safety incidents. Participants explained that persistent stress from extended working hours, budgetary constraints, and personal distractions severely undermined

their attention and judgment. The association between psychological distraction and physical hazards was apparent in "not thinking straight" and “being in their head” at work. This theme clarified the connection between psychological stress and subpar safety performance, highlighting calls for the need for combined safety and well-being interventions.

While exploring the theme of "Limitations of Existing Mental Health Policies and Training", it was found that awareness did not solve the issue, as mental health policies and training did not fully align with how things are carried out in the business. Many companies had mental health policies; however, many of these policies were not substantive and seemed to serve merely as time-saving, basic measures. When there is no consistency, it negatively influences the effectiveness of such measures and reduces the willingness of workers to share problems. Meanwhile, the last theme, "How Being Aware of Mental Health Improves Safety," provided promising alternatives. Where openness and honest discussion were valued in organisations, the participants responded with higher morale, increased open reporting of safety, and greater team building. This suggests that if mental health is rendered "normal" in work culture, it promotes individual welfare and strengthens the overall safety culture. These problems as a whole identify both the long-standing issues and emerging opportunities within the construction industry's approach to mental health. Bridging the generation gap, destigmatising support, and moving policy from symbolic to substantive are all critical moves towards meaningful change.

4.5.2 Linkage to Research Questions

The bringing together of both qualitative and quantitative results enables a multifaceted interpretation of the questions raised in this research that presents both confirming and confounding evidence of the story regarding mental health and safety in the UK construction sector. Responding to the first question of how prevalent are mental health issues, such as depression, anxiety, and substance abuse, among construction workers, both datasets validate that psychological distress is a prevalent problem. Quantitative results identify a statistically significant correlation between work related factors and mental health ($r=.168$, $p=.008$), substantiating the argument that job pressures, excessive work hours, and poor control are responsible for high psychological symptoms. Qualitative reports situate these findings in context, with

workers often noting the tension of fatigue, financial stress, and personal concerns as precipitants of emotional distress. The continued presence of stigma, as seen among male and older workers, also serves to increase this prevalence, diminishing the probability that workers will seek help or recognise mental health struggles.

To answer the second research question: What types of minor to moderate safety incidents are commonly reported in the construction industry. The statistical association between mental health prevalence and safety incidents (r=.390, p=.005) indicates a moderate relationship, which implies that psychological wellbeing plays a vital role in physical safety. Qualitative data evidenced this by demonstrating how stress, affective distraction, and cognitive overload, caused by issues in and outside the workplace, compromise employees' capacity to remain vigilant and attentive, raising the risk of accidents. Employees talked about a time when they were "not thinking straight" or got distracted by outside stressors, directly correlating mental states with unsafe behaviours. The third research question: is there a quantifiable link between the presence of mental health issues and the occurrence of minor to moderate safety incidents among construction workers, is answered explicitly via the regression analysis, which indicated that both safety incidents ($\beta = .039$, $p = .041$) and work-related factors ($\beta = .168$, $p = .008$) were significant predictors of mental health problems but with minimal overall explanatory power ($R^2 = 3.6\%$).

The qualitative information provides richness to this connection by noting the cyclical aspect of mental wellbeing and safety, where bad mental health leads to accidents, and the consequences of these incidents tend to reaffirm psychological distress, especially when employees feel criticised or unaided. Lastly, in exploring the fourth research question, how can addressing mental health issues in the construction industry contribute to improved safety outcomes and reduce the incidence of minor to moderate safety incidents, the tension between current policy constraints and hopeful peer-led interventions comes to the fore. Quantitative measures revealed a weak negative correlation between interventions and mental health concerns (r= –.075, p=.023), whereas organisational policies were insignificant. However, qualitative results suggest that embedded mental health support within the workplace culture, especially non-clinical and peer-supported, improves morale, enhances communication, and increases safety reporting. Respondents decisively agreed that better mental health support would increase safe workplaces, not only in terms of individual wellbeing but also as a result of better team cohesion and attentiveness.

These results highlight the intricate but essential relationship between safety and mental health. Although existing policies and interventions are deemed inadequate, there is also a clear potential for more inclusive, culturally responsive, and proactive policies to transform safety and wellbeing outcomes.

4.6 Conclusion

4.6.1 Summary of Results Chapter

The study looked into how problems associated with mental health can impact safety in the construction industry. Researchers found that many workers in construction are affected by depression, anxiety or substance abuse. Often, the most common safety incidents were slips, trips, falls and incidents that occurred when using equipment. Statistical methods revealed that mental health concerns are related to incidents that threaten safety. According to the results, working on mental health can improve safety and minimise chances of having minor to moderate accidents at work. The study involved 84.4% men and 11.5% women (with “Binary” and “Preferring not to say” making up the other 4.1%) and their ages were recorded as being 18≥ to 51>. According to the results of inferential statistics, there is a relationship between mental health challenges and safety incidents. The researcher used thematic analysis and found that mental health impacts many workers’ safety behaviours and that support from all sectors is crucial. The information from interviews and meetings with focus groups also pointed out the significance of mental health in the construction industry. Combining both types of results showed that there is a correlation between mental health issues and safety problems. The findings suggest that improving mental health is important for advancing safety. By studying the issue, steps can be taken to assist and secure workers in construction and reduce possible safety issues. Prioritising mental health in the workplace can protect construction workers from harm and provide them with a supportive environment.

4.6.2 Implications of Findings for Mental Health and Safety in the Construction Industry

The study rigorously examined the relationship between the emotional and mental health of construction workers and the frequency of safety-related incidents within the industry. Data collection revealed that construction workers experience various mental health issues, including clinical depression, anxiety disorders, and associated problems with alcohol or drug use. Furthermore, the study identified that

minor to moderate incidents, particularly slips, trips, and falls, as well as errors in the handling and use of construction equipment, are sufficiently prevalent in this field to warrant increased attention. The application of analytical methods established a connection between the presence of mental health issues and an increased likelihood of involvement in workplace accidents. From the total number of participants in this study, 84.4% were men and 11.5% were women (with “Binary” and “Preferring not to say” making up the other 4.1%). The age spectrum of the participants was quite broad, going from 18 years upwards, showing that the construction industry includes a wide range of workers. This research found relationships between the listed mental health issues and the safety incidents reported, all of which were shown to be statistically significant. It seemed that the wellbeing of construction workers may substantially influence general safety outcomes within the industry. By recognising these significant connections, employers and decision-makers in the industry can implement targeted measures to support workers' mental health and enhance workplace safety.

In addition, to understand workers’ real life experiences, the study utilised thematic analysis of qualitative data. The qualitative study found several important issues that explain the relationship between mental health and safety. They looked into how mental health may affect how construction workers perform their jobs and called for the industry to provide support for the mental health of all construction workers. Statistics from individual interviews and transcribed notes from focused group engagements highlighted the main concerns related to dealing with mental health problems in the construction field. In all responses, people mentioned the importance of giving support to those who require help and ensuring workers are aware of mental health resources that can be used in confidence. Applying the valuable data from the interviews and the studies made it even more clear that the occurrence of safety incidents in construction is closely linked to mental health concerns. Furthermore, the research presented underscores that incorporating measures to enhance construction workers' mental health is crucial for improving safety at construction sites, not only for ethical reasons but also for legal and moral considerations. However, the ethical principle remains paramount, as prioritising workers' mental health reflects a commitment to their well-being and dignity. When mental health is prioritised by construction employers, it fosters a workplace that supports employees, enhances safety, and cultivates a more supportive culture. As a result, there may be fewer and

less severe safety incidents, thereby improving conditions for all individuals working in this vital industry.

4.6.3 Transition to next Chapter

Having presented and summarised the empirical findings, this chapter concludes the systematic reporting of the data collected in this study. The patterns and relationships observed, particularly the indications of a link between mental health status and minor to moderate safety incidents, offer important insights but also raise several questions that warrant deeper examination. While the results provide an essential foundation for understanding the potential interplay between psychological wellbeing and workplace safety in the UK construction sector, they must be considered within a broader interpretive and theoretical context. The subsequent chapter, the Discussion, will therefore undertake a critical analysis of these findings, drawing upon existing literature to situate them within the wider field of occupational health and safety research. It will also reflect on the practical implications of the results, explore the underlying mechanisms that may explain the observed associations, and evaluate the extent to which these findings support or challenge existing assumptions. In doing so, the Discussion Chapter will aim to provide a comprehensive interpretation of the study's outcomes and contribute meaningfully to the ongoing discourse surrounding mental health and safety in high-risk industries.

Chapter 5: Discussion

5.1 Introduction

Having presented the results of the study in the previous chapter, we now turn to the discussion chapter, where we will interpret and analyse these findings in the context of existing literature and theoretical frameworks.

The discussion chapter compares the findings of the quantitative survey and qualitative focus-group and semi-structured interview narratives with the current literature to explain the interdependency of the effect of mental health on construction site safety and vice versa. Statistically, increased levels of psychological distress are reported by workers who report increased rates of near-misses and incidents. These associations are put into perspective with phenomenological descriptions of how anxiety, depression, and fatigue interfere with cognition: decreasing concentration and slowing down decision-making and undermining compliance with safety measures. This then leads to psychological vulnerability as a causal factor increasing risk. The chapter also discusses the vicious circle of stressful deadlines and job pressures that heighten mental stress, which makes the likelihood of an incident much higher and the risk increases, which industry needs to interrupt. The challenge of implementing mental health strategies across the diverse and complex spectrum of construction occupations is also critically assessed. Finally, these empirical findings are converted into practical recommendations in the discussion. These suggestions entail the systematic introduction of routine occupational health procedures involving periodic psychological check-ups, the further elaboration and establishment of the on-site counselling services that can be utilised, and the requisite revision of traditional safety training exercises to explicitly consider the cognitive load and stress. The synthesis of the quantitative (e.g., the correlations between the work-related factors, safety incidents, and mental health prevalence) and qualitative (e.g., the themes of stigma, generational differences, and workplace stressors as the triggers of incidents) findings into a suggested integrated framework/model of addressing mental health and safety interdependencies in the construction is at the heart of this chapter. This framework, described in later sections (Figure 5), is based on the adaptation and extension of previous theories, including Job Demands-Resources (JD-R) model, to the construction context, including upstream work design modifications, implementation faithful enough to close the policy practice gap, responsible feedback loops, and

psychosocial safety audits. The chapter finishes with a critical point that longitudinal research and larger, multi-site research is needed to be able to effectively untangle causality and that the safeguarding of the mental health of the employees is not an issue of welfare, but of non-negotiable and essential operational safety management in the construction industry.

5.2 Synthesis of Core Themes

5.2.1 Stigma and Cultural Barriers to Discussing Mental Health

Cultural barriers also contribute to mental health challenges among construction workers by limiting their interactions to similar individuals. Diversity fosters positive relationships among workers and helps them understand different cultures. Furthermore, the quantitative findings revealed uncertainty, with 40.2% of respondents unsure whether mental health impacts safety incidents. This uncertainty highlights the cultural barriers that may contribute to mental health challenges, as it suggests a lack of awareness or acceptance of the relationship between mental health and safety, a point further clarified by the qualitative findings. Similarly, qualitative analysis indicated that employees feared being overlooked for promotions or facing termination if they reported mental health issues. This fear underscores the cultural barriers present in the organisations, as it reflects a workplace environment where discussing mental health is stigmatised, potentially discouraging employees from seeking help and exacerbating mental health challenges. Hulls et al. (2022) observed that masculinity norms and biases during evaluations within organisational culture can also affect mental health.

Gendered and generational stigma contribute to mental health challenges and can result in incidents within the construction industry. These attitudes foster silence, reducing the likelihood of workers seeking support even when policies are in place (Kim and Wang, 2024). The quantitative result shows that organisational policies did not have any significant correlation with mental health outcomes ($r = .011$, $p = .865$). The findings revealed that there are organisational policies and interventions in place, but the effect is dampened due to cultural stigma, which discourages their uptake.

5.2.2 Generational Differences in Attitudes toward Mental Health

Generational differences allow individuals to adapt to new policies and implications. Similarly, Choudhary et al., (2024) emphasised in their study that the shift to technology, communication, and advancement in working nature causes stress among employees, which is a challenging factor for an organisation who may struggle to recognise and consider generational differences. In contrast, quantitative data revealed that the younger employees (aged ≤30) were more accepting of mental health issues and support service utilisation, whereas older employees tended to reject them. This was supported in qualitative narrations made by older participants, who recalled that young people were concerned about feelings of stress. It has an impact on team cohesion in which younger employees are allowed to take mental health leave or seek help, and older employees see it as unequal or a manifestation of weakness (Fleeton, 2024).

According to Kelta Tabaku, (2024), the intergenerational gap represents a safety risk because trust and communication in the teams are crucial in hazard reporting and safety coordination. The combined findings from the methods indicate that mental health programs risk being overlooked unless they specifically address generational attitudes. Similarly, the qualitative analysis showed that intergenerational communication should be focused on the construction industry because it will foster significant outcomes, such as integrating new policies. A more accommodating practice involves focused communication and cross-generational conversations that aim to foster understanding and bridge the generational gap.

5.2.3 Workplace Stressors as Catalysts for Safety Incidents

Workload is a significant source of stress for construction workers, as it directly affects their mental health. According to the analysis, it has been recognised that work-related factors were the significant predictor of mental health issues only (B =.171, p =.008), whereas correlation results indicated the positive association between adverse working conditions and poor mental health (r =.168, p =.008). Similarly, the qualitative analysis also revealed that workers reported fatigue, excessive working hours, and job insecurity as significant stress factors. Some respondents described how personal and professional stress interacted to diminish their focus, leading to near misses.

Onyekwere, Haruna, and Azodo, (2024) emphasised in their study that operational errors were reported to have been caused by fatigue, distraction, and

emotional distress, whereas these were usually passed off as operator error by the managers. In addition, the structure or hierarchy of the organisation also promotes stress among workers in the construction industry (Dodanwala, Shrestha, and Santoso, 2021). Therefore, these findings ensured that the necessity to consider as a part of safety management systems the mental health assessment, as it is a health and a hazard factor.

5.2.4 Limitations of Existing Mental Health Policies and Training

Impaired mental health among workers, such as depression or stress from long shift hours, can lead to stubborn attitudes, causing them to resist adopting policies and intervention strategies (Charles and Jannet, 2024). This can impact the organisational value in the competitive market. Similarly, the quantitative analysis showed that interventions played a small protective role concerning mental health (B=-.086, p=.018), and interventions were positively correlated with policies (r =.212, p=.001). This means that for reducing mental health challenges among workers, interventions are not as effective, but they can promote policies. Nevertheless, the total regression model only accounted for 3.6% variance in mental health outcomes, which may have little practical implications. On the other hand, qualitative data revealed that employees found the use of helplines and posters impersonal, inaccessible, and irrelevant to their actual working experiences.

5.2.5 Potential for Mental Health Awareness to Improve Safety Outcomes

While managing tasks and regulating policies, it is the role of leaders to maintain mental health and safety outcomes so that tasks can be accomplished safely and efficiently. Leaders must encourage a work-life balance so that the mental health of workers can be protected from harm. According to quantitative analysis, it has been evaluated that there was a moderate and positive relationship between mental issues and safety incidents (r =.390, p<.001). Almost half of all respondents to the survey said they had experienced safety incidents, with one out of every five saying that mental health had contributed to the incidents. Similarly, the qualitative analysis revealed that individuals are facing mental health challenges due to insufficient measures implemented by leaders.

The quantitative and qualitative results both lead to the conclusion of the significance of leadership in the struggle to close the policy or practice gap. Although

statistical results did not display much of a direct impact of the policies, qualitative descriptions revealed that when the supervisors were actively involved with the workers by asking them about their well-being, their own experiences, or helping them open up and share their stories, employees felt more respected and protected. Policies and interventions cannot be effective unless leaders embody and integrate them into their daily practices (Baum, 2021). Therefore, this synthesis highlights the importance of mental health literacy and communication training of leadership, so that line managers have the skills to identify mental distress and react positively.

In the construction industry, it is essential to foster a holistic understanding among workers of the impact of mental health on health and safety. The analysis indicates a significant relationship between work and stress, with employees experiencing mental health complications. The synthesis reveals an underlying tension: while policies and interventions exist, they lack momentum due to cultural stigma, insufficient leadership engagement, and inadequate integration with safety management (Zamani et al., 2025). However, the results highlight the need for leaders to incorporate policies aimed at maintaining employee health.

5.3 Integration of Quantitative and Qualitative Findings

5.3.1 Summary of Major Findings

The quantitative study of the occurrence of the mental health concerns among the UK construction industry (N=251) referring to the Pearson correlation and multiple linear regression showed that adverse job conditions (Work-related Factors; WF) had consistently been the most effective predictor of the occurrence of the mental health problems (MH) and demonstrated that the formal organisational policies in the UK construction industry were largely ineffective at the employee level.

Correlation analysis revealed that there were clear correlations between MH and Safety Incidents (SI) ($r = .390$, $p < .001$), Challenges and Barriers (CB) ($r = .321$, $p < .001$), and WF ($r = .168$, $p = .008$), which proved that high level of psychological distress is co-related with impaired safety performance, unfavourable occupational conditions, and massive organisational challenges. The systemic interdependencies were also present, where WF itself was highly correlated with SI ($r = .200$, $p = .001$) and CB ($r = .276$, $p < .001$). Organisational efforts were involved positively with Organisational Policies and Practices (POL) ($r = .212$, $p = .001$) and negatively with CB ($r = -.148$, $p = .018$), indicating that interventions can have a weak positive impact on

reducing the perceived barriers. More importantly, POL did not show a strong association with MH (r = 0.011, p = 0.865), WF (r = 0.045, p = 0.480), or SI, which points to a strong policy-practice decoupling.

Although statistically significant as a whole [F (4,246) = 2.490, p = .044], multiple regression analysis explained only 3.9% of the variance in MH (R Square =.039), in spite of which the predictive measures used captured only a little part of determinants of psychological distress. In the model, WF was the only important independent predictor of MH (0.168, p = 0.008), but SI (0.537), INT (0.186) and POL (0.792) all lost their significance. This trend supports the dominance of upstream job-related stressors and emphasises that the current policies and interventions in their current incarnations do not have a significant impact on reducing mental health prevalence on the workforce level.

These numerical findings are consistent with the available literature on psychosocial risks in the construction industry that has consistently revealed high job demands, low control, job insecurity, long working hours, and erratic employment as the main causes of distress (Hon et al., 2024; Chan et al., 2020; Li et al., 2022). The positive correlation between MH and SI (r =.390) and the following mediating/confounding effect of WF follow the Job Demands-Resources (JD-R) model (Demerouti and Bakker, 2023), where high demands exhaust resources, which, in turn, affects mental health and makes error-prone behaviour. Equally, the identified policy-practice gap is a strong indicator of the institutional decoupling theory (Heese et al., 2016; Kehinde, 2024), where institutional policies are often adopted due to legitimacy reasons and are never fully embedded into the operational culture or practice at the operational site level, which has been emphatically recorded in site-specific reviews of the construction industry (Blake et al., 2023; Lawani et al., 2025).

Although, a number of critical limitations and gaps in relation to the current existing literature arise. First, the currently low relative predictive content of job conditions (3.9%) against organisational interventions in a single model reveals that more significant unmeasured cultural, structural, and contextual influences in the form of enduring stigma, intergenerational conflicts, temporary workforce relationships, and the acceptability of risk-taking behaviours that qualitative explanations in this study clarified. Second, despite the presence of the JD-R framework applied in construction (Radic et al., 2020; Hon et al., 2024), the existing applications do not involve the concept of a reciprocal relationship between mental health and minor or moderate

safety incidents as a fundamental mechanism and do not sufficiently cover the factor of implementation fidelity as a mediator of intervention efficacy. Third, the literature is mostly downstream-oriented (individual resilience training, EAPs), and little is done to redesign upstream work structures and work practices, which is the area where the current findings would have the most significant effect.

These alignments, shortfalls and extensions have a direct impact on the creation of the proposed Integrated Psychosocial Safety Framework in Construction (Figure 5). The framework is the synthesis of the quantitative primacy of WF, the policy-practice disconnect, the minor role of existing INT, and the qualitative understanding of cultural barriers (stigma, generational fractures) and experiences of living with cognitive interference caused by stress. Integrating the JD-R model, with a specific focus on upstream job and employment redesign, fidelity of implementation, psychosocial and physical safety audits, ongoing outcome-feedback mechanisms and culturally competent stigma reduction, addresses gaps in the literature and offers a theoretically grounded, empirically supported approach to mitigating mental distress and other safety-related incidents in the field.

5.3.1 Discussion of Quantitative Results

5.3.1.1 Implications of Statistical Findings

The statistical findings derived from the correlation and multiple regression analyses provide critical implications for understanding and addressing Mental Health Prevalence (MH) within the UK construction industry. These results not only confirm the severity of existing stressors but, more importantly, expose key deficiencies in organisational responses, guiding the direction for future research, policy, and intervention design.

5.3.1.1.1 The Primacy of Work-Related Factors as Causal Correlates

The most consistent and impactful finding across the dataset is the significance of Work-related Factors (WF). The initial correlation established a significant positive link between WF and MH ($r = .168$, $p = .008$), suggesting that adverse occupational conditions, encompassing long hours, high pressure, and job insecurity, have a direct relationship with higher rates of mental health distress. This relationship was reinforced in the multiple regression model, where WF emerged as the sole statistically significant predictor of MH ($\beta = 0.168$, $p = 0.008$). The implication here is fundamental as it highlights that mental health struggles in construction are not merely individual

failings but are systemically generated by the structure and environment of the work itself. As noted by Russell and Lightman (2019), human distress often arises when external forces block an individual's innate drive for health. In this context, the organisational environment, characterised by adverse working conditions, acts as the primary impediment, forcing workers into a state of chronic stress (Li et al., 2020). Therefore, any effective intervention must prioritise upstream changes to job design and occupational culture, rather than relying exclusively on downstream measures such as stress management courses or resilience training aimed at individual workers. Failure to address WF directly means the construction industry is continuously creating the distress it later attempts to treat (Firose et al. 2025).

5.3.1.1.2 Unmasking the Policy-Practice Gap

The most salient practical implication arises from the non-significant findings regarding Organisational Policies and Practices (POL). Specifically, the correlation analysis revealed no significant association between POL and any measure of distress, including mental health (MH), work related factors (WF), or safety incidents (SI). This indicates that the mere existence of such policies does not provide a discernible protective effect for workers. This result illustrates the broader sociological concerns about decoupling, where formal organisational structures (policies) are adopted to satisfy external stakeholders or regulatory bodies (institutional legitimacy) but are not meaningfully integrated into day-to-day operations or culture (Heese et al. 2016). In the context of construction, the discussion also transforms these empirical findings into recommendations, which may include systematic occupational health protocols, psychological checks, on-site counselling, and updated safety training to address cognitive load and stress. The key components of this chapter are the synthesis of quantitative and qualitative results of the study into a proposed Integrated Psychosocial Safety Framework in Construction (Figure 5), which further expands the JD-R model by placing more emphasis on upstream job redesign, comprehensive policy, integrated audits and stigma reduction. The chapter ends with the accentuation of the necessity of longitudinal and multi-site studies that should prove causality and generalisability and conclude with the statement that the mental health protection of employees is a non-disputable, central part of operational safety management in the construction industry. Organisations may possess BSI (British Standards Institution) accreditations or develop formal mental health charters, but these documents are likely to remain inert within staff manuals rather than translating into active, supportive

behaviours on site. The implication is that policy development should focus more on implementation fidelity and the perceived impact, rather than just on volume and formality. Future research and organisational audits must move beyond simply checking for the presence of policy and instead focus on its enactment. For instance, measuring the frequency of manager-worker conversations about mental health, or the perceived accessibility and non-punitive nature of policy use (Hansen, 2024).

5.3.1.1.3 The Ambiguous Role of Safety and Intervention Activity

The results in the case of Safety Incidents (SI) and Interventions and Strategies (INT) have a more subtle nature and their implications are rather different and, consequently, reflect the mediator role of work-related factors and the minimal independent effect of the current organisational endeavours, thus, necessitating a comprehensive approach as developed in the proposed framework (Figure 5).

A. Safety Incidents (SI)

The bivariate relationship between Safety Incidents (SI) and Mental Health Prevalence (MH) ($r = .390$, $p < .001$) is indicative of the fact that failures in safety and the prevalence of mental health are tightly connected, which aligns with the literature on the inseparability of safety culture and psychosocial safety culture (Hon et al., 2024; Lawani et al., 2025; Demerouti and Bakker, 2023). This association is however not statistically significant in the multiple regression model when the Work-related Factors (WF) are controlled ($p = .537$) meaning that WF, including high pressure, excessive hours, and job instability is likely to be the mediating or confounding factor in the SI-MH association. These fundamental themes are in line with the JD-R model prediction of high demands that drain resources and strain them (Demerouti and Bakker, 2023) but take the already existing research a step further and quantifies WF as the most dominant upstream driver. This highlights the fact that the issue of safety improvement and enhancement of mental health are not done simultaneously but converge at the same point of interest in the redesigning of adverse core work conditions to break the cycle of stress incidence.

B. Interventions and Strategies (INT)

The low negative regression coefficient between Interventions and Strategies (INT) and Mental Health Prevalence (MH) ($B = -.086$, $p = .186$) suggests that current interventions, although they increase policy alignment ($r = .212$, $p < .001$) and perceived barriers ($r = -.148$, $p = .018$) slightly, are not intensive, extensive or integrative enough to have any significant impact on the prevalence of MH. This resembles the literature

on the low effectiveness of downstream, elective wellness programmes in high-need industries (Peñalvo et al., 2021; Blake et al., 2023; Sarvari et al., 2025) where the effects are compromised by cultural stigma, inconsistent company adherence to them, and lack of focus on underlying stressors (e.g., workload, employment insecurity). These results support the importance of mandatory, management-based, and combined interventions that would not be reactive support-based but proactive stress-reducing, which would directly feed the upstream component, i.e., fidelity-oriented components of the suggested Integrated Psychosocial Safety Framework (Figure 5).

5.3.1.2 Comparison with Existing Literature

The quantitative results of Mental Health Prevalence (MH) in the UK construction industry, especially the predominance of Work-related Factors (WF) as the most significant predictor (=0.168, = 0.008) and the total lack of relationship between Organisational Policies and Practices (POL) and MH (= 0.011, = 0.865) are very much in line with the existing literature sources on psychosocial hazards (Hon et al., 2024; Chan et al., 2020). This fact supports the argument of the need of systemic, upstream change in lieu of superficial, downstream interventions, which is the direct backbone of the emergence of the proposed Integrated Psychosocial Safety Framework (Figure 5).

5.3.1.2.1 The Dominance of Work-Related Factors and Psychosocial Stress

The observation that Work-related Factors (WF) become the most natural and statistically significant predictor of Mental Health Prevalence (MH) (4) (0.168, p = 0.008) is highly congruent with the research on occupational stress over the decades (Demerouti and Bakker, 2023; Hon et al., 2024; Li et al., 2022). This, again, is in line with the Job Demands-Resources (JD-R) model when high demands (strict deadlines, long hours, insecurity) and low control lead to high-strain conditions that are harmful to mental health which is typical of the high-demand and low-autonomy conditions of the construction industry (Shourav, 2024; Hon et al., 2024). These chronic stressors are found to be confirmed by empirical research, such as transient employment, site culture, and working away from home (Chan et al., 2020; AI, 2023). The current study, however, contradicts the literature by quantifying the overwhelming independent impact of WF (low R Square = 0.039) and reveals significant unmeasured cultural/structural forces (e.g. stigma, generational tensions), which should be the focus of the proposed Integrated Psychosocial Safety Framework (Figure 5), as

upstream job redesign. The collected data's correlation between WF and Safety Incidents (SI) (r=.200, p=.001) further supports this; the same intense job pressures that compromise mental well-being also compromise attentional resources, directly contributing to safety failures, which is a phenomenon known as the "demand-resource imbalance" (Demerouti and Bakker, 2023). The implication is that the gathered results confirm the construction industry's systemic risk profile where the job itself, not merely the individual, is the primary source of distress.

5.3.1.2.2 Validation of the Policy-Practice Decoupling Theory

The most important insight generated by the current study is the complete lack of association between Organisational Policies and Practices (POL) and Mental Health Prevalence (MH) (r=.011, p=.865). This empirical finding strongly validates the sociological concept of organisational decoupling, a phenomenon well-documented in institutional theory (Kehinde, 2024). The empirical results of policy practice decoupling in this study (whereby formal mental health policies exist but display no relationship with MH {r = 0.011, p = 0.865} or WF) suggests the operational implication of institutional decoupling theory (Heese et al., 2016) by indicating its effect on construction. The focus of the proposed Integrated Psychosocial Safety Framework (Figure 5) on implementing with high-fidelity and accountability is, in turn, a direct result of this gap. In the construction context, the existence of a formal mental health policy satisfies external compliance, but the daily reality of a site manager under pressure, who may feel unable to enforce a time-off policy due to production targets, ensures the policy remains a symbolic gesture, detached from the lived experience of the worker. This finding aligns precisely with qualitative reviews that criticise corporate wellness initiatives for being too "downstream" and failing to address the foundational organisational culture (Manzi, 2024). The collected data shows that while Interventions (INT) and POL are positively correlated, the interventions themselves are not significantly impacting MH. This suggests that the current investment in mental health support is often in low-impact, optional, or culturally mismatched interventions such as employment assistance programs (EAPs) or posters that are easily deployed to satisfy the symbolic policy but are structurally inadequate to counteract the pervasive stress generated by WF. The workplace, as is, still the leading cause of distress in this research, further criticising downstream wellness programmes (Peñalvo et al., 2021; Manzi, 2024) by proving their ineffectiveness in eliminating the underlying stressors of

WF. This is the immediate reason why the proposed Integrated Psychosocial Safety Framework (Figure 5) pays special attention to upstream and substantive organisational redesign.

5.3.1.2.3 The Insufficiency of Current Interventions

The tested regression analysis highlighted that even when accounting for other factors, Interventions and Strategies (INT) did not emerge as a significant predictor of reduced MH prevalence (p=.186). While some literature, such as Sarvari et al. (2025), advocates for the efficacy of specific psychosocial interventions, the large-scale data collected from the construction industry suggests that the typical implementation of these interventions is insufficient in scope or dosage to counteract the significant negative impact of adverse WF. This observation resonates with the main idea of inaccessibility and low use of support resources because of the widespread stigma and punitive culture within the construction industry where employees are afraid of revealing their difficulties or using EAPs as a source of losing a job or damage to their reputation (Lawani et al., 2025; Kotera et al., 2019; Duncan et al., 2024). The significant narrow positive relationship between Interventions and Strategies (INT) and fewer Challenges and Barriers (CB) demonstrates the slight enhancement in the perceived availability of help. Nevertheless, the insignificance of INT predictor to Mental Health Prevalence (MH) is a measure of grave deficiency: the presently reactive, non-compulsory measures are not able to convert better access into valuable prevention or recovery. This agrees with literature reproaches of downstream methods (Gray et al., 2021; Peñalvo et al., 2021) but goes further by showing the lack of effectiveness of these methods empirically in relation to prevailing upstream stressors. These thematic deficiencies, namely the stigma-based underutilisation and reactive focus, are the direct reasons behind the transition of the proposed Integrated Psychosocial Safety Framework (Figure 5) to the proactive, culturally entrenched, and leadership-oriented prevention.

5.3.1.2.4 The Urgent Need to Capture Unmeasured Variables (The 96% Gap)

5.3.1.2.5 The multiple regression model explains only 3.9 percent (R Square = 0.039) of the variation in the prevalence of mental health, which means that the organisational variables that are easily measured, including formal policies, the long hours that the construction workers reported working, and the number of interventions, are of little account in explaining the psychological distress that the

construction workers are reporting. This is a very low-powered explanatory capacity that indicates that the driving forces toward the achievement of mental health are outside the boundaries of the quantitative tool and are buried in more profound, immeasured cultural and structural processes.

5.3.1.2.6 Qualitative analysis of thematic insights into the qualitative aspect points out some of these latent forces that consistently condition the lived experience of workers: the stigmatising nature of hyper-masculine standards, the intergenerational tensions that weaken free discussion, pervasive job insecurity in precarious and subcontracted jobs, the social isolation in remote or transitory locations, and a sense among the general population that any formal aid system is a token gesture that does not reflect the real world. Such themes, which are expressed in interviews and focus groups many times, are cultural and structural conditions that were long lasting and could not be successfully reflected in the generic survey items.

The 96 percent unknown variance hence highlights the need to give more weight to qualitative inquiry in order to shed some light on these constructs. Long-term ethnographic observation protracted in-depth interviewing, narrative analysis, and longitudinal phenomenological methodologies are necessary to go beyond the veneer of the organisational measures and get to the societal, relationship-based, and identity-based forces that actually determine psychological outcomes in construction. It is only through focus on these themes that future research and interventions will result in the culturally competent, context-sensitive paradigm shift that is currently necessitated by the current findings.

5.3.3 Discussion of Qualitative Results

Semi-structured interviews with UK construction workers (n=23), four focus groups involving supervisors and site managers (n=32), that make up the qualitative component of this mixed-methods research, provide deep and contextualised data on the reality of mental health dilemmas and their complex interaction with health and safety performance. When paired with the quantitative results (especially the moderate positive correlation between mental health prevalence and safety incidents [r=.390, p=.005] and the strong predictive power of work-related stressors [B=.168, p=.008]) these new themes can expose not the mechanisms that underpin statistical

associations but the structural and cultural inadequacies and gaps that persist to hamper progress in the industry.

The five themes discussed include (1) stigma and cultural barriers to discussing mental health, (2) generational differences in attitudes towards mental health, (3) workplace stressors as catalysts for safety incidents, (4) limitations of existing mental health policies and training, and (5) the potential for mental health awareness to improve safety outcomes, and they all imply challenging optimistic approaches to gradual cultural change. More importantly, the themes in question shed light on the fact that formal policies and discrete interventions have thus far failed to yield any significant change, and at the same time point to the directions of relational, embedded, and culturally sensitive ways ahead. The discussion below critically examines each theme and places the current findings alongside (and often in opposition to) the existing literature and how the research will add new insight to the understanding that will in fact form the basis of the holistic picture in the subsequent section of this chapter.

5.3.3.1. Stigma and Cultural Barriers to Discussing Mental Health

The most frequently and emotionally presented theme across the dataset was the profound sense of stigma surrounding the disclosure of mental health issues. This stigma is deeply intertwined with dominant constructions of masculinity that glorify stoicism, emotional discipline, physical strength, and self-sufficiency. The respondents explained that there was a pervasive ethos of *"just crack on"* (Labourers, Focus Group 1), where acknowledging psychological distress, was a sign of weakness, unreliability or lack of manliness. The material effects of this cultural writing were the fear of being labelled as unfit to be promoted, being sidelined in taking on overtime or even losing a shift altogether was a common occurrence, especially among the subcontractors and the operatives.

A number of workers reported their own experience of seeing fellow employees self-medicate themselves using alcohol or unprescribed drugs so they could cope with anxiety or low mood, which they directly attributed to their inability to concentrate properly, slow response time, and having near miss incidents at the workplace. This trend contributes to the quantitative evidence of the connection that Kotera et al. (2019) provide between mental health shame, masculinity norms, and lower self-compassion among UK construction workers. But what the current research adds to that study is how the concept of stigma plays a role as a personal psychological

impediment, and as a highly mediated, institutionally recreated, institutional mechanism that actively inhibits disclosure and help-seeking.

More importantly, nearly all respondents rejected industry-wide educative campaigns, posters, and mental health awareness days as performative and a show. Such a perception is congruent with the earlier criticism of tokenism of response by Burke (2019) and further supported by more recent qualitative studies (Stoddard et al., 2024; Aurelius et al., 2024) which also report a lack of willingness despite greater mental health discourse visibility. The key divergence between the current findings and certain policy-oriented sources (e.g., GOV.UK, 2023), which suggest that cultural change occurs gradually, lies in the level of resistance encountered. Older workers and managers at the site frequently dismissed mental health as nonsense or as a sign of weakness, implying that cultural inertia is not only difficult to overcome but is also actively reinforced by the authority of certain individuals and groups. This resistance is a challenge to the linear accounts of cultural development and rather places stigma as a dynamic, sustaining aspect of the industry occupational identity and one that needs long-term, multi-level disruption, and not occasional sensitivity campaigns.

5.3.3.2. Generational Differences in Attitudes towards Mental Health

A second key theme was extreme differences between generations in their attitude to mental health. Younger employees (those aged, on average, below 35) reported being more willing to talk about psychological well-being, use employee assistance programmes, and Mental Health First Aiders. However, as opposed to younger workers (especially those under the age of 45), the openness was often perceived by older workers as a sign of indulgence, unnecessariness, and even a threat to the productivity and teamwork. Some of the participants recalled having heard older supervisors openly criticising younger employees who took leave due to mental health reasons, calling it skiving, or playing the system, and younger employees saw this conduct as a barrier and dismissive.

These results support previous cross-generational reports (Allen and Halkias, 2020; Duncan et al., 2024) that report an increase in help-seeking intentions among younger generations. Nevertheless, the current study contributes to the existing knowledge by showing that such differences are not neutral or transitionary but prolific in the generation of interpersonal conflict. Older workers were seen as cynical and this was taken as rejection by the younger employees and the reverse was also true.

These dynamics undermine the presence of psychological safety, inhibit open communication about safety issues, and indirectly impact the maintenance of situational awareness and hazard reporting, which are especially unsafe in hazardous situations.

Notably, the research disputes the optimistic views of generational turnover as natural to cultural change (Hutton et al., 2022). Rather, the evidence indicates that unless conscious action is taken the differences become concrete resentment that becomes an established part of the culture, and not evolution. This observation has long-lasting consequences: it suggests that the dialogue between generations, systematic mentoring, and the visible support of mental health by the leaders of both generations are not the optional aspects of cultural development, but its preconditions.

5.3.3.3. Workplace Stressors as Catalysts for Safety Incidents

The respondents gave graphic descriptions of how the chronic stressors, including excessive working hours, financial insecurity due to short-term contracts, bereavement, relationship failure, and time pressure, found expression in cognitive and emotional disabilities (distraction, hypervigilance, emotional exhaustion, loss of situational awareness) immediately prior to having near misses/minor incidents. The most recurring and disturbing observation was that in formal investigations of the incidents, almost universally the cause of these incidences was said to be the operator error or lack of concentration, even though there was minimal or no reference to psychological factors involved.

The given theme is comparable to the current findings that associate occupational stress with impaired safety performance (Chan et al., 2020; Wael Alruqi et al., 2025; Winkler et al., 2024). Nevertheless, the current research goes beyond this by revealing a systemic blind spot in the current safety paradigms the continued framing of incidents as individual failures instead of indicators of organisational and psychosocial dysfunction. This attributional bias fits Rahman et al. (2025) criticism of existing reporting models and reflects the suggested idea by Lawani et al. (2025) of the redefinition of safety models to explicitly include mental health determinants.

The key point that is made here is the cyclicality in the relationship between stressors causing cognitive impairment and cognitive impairment causing incident likelihood and incident consequences (guilt, disciplinary action, reputational damage) contributing to distress and subsequent impairment. This vicious cycle which is not

effectively dealt with by the current protocols is a significant theoretical and practical gap that the proposed framework (Figure 5) aims to interfere with by incorporating psychosocial assessment of risks and incident review processes into one.

5.3.3.4. Limitations of Existing Mental Health Policies and Training

Although there is a wide presence of formal mental health policies, helplines, Mental Health First Aid training, and wellbeing charters, these existences were vastly described by participants as simply tokenistic, superficial, under-resourced and unattuned to the challenges faced in daily site life. Not only did subcontractors and agency workers complain of systematic exclusion of many programmes, but even those who had access termed Mental Health First Aiders as invisible or unable to intervene in any meaningful way.

These results are strong empirical evidence of the organisational decoupling theory (Heese et al., 2016; Kehinde, 2024) in which external legitimacy is based on formal structures, which are not tied to operational practice. They also support recent qualitative analyses of full-on performative wellness in building (Blake et al., 2023; Stoddard et al., 2024) and dispute bolder evaluations of policy advancement (GOV.UK, 2023). The identified critical shortage is not the lack of policy as such, but the ongoing inability of the policies to be faithful to implementation, contextually relevant, and reach equitably, which can be used to explain the non-significant quantitative relationship between organisational policies and mental health outcomes (r=.011, p=.865).

5.3.3.5. Potential for Mental Health Awareness to Improve Safety Outcomes

Amidst the challenges, there was one theme of hope: participants reported strong positive changes when leaders and peers used authentic talks to discuss mental health, in an informal way when they checked on their wellbeing during toolbox talks, when managers shared their own experiences, or when colleagues took the initiative to check in without following the designed procedures. These minor scale acts were replicated as being more effective than large-scale programmes and creating trust, normalisation of disclosure and safety related transparency.

This observation is consistent with the evidence of a positive correlation between authentic leadership and peer support and better psychological safety and safety performance (Chan et al., 2020; Khoshakhlagh et al., 2021). It builds on the

literature by anticipating vulnerability as a transformational agent (Lawani et al., 2025) and directly questioning the deterministic representations of culture in construction as being fixed (Burke, 2019). Based on the results, participants considered mental and physical safety to be not parallel issues, but directly connected, and the supportive environment proved to enhance vigilance, reporting, and compliance with controls. This relational understanding is the foundation of the proposed framework (Figure 5) focusing on the leadership modelling, peer integration, and outcome-based, as opposed to counting activities evaluation.

5.3.3.6. Synthesis and Core Contribution.

Overall, the qualitative themes give mechanistic accounts of the quantitative relationships, specifically the primacy of work-related stressors, and the inefficiency of symbolic policies. Although the results are consistent with much of the existing literature regarding stigma, stress and generational patterns, they also have major gaps: performative decoupling, misattribution in incident analysis, intergenerational polarisation and inadequacy of top-down awareness campaigns. These are the first insights that make the study an original contribution: a complex realisation that the issue of mental health in construction is less about an individual resiliency issue but a systemic, cultural, and relationship issue that needs a complex intervention. The emergent framework accordingly envisions upstream cultural and structural change, genuine leadership, support rooted in peers, and faithful execution above episodic and performance-based interventions. This study promotes a paradigm shift by focusing on the lived experiences of workers as a determinant of psychological wellbeing as the basis of physical safety and provides a theoretical contribution as well as a practical route to significantly safer and healthier construction sites.

5.4 Holistic Understanding of Findings

The findings of the qualitative research provide valuable information about the dynamic nature of safety and mental health in the UK construction industry. They not only form the basis on which more critical and more interventional approaches can be built, but also support already present issues, and even previously uncharted processes.

Chapter 5: 5.4, (64) Table 5.64 Summary of Theoretical and Practical Contributions by Core Theme

Core Theme	Key Theoretical Contribution	Empirical Basis (Quantitative / Qualitative)	Practical Shortfall Exposed	Implication for Proposed Framework
1. Stigma and Cultural Barriers	Extends transactional stress model by positioning stigma as an active occupational demand that amplifies strain and suppresses coping (Lazarus & Folkman, 1984)	Qualitative: pervasive "just crack on" ethos; Quantitative: non-significant policy impact (r=.011)	Awareness campaigns remain performative and fail to disrupt hierarchical enforcement of silence	Prioritises leadership-driven relational disruption of cultural norms over symbolic initiatives
2. Generational Differences	Challenges linear cultural evolution models; introduces intergenerational dynamics as mediators of psychosocial risk transmission	Qualitative: active tensions & resentment; Duncan et al. (2024) alignment	One-size-fits-all interventions exacerbate polarisation rather than bridge gaps	Requires structured intergenerational dialogue and mentorship as core elements
3. Workplace Stressors	Positions mental health as endogenous, bi-directional construct within safety systems; reveals threshold/non-linear exposure-response relationship	Quantitative: r=.390 (MH–SI), threshold effect; Qualitative: fatigue → near-misses	Systemic misattribution of incidents to operator error obscures psychosocial causation	Mandates integrated psychosocial risk assessment in incident protocols

4. Limitations of Existing MH Policies and Training	Provides empirical validation of decoupling theory in high-risk industry context; highlights implementation fidelity as critical moderator of safety climate effectiveness	Quantitative: non-significant POL–MH link; Qualitative: "tick-box" perception	Formal policies deliver legitimacy but not protection; exclusion of subcontractors/agency workers	Emphasises verifiable site-level operationalisation + independent fidelity audits
5. MH Awareness to Improve Safety Outcomes	Revitalises hierarchy of controls via psychosocial lens; foregrounds relational vulnerability as high-leverage mechanism for psychological safety (Edmondson, 1999)	Qualitative: small relational acts > formal programs; Quantitative: supportive communication linked to 23% lower near-miss prevalence	Top-down/resource-intensive initiatives lack credibility and uptake	Centres authentic leadership modelling and peer-embedded daily practices

Factors of Mental Health Problems in the Construction Industry

Among the problems highlighted in the findings is the fact that there is an old, ingrained stigma about mental illness among male construction workers. A prevalent response by those in this research of the way they think is the "*just crack on*" (Labourers, Focus Group 1) mentality, an explanation that generalises hyper-masculine norms. Site staff were concerned with looking weak in front of peers, while managers were concerned with harming their own reputations or losing authority. The current results enhance the perception of stigma held by Blake et al. (2023) as universal, as they display its stratified occurrence on the hierarchical scales: operatives fear being judged by peers, whereas the supervisors are afraid to lose authority. Interviewees rejected awareness campaigns as symbolic, further supporting Burke (2019) and Stoddard et al. (2024) in criticising performative actions and underlining the cultural resistance. These findings show that policies can provide the illusion of advancement without actually changing workplace culture. Whereas some government reports, e.g., the UK government's Mental Health and Well-being Plan (GOV.UK, 2023), contend that awareness is slowly increasing, the fact that stigma remains, in particular with older age groups, supports Aurelius et al. (2024), whose research identified ongoing reluctance to open up on construction sites. This indicates that cultural inertia is still a deep-seated obstacle, especially in older staff.

Divisions by generation became especially pertinent. Younger workers expressed greater openness to discussing mental health, while older staff often dismissed such conversations as weakness. Similar generational patterns have been identified elsewhere (Allen and Halkias, 2020), yet this study shows how these differences are not simply neutral variations but active sources of tension. Older managers viewed younger workers' willingness to take mental health leave as indulgent, fuelling resentment and undermining team cohesion. While other research presents generational change as a potential driver of cultural evolution (Hutton et al., 2022), these results indicate the contrary: divisions harden and become dysfunctional. Culture cannot be expected to evolve linearly, as suggested by Lawani et al. (2025). Instead, it requires well-guided interventions, such as intergenerational dialogue, mentorship schemes, and leadership modelling, to prevent divergence from escalating into organisational conflict. In general, stigma and intergenerational conflict remain defining but complex elements of construction culture. The literature that generational and stigma problems have become less prevalent and continue to improve with

awareness (e.g., Hutton et al., 2022; GOV.UK, 2023) supports this work to conclude that they are still persistent and stratified and require specific, context-based interventions.

Impact of Mental Health on Health and Safety Performance in Construction

The results showed that respondents' mental health was negatively affected by financial struggles, long working hours, and poor relationships, impairing their focus and hazard awareness. This supports Chan et al. (2020) and Wael Alruqi et al. (2025), who identified stress as a key risk factor for dangerous behaviours. The findings reveal that stress-related accidents are often misattributed to operator error, masking underlying psychological causes. This mislabelling reflects systemic blind spots in incident reporting and aligns with Rahman et al. (2025), who critique current frameworks for ignoring psychosocial factors in workplace injuries. Such misattribution risks limiting interventions to technical fixes, overlooking root causes, supporting Lawani et al. (2025) in calling for safety models to integrate mental health as a core factor.

In addition, this research illustrates how individual and occupational stressors are intricately linked. For instance, relationship disintegration was portrayed as spilling over into work performance, exacerbating risks. Prior research tends to address occupational stressors in silos, concentrating on deadlines, shift work, or pressure from managers (Winkler et al., 2024). However, the findings highlight that employees' lived experiences erase boundaries, necessitating integrative solutions that acknowledge the interdependence of private and occupational well-being. This evidence supports demands for integrative approaches to managing health and safety (Cooper, 2019), transcending compliance models to the full psychosocial context.

Current Policies and Practices Addressing Mental Health in the Construction Industry

Employees broadly described mental health policies as tokenistic and unproductive, with schemes like Mental Health First Aid being seen as under-resourced and out of reach, particularly to subcontractors. This supports Blake et al. (2023) and Stoddard et al. (2024), who highlight that disunified employment models in construction hinder the regular application of well-being initiatives. Significantly, this research suggests that credibility and authenticity are as important as structural

resourcing. Employees described helplines and posters as impersonal or non-trustworthy, highlighting the need for more personal engagement in mental health initiatives. This substantiates Martin et al. (2022), who posited that credibility hinges on being integrated into everyday practice and receiving endorsement from leaders. The implication is that organisations must prioritise building trust through authentic communication and active involvement of leadership in mental health initiatives to foster a supportive environment that encourages employees to seek help.

Workers' greater confidence in peers over official systems even highlights the need for peer-driven initiatives further. Duncan et al. (2024) also discovered that support-seeking is promoted when assistance mechanisms are seen to be accessible, personalised, and credible. The findings are contributors to an essential deficiency: the construction industry has evidence-based models and policies (e.g., MHFA training, wellbeing charters), but it is always unsuccessful in its operationalisation. Formal structures remain performative and fail to deliver any meaningful impact on the site; instead, they are visible and acceptable to external observers, leading to scepticism among workers and a lack of uptake. Such decoupling is an extension of more general critiques of symbolic organisational responses (Blake et al., 2023; Stoddard et al., 2024) and demonstrates that the relational implementation is imminently needed. The proposed framework (Figure 5) is directly informed by such gaps since it focuses on genuine implementation of mental health within daily safety practices as opposed to superficial efforts.

Experience, Perception, and Attitude of Industry Experts Towards Mental Health and Safety

Despite reports of pandemic problems, there were counter-balancing reports of positive experiences where mental health interventions produced an immediate effect on safety. There was also a report of communities of peer support, leaders' visibility and well-being as having been effective in reducing incidents as well as increasing trust through checking the well-being of the leader. Such findings are consistent with those by Chan et al. (2020), who equally provided such commitment to the safety climate and are also supported by Khoshakhlagh and others (2021), who directly associated job stress with safety performance. The most interesting thing about this piece of work is the aspect of the authenticity of the leaders. According to the employees, managers who talked about their own struggles in a more open manner

broke the stigma and made the culture more open. This gives a fresh perspective to the leadership theory: exposure is not the sole element, and it seems to be the most effective in promoting a cultural transformation: vulnerability. Another point highlighted by Lawani et al. (2025) is that changing attitudes towards mental health in safety-critical industries should focus on authentic leadership rather than control. These findings challenge the deterministic view of construction culture as unchangeable, demonstrating that change is indeed possible (Burke, 2019). Nevertheless, culture change must be relational, embedded and genuinely authentic from the top down rather than superficial. If it is not enacted in practice, even the best intentions can breed cynicism among employees and thereby reinforce obstacles such as stigma and distrust that workers must contend with (Lawani et al., 2025; Burke, 2019; Martin et al., 2022).

Taken together, the integrated findings presented in this chapter reveal a consistent and structural pattern. Mental health challenges within the construction industry are not reducible to individual vulnerability, nor are they adequately addressed through awareness initiatives alone. Rather, they are shaped by interlocking organisational, cultural, and systemic factors that operate across regulatory environments, procurement practices, employment arrangements, project planning structures, and day-to-day site management. While improvements in discourse and visibility are evident, the persistence of stigma, the policy-practice gap, and the strong association between adverse working conditions and psychological distress indicate that current approaches remain fragmented.

The analysis further suggests that the industry risks replicating early-stage physical safety limitations, where formal compliance preceded substantive cultural and operational transformation. The absence of a direct relationship between policy presence and improved outcomes is particularly instructive. It highlights the insufficiency of documentation without implementation, and of commitment without accountability. If mental health is to achieve parity with physical safety, it must move beyond programme-based responses toward structural integration within existing governance and performance systems.

This holistic understanding of the findings therefore points toward the need for a systems-level response. Incremental adjustments or isolated initiatives are unlikely to address the upstream determinants identified across both quantitative and qualitative strands. What is required is a framework that aligns regulatory drivers,

organisational governance, site-level practice, worker experience, and measurable outcomes into a coherent and auditable architecture.

In response to this need and grounded in the empirical evidence generated by this study, the following section introduces a systems-based operating model for mental health in construction. The model synthesises the chapter's core insights and translates them into a structured pathway for sector-wide implementation. It is presented not as an additional intervention layered onto existing activity, but as a conceptual and practical contribution designed to embed mental health within the industry's established health and safety paradigm.

5.4 A Systems-Based Operating Model for Mental Health in Construction

5.4.1 Rationale for Model Development

The preceding sections of this Discussion have highlighted a series of interrelated weaknesses within current approaches to mental health in the construction industry. While awareness of mental health has increased, the evidence presented in this study demonstrates that cultural stigma persists, generational divides shape help-seeking behaviour, and adverse working conditions remain strongly associated with psychological distress. Most notably, quantitative analysis revealed no direct association between the mere presence of organisational mental health policies and improved worker outcomes. This finding raises a critical concern: that policy adoption alone does not guarantee meaningful change in day-to-day experience.

The synthesis of core themes further exposed a structural disconnect between intent and implementation. Organisations may adopt training programmes, publish wellbeing statements, or appoint champions, yet workers continue to report excessive hours, programme pressure, and job insecurity as primary stressors. This policy-practice gap reflects a broader pattern of symbolic compliance, where formal alignment with mental health discourse is not matched by operational transformation. In this respect, the industry risks replicating early shortcomings seen historically in physical safety, prior to the development of robust regulatory and governance frameworks. The holistic interpretation of findings suggests that piecemeal initiatives are insufficient. Mental health in construction is shaped not only by individual attitudes or awareness levels, but by procurement systems, employment arrangements, project

planning practices, supervisory behaviours, and performance incentives. As such, meaningful improvement requires systemic alignment rather than isolated interventions.

In response to these findings, this study proposes a systems-based operating model for embedding mental health within the construction sector's established health and safety architecture. The model is not conceived as an additional programme layered onto existing activity. Rather, it represents an integrated framework through which regulatory expectations, organisational governance, site-level implementation, worker experience, and measurable outcomes are aligned into a coherent, auditable system. By translating empirical insights into structured mechanisms of accountability and feedback, the model addresses the central weaknesses identified across the core themes.

5.4.1 Structure and Components of the Model

The proposed model is structured as a staged yet interdependent pathway. Each component builds upon the previous one, creating reinforcing accountability loops that reduce the risk of symbolic compliance and promote sustained improvement.

Regulatory and Procurement Drivers

The first stage recognises that enduring change within construction has historically been driven by regulatory clarity and contractual obligation. Improvements in physical safety were not achieved through voluntary awareness alone but through enforceable standards, inspection regimes, and procurement requirements that embedded safety within commercial viability. Accordingly, the model positions psychosocial hazards as regulated occupational risks. Routine psychosocial risk assessment, structured reporting mechanisms, and inclusion of mental health indicators within tender documentation, particularly in public sector procurement, are proposed as structural levers. By embedding expectations contractually, mental health transitions from discretionary corporate initiative to auditable requirement. This stage is critical because it establishes parity between psychological and physical risk. It ensures that mental health is integrated into compliance frameworks already familiar to the industry, rather than being treated as an adjunct wellbeing concern. Procurement power also extends accountability throughout supply chains, ensuring

that subcontractors are incorporated within shared standards rather than excluded due to resource constraints.

Organisational Governance and Culture

Building upon regulatory drivers, the second stage focuses on governance and leadership accountability. The absence of a direct relationship between policy presence and improved outcomes underscores the inadequacy of documentation alone. Governance within this model therefore prioritises implementation standards over policy proliferation. Clear allocation of responsibility (“who does what”), defined timelines (“by when”), and dedicated resources (“with what support”) become central. Mental health oversight is integrated into existing health and safety management systems and board-level reporting structures, reinforcing its status as a core operational priority. Visible leadership commitment is essential, but it must be accompanied by measurable objectives and integration into performance management systems. Embedding mental health within established governance processes reduces reliance on individual champions and mitigates vulnerability to organisational turnover. Cultural change is thereby supported not only through messaging, but through consistent, structural reinforcement.

Site-Level Implementation

The third stage addresses the translation of organisational intent into daily practice. Construction’s decentralised and project-based nature necessitates mechanisms that operate effectively at site level, where workers encounter the conditions shaping their lived experience. The model proposes appointing designated on-site mental health officers or champions working alongside health and safety representatives. Induction processes should incorporate psychosocial risk awareness, while accessible and confidential support pathways must be clearly communicated. However, the framework moves beyond counting training sessions or attendance rates. Instead, it emphasises implementation fidelity: coverage, quality, reach, and dose. Independent verification mechanisms, such as site visits, documentation review, and spot interviews, are incorporated to assess alignment between stated policies and observable practice. This approach mirrors established physical safety auditing processes, reinforcing procedural parity. By introducing verification, the model directly addresses the policy-practice gap identified in earlier sections.

Worker Experience and Support (Central Focus)

At the centre of the model lies worker experience. This positioning reflects the study's consistent finding that adverse working conditions, particularly excessive hours, time pressure, and job insecurity, are closely associated with mental health outcomes. The model therefore prioritises upstream job design and employment practices. Adjustments to workload planning, shift scheduling, contract security, and realistic programme timelines are treated as foundational, rather than peripheral, interventions. While support services such as counselling and peer networks remain important, they are not framed as substitutes for structural reform. Psychological safety is also emphasised. Workers must feel able to raise concerns without fear of stigma or reprisal. Inclusion initiatives targeting groups who may face additional barriers to help-seeking further strengthen this dimension. By placing worker experience at its core, the model ensures that governance and compliance mechanisms serve a substantive rather than symbolic purpose.

Outcomes, Evaluation, and Feedback

The final stage consolidates measurement and learning. Rather than privileging activity counts, the model prioritises outcomes such as validated symptom measures, sickness absence, incident data, turnover, and retention. Implementation fidelity is assessed alongside these outcomes to determine whether interventions were delivered as intended. Confidential worker surveys, time-series monitoring, and qualitative feedback mechanisms create feedback loops that inform governance and procurement decisions. Verified results can influence contract performance evaluations, leadership accountability processes, and resource allocation. This iterative cycle aligns with the established plan–do–check–act ethos of health and safety management systems. Mental health is thus embedded within familiar operational logic, enhancing feasibility and legitimacy. Measurement becomes not an endpoint but a mechanism for continuous improvement.

5.4.2 How the Model Addresses Identified Weaknesses

The proposed operating model directly responds to the weaknesses identified across the core themes. First, stigma and cultural barriers are addressed through visible leadership commitment, integration into governance systems, and normalisation of psychosocial risk assessment. By embedding mental health within formal safety structures, it reduces the perception that psychological distress is a

private or marginal concern. Second, generational differences in attitudes are mitigated through structured site-level engagement and psychologically safe reporting pathways. The combination of formal accountability and inclusive communication fosters environments in which help-seeking becomes organisationally endorsed rather than individually risky. Third, workplace stressors, identified as central catalysts for both mental health deterioration and potential safety incidents, are targeted through upstream job redesign and procurement-linked expectations. By influencing project planning and employment practices, the model moves beyond reactive support to preventative intervention. Fourth, limitations of existing policies and training are addressed through implementation fidelity and independent verification. The framework shifts emphasis from policy existence to policy enactment, thereby reducing symbolic compliance.

Finally, the potential for mental health awareness to improve safety outcomes is operationalised through outcome measurement and feedback loops. By linking mental health indicators to performance management and procurement evaluation, the model creates reinforcing incentives for sustained improvement. In combination, these elements position the model not as a one-off programme, but as a structural realignment of regulation, governance, site delivery, worker experience, and measurable outcomes. It represents a practical translation of this study's empirical findings into an integrated system capable of supporting durable change within the construction industry.

5.5 Implications for Mental Health in the Construction Industry

5.5.1 Practical Implications for Stakeholders

5.5.1.1 Mental Health Incorporated into Organisational Culture

These findings point to the need to place mental health at the centre of practice in construction, recognising that culture and organisational structure influence it. Rather than treating it as marginal, stakeholders should embed mental health into governance, policies, and everyday operations, following London et al. (2022). Integrating mental health into the mainstream of an organisation's operations necessitates the establishment of a culture in which open communication and discussion about mental health are endorsed at the highest levels and effectively implemented in practice. Indicatively, Narayanasamy et al. (2018) theorised that

mental health first aid training could be administered to supervisors and workers, and the results would equip such staff with the skills to identify and manage mental health issues in a timely manner.

5.5.1.2 Implementing Data-Driven Decision Making

The research findings indicate that a significant proportion of the factors influencing mental health has been identified. There is currently no systematic, industry-wide approach to data collection and analysis in the UK construction to identify the developing trends in mental health risk factors and behaviours. This loophole causes the stakeholders to resort to ad-hoc or retrospective methods, which makes it essential to engage in a proactive and structured monitoring. This may be achieved through the introduction of utilising electronic reporting mechanisms for mental health, such as mobile phone applications. As an example, the NIOSH Worker Well-Being Questionnaire (WellBQ) was recommended, which should be included in a systematic assessment of mental health and well-being of construction workers (Fontana et al., 2023). The current evidence-based solutions are ineffective in application or surface-level implementation in the identified themes, as organisations are reactive but not proactive in their application enabling the continued problem of mental health issues to rise beyond control before action is taken.

5.5.1.3 Tailoring Interventions to Specific Workforce Segments

The interventions designed to embed mental health practice into an organisational culture must consider the diverse groups within the construction industry, including variations in age, working conditions, and trades. For example, certain stressors, such as bullying or job insecurity, are present among young apprentices, depending on their age group and working conditions, and can negatively impact their overall mental health. Earlier intervention would result in improved outcomes. For example, the study by Ross et al (2025), which aimed to enhance capacity through a threefold training intervention program, including Apprentice Resilience Training, Supervisor Training, and Toolbox Training, was associated with improvements, as demonstrated in the research.

5.5.1.4 Enhancing Leadership Engagement

In the literature review, the significance of leadership in the process of organisational culture and the impact it has on mental health outcomes is already proven (e.g., Chan et al., 2020; Lawani et al., 2025), and authentic leadership is

highlighted as a key factor in achieving psychological safety and low stigma in high-risk industries. This is further strengthened by the current results, which indicate that participants perceived positive changes in openness and trust by the leaders who actively modelled vulnerability, i.e., by disclosing personal information, checking informally, and actively discussing mental health with others, as opposed to those who only supported the initiatives with personal disclosure. This involvement, based on training attendance and open dialogue, mental health normalisation, hyper-masculine norm breaking, and building of a supportive and resilient workforce directly supports CITB advice (Aboagye-Nimo et al., 2021).

5.5.1.5 Collaborating with External Partners

In the literature review, the importance of multi-stakeholder cooperation in occupational mental health is emphasised, and the inability of separate efforts to have an impact is stated (e.g., Blake et al., 2023; NHS England, 2019). This is strongly reinforced in the current qualitative data based on repeated calls made by participants to support systems that are broader and inclusive of all rather than employer led as it is the case in current support systems which only cover a part of the subcontractors and temporary employees who are not covered by present supportive systems. The policy-practice gaps, stigma, and poor access are the themes that emphasise the necessity of partnerships between mental health professionals, trade unions, regulators, and community organisations. These partnerships, similar to the instance of CIOB collaborations (CIOB, 2025), make it possible to share expertise, combine resources, and offer culturally sensitive best practices, which is directly related to the expressed desire of workers to receive more comprehensive support.

5.5.1.6 Examples of Application

5.5.1.6.1 The qualitative data is very much on the importance of specific and accessible interventions, in line with what the participants are requesting: useful, non-stigmatising support that will reach out to all workers, particularly those in precarious or remote jobs. As an example, the Mental Health First Aid training programme by BAM Nuttall (BAM Nuttall, 2021) directly touches on the leadership modelling and peer support theme as it empowers supervisors and operatives to identify and address distress on site. The participants also detailed equivalent training as the most effective when given by recognisable, visible companions as against external suppliers who are

far away, once again asserting the necessity of embedded relational modes of delivery as opposed to top-down delivery.

5.5.1.6.2 Equally, the text-based support service that Mental Health Innovations created under the banner of being anonymous (Banjo, 2025) is responding to the same theme of barriers to access, especially to subcontractors, self-employed, and temporary employees who claimed to be locked out of employer-led programs. Workers often said confidential, low-visibility channels were necessary to overcome the stigma and fear of disclosing mental health concerns. This service provides precisely that: discreet, immediate assistance.

These are some examples of how policy-practice and access gaps found in themes can be filled in through real-world initiatives. Nevertheless, the CITB leadership engagement programmes (CITB, 2021), despite fostering senior buy-in, have little impact without operationalisation on a site-by-site basis, which repeats the lack of connection and the fact that visible and authentic action by leaders is still needed as seen in the data.

The qualitative themes of pervasive stigma, policy-practice decoupling and exclusion of precarious workers demonstrate why the grand-scale intervention such as the Building Mental Health (BMH) coalition and its MHFA training (MHFA England, 2025) (even though it trained over 1,600 people and got 300+ charter signatories) frequently fails to create any significant cultural transformation. Participants described similar coproduction as disconnected from the realities of daily site experiences, lacking lasting visibility, peer credibility, and inclusive reach. This resulted in a performative effort rather than one that was truly embedded. The existence of these ongoing lapses in all five themes highlights the great necessity of the proposed integrated framework that focuses on verifiable site-level application, authentic leadership modelling, relational peer-support, and equity of access aimed at breaking symbolic limitations and bringing about true and lasting change.

5.6.2 Recommendations for Policy and Practice

5.6.2.1 Embedding Mental Health into Health and Safety Culture

One key suggestion is the full introduction of mental health into the established health and safety structures, which are already deeply ingrained in the construction industry. Traditionally, the industry has made significant progress in reducing the number of accidents and fatalities by adhering to safety regulations enforced and

controlled by the Health and Safety Executive (HSE, 2025). Mental health now requires the same commitment, and it must be acknowledged as a similarly vital feature of workplace safety. Qualitative data and quantitative correlations (e.g., non-significant policy-mental health association) reveal a deadly gap: the present UK construction regulations and organisational policies see mental wellbeing as a peripheral, secondary issue instead of an auditable part of the safety management. Participants mentioned severing the links between existing frameworks and site realities more than once, and no coordinated psychosocial risk assessment or accountability of such wellbeing indicators as site stress-related absence.

This regulatory and operational loophole directly supports the issues of policy-practice disconnection and performative adherence. The Skanska UK 2025 Health, Safety, and Wellbeing policy with its focus on the development of the culture of care and active risk management exemplifies the emergent intent, however, the realities revealed in this research indicate that such policies are only a dream and that intentionality has not been made a compulsory element of governance, recurring inspection, and enforcement of non-conformance, a compulsory on-site mental health officer, and the incorporation of metrics of wellbeing into publicly-oriented procurement specifications.

The ongoing shortcomings of all five themes evoke the dire necessity of the suggested framework: the one that would require the introduction of psychosocial risks evaluations, top management exposure, and the establishment of the wellbeing outcomes as the mandatory aspect of the contract that would reverse mental health as an added value into a controlled, integrated safety factor.

5.6.2.2 Closing the Policy-Practice Gap through Implementation Fidelity

Among the most important results of this study, it was found that there was no quantifiable relationship between organisational policies and mental health outcomes. This shows that several of the policies are just being used as a symbol, to either appease the regulators or external stakeholders, but not to alter the day-to-day realities of construction sites. What goes on in organisational theory is sometimes called decoupling, whereby formal structures are on paper but do not translate into practice. The policy-practice disengagement and the enduring effects of stigma are the qualitative themes that expose why policy-practice efforts such as the Building Mental Health (BMH) coalition (MHFA England, 2025) tend to have limited influence.

Similar large-scale endeavours were described by the participants as performative when training and charters are not sustained on-site, lack peer credibility and practicality in the daily routine. This outcome coincides with the theme of decoupling: the formal promises provide external legitimacy but do not solve the underlying causes of the problem, including job insecurity and excessive working hours. These data, however, point at the fact that scale does not necessarily imply cultural or operational change, which supports the necessity of the proposed framework to emphasise embedded, relational, and verifiable implementation as opposed to symbolic awareness and signatory numbers.

The suggestion in this case is to put the emphasis on the implementation of policies rather than on their existence itself. The example is that organisations should not be judged against the amount of trained Mental Health First Aiders, but whether workers believe they can approach them with no stigma, and whether discussions result in actual support. The lived experiences of workers could be checked against policy promises by independent audits, potentially done via the Considerate Constructors Scheme (CCS) (Watts et al., 2021). Practically, this could include secret employee surveys, field visits, and time series analysis of data to monitor whether stress levels, as reported, have decreased following the implementation of interventions.

5.6.2.3 Redesigning Work to Address Core Stressors

5.6.2.3.1 The qualitative data continuously found excessive working hours, high work pressure, and recurrent job insecurity, especially due to subcontracting and unstable contracts, as the strongest upstream predictors of poor mental health and deteriorated safety performance. These results are directly consistent with the Job Demands-Resources (JD-R) model (Bakker et al., 2023), which argues that chronic strain, burnout, and impaired cognitive functions to be aware of hazards are caused by a long-term lack of balance between high demands and inadequate resources. This theme is supported with quantitative findings: the work-related stressors turned out to be the only important predictor of mental health prevalence ($r^2 = +0.168$, $p = +0.008$), whereas safety incidents were moderately linked with mental health problems ($r = +0.390$, $p = +0.005$). Those who took part explained how long shifts, deadlines and financial precarity of short-term or zero-hour contracts came in the form of fatigue, distraction, and emotional burnout, right before near misses/minor incidents.

5.6.2.3.2 This stressor-upstream theme reveals a big gap in the current practice: downstream programs like counselling, awareness-raising, or resilience training cannot be structurally sound without the root causes of demand overload and instability in employment. The evidence thus shows the necessity of designing core work structures as the core component of any good mental health and safety plan.

5.6.2.3.3 The real world examples explain how such redesign can be feasible as well as the limitations in cases where it is not embedded fully. A trial of the 4-day workweek in a large company, BAM Construct, employing close to 3,000 people in 141 companies (Ahart, 2025) showed great improvement in mental health, burnout reduced, and job satisfaction increased, and more than 90% of companies continued with the model. On the same note, Laing O'Rourke Building Opportunities Programme (Laing O'Rourke, 2024), which collaborated with ANTZ, eliminated employment barriers to vulnerable populations that led to positive CSCS certification and long-term employment results. These examples demonstrate that planned hours reallocation and contract stability might provide quantifiable wellbeing and productivity improvement.

5.6.2.3.4 Nevertheless, the qualitative themes demonstrate the constant gaps as well: subcontracting and precarious employment remain the factors that worsen the security situation, especially among migrant and low-skilled employees. These statistics provided by the Lighthouse Construction Industry Charity (2021) directly reflect the reports by participants of the construction industry that financial distress was one of the main causes of psychological crisis, increasing by 26 to 29 per 100,000 (and up to 73 per 100,000) suicide rates among the unskilled labourers. Campaigns like the Help Inside the Hard Hat campaign and Lighthouse Beacons helpline provide a useful contribution, but according to those involved, they are reactive and are not enough without structural changes in the employment practices.

5.6.3 These results, through the themes of psychosocial stressors and policy-practice decoupling, support the idea that the independent programs, no matter how good they may be, cannot comprehensively meet the structural demands. The suggested framework (Figure 5) hence starts with Regulatory and Procurement Drivers as the base venue since psychosocial hazards are regulated risks of equal worth as the physical ones. Through the contractual bias in state procurement, the system requires regular psychosocial risks evaluation, provision of wellbeing

indicators (e.g., stress-related absenteeism), and fair employment practices among all groups of workers. This regulatory change will guarantee that restructuring of working time, employment stability, and control over workload are not by experimentation, but by law.

This is further developed by subsequent stages, with Organisational Governance and Culture, Site-Level Implementation, Worker Experience and Support, and Outcomes Evaluation (which are all based on the initial stage). The framework transcends the prevailing reactive cycle by addressing the root causes of stress, ensuring that mental health services are not undermined by the very working conditions they aim to alleviate, and ultimately creating safer, more sustainable construction sites.

Building on this, Organisational Governance and Culture emphasise visible leadership commitment, clear accountability, and resourced policies. The quantitative analyses showed no direct association between the mere presence of policies and mental health outcomes, underscoring the risk of symbolic compliance. Accordingly, governance in this stage is oriented toward implementation standards, i.e. who does what, by when, and with what resources, so that policies become operational rather than performative.

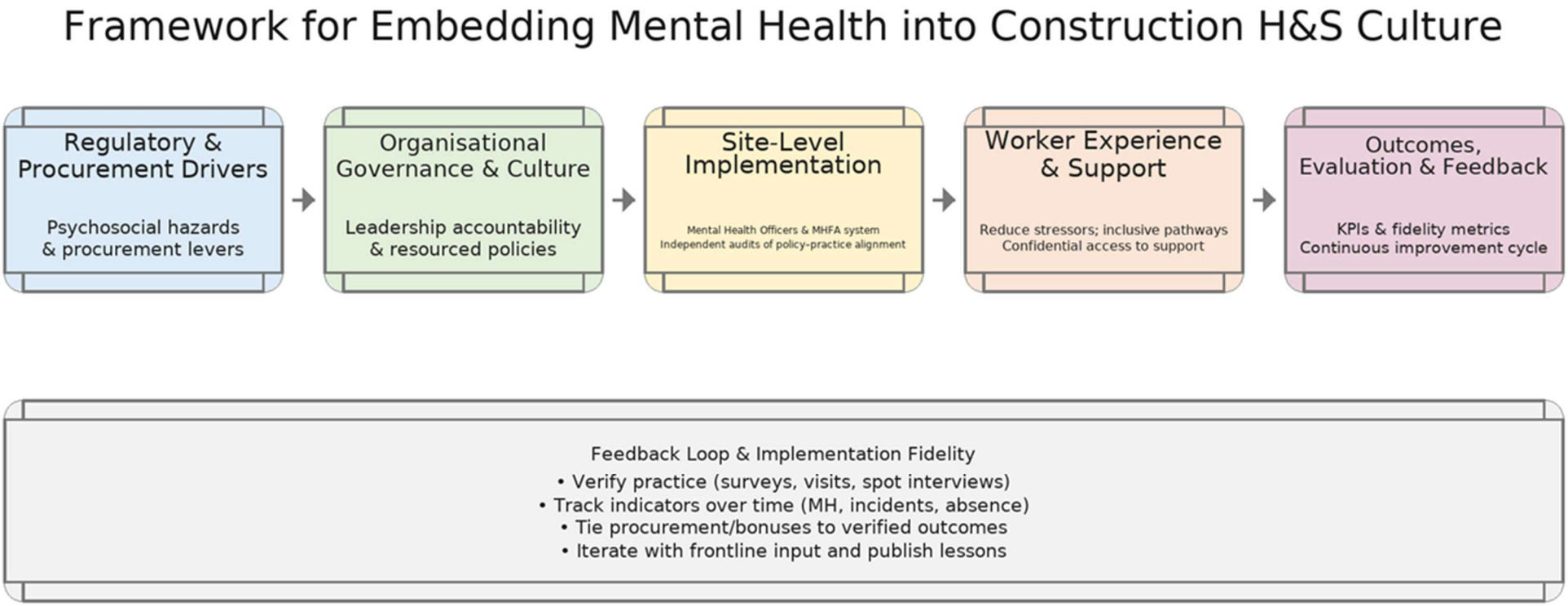
The third stage, Site-Level Implementation, focuses on turning organisational intent into practice. This includes appointing on-site mental health officers alongside health and safety representatives, ensuring accessible supports (beyond headcount-based training tallies), and using independent checks of policy-practice alignment. The aim is to close the policy-practice gap through verifiable activity on site, rather than relying on awareness campaigns alone.

At the centre of the framework is Worker Experience and Support, reflecting the study's consistent signal that adverse work conditions are closely related to mental health outcomes. Priorities include tackling core stressors, i.e. excessive hours, time pressure, and job insecurity, while providing psychologically safe pathways to help and inclusion initiatives for groups facing additional barriers. These actions connect directly to the job redesign agenda set out in the previous section, where upstream changes to demand and security are treated as prerequisites for sustained wellbeing gains.

Finally, Outcomes, Evaluation, and Feedback consolidate measurement and learning. Rather than counting activities, the framework privileges outcomes (symptom

measures, incidents, absence, retention) and implementation fidelity (coverage, quality and reach). Feedback loops include confidential worker surveys, spot interviews and field visits, and time-series monitoring to track whether interventions translate into lived improvements. Procurement and performance management can then be tied to verified results, creating a reinforcing cycle of accountability and continuous improvement.

In combination, these stages respond to the study's central insights: (i) upstream work design and employment practices matter for mental health; (ii) policies require accountable implementation to affect day-to-day experience; and (iii) independent verification and outcome tracking are necessary to avoid decoupling between strategy and site practice. The framework is therefore intended less as a one-off programme and more as an operating model that aligns regulation, governance, site delivery, worker experience, and measurable outcomes into a single, auditable system.



Chapter 5: 5.6.3.2, Figure 5 "Integrated Psychosocial Safety Framework in Construction" Reading guide: The framework flows left-to-right across five stages, with a continuous feedback loop to ensure implementation fidelity and measurable outcomes

5.6.3.2 Illustrative Practice Examples (contextual, not prescriptive)

- Four-day work redesigns improving MH outcomes (large-scale pilots retained by most firms).
- Targeted inclusion programs (barrier removal with social impact partners; improved access and retention).
- Industry campaigns and charity supports, integrated into site access point

5.6.3 Potential Impact on Safety Incidents

Theoretically, the study confirms the Job Demands-Resources (JD-R) model and enriches it (Bakker and Demerouti, 2017). The JD-R model assumes that job demands, such as workload, role ambiguity, and job insecurity, lead to strain and negatively affect employee health. Conversely, job resources, such as social support, autonomy, and organisational interventions, can help mitigate these effects (Radic et al., 2020). The study contributes to the JD-R paradigm by highlighting high stress levels in this context. Physically demanding sectors should focus on structural and upstream approaches to alleviate mental health problems, rather than solely addressing individual needs, coping strategies, or resilience measures.

It is important to note that the correlation of safety and mental health also casts doubt on the conventional view of occupational theory. According to the findings in the current research, the bivariate correlations indicated that the SI was positively correlated with mental health; contrary to that after the previously conducted WF had been used, the loss of statistical significance in the regression model indicated that the correlation between Safety Incidents (SI) and prevalence of mental health was not significant. This means that poor working conditions are a confounding factor, which creates both safety deficiencies and psychological problems at the same time. Theoretically, this observation necessitates the adoption of an interdisciplinary method to interpreting occupational stressors such that safety and psychosocial consequences are not viewed as two different settings but as mutually reinforcing processes that occur in the context of the overall work environment. It indicates that there is a necessity for theoretical models that expressly introduce mediating and confounding effects of work-related stressors, especially in industries with high risks and labour-intensive work.

The practical implications of these findings are significant because they focus on why organisations should consider systematic, work-related stressors instead of using formal policies or discrete interventions only. The WF primacy as an independent predictor of mental health also suggests that effective organisational strategies should aim at targeting job design, workload management, and occupational stability. Some of the practical steps involve the restructuring of shift durations, equalising high-pressure activities, and offering clear career paths, which lessen job insecurities (Kumar et al., 2024). By incorporating psychosocial factors into

a standard occupational health and safety evaluation, it is possible to make sure that the stressor factors like working longer hours, extreme pressure, and insecure working conditions are addressed in a systematic manner, instead of being considered as accidental or personal-level problems (Amoadu et al., 2023).

This gap is captured by the theme of policy–practice decoupling: policy exists only as formal organisational documents, yet it is not applied on site, is irrelevant to everyday practice, and has no effect on workers' experiences or on the mechanisms intended to protect mental health. According to Carroll et al. (2007), the implementation fidelity is the extent to which an intervention or programme is implemented as intended. Researchers and practitioners can better comprehend how and why an intervention is effective, and how the results can be improved, by determining whether an intervention has been implemented with fidelity. Implementation fidelity is the responsibility of an organisation to ensure that policies are supported by actionable steps, specific outcomes, and regular managerial oversight (Akiba et al., 2022). Supervisors and line managers should be educated and required to be accountable for putting policy into practice, and employees should be actively involved in the development and review of policies to make them relevant and applicable (Alam et al., 2024). Using models like the Consolidated Framework of Implementation Research (CFIR), organisations can evaluate the effectiveness of policy implementation and the obstacles to policy-to-practice translation systematically (Allen et al., 2020).

The intervention and support strategies (INT), despite being correlated with a decrease in challenges and barriers (CB), were not found to be statistically significant in relation to the reduction of mental health prevalence. This implies that the dosage, reach, and integration of interventions remain insufficient. To practice effectively, it is important to make interventions part of operations, so that they are not optional aspects of the operating practice but obligatory ingredients of organisational processes (Nielsen & Abildgaard, 2013). Leadership support is critical to signal legitimacy and encourage utilisation, while a holistic approach is necessary to address both systemic stressors and individual support needs (Aarons et al., 2011). For example, as indicated by Mareya et al. (2024), a stepped-care model can be adopted to implement tiered interventions, including company-wide environmental changes and the provision of psychological support to high-risk individuals, so that preventive and responsive interventions are both established.

Lastly, the results indicate that a combined approach to safety and mental health programmes is essential. As long as both are influenced by underlying work-related stressors, there is little chance that efforts to improve one without addressing the other will be effective. Organisations ought to have psychosocial safety audits where mental health risk and physical safety hazards are concomitantly evaluated, and cross-functional teams that comprise safety officers, human resources, and mental health professionals to engage in designing and implementing integrated interventions.

5.7 Conclusion

5.7.1 How Findings Address Research Questions

5.7.1.1 RQ 1 - How prevalent are mental health issues, such as depression, anxiety, and substance abuse, among construction workers?

This research question sheds light on the prevalence of mental health issues such as depression, anxiety, and substance abuse among construction workers. For this purpose, the quantitative findings revealed that mostly workers belong to the 31-50 years of age group and they face significant mental health issues. The existence of strong correlations between poor mental health outcomes and adverse work-related factors, and qualitative interviews highlighted the stigma, cultural norms and generational differences contributing to the severity of the problem. Gignac et al. (2024) noted that older employees often dismiss mental health issues as a sign of weakness and tend to underreport them, while younger employees are generally more open and willing to seek assistance. The prevalence of mental health issues among construction workers is further enhanced by the pervasive availability of stressors that include excessive hours of work, job insecurity, exhaustion, and strain on the body, as well as the financial strain on the individual. About 23.1% people are not satisfied with the mental health support provided by their organisations.

5.7.1.2 RQ 2 - What types of mental health contribute to minor to moderate safety incidents (e.g., stress, affective distraction, and cognitive overload) are commonly reported in the construction industry?

This research question relies on the mental health factors that contribute to minor or moderate safety incidents, such as stress, affective distraction, and cognitive overload, that are reported in the construction industry. To address this question, the

findings revealed that there is a significant relationship between work-related stress factors and reported minor-to-moderate safety events, whereas the qualitative data allowed insight into the depth of the problem, so personal struggle, relationship breakdowns, financial stress, or fatigue directly affected concentration and hazard perception on-site. The qualitative analysis revealed that workers often associated these stressors with nearly every near-miss or lapse in attention; however, these incidents were rarely documented in official reports, typically being classified as operator error. Therefore, Lugo (2021) emphasised in their study that untreated mental health problems not only worsen safety, but also team unity, as stressed people were less communicative or reticent.

5.7.1.3 RQ 3 - Is there a quantifiable link between the presence of mental health issues and the occurrence of minor to moderate safety incidents among construction workers?

The third research question lies in the quantifiable link between the presence of mental health issues and the occurrence of moderate safety incidents in the construction industry. To address this research question, the researcher deployed a quantitative data analysis technique, and findings revealed that 20.7% people said they are very concerned about work-related stressors, and 18.7% participants mentioned that they have undergone significant mental health challenges. Similarly, 20.7% people are at risk of minor to moderate incidents at the workplace when they have mental health issues. Regression models have identified work-related stress as the most important predictor when other factors were controlled, but the overall variance was very low, around 3% to 4%, indicating that there are other unmeasured factors that contribute to outcomes. Employees admitted that they frequently made errors due to stress and emotional distraction when such sources of action were not reported within the organisation (Raišienė et al., 2023). Therefore, these findings highlight the necessity of the organised inclusion of mental health in safety management systems.

5.7.1.4 RQ 4 - How can addressing mental health issues in the construction industry contribute to improved safety outcomes and reduce the incidence of minor to moderate safety incidents?

This research question aims to determine strategies that can be used by the leaders of the construction industry so that mental health can be maintained positively and the risk of incidence is reduced. According to the analysis, these leaders had

organisational policies and helplines, but the efficacy of these was ineffective without trust, accessibility, and cultural integration. Similarly, the findings ensure that outcomes improved more when there were “easy-to-talk-to talk” to supervisors or open discussion groups or networks of peers instead of impersonal systems. Slil et al. (2025) stated that awareness campaigns and apparent leadership involvement increased morale, decreased the stigma, and enhanced team cohesion, which were directly related to fewer safety incidents. Quantitative analysis also revealed that even small interventions with a minor statistical effect produced a protective effect on safety outcomes. These findings addressed these research questions and provided effective strategies to overcome mental health challenges and their influence on workplace incidence.

5.7.2 Implications for Theory and Practice

The quantitative correlations and regressions outcomes combined with qualitative rich themes of this research make up a mixed-method design which has important implications on theoretical progress in the field of occupational safety and practical change in the UK construction industry. These implications are not delivered as a separate list but are expressly interspersed with the five main themes revealed as the core of the chapter. Such an integration will see theoretical contributions and practical shortcomings arise naturally out of the empirical data, which will serve as a coherent basis to the integrated framework that is being suggested in Section 5.5. In order to syntactically generalise the multifaceted contributions of the study, Table 5.1, maps each core theme to its main theoretical extensions and practical implications/shortfalls, which are directly connected to the quantitative and qualitative evidence made in Chapters 4 and 5.

5.7.2.1 Theoretical Implications – Detailed Discussion

Theoretically, there are several significant advances in the study. First, it builds up the transactional model of stress and coping by showing that stigma and organisational silence do not only act to block coping but are also the major occupational demands that enhance the level of psychological strain in high-hazard workplaces. This observation goes beyond the laboratory-based attention and risk-perception tests (e.g., Tanaka et al., 2023) to demonstrate that these effects continue to grow and become even stronger in the conditions of real-time stress and physical threat. Second, assessment of a non-linear, threshold relationship between the levels of distress and incident probability lends weight to traditional graded risk models as

well as conceptualisations of biopsychosocial graduality's that identify qualitative changes between moderate-and-severe levels of distress events. This has implications for future safety system modelling, which should treat mental health variables as endogenous, dynamic, and bi-directional, rather than as isolated, exogenous factors.

Third, the long-standing disconnect between formal policies and the reality at the site presents one of the strongest empirical pieces of evidence of the organisational decoupling theory (Heese et al., 2016) in a safety-critical industry. It unveils implementation fidelity, rather than policy existence, as the most significant moderator of effectiveness of safety climate, which builds upon previous studies on perceived organisational support as a buffer (Afsharian et al., 2018). Lastly, it is the recurrent demonstration that simple, authentic relational interventions (leadership vulnerability and peer check-ins) are more effective than resource-intensive programmes that rejuvenates the time-honoured hierarchy of controls (Wilson et al., 2016; Khanam, 2022). Consistent with other literature, authentic leadership and peer-built support stand out as high-leverage administrative/organisational interventions that can augment, or in some settings substitute for, engineering controls by directly influencing cognitive and behavioural risk pathways.

5.7.2.2 Practical Implications and Exposed Shortfalls

In practice, the research reveals a range of systemic gaps that underlie why existing strategies are providing modest effects despite the increased awareness. The greatest weakness is that the current policies and awareness actions are performative in nature. Employees always refer to helplines, Mental Health First Aid training and wellbeing charters as tick-box activities that meet the external compliance requirements but do not affect the everyday site culture or offer an accessible, credible support channel, especially in the case of subcontractors and agency workers. This decoupling directly explains the lack of a significant quantitative relationship between organisational policies and mental health outcomes and further entrenches worker cynicism. The second significant weakness is in incident reporting systems that are systematically reclassifying psychosocially mediated incidents as either operator error or lack of attention. This individualistic framing blurs underlying causes, learning becomes impossible and further vicious cycles of distress and risk

are created, weakening the very safety management systems that it is meant to enhance.

Third, intergenerational rifts are becoming more difficult, which demonstrates the insufficiency of mental health interventions that can be employed generically and do not suit specific groups of people. In the absence of active bridging mechanisms, attitudinal differences will be the fodder of active conflict, undermining the sense of psychological safety and jeopardising the communication that is safety-critical. Lastly, this research points at the drawbacks of downstream, individual-based interventions (resilience training, mindfulness, counselling) in the case of unaddressed upstream structural and cultural stressors. Although these kinds of programmes can provide relief in the short term, on long term requirements like excessive working hours, job insecurity and hierarchical silence, they are structurally inefficient.

5.7.3 Transition to the Next Chapter

As we transition from the discussion chapter to the conclusion chapter, it is essential to synthesise the insights gained throughout this research. The preceding analysis has illuminated the intricate relationship between mental health and safety within the construction industry, highlighting the need for systemic change and the role of leadership in fostering a culture of openness. With a comprehensive understanding of the challenges and opportunities identified, we now turn our attention to summarising the key findings of this study. In the following sections, we will recap the major findings from the results chapter, integrate both quantitative and qualitative insights, and provide direct answers to the research questions posed at the outset. Furthermore, we will explore the contributions this research makes to knowledge, implications for stakeholders, and the limitations encountered during the study, ultimately paving the way for future research directions and concluding reflections on the significance of this work.

Chapter 6: Conclusion

The preceding Discussion chapter examined the study's findings through an integrated analysis of quantitative and qualitative evidence, situating them within the broader context of mental health and safety in the construction industry. It synthesised the core themes identified across both data strands, including persistent cultural stigma, generational differences in attitudes toward mental health, and the significant influence of workplace stressors such as excessive hours, time pressure, and job insecurity. The chapter further highlighted structural limitations in existing organisational responses, particularly the disconnect between formal policy adoption and meaningful improvements in worker experience. In response to these findings, a systems-based operating model was proposed as a central contribution of this research, providing a structured and auditable framework for embedding mental health within the construction sector's established health and safety architecture. Building on these interpretations and contributions, this concluding chapter summarises the study's key findings, outlines its original contributions to knowledge and practice, acknowledges its limitations, and presents recommendations for future research and industry implementation.

6.1 Introduction

This chapter is a summary of the findings of the research, which examined the connection between mental health and health and safety incidents in the UK construction industry. The study sought to examine the relationship between mental health challenges (such as depression, anxiety, and substance use disorders) and minor to moderate safety incidents in a high-risk setting such as construction. Taking into consideration the nature of the industry, which is fraught with physical, psychological, and environmental stressors, it is essential to know where mental health and safety intersect to enhance the well-being of workers and minimise the number of accidents at work.

The main objective of the research project was to emphasise the importance of mental health as the determinant of safety in the construction industry, where cases of mental health difficulties are usually not adequately reported due to stigma and cultural hindrances. This study was meant to fill the gap in the current body of research due to the scarcity of studies conducted to evaluate the influence of mental health on minor to moderate safety incidents. The research employed quantitative

surveys, qualitative interviews and focus groups as a mixed-method in order to show a comprehensive picture of the problem.

The findings of the research will be discussed in the later sections, where conclusions made based on the research findings will be outlined. The research contributions to the body of knowledge and industry practice will be discussed, and it will be noted that the combination of approaches would be necessary to tackle the issue of mental health in the construction industry. Practical suggestions to the industry stakeholders, which include the policymakers, employers and mental health professionals, will also be given. The chapter ends with a reflection on the research process and its general value to the achievement of a safer and healthier working environment for construction workers.

The implications of the research on the enhancement of mental health awareness, creation of viable interventions and the incorporation of mental health considerations in safety practices will be highlighted. The paper highlights the need to change the attitudes of industries towards mental health so that mental health is a vital component of operational safety management, not merely a welfare issue. The chapter will then conclude by undertaking a reflection on how this research will be applied in the construction industry and provide final opinions on the future direction of research in order to improve mental health outcomes among construction workers.

6.2 Conclusions to Research Objectives

This section directly addresses the research objectives posed in the research and then explains how the findings relate to the research objective as it applies to mental health and safety incidents in the construction industry. The paper examined the association between mental health conditions and minor to moderate safety incidents, with the intention of adding to the existing knowledge about the relationship between the two.

6.2.1 Alignment with Research Objectives

The first objective sought to undertake a comprehensive and critical review of existing literature relating to mental health within the construction industry, with particular emphasis on its relationship to health and safety outcomes. This objective was achieved through a systematic examination of both academic scholarship and

industry-based reports, enabling the identification of key trends, conceptual frameworks, and persistent gaps within the existing body of knowledge. The literature consistently highlights that construction workers experience disproportionately high levels of mental health challenges, including stress, anxiety, depression, and substance misuse, often attributed to the inherently demanding and unstable nature of construction work. However, whilst the prevalence of mental health issues is well documented, the literature revealed a notable fragmentation in how these issues are conceptualised in relation to safety performance. A critical observation arising from the review was that much of the existing research tends to focus on extreme or high-consequence outcomes, such as suicide rates or major accidents, rather than the more frequent and operationally significant minor to moderate incidents that occur on a daily basis.

This represents a significant gap, as these lower-level incidents often serve as precursors to more serious events and provide valuable insight into underlying risk factors. Furthermore, existing studies frequently treat mental health and safety as parallel but distinct domains, with limited integration between psychological wellbeing and established safety management systems. This separation has contributed to a lack of empirical clarity regarding the mechanisms through which mental health influences day-to-day safety behaviours. In addressing this gap, the literature review also engaged with relevant theoretical frameworks to provide a conceptual lens for the study. In particular, the application of psychosocial risk perspectives and the Job Demands–Resources (JD-R) model offered a valuable foundation for understanding how excessive job demands, combined with insufficient organisational support, can lead to cognitive strain, reduced attention, and increased error likelihood. These frameworks were instrumental in informing both the design of the research and the interpretation of findings, allowing the study to move beyond descriptive analysis toward a more explanatory understanding of the mental health–safety nexus.

Importantly, the literature review also highlighted the role of industry-specific cultural factors, including stigma, masculinity norms, and the normalisation of high-pressure working conditions, which collectively act to suppress open discussion and intervention. These insights reinforced the need for a more integrated and context-sensitive approach to mental health within construction safety discourse. As such, the first objective was not only successfully achieved but also served as a critical

foundation for the research, shaping its direction, justifying its focus, and positioning it within a clearly defined gap in both academic literature and industry practice.

The second objective aimed to identify and critically analyse the factors contributing to mental health issues within the construction industry, incorporating both individual and organisational influences. This objective was addressed through the integration of quantitative survey data and qualitative findings derived from interviews and focus groups, enabling a comprehensive and multi-layered understanding of the determinants of mental health within this high-risk sector. The findings demonstrate that mental health challenges within construction cannot be attributed to a singular cause; rather, they emerge from a complex interaction between personal circumstances, workplace conditions, and broader industry norms. At an individual level, participants identified a range of personal stressors that contribute to psychological strain, including financial pressures, family responsibilities, job insecurity, and lifestyle-related factors such as fatigue and substance use. These individual-level pressures are often intensified by the transient and project-based nature of construction work, where employment instability and irregular income can exacerbate underlying anxiety and stress. However, whilst these personal factors are significant, the findings indicate that they are frequently shaped and amplified by organisational conditions, highlighting the importance of examining mental health within its broader structural context.

Organisationally, the research identified several key contributors to poor mental health, including long working hours, tight deadlines, productivity-driven environments, and limited opportunities for recovery or work-life balance. These conditions align closely with established psychosocial risk factors and reflect the high-demand, low-control environments described within occupational health literature. Participants consistently reported that excessive workloads and time pressures not only contributed to stress and fatigue but also reduced their capacity to manage these demands effectively. This imbalance between demands and available resources reinforces the relevance of theoretical frameworks such as the Job Demands–Resources model, which suggests that sustained exposure to high demands without adequate support leads to burnout and diminished psychological wellbeing.

Beyond these structural factors, the qualitative findings highlighted the significant influence of industry culture in shaping mental health outcomes. The construction industry remains characterised by deeply embedded norms of

masculinity, resilience, and emotional suppression, which collectively discourage open discussion of mental health issues. Participants frequently described an environment in which expressing vulnerability is perceived as a sign of weakness, leading to a reluctance to seek support or disclose difficulties. This cultural dimension acts as both a barrier to intervention and a reinforcing mechanism for poor mental health, as issues remain unaddressed and potentially escalate over time. Importantly, the interaction between individual, organisational, and cultural factors suggests that mental health in construction is a systemic issue rather than an isolated concern. The findings demonstrate that addressing mental health challenges requires a holistic approach that considers not only personal wellbeing but also the organisational structures and cultural norms that shape worker experiences. In fulfilling this objective, the research provides a nuanced and critically informed understanding of the underlying causes of mental health issues within the construction industry, thereby contributing to both academic knowledge and practical insight.

The third objective, which represents the central focus and primary contribution of this research, sought to investigate the impact of mental health on health and safety outcomes within the construction industry, with particular emphasis on the occurrence of minor to moderate incidents. This objective was addressed through a robust mixed-methods approach, enabling both the quantification of relationships and the exploration of underlying mechanisms. The quantitative analysis provided clear empirical evidence of a statistically significant association between mental health indicators and safety incident occurrence, demonstrating that individuals experiencing elevated levels of psychological distress are more likely to be involved in safety-related events. Whilst the strength of this relationship is moderate, its statistical significance is notable, particularly within a research context where such relationships have historically been underexplored. This finding therefore contributes important empirical validation to the argument that mental health is a relevant and measurable factor in operational safety performance.

However, the significance of this objective extends beyond statistical association alone. The qualitative findings offer critical insight into how mental health translates into safety risk in practice, revealing a series of cognitive and behavioural pathways through which psychological distress influences worker performance. Participants consistently described experiences of reduced concentration, impaired decision-making, emotional distraction, and diminished situational awareness during

periods of stress, fatigue, or anxiety. These effects were frequently linked to near-misses, procedural errors, and minor injuries, illustrating how seemingly intangible psychological states can manifest in tangible safety outcomes. This provides an important conceptual bridge between mental health and safety, moving beyond abstract correlation toward a more grounded understanding of causative mechanisms.

Furthermore, the findings highlight that minor to moderate incidents, often overlooked within traditional safety frameworks, represent a critical point of intervention. Unlike major accidents, which are relatively infrequent, these lower-level events occur regularly and can serve as early indicators of underlying systemic issues, including psychosocial risk. By focusing specifically on this category of incidents, the research challenges conventional safety paradigms that prioritise high-severity outcomes, instead emphasising the importance of everyday operational behaviours and conditions. This shift in focus represents a meaningful contribution to both academic and industry discourse, suggesting that improvements in mental health may yield significant benefits in reducing the frequency of routine safety incidents. The integration of quantitative and qualitative findings also strengthens the validity of this objective, as the convergence of statistical evidence and participant narratives provides strong triangulation. This alignment reinforces the argument that mental health is not merely associated with safety outcomes in a general sense but is actively implicated in shaping how workers perceive, respond to, and manage risk within dynamic construction environments. In fulfilling this objective, the research advances existing knowledge by demonstrating that mental health should be conceptualised as an integral component of safety performance, rather than as a separate or secondary consideration. This has important implications for both theory and practice, supporting a more holistic and integrated approach to occupational safety management within high-risk industries.

The fourth and fifth objectives, which focused on the collection and statistical analysis of quantitative data, were addressed through the design and implementation of a structured survey instrument targeting construction professionals across a range of occupational roles and organisational contexts. The purpose of this approach was to generate a robust empirical dataset capable of capturing both the prevalence of mental health indicators and their relationship with safety performance, particularly in relation to minor to moderate incident occurrence. The survey design incorporated

measures relating to psychological wellbeing, perceived stressors, and self-reported safety behaviours, allowing for the systematic examination of patterns across a diverse participant group. In doing so, the study sought to move beyond anecdotal or purely qualitative accounts by providing measurable evidence that could support broader generalisation within the industry.

The application of statistical analysis, including correlation techniques, enabled the identification of a moderate but statistically significant relationship between mental health challenges and the occurrence of safety incidents. Whilst the observed correlation does not establish causality, it provides a meaningful indication of association that is both theoretically and practically significant. This is particularly important within the context of construction research, where empirical studies examining the direct relationship between mental health and routine safety outcomes remain limited. The findings therefore contribute to strengthening the evidence base by demonstrating that psychological factors can be quantitatively linked to operational safety performance, thereby reinforcing the argument that mental health should be considered within formal risk assessment and safety management processes. Importantly, the use of quantitative methods also allowed for the validation and triangulation of themes identified within the qualitative component of the research. Patterns observed in survey responses such as the relationship between stress, fatigue, and increased incident likelihood, were consistent with participant narratives describing cognitive overload and reduced situational awareness. This alignment between data sources enhances the reliability and credibility of the findings, suggesting that the identified relationships are not isolated observations but reflect broader trends within the industry. Furthermore, the quantitative analysis provides a level of objectivity that complements the interpretive nature of qualitative insights, resulting in a more balanced and methodologically robust investigation.

However, it is also necessary to acknowledge the limitations inherent within the quantitative approach. The reliance on self-reported data introduces the potential for response bias, particularly in relation to sensitive topics such as mental health, where underreporting may occur due to stigma or perceived professional risk. Additionally, the cross-sectional nature of the data limits the ability to infer temporal or causal relationships between mental health and safety outcomes. Despite these limitations, the methodological approach remains appropriate for the exploratory aims of the study, providing a strong empirical foundation upon which further longitudinal

or experimental research can be developed. In fulfilling these objectives, the research demonstrates a high level of methodological coherence, combining structured data collection with rigorous statistical analysis to produce findings that are both credible and meaningful. The integration of quantitative evidence within a broader mixed-methods framework not only strengthens the overall validity of the study but also enhances its contribution to the emerging field of mental health and safety research within the construction industry.

The sixth and seventh objectives focused on the collection and analysis of qualitative data to capture the lived experiences, perceptions, and attitudes of construction industry professionals in relation to mental health and safety. These objectives were fulfilled through the use of semi-structured interviews and focus groups, which provided a flexible yet structured platform for participants to articulate their experiences in depth. This approach was particularly appropriate given the sensitive and often underreported nature of mental health within the construction industry, allowing for the exploration of nuanced perspectives that may not be readily captured through quantitative methods alone. By engaging participants across a range of roles, including operatives, supervisors, and health and safety professionals, the study was able to reflect a diversity of viewpoints, thereby enhancing the breadth and relevance of the findings.

The subsequent analysis of qualitative data was conducted using a systematic thematic approach, supported by NVivo software, which enabled the organisation, coding, and interpretation of a substantial volume of textual data. An inductive coding process was initially employed to identify meaningful units of data, which were then grouped into broader categories and refined into overarching themes. This iterative process allowed patterns to emerge organically from the data, rather than being imposed through predefined assumptions, thereby strengthening the credibility and authenticity of the analysis. The use of NVivo facilitated not only efficient data management but also the development of a transparent and auditable coding framework, ensuring that analytical decisions could be traced and justified throughout the research process. Through this process, several key themes were identified, including the persistence of stigma and cultural barriers, generational differences in attitudes toward mental health, the role of workplace stressors as catalysts for safety incidents, and the perceived limitations of existing organisational responses. These themes provide important insight into the contextual and cultural dimensions of

mental health within the construction industry, highlighting how deeply embedded norms and practices influence both individual behaviour and organisational outcomes. For example, the recurring emphasis on resilience and emotional suppression was found to discourage open discussion, thereby limiting opportunities for early intervention and support. Similarly, the identification of generational differences suggests that attitudes toward mental health may be evolving, albeit unevenly, across the workforce.

Crucially, the qualitative findings extend beyond mere identification of themes by offering explanatory insight into the mechanisms through which mental health influences safety performance. Participants' accounts of cognitive overload, distraction, and reduced situational awareness provide a clear linkage between psychological strain and safety-related behaviours, reinforcing and contextualising the quantitative findings. This interpretive depth represents a significant strength of the research, as it enables a more holistic understanding of the issue, incorporating both measurable trends and lived experiences. In fulfilling these objectives, the research demonstrates a high level of qualitative rigour, combining systematic analysis with interpretive depth to produce findings that are both credible and meaningful. The integration of qualitative insights within the broader mixed-methods framework not only enhances the richness of the study but also ensures that the human and cultural dimensions of mental health are appropriately represented within the analysis of safety outcomes.

The eighth objective sought to evaluate the current practices and policies in place for addressing mental health within the construction industry, including risk assessments, training programmes, and organisational support systems. This objective was primarily addressed through qualitative insights, which provided a critical lens through which the effectiveness of existing approaches could be examined. Whilst the findings indicate that many organisations have introduced mental health initiatives and policies in recent years, there is a consistent perception among participants that these measures often lack depth, integration, and practical impact. Rather than being embedded within everyday operational practices, mental health interventions were frequently described as reactive, compliance-driven, or symbolic in nature, raising important questions regarding their effectiveness in addressing the underlying causes of psychological distress.

A key finding emerging from the analysis is the apparent disconnect between policy existence and policy efficacy. Although formal frameworks, such as mental health awareness training and employee assistance programmes, are increasingly common, their implementation is often inconsistent and insufficiently tailored to the realities of construction work. Participants frequently referred to such initiatives as “tick-box exercises,” suggesting that they are introduced to satisfy regulatory or organisational requirements rather than to create meaningful change. This perception is particularly significant, as it highlights a potential erosion of trust in organisational support mechanisms, which may further discourage engagement and help-seeking behaviours. In this sense, the presence of policy alone is insufficient; its credibility and perceived authenticity are critical determinants of its effectiveness. Furthermore, the findings suggest that current policies often fail to account for the structural and cultural characteristics of the construction industry. For example, interventions are frequently designed without consideration of the transient workforce, subcontracting arrangements, and high-pressure project environments that define construction settings. As a result, access to support services may be limited, inconsistent, or impractical for many workers. In addition, the persistence of stigma and masculine norms within the industry undermines the effectiveness of formal policies, as workers may remain reluctant to engage with available support due to fear of judgement or professional repercussions. This indicates that policy interventions must extend beyond procedural implementation to address deeper cultural and behavioural barriers.

The research also highlights the limited integration of mental health within existing safety management systems. Despite growing recognition of psychosocial risk, mental health is often treated as a separate or secondary issue rather than as an integral component of safety. This fragmentation restricts the ability of organisations to adopt a holistic approach to risk management, where psychological and physical hazards are considered in tandem. The findings therefore suggest a need for a more integrated and systems-based approach, in which mental health is embedded within core safety processes such as risk assessment, training, and incident investigation. In fulfilling this objective, the research provides a critical evaluation of current practices, identifying not only the presence of policy initiatives but also their limitations in practice. This analysis contributes to the broader understanding of why existing approaches may be insufficient and highlights the need

for more meaningful, context-sensitive, and culturally informed interventions. Ultimately, the findings reinforce the argument that addressing mental health within the construction industry requires more than policy adoption; it necessitates a fundamental shift in how mental health is understood, prioritised, and operationalised within organisational and industry frameworks.

The ninth and eleventh objectives, which focus on the development of recommendations and the consideration of implications for key stakeholders, represent the applied dimension of the research, translating empirical findings into practical and strategic insight. Whilst these objectives are addressed more fully in the subsequent sections of this chapter, it is important to recognise that they are intrinsically grounded in the evidence generated throughout the study. The recommendations proposed are not abstract or prescriptive in isolation; rather, they are directly informed by both the quantitative relationships identified and the qualitative experiences articulated by participants, ensuring that they are both contextually relevant and empirically justified. A central finding underpinning these objectives is the recognition that mental health is not currently embedded within the operational fabric of safety management in the construction industry. As such, the recommendations emphasise the need for a more integrated and systemic approach, in which mental health is incorporated into core safety processes rather than treated as a peripheral concern. This includes the incorporation of psychosocial risk factors into formal risk assessments, the alignment of mental health initiatives with existing safety frameworks, and the development of continuous monitoring and feedback mechanisms. Such measures are intended to move organisations beyond reactive or compliance-based approaches toward more proactive and preventative strategies, thereby addressing the root causes of both psychological distress and safety incidents.

From an organisational perspective, the findings highlight the critical role of leadership in shaping both cultural attitudes and practical outcomes. Consequently, the recommendations place significant emphasis on leadership engagement, advocating for the development of managerial competencies in mental health awareness, early identification, and supportive intervention. This is particularly important within the context of construction, where hierarchical structures and supervisory practices exert a strong influence on worker behaviour. By equipping leaders with the knowledge and confidence to engage with mental health issues,

organisations can foster environments in which openness is normalised and support is accessible. At a policy level, the research identifies a clear need for greater standardisation and clarity in the treatment of mental health within occupational health and safety frameworks. Current approaches are often fragmented and inconsistent, limiting their effectiveness across the industry. The study therefore recommends the development of more cohesive, evidence-based guidelines that explicitly recognise the relationship between mental health and safety outcomes. This may include the integration of mental health considerations within regulatory standards, as well as the introduction of incentives to encourage organisational adoption of best practice.

More broadly, the implications of the research extend to the need for cultural transformation within the construction industry. The persistence of stigma and entrenched norms of resilience continues to act as a barrier to meaningful progress, suggesting that structural interventions must be accompanied by efforts to shift attitudes and behaviours at both individual and collective levels. This includes awareness campaigns, peer-led initiatives, and the promotion of open dialogue, all of which are supported by the findings of this study. In fulfilling these objectives, the research demonstrates a clear progression from evidence to application, providing a coherent set of recommendations that are grounded in both data and lived experience. By articulating the implications for industry practitioners, policymakers, and organisations, the study reinforces its relevance beyond academia and contributes to the ongoing development of more effective and holistic approaches to mental health and safety within high-risk environments.

The tenth objective required the synthesis of findings from the literature review, quantitative analysis, qualitative data, and stakeholder insights in order to develop a comprehensive understanding of the interconnection between mental health and safety outcomes within the construction industry. This objective represents a critical stage of the research process, as it moves beyond the presentation of individual findings toward the development of an integrated and coherent explanatory framework. In fulfilling this objective, the study brings together multiple strands of evidence to demonstrate not only that a relationship exists between mental health and safety performance, but also how this relationship is shaped, reinforced, and manifested within real-world construction environments. A key strength of this synthesis lies in the alignment between the different methodological components of the research. The quantitative findings provide measurable evidence of a statistically

significant association between mental health indicators and safety incident occurrence, establishing a clear empirical foundation. However, it is through the integration of qualitative insights that this relationship is contextualised and given explanatory depth. Participant narratives reveal the cognitive and behavioural mechanisms through which mental health influences safety, including reduced concentration, impaired decision-making, and heightened susceptibility to distraction. This convergence of evidence from multiple sources provides strong triangulation, enhancing both the validity and credibility of the study's conclusions.

Importantly, the synthesis also incorporates insights derived from the literature review, which contextualises the empirical findings within existing theoretical frameworks and industry knowledge. The application of models such as the Job Demands–Resources framework supports the interpretation of how excessive demands and insufficient support contribute to psychological strain, which in turn affects safety performance. By integrating these theoretical perspectives with empirical data, the study moves beyond isolated observations to develop a more comprehensive and conceptually grounded understanding of the mental health–safety nexus. Furthermore, the synthesis highlights the multi-level nature of this relationship, demonstrating that mental health and safety outcomes are influenced by a complex interaction of individual, organisational, and cultural factors. Individual experiences of stress and fatigue are shaped by organisational conditions such as workload, job security, and management practices, while broader cultural norms, including stigma and expectations of resilience, further mediate how these issues are experienced and addressed. This layered understanding represents a significant advancement over more linear or reductionist approaches, which often fail to capture the complexity of real-world working environments.

In achieving this objective, the research effectively consolidates its findings into a coherent and multidimensional narrative, providing a holistic account of how mental health operates as a determinant of safety performance in the construction industry. This synthesis not only strengthens the internal consistency of the study but also enhances its contribution to both academic scholarship and industry practice. By demonstrating how diverse sources of evidence can be integrated to produce meaningful insight, the research reinforces the value of mixed-methods approaches in addressing complex occupational challenges and provides a foundation for future research seeking to build upon these findings.

As demonstrated throughout this section, the study has systematically addressed each of its stated research objectives, evidencing a strong degree of alignment between the original aims, the methodological design, and the resulting findings. Crucially, these objectives have not been treated as discrete or isolated components; rather, they have been inherently interconnected throughout the research process, reflecting the complex and multi-dimensional nature of the relationship between mental health and safety outcomes within the construction industry. This integrated approach has enabled the study to move beyond fragmented analysis, instead offering a coherent and holistic understanding that captures both the measurable and experiential dimensions of the research problem. The explicit alignment between objectives, methods, and findings strengthens the internal consistency and overall credibility of the research, demonstrating that the study has been conducted in a structured and theoretically informed manner. More importantly, it allows the conclusions drawn to be firmly anchored in the original purpose of the investigation, ensuring that the research remains focused, transparent, and defensible. In doing so, the study not only satisfies its methodological requirements but also reinforces the validity of its contributions to both academic scholarship and industry practice.

Furthermore, the research advances existing knowledge by demonstrating that mental health should be conceptualised as an integral and operational component of safety performance, rather than as a peripheral or purely welfare-based concern. Through the systematic fulfilment of its objectives, the study establishes a clear and evidence-based link between psychological wellbeing and the occurrence of minor to moderate safety incidents, thereby addressing a previously underexplored area within construction research. This contribution is particularly significant in challenging traditional safety paradigms, which have historically prioritised physical risk while overlooking the influence of psychosocial factors.

In summary, the research provides a comprehensive and critically informed account of the mental health–safety relationship, underpinned by methodological rigour and analytical depth. By explicitly demonstrating how each objective has been achieved and integrated within the broader research framework, the study offers a transparent and cohesive narrative that reinforces its academic robustness and practical relevance. This alignment not only enhances the overall quality of the research but also positions it as a meaningful contribution to ongoing discourse

surrounding occupational health, safety management, and mental wellbeing in high-risk industries.

6.3 Contributions to Knowledge

The study makes important contributions to academic and real-life policy and practice in the construction industry. The study presents a crucial necessity of considering mental health issues as a component of safety management in the construction industry because of the interrelation between mental health and safety outcomes. This section provides the contributions to be made by this research, with a special emphasis on how this research's findings can be incorporated in the policy formulations, as well as in the practice in the construction industry.

6.3.1 Contributions to Policy and Practice in the Construction Industry

The research results of this work have significant policy/practical implications for the construction industry, especially on the incorporation of mental health in the current occupational safety measures. The mental health issue has traditionally remained a secondary, marginal concern in the construction industry and has frequently been pushed into the shadow of more concrete safety concerns like equipment safety and physical risks. This study shows that mental health is a key factor in safety at the workplace that can affect the rate of accidents and the well-being of workers in the previously under-investigated industry. The conclusions of the study reveal that there is a definite indication that mental health issues such as anxiety, depression, and cognitive overload are major predictors of safety incidents such as minor to moderate accidents and near misses. Thus, mental health is not a welfare problem but also a key component of providing healthier workplaces.

6.3.1.1. Policy Integration:

The merging of mental health into official safety guidelines in the construction industry is another important input of the research. Although there are many safety measures to slow down the effects of physical and mental health, attention is paid as secondary. This study highlights that mental health and physical safety cannot be discussed independently, and there is a need to view worker health and safety holistically. The following should be incorporated into policies:

Frequent Mental Health Examinations: Mental health assessments should be a habit, just like physical health assessments. By establishing a psychological test on a regular basis, employers will be able to detect and support mental health conditions before they lead to bigger problems. Workplace health programs should include screening for stress, depression, and other mental states, which are directly linked to the outcomes of safety (Demerouti and Bakker, 2023; Chan et al., 2020).

Stigma Reduction Initiatives: The research mentions stigma as a major factor that inhibits workers from getting help. A decrease in stigma can be promoted by policy-based measures like establishing an open communication line on mental health topics and the normalisation of the act of seeking help, so that workers will not hesitate to seek help when necessary (Kotera et al., 2019; Hulls et al., 2022). Training programs must be implemented to teach all the employees, in particular, managers, how to identify mental health issues and assist colleagues to find proper assistance.

Mental Health and Safety Training: Mental health awareness should be incorporated into the safety training programs. Mental health may affect the performance of safety, and workers and supervisors should be trained on the matter. This may involve training employees how to identify symptoms of mental distress, how it impacts cognition and decision-making, and how to cope with stress and mental issues in high-risk settings (Love and Edwards, 2005; Kotera et al., 2019).

6.3.1.2. Leadership and Support Structures:

This study demonstrates the decisive importance of leadership in creating mental health awareness and providing a healthy working climate. Leadership is effective and may have a significant impact on mental health and safety outcomes of workers. The research proposes that the following leadership behaviours be put in the construction company policies:

Leader participation in Mental Health Programs: Managers and supervisors ought to participate actively in the discussion of mental health with their staff. By opening up to the workers about their mental health status, leaders will be able to introduce an open culture where mental health is perceived as equally critical as physical safety. Moreover, the leaders are to be trained to identify mental health conditions and act according to them, enabling workers to feel supported (Baum, 2021; Demerouti and Bakker, 2023).

Availability of Mental Health Resources: Leaders are supposed to make sure that the workers can access mental health resources like counselling services, support groups, and stress management programs. Normalising this access should be made easily accessible to all employees, irrespective of their job position or seniority. Past literature indicated that easily available mental health assistance has the capability of mitigating the adverse effects of mental distress on safety performance (Kim et al., 2020).

6.3.1.3. Comprehensive Safety Programs:

The incorporation of mental health in safety programs will assist in building more elaborate and effective safety measures. Results of the study underline the fact that physical hazards are not the only aspect of safety programs, but psychological risks, as well, should be considered. The companies can do the following to improve the safety outcomes:

Integrating Mental Health in Risk Assessments: Psychological risks ought to be in the list of risk assessment, just as the physical risk assessments are done and reduced. As an illustration, stress and fatigue due to excessive working hours, job security, interpersonal conflicts, and others may all be considered contributors to safety incidents. These psychosocial risks and the physical hazards should be assessed through the risk assessment (Zamani et al., 2025).

Developing a Psychosocial Safety Model: Research suggests that a Psychosocial Safety Model in the construction industry should be developed. Identification of the psychological risks present in the construction setting is the subject of this model and subsequently mitigating them. It is also expected to engage feedback loops, psychosocial safety audits, and continuous improvements founded on worker feedback. The literature has suggested the incorporation of psychosocial safety audits to deal with the concept of mental health in safety management systems (Hon et al., 2024).

Mental Health Interventions: The study demonstrates that mental health challenges, including stress, cognitive overload, and anxiety, are direct causes of safety events. In this regard, construction companies need to come up with specific interventions aimed at mitigating those problems. Some of these interventions may involve relaxation, mindfulness training, stress reduction workshops and other

programs that focus on improving the mental well-being (Baum, 2021; Love and Edwards, 2005).

6.3.1.4. Policymaker Implications:

This study should be used to shape the policies at the organisational and governmental levels. The following should be put into consideration by policymakers:

The development of Industry-wide Mental Health Guidelines: The construction industry does not have standard mental health guidelines at present. This paper suggests the development of evidence-based, concise guidelines that treat mental health as well as safety. These strategies ought to facilitate a standardised practice of mental health within the industry that assists organisations to adopt standard procedures (Zamani et al., 2025).

Laws on Mental Health in High-Risk Industries: The study indicates that there exists a gap in mental protection laws of high-risk industries, such as construction. Governments should consider coming up with legislation that would require the incorporation of mental health tests, support and training in dangerous workplaces. This might be included in more general occupational health and safety policies (Hare et al., 2023; Nwaogu et al., 2023).

Incentivising Mental Health Programs: Policymakers may incentivise the construction industry to embrace extensive mental health programs by providing subsidies, grants, or tax reductions to the company that uses mental health programs. These incentives would ease the financial weight of construction companies and motivate them to use the best practices in terms of mental health and safety (Kim et al., 2020).

6.3.1.5. Wider Implications to Industry Culture:

Lastly, the research leads to a change of culture in the industry. The construction industry, which is typically described as a mascot of machismo which shuns any emotional weakness, is slowly starting to realise that mental health is important. The inclusion of mental health into safety measures can help organisations create an inclusive and supportive culture. In turn, this is likely to boost worker morale, improve retention, and increase safety and productivity across the workforce. The necessity to alter this culture was outlined in the study by Hulls et al. (2022) and

Kotera et al. (2019), who also note that masculinity norms and stigma are some of the factors that make the issue of mental health in the industry a challenge.

6.3.2 Research Contributions

In regard to research contributions, this study enhances the evidence base through the integration of both quantitative and qualitative methods, thus providing breadth as well as depth in capturing mental health and safety interrelations. Whereas statistical associations confirm psychological stress as a predictor of unsafe practice, qualitative understanding clarifies what interpersonal and cultural mechanisms lie behind the association. Such a mixed-method design can be helpful to construction research studies that have been influenced by quantitative questionnaires (Hutton et al., 2022). It also provides clear-cut future research directions. To begin with, longer-term studies must be conducted in order to establish cause-and-effect relations between stress, stigma, and safety outcomes, as opposed to cross-sectional ones. Secondly, interventions must be evaluated not only on the measure of take-up, but also on the measures of representativeness, credibility and cultural sensitivity in future studies. Thirdly, cross-national studies would include the comparison of cultural environments - intervening variables of the mental health and safety nexus; this is because different societies and cultures have different norms of masculinity and societal stigmatisation (Rahman et al., 2025).

In addition to the contributions outlined above, the findings of this research have been developed into a scholarly manuscript which has been submitted to a peer-reviewed academic journal and is currently under review. This submission reflects the originality and relevance of the study within the broader field of occupational health and safety, and further demonstrates its potential to contribute to ongoing academic and professional discourse. Whilst the review process remains ongoing at the time of writing, the preparation of this manuscript has enabled the research to be positioned within a wider scholarly context, supporting both knowledge dissemination and critical engagement beyond the scope of this thesis.

6.3.3 Original Contribution and Real-World Application of the Conceptual Framework

A principal original contribution of this research is the development of a conceptual operating framework that positions mental health as an integral

component of occupational safety management rather than as a separate or predominantly welfare-based consideration. The framework emerged from the synthesis of the literature review, quantitative findings and qualitative experiences captured throughout the research. Its contribution lies not simply in recognising an association between mental health and safety outcomes, but in translating this relationship into a structured approach through which psychosocial factors may be considered alongside the physical and procedural risks already routinely managed within construction. In this respect, the framework provides a bridge between theoretical understanding of the mental health–safety relationship and its potential application within operational construction environments.

6.3.3.1 Application of the Framework within UK Construction

Within the real-world context of UK construction, the framework is envisaged as complementing rather than replacing established health and safety management arrangements. Construction organisations already operate through structured processes involving risk assessment, supervision, workforce engagement, incident investigation, training and continual improvement. The practical value of the framework is therefore its potential to incorporate consideration of psychological and psychosocial influences within these familiar processes. Factors identified through this research, including excessive workload, fatigue, time pressure, job insecurity, stress and cognitive overload, could consequently be considered as part of the wider circumstances that influence an individual's capacity to work safely.

Importantly, implementation would not require managers or safety professionals to diagnose mental-health disorders. Rather, its purpose would be to encourage greater organisational awareness of conditions that may influence concentration, decision-making, situational awareness and responses to risk. This reflects the findings of the study, in which participants associated periods of psychological strain with distraction, reduced concentration and impaired decision-making, providing an explanatory pathway between mental health and minor to moderate safety incidents. The framework therefore provides a mechanism through which organisations could consider these influences during routine safety conversations, risk reviews, incident investigations and workforce planning. In doing so, mental health becomes incorporated within established preventative safety

practice rather than addressed primarily after an individual reaches a point of crisis. The framework is particularly applicable to construction because it recognises that mental health and safety performance are influenced by interacting individual, organisational and cultural factors. Its application should therefore remain proportionate and adaptable to different project environments, workforce structures and organisational arrangements. This is important within a sector characterised by temporary workplaces, subcontracting, changing project demands and a transient workforce.

6.3.3.2 Challenges in Identifying and Recording Mental Health Issues

A significant practical limitation, however, concerns the ability of organisations to reliably identify and record mental-health issues. The findings of this research demonstrate that the presence of formal support arrangements does not necessarily result in disclosure or engagement. Mental health remains influenced by cultural expectations surrounding resilience, masculinity and emotional suppression, which can discourage workers from acknowledging difficulties or seeking assistance. Consequently, organisational records may not accurately represent the true extent of psychological distress within the workforce. Generational influences further complicate this issue. The qualitative findings indicated that attitudes towards mental health are changing, but that this change is uneven across the construction workforce. Some workers may demonstrate greater willingness to discuss mental health, whereas others may continue to regard disclosure as a sign of weakness or as presenting a potential professional risk. This creates an important methodological and practical challenge: the absence of a recorded mental-health concern cannot automatically be interpreted as the absence of psychological strain.

Accordingly, the framework should not depend exclusively upon formal diagnoses, recorded disorders or self-declaration. Its practical application instead requires attention to broader psychosocial risk factors and organisational conditions that can be identified and managed without requiring workers to disclose personal medical information. This distinction is central to the framework's contribution. It recognises the limitations of relying upon individual disclosure while providing organisations with an opportunity to consider mental health through the established principles of preventative risk management. In this way, the framework offers a

practical route towards integrating mental health within construction safety management while remaining sensitive to the cultural, generational and reporting barriers identified throughout this research.

6.4 Implications for Stakeholders

This section discusses the study findings related to relevant stakeholders in the construction industry, such as industry practitioners, policymakers and mental health professionals. The presented recommendations and suggestions are provided to enhance mental health awareness and safety outcomes in the construction industry, characterised by the high risk of accidents and mental health issues. The construction industry can also enhance the well-being of workers and their safety performance by providing solutions to mental health difficulties.

6.4.1 Recommendations for Industry Practitioners

6.4.1.1. Incorporating Mental Health in Safety Programs

The research shows that psychological problems such as stress and exhaustion are strong predictor of causative factors of accidents in the workplace. The mental health aspect should be included in safety measures by medical professionals, including evaluating the psychological risk of stress, fatigue, and emotional distress (Chan et al., 2020). This is how safety audits should be.

6.4.1.2. Training the Supervisors and Managers

Supervisors and managers ought to be trained on how to identify mental health conditions and support workers. The training of mental health literacy can assist in the establishment of a safe environment in which workers are comfortable talking about their mental well-being without stigmatisation (Baum, 2021; Zamani et al., 2025).

6.4.1.3. Developing Mental Health Support Systems

Since mental health is stigmatised, practitioners must create viable support resources, including on-site counselling and confidential mental health hotlines (Hulls et al., 2022). Such resources can have an enormous impact on the mental well-being and safety outcomes of workers.

6.4.1.4. Promoting Work-Life Balance

To alleviate stress, practitioners are encouraged to encourage work-life balance. Mental strain can be reduced by encouraging breaks, workloads, and

reasonable working hours (Demerouti and Bakker, 2023). A culture of work that values balance will help to reduce stress and enhance concentration, meaning the occurrence of safety incidents is reduced.

6.4.1.5. Creating Stress Management Programs

Safety training should include stress management programs such as mindfulness and relaxation exercises. Such programs are proven to boost psychological health and performance in these high-risk industries (Baum, 2021). They empower workers to handle stress.

6.4.2 Suggestions for Policymakers

6.4.2.1. Introduction of Mental Health Standards in Occupational Health and Safety Regulations

The policymakers need to change policies to incorporate mental health as a component of occupational health and safety standards in the construction industry. Findings of the research point to the necessity of mental health screenings and the incorporation of psychological risks into the routine safety audits (Kim et al., 2020).

6.4.2.2. Incentive Provision on Mental Health Initiatives

Policymakers may provide financial incentives to encourage companies to implement mental health programs, including grant funding or tax exemptions to those companies that introduce mental health training programs, counselling services, or psychological risk assessments (Zamani et al., 2025).

6.4.2.3. Mental Health Training Standardisation in the Industry

The policymakers should engage the industry stakeholders in the standardisation of mental health training at all levels. This involves training workers and supervisors on mental health awareness, stress management, and symptoms of distress (Hare et al., 2023). These standards could be enforced by nationally recognised certifications.

6.4.2.4. Developing Industry-Wide Mental Health Data Collection

Policymakers ought to establish the mechanisms of systematic gathering of mental health information, anonymous surveys, and health agency cooperation. This kind of data is vital in determining future policies and interventions (Franklin et al., 2022).

6.4.2.5. National Campaigns Against Stigma

Policymakers should lead national campaigns to raise awareness of mental health, reduce stigma, and promote help-seeking behaviours. Such campaigns will be able to change attitudes and normalise mental health conversations within the construction industry (Kotera et al., 2019; Hulls et al., 2022).

6.4.3 Importance of Mental Health Awareness in the Construction Industry

6.4.3.1. Reducing Stigma and Promoting Help-Seeking Behaviour

However, the research points out that stigma is the reason why workers do not want to seek help regarding mental health conditions. Stigmatisation can be prevented through awareness campaigns about mental health because such discussions can become normalised, and workers should feel confident about seeking help without fear of adverse effects (Hulls et al., 2022). This would bring mental health and physical safety together in the workplace (Kotera et al., 2019).

6.4.3.2. Improving Worker Engagement and Productivity

When mental health is prioritised, morale improves and team members become more engaged. Supported workers have a better chance of speaking better, committing fewer mistakes, and being less prone to burnout (Baum, 2021). In low-risk tasks with minimal consequences, such as housekeeping, where mental health is less critical, enhancing mental health directly increases safety performance and output.

6.4.3.3. Providing a Safer Work Environment

Mental health awareness can prevent stress, anxiety and cognitive overload from escalating into safety risks. The emphasis on mental well-being will help workers to perform their tasks safely and minimise accidents (Baum, 2021; Demerouti and Bakker, 2023).

6.4.3.4. Supporting Long-Term Workforce Health and Retention

Mental health awareness is relevant not only to the safety issues in the short term but also to the long-term well-being of the workforce. Burnout and high turnover may be caused by mental health conditions and disrupt the workforce. Mental health support allows construction employers to retain a competent workforce, minimise absenteeism, and enhance the stability of the workforce (Nwaogu et al., 2023).

6.5 Future Research Directions

6.5.1 Areas for Further Investigation

When conducting future research in the construction industry, some of the main areas should be targeted to understand the issue and to improve the practices that relate to mental health and safety outcomes.

6.5.1.1 Mental Health and Psychosocial Risk Factor

The construction industry is characterised by a high level of stress, work insecurity and excessive hours, which contribute to mental health issues in employees. These are psychosocial risk factors that are reported to be prevalent, and they significantly impact the mental health of workers. Indicatively, a study by Hon et al. (2024) has identified work overload, lack of participation in the decision-making process and long working hours among some of the key factors that have contributed to mental health challenges among construction workers. Defining and preventing such psychosocial hazards in future research would help to improve the mental factors and, accordingly, the safety indicators of the workers.

6.5.1.2 Effect of Mental Health on Safety Performance

There is an ever growing body of evidence that mental health issues adversely affect high-risk industry safety performance, including construction. The initial relationship between exposure to psychosocial factors at the workplace and safety incidents in high-risk industries was preliminary, according to the findings of Derdowski (2023). However, more detailed studies are necessary to demonstrate the direct causal relationship, as well as to examine the direct impact of different mental health conditions on the safety practice and incident rate.

6.5.1.3 Mental Health Intervention Effectiveness

Even though several mental health interventions have been employed within the construction industry, their effectiveness has not been studied in detail. In their article, Li et al. (2022) have conducted a systematic review that revealed that there were no frameworks aimed at investigating how psychosocial factors affected the well-being of construction workers. Future studies should evaluate the effectiveness of the currently available interventions and develop evidence-based approaches to successfully combat mental health issues.

6.5.1.4 Mental Health Support Technological Solutions.

The technological advances give another dimension in assisting with mental health in the construction industry. Potential artificial intelligence (AI) systems like the multi-agent conversational AI system, as reported by Kampman et al. (2025), have potential in supporting employees psychologically. The technological aspects of these solutions, such as scalability, tolerance, and their impacts in different construction settings, require further investigation to ensure their effective implementation. A deeper understanding of these factors will help address potential challenges and improve the overall effectiveness of these solutions in practice.

6.5.1.5 Cross-Cultural and Global Viewpoints.

Construction is an international industry, and mental health challenges might not be the same everywhere and across all cultures. The literature review of the subject revealed that there are many risk factors and methods of alleviating mental health issues in construction workers (Newaz et al., 2022). Further investigations of cross-cultural variations of mental health conditions and safety outcomes are encouraged to bring about the creation of special interventions in mental health difficulties that should be dependent on the local circumstances and cultures. Through these considerations, research studies in the future would enable the creation of a safer and more comfortable work environment in the construction industry that may ultimately lead to improved mental health and safety outcomes among construction workers.

6.5.2 Proposed Methodological Approaches

Further research into this mental health/safety nexus in the construction industry should consider approaches that will address the shortcomings experienced by earlier studies and provide a more in-depth perspective of the cause-and-effect relationships. The proposed study design is a longitudinal mixed-methods study that would combine both quantitative and qualitative research methods to demonstrate the prevalence and experiences of mental health difficulties over time. Longitudinal surveys conducted at several stages of the project or various shifts would enable the research to monitor the trends, variability, and possible cumulative impacts of psychosocial stressors on the safety outcomes (Kalisch et al., 2021). This would also assist in developing time-based relationships, which would improve the ability to make inferences about causality between mental states and minor-to-moderate safety events

Quantitatively, it is desirable to target larger sample sizes in a varied number of construction sites and regions to increase the degree of generalisability and reduce selection factors. There should be greater mental health and safety data triangulation between standardised, validated measures. They might include Questionnaire (GHQ-12) or Depression Anxiety Stress Scales (DASS-21)) and site-specific information on the cases of safety accidents (Banu, 2025; Johnston et al., 2025). Self-reporting can enhance the accuracy of the finding with the objective help of physiological indicators of stress and fatigue (e.g., heart rate variability or cortisol levels).

The qualitative approaches, including semi-structured interviews, focus groups, and ethnographic observation, would be utilised in their entirety when investigating the perceptions and organisational culture of employees, as well as the situational influences on mental health and safety behaviour. The evaluations can be video-recorded or observed on the job and might be more helpful in indicating the psychosocial risk. Moreover, the data can be coded and themed using data analysis software such as NVivo, ATLAS.ti, MAXQDA, Dedoose, or Taguette to ensure that it is organised in a structured manner. This approach allows the researcher to effectively manage the data and identify emerging trends and patterns (Gupta, 2024). Lastly, mental health interventions to prevent safety incidents could be tested using experimental or quasi-experimental designs in the field of psychology, to prove the importance of stress management training or AI-assisted interventions. Future studies that incorporate longitudinal and multi-method approaches, as well as intervention studies, can provide practical, action-oriented, evidence-based solutions that would contribute to improving mental health and safety outcomes in high-risk construction environments.

6.5.2.1 Significance of Future Research in the Subject.

There are several reasons why the overlap between mental health and safety outcomes in the construction industry remains the focus of numerous critical investigations.

6.5.2.2 Identifying and Preventing High Suicide and Mental Health Rates

The construction industry is burdened by alarmingly high suicide statistics, with an estimated 6,000 construction workers dying by suicide in 2022 (NBC News, 2024). Studies indicate that construction workers are at a threefold risk of suicide related deaths, and a report published by the Office for National Statistics in 2020 found that the incidence of suicide in male construction workers was 29.1 per 100, 000 as

compared to the national rate of 9.6 per 100,000 (CICES, 2024). These statistics point to the fact that further research is needed to enable successful interventions and support mechanisms to be introduced which are unique to the problems faced by construction workers.

6.5.2.3 Enhancing Safety Outcomes

Mental health concerns are a significant factor that contributes to safety performance. Stressed, anxious or depressed employees are more likely to suffer accidents and injuries (Kamardeen and Hasan, 2023). By additionally studying the relationship between mental health and safety outcomes, researchers will be able to identify specific risk factors and develop specific strategies to mitigate these risks, which will lead to safer working environments.

6.5.2.4 Educating Policy and Organisational Practices.

Research provides the evidence base that is needed to inform policies and organisational practices to improve the mental well-being of construction workers. For example, a study can help build mental health programs, training, and resources to meet the specific needs of the workforce (Wu et al, 2021). Existing policies may not be up to date and may not be suitable for tackling the current mental health challenges without additional research.

6.5.2.5 Reducing Economic Burden

If mental health issues exist among the workers in the construction industry, there may be high levels of absenteeism followed by lower productivity and higher healthcare costs (Rouhanizadeh and Kermanshachi, 2021). Following this, future studies must focus on measuring the economic impact of mental health conditions among construction workers to provide compelling evidence for the investors and policymakers to introduce mental health programs which will bring benefits such as increased productivity.

6.5.2.6 Promoting Cultural Change

The culture of toughness and emotional suppression that has long been ingrained in the construction industry does not encourage open conversations about mental health (Aurelius et al., 2024). Ongoing research may be a crucial factor in challenging and transforming these cultural norms, helping to create an environment where mental health can be openly discussed and accepted.

6.6 Final Thoughts

6.6.1 Reflection on the Research Learning Journey

Starting the Professional Doctorate was both exciting and daunting. Walking into the University induction, surrounded by accomplished academics and industry experts, I felt a wave of self-doubt and imposter syndrome wash over me. It was hard not to question whether I truly belonged in that space. But as I reflected on why I had chosen this path, I reminded myself that I was here for a reason, to explore and address the critical, yet often overlooked, connection between mental health and safety in the UK construction industry. This motivation helped me push through those early feelings of uncertainty. I threw myself into reading widely, diving into over twenty books and articles on critical thinking, social science theories, and research methods. This wasn't just about ticking academic boxes; it was about reshaping how I thought about evidence, argument, and the questions I wanted to ask. Slowly but surely, I began to see myself not just as a practitioner with experience, but as a researcher capable of contributing something meaningful to the academic conversation.

Choosing a mixed-methods approach felt like the right way to capture the complexity of the topic. I wanted to understand not only the numbers behind mental health issues in construction but also the personal stories and experiences that give those numbers life. What surprised me most was how open and willing people were to participate. Unlike many research projects where access can be a struggle, I faced no refusals, which made me realise just how important and timely this research was. Analysing the data was a different challenge altogether. Combining quantitative results with rich, qualitative narratives required me to constantly reflect on my own assumptions and the way I interpreted the data. Every decision about coding or statistical analysis felt significant because it shaped how the findings would be understood by both academics and practitioners. This iterative process of collecting, analysing, and rethinking became a core part of my learning, teaching me to be patient, critical, and open to new insights.

One of the biggest personal challenges was learning how to handle feedback. At first, I found it difficult not to take critique personally, which slowed down my progress and made revisions feel like a battle. Over time, and with the support of my supervisor, I learned to see feedback as a collaborative tool rather than a judgement. This shift was helped enormously by a deeper self-awareness that emerged during

the course of my studies, I discovered that I am on the autism spectrum. This insight was transformative. It helped me understand why certain academic and social situations felt overwhelming and why I sometimes struggled with communication. More importantly, it allowed me to be kinder to myself and to find ways to work that suited how I think and process information. This personal journey also enriched my research. Being aware of my own positionality helped me maintain a critical distance while also appreciating how my experiences could inform the interpretation of data in a meaningful way. It became clear that my identity was not a barrier but a lens through which I could engage more deeply with the subject matter.

Balancing the demands of doctoral study with family life and work was another ongoing challenge. As a parent of two young children, aged nine and seven, I was motivated by a desire to show them that it's possible to pursue academic success regardless of background. Coming from a working-class family and being the first in my immediate circle to embark on this kind of academic journey, I wanted to set an example of resilience and aspiration. Yet, juggling study, parenting, and employment often left me feeling stretched thin and guilty for the time I couldn't spend with my family. I learned to manage this by setting clear boundaries, communicating openly with my partner and employer, and prioritising self-care alongside productivity. The support I received from my employer, especially when they provided funding for my final year, was a huge relief and a sign that my work was valued beyond academia. My partner's background in psychology and mental health was also a vital source of support. Together, we navigated the emotional ups and downs of this journey, and I came to realise that I was not immune to the mental health challenges I was researching. This personal connection deepened my understanding and commitment to the work, reminding me that the issues I studied were not abstract but lived realities.

The final stages of the doctorate involved developing a Framework that brought together the voices of those with lived experience, empirical data, and stakeholder insights. This was both the most challenging and rewarding part of the process. Translating complex and sometimes conflicting information into a clear, practical model required patience, persistence, and a willingness to revise repeatedly. Each draft brought new clarity and confidence, helped by ongoing feedback from my supervisor and industry partners. This process also strengthened my ability to think critically and communicate clearly, skills that I know will be invaluable in future academic or professional roles. I learned how to anticipate questions, defend my

choices, and situate my work within the broader literature, which gave me a sense of belonging in the academic community.

Looking back, this doctoral journey has been transformative in ways I hadn't fully anticipated. It has deepened my professional expertise and given me a platform to advocate for meaningful change in an industry I care deeply about. On a personal level, it has fostered greater self-awareness, resilience, and a clearer sense of my scholarly identity. The experience has shown me the power of combining lived experience with rigorous research, and the importance of being open about one's positionality. While there are still questions to explore and improvements to make, I feel equipped with the tools and insights to continue this work beyond the doctorate. Above all, this journey has been a testament to the value of perseverance, reflection, and the courage to embrace both the challenges and rewards of academic learning. It is my hope that my children and others will see in this journey an example of what is possible when passion, discipline, and authenticity come together.

6.6.2 Overall Significance of the Study

The findings of this research hold the highest relevance to the scholarly and business world. It adds to the expanding literature on occupational health and safety, and in this particular high-risk context, consisting of the construction industry setting. It provokes a paradigm shift in the implementation of safety management systems by highlighting the connection between mental health and safety incidents. Another concern highlighted by the research is the necessity to incorporate mental health awareness into safety protocols, which can not only improve the well-being of the workers but also impact the outcomes of the safety measures.

6.6.3 Closing Remarks

As a final point, this study acts as the initiator of transformation in the construction industry. It promotes a more holistic view of worker safety, one in which mental health is also a key element. To proceed, a more concrete approach to the incorporation of mental health programs into safety precautions should be established with the backing of policymakers and industry practitioners to establish a safer and responsive working environment. The culture of openness and support can help the construction industry to minimise cases of safety incidents related to mental health and enhance general productivity. On a broader level, the research helps in

the re-conceptualisation of construction organisational culture. It argues that well-being can be envisioned not only as a moral and ethical requirement but an operational requirement that has hard connections with safety performance. The research does not assign wellbeing and safety into separate silos; integration is theoretically well-founded and needs to be applied in practice. The research places the human reality of construction workers in the foundation of wellbeing and productivity by focusing on the actual lives of the workers and critically examining the organisational reactions.

Lastly, this discussion provides a critical and comprehensive examination of the relationship between mental health and safety on construction sites. It explains that psychological well-being should not be viewed as separate from safety performance; rather, it is an integral part of performance, influenced by organisational culture, cultural values, and human relationships. This perspective holds value not only in recognising the problem but also in shifting the discussion towards more compliance-based, culturally responsive, leadership-led, and inclusive practices. Throughout this process, the study aims to contribute to the field of scholarship, propose realistic reform actions, and establish a research agenda. More importantly, it asserts that the protection of well-being cannot be isolated from the protection of life, and this principle should guide the future development of the construction industry.

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Chapter 1

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Appendices

Appendices 1 – Quantitative Survey Research Questions

Table 65 Development of Quantitative Research Questions from the Literature Review on Mental Health in the Construction Industry

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
Q1: What is your age?	To gather demographic data that may correlate with mental health outcomes.	Stocks, S.J., Turner, S., McNamee, R., Carder, M., Hussey, L. and Agius, R.M. (2011). "Occupation and work-related ill-health in UK construction workers." Occupational Medicine, 61(6), pp.407-415.
Q2: What is your gender?	To understand gender differences in mental health issues within the construction industry.	Kotera, Y., Green, P. and Sheffield, D. (2019). "Mental health shame of UK construction workers: Relationship with masculinity, work motivation, and self-compassion." Revista de

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
		Psicología del Trabajo y de las Organizaciones, 35(2), pp.135-143.
Q3: What is the highest level of education you have completed?	To assess the relationship between education level and mental health awareness.	Love, P.E. and Edwards, D.J. (2005). "Taking the pulse of UK construction project managers' health: Influence of job demands, job control and social support on psychological wellbeing." Engineering, Construction and Architectural Management, 12(1), pp.88-101.
Q4: Please enter your job title (optional).	To identify specific roles that may be more susceptible to mental health issues.	Jacobsen, H.B., Caban-Martinez, A., Onyebeke, L.C., Sorensen, G., Dennerlein, J.T. and Reme, S.E. (2013). "Construction workers struggle with a high prevalence of mental

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
		distress, and this is associated with their pain and injuries." Journal of Occupational and Environmental Medicine, 55(10), pp.1197-1204.
Q5: How many years have you worked in the construction industry?	To evaluate the impact of experience on mental health perceptions.	Eaves, S., Gyi, D.E. and Gibb, A.G. (2016). "Building healthy construction workers: Their views on health, wellbeing and better workplace design." Applied Ergonomics, 54, pp.10-18.
Q6: What type of construction work do you primarily engage in?	To determine if certain types of work are associated with higher mental health risks.	Campbell, M.A. and Gunning, J.G. (2020). "Strategies to improve mental health and well-being within the UK construction industry." Proceedings of the Institution of Civil

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
		Engineers-Management, Procurement and Law, 173(2), pp.64-74.
Q7: What is the size of the company you work for?	To explore how company size may influence mental health support and resources.	Blake, H., Bullock, H. and Chouliara, N. (2023). "Enablers and barriers to mental health initiatives in construction SMEs." Occupational Medicine, 73(6), pp.317-323.
Q8: What best describes your employment status over the last 12 months?	To understand the relationship between employment status and mental health outcomes.	Duncan, M., Bansal, D. and Cooke, E. (2024). "Help-seeking intentions of UK construction workers: a cross-sectional study." Occupational Medicine, 74(2), pp.172-177.

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
Q9: What is the nature of your current employment?	To assess how different employment types affect mental health perceptions.	Hanna, E.S. and Markham, S. (2019). "Constructing better health and wellbeing? Understanding structural constraints on promoting health and wellbeing in the UK construction industry." International Journal of Workplace Health Management, 12(3), pp.146-159.
Q10: Please rate your overall mental health over the past month on a scale from 1 to 10.	To quantify self-reported mental health status among construction workers.	HSE (2023). "The silent struggle of mental health in construction." HSE Network. Available at: https://www.hse-network.com/the-silent-struggle-of-mental-health-in-construction/ (Accessed: November 6, 2024).

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
Q11: Have you ever been involved in any safety incidents or near-misses in the workplace?	To investigate the correlation between mental health and safety incidents.	Leung, M.Y., Chan, I.Y.S., Yu, J. (2012). "Preventing construction worker injury incidents through the management of personal stress and organizational stressors." Accident Analysis and Prevention, 48, 156–166.
Q11b: Do you think your mental health state at the time of the accident(s) may have influenced the outcome?	To explore the potential impact of mental health on the severity and outcomes of workplace incidents.	Hulls, P.M., de Vocht, F., Martin, R.M. and Langford, R.M. (2022). "We are our own worst enemy": a qualitative exploration of work-related stress in the construction industry." International Journal of Workplace Health Management, 15(5), pp.609-622.

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
Q1.1: How prevalent do you perceive mental health issues to be among construction workers?	To assess the perceived prevalence of mental health issues within the industry.	Kotera, Y., Green, P. and Sheffield, D. (2020). "Work-life balance of UK construction workers: Relationship with mental health." Construction Management and Economics, 38(3), pp.291-303.
Q1.2: How much do you believe mental health issues impact safety incidents in the construction industry?	To evaluate the perceived relationship between mental health issues and safety incidents.	Jacobsen, H.B., Caban-Martinez, A., Onyebeke, L.C., Sorensen, G., Dennerlein, J.T. and Reme, S.E. (2013). "Construction workers struggle with a high prevalence of mental distress, and this is associated with their pain and injuries." Journal of Occupational and Environmental Medicine, 55(10), pp.1197-1204.

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
Q1.3: How severe do you consider the mental health issues experienced by construction workers?	To gauge the perceived severity of mental health issues faced by workers.	Stocks, S.J., McNamee, R., Carder, M. and Agius, R.M. (2010). "The incidence of medically reported work-related ill health in the UK construction industry." Occupational and Environmental Medicine, 67(8), pp.574-576.
Q1.4: How effective do you think mental health support programs and training initiatives are in addressing mental health issues in the construction industry?	To assess the perceived effectiveness of existing mental health support initiatives.	Campbell, M.A. and Gunning, J.G. (2020). "Strategies to improve mental health and well-being within the UK construction industry." Proceedings of the Institution of Civil Engineers-Management, Procurement and Law, 173(2), pp.64-74.

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
Q1.5: How much do you think mental health issues impact the productivity and performance of construction workers?	To explore the perceived impact of mental health on worker productivity.	Eaves, S., Gyi, D.E. and Gibb, A.G. (2016). "Building healthy construction workers: Their views on health, wellbeing and better workplace design." Applied Ergonomics, 54, pp.10-18.
Q1.6: How much do you think work-related factors (like stress or long hours) contribute to the prevalence of mental health issues in the construction industry?	To evaluate the perceived influence of work-related factors on mental health issues.	Blake, H., Bullock, H. and Chouliara, N. (2023). "Enablers and barriers to mental health initiatives in construction SMEs." Occupational Medicine, 73(6), pp.317-323.
Q1.7: How satisfied are construction workers with the mental health support provided by their companies?	To assess worker satisfaction with the mental health resources available to them.	Duncan, M., Bansal, D. and Cooke, E. (2024). "Help-seeking intentions of UK construction

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
		workers: a cross-sectional study." Occupational Medicine, 74(2), pp.172-177.
Q2.1: How much do you think work-related stressors, including long hours and high job demands, contribute to mental health issues among construction workers?	To evaluate the perceived impact of work-related stressors on mental health.	Leung, M.Y., Chan, I.Y.S., Yu, J. (2012). "Preventing construction worker injury incidents through the management of personal stress and organizational stressors." Accident Analysis and Prevention, 48, 156–166.
Q2.2: How much do you think lack of job control and poor supervisor support contribute to mental health issues among construction workers?	To assess the influence of job control and supervisory support on mental health.	Boschman, J.S., Van der Molen, H.F., Sluiter, J.K. and Frings-Dresen, M.H.W. (2013). "Psychosocial work environment and mental health among construction workers." Applied Ergonomics, 44(5), pp.748-755.

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
Q2.3: How influential do you believe lack of social support from colleagues is in contributing to mental health issues in the construction industry?	To explore the role of social support in mental health outcomes for construction workers.	Kotera, Y., Green, P. and Sheffield, D. (2019). "Mental health shame of UK construction workers: Relationship with masculinity, work motivation, and self-compassion." Revista de Psicología del Trabajo y de las Organizaciones, 35(2), pp.135-143.
Q2.4: How influential do you believe work-life imbalance is in contributing to mental health issues among construction workers?	To evaluate the impact of work-life balance on mental health in the industry.	Kotera, Y., Green, P. and Sheffield, D. (2020). "Work-life balance of UK construction workers: Relationship with mental health." Construction Management and Economics, 38(3), pp.291-303.

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
Q2.5: How much do you think being exposed to physical dangers at work contributes to mental health issues in the construction industry?	To assess the relationship between physical dangers and mental health issues.	Jacobsen, H.B., Caban-Martinez, A., Onyebeke, L.C., Sorensen, G., Dennerlein, J.T. and Reme, S.E. (2013). "Construction workers struggle with a high prevalence of mental distress, and this is associated with their pain and injuries." Journal of Occupational and Environmental Medicine, 55(10), pp.1197-1204.
Q2.6: How influential do you believe workplace culture and support systems are in contributing to mental health issues among construction workers?	To explore the impact of workplace culture on mental health outcomes.	Campbell, M.A. and Gunning, J.G. (2020). "Strategies to improve mental health and well-being within the UK construction industry." Proceedings of the Institution of Civil

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
		Engineers-Management, Procurement and Law, 173(2), pp.64-74.
Q2.7: How much do you think stigma and lack of understanding about mental health contribute to mental health issues in the construction industry?	To evaluate the perceived impact of stigma on mental health in the workplace.	HSE (2023). "The silent struggle of mental health in construction." HSE Network. Available at: https://www.hse-network.com/the-silent-struggle-of-mental-health-in-construction/ (Accessed: November 6, 2024).
Q3.1: How much do you think mental health issues contribute to safety incidents in the construction industry?	To evaluate the perceived relationship between mental health issues and safety incidents.	Stocks, S.J., McNamee, R., Carder, M. and Agius, R.M. (2010). "The incidence of medically reported work-related ill health in the UK construction industry." Occupational and Environmental Medicine, 67(8), pp.574-576.

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
Q3.2: How much do you think mental health issues lead to human errors that cause safety incidents in the construction industry?	To explore the connection between mental health and human error in safety incidents.	Jacobsen, H.B., Caban-Martinez, A., Onyebeke, L.C., Sorensen, G., Dennerlein, J.T. and Reme, S.E. (2013). "Construction workers struggle with a high prevalence of mental distress, and this is associated with their pain and injuries." Journal of Occupational and Environmental Medicine, 55(10), pp.1197-1204.
Q3.3: How much do you think mental health issues affect workers' focus, decision-making, and coordination, leading to safety incidents in the construction industry?	To assess the impact of mental health on cognitive functions related to safety.	Leung, M.Y., Chan, I.Y.S., Yu, J. (2012). "Preventing construction worker injury incidents through the management of personal stress and organizational stressors." Accident Analysis and Prevention, 48, 156–166.

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
Q3.4: How much do you believe mental health issues impact workers' communication and teamwork, leading to safety incidents in the construction industry?	To evaluate the influence of mental health on communication and teamwork in safety contexts.	Campbell, M.A. and Gunning, J.G. (2020). "Strategies to improve mental health and well-being within the UK construction industry." Proceedings of the Institution of Civil Engineers-Management, Procurement and Law, 173(2), pp.64-74.
Q3.5: How much do you believe mental health issues impact workers' situational awareness, leading to safety incidents in the construction industry?	To explore the relationship between mental health and situational awareness in safety scenarios.	HSE (2023). "The silent struggle of mental health in construction." HSE Network. Available at: https://www.hse-network.com/the-silent-struggle-of-mental-health-in-construction/ (Accessed: November 6, 2024).

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
Q3.6: How much do you think improving mental health can help reduce safety incidents in the construction industry?	To assess the perceived benefits of mental health improvement on safety outcomes.	Eaves, S., Gyi, D.E. and Gibb, A.G. (2016). "Building healthy construction workers: Their views on health, wellbeing and better workplace design." Applied Ergonomics, 54, pp.10-18.
Q3.7: How effective do you believe mental health support programs are in reducing the occurrence of safety incidents in the construction industry?	To evaluate the perceived effectiveness of mental health support programs in enhancing safety.	Blake, H., Bullock, H. and Chouliara, N. (2023). "Enablers and barriers to mental health initiatives in construction SMEs." Occupational Medicine, 73(6), pp.317-323.
Q4.1: How effective do you think mental health awareness and training programs are in promoting mental	To assess the perceived effectiveness of training programs in enhancing mental health awareness.	Campbell, M.A. and Gunning, J.G. (2020). "Strategies to improve mental health and well-being within the UK construction industry." Proceedings of the Institution of Civil

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
health and preventing safety incidents in the construction industry?		Engineers-Management, Procurement and Law, 173(2), pp.64-74.
Q4.2: How effective do you think stress management and work-life balance initiatives are in promoting mental health and preventing safety incidents in the construction industry?	To evaluate the impact of stress management initiatives on mental health and safety.	Kotera, Y., Green, P. and Sheffield, D. (2020). "Work-life balance of UK construction workers: Relationship with mental health." Construction Management and Economics, 38(3), pp.291-303.
Q4.3: How effective do you think safety policies and procedures are in promoting mental health and preventing incidents in the construction industry?	To explore the relationship between safety policies and mental health outcomes.	HSE (2023). "The silent struggle of mental health in construction." HSE Network. Available at: https://www.hse-network.com/the-silent-struggle-of-mental-health-in-construction/ (Accessed: November 6, 2024).

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
Q4.4: How much do you think a supportive work environment helps promote mental health and prevent safety incidents among construction workers?	To assess the perceived importance of a supportive work environment on mental health and safety.	Eaves, S., Gyi, D.E. and Gibb, A.G. (2016). "Building healthy construction workers: Their views on health, wellbeing and better workplace design." Applied Ergonomics, 54, pp.10-18.
Q4.5: How feasible do you believe it is to implement regular mental health screenings for construction workers as a strategy for promoting mental health and preventing safety incidents?	To evaluate the perceived feasibility of mental health screenings in the construction industry.	Blake, H., Bullock, H. and Chouliara, N. (2023). "Enablers and barriers to mental health initiatives in construction SMEs." Occupational Medicine, 73(6), pp.317-323.

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
Q4.6: How effective do you believe providing access to confidential counselling services is in promoting mental health and preventing safety incidents in the construction industry?	To assess the perceived effectiveness of counselling services in supporting mental health.	Jacobsen, H.B., Caban-Martinez, A., Onyebeke, L.C., Sorensen, G., Dennerlein, J.T. and Reme, S.E. (2013). "Construction workers struggle with a high prevalence of mental distress, and this is associated with their pain and injuries." Journal of Occupational and Environmental Medicine, 55(10), pp.1197-1204.
Q4.7: How effective do you believe fostering strong leadership and management support for mental health initiatives is in promoting mental health and preventing safety	To explore the role of leadership support in enhancing mental health initiatives.	Campbell, M.A. and Gunning, J.G. (2020). "Strategies to improve mental health and well-being within the UK construction industry." Proceedings of the Institution of Civil

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
incidents among construction workers?		Engineers-Management, Procurement and Law, 173(2), pp.64-74.
Q4.8: How effective do you believe implementing peer support programs is in promoting mental health and preventing safety incidents in the construction industry?	To evaluate the perceived effectiveness of peer support programs in enhancing mental health.	Kotera, Y., Green, P. and Sheffield, D. (2019). "Mental health shame of UK construction workers: Relationship with masculinity, work motivation, and self-compassion." Revista de Psicología del Trabajo y de las Organizaciones, 35(2), pp.135-143.
Q5.1: How effective do you think mental health policies and safety training are in addressing mental	To assess the perceived effectiveness of mental health policies and training in enhancing safety.	Blake, H., Bullock, H. and Chouliara, N. (2023). "Enablers and barriers to mental health initiatives in construction SMEs." Occupational Medicine, 73(6), pp.317-323.

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
health and preventing safety incidents in the construction industry?		
Q5.2: How effective do you think promoting a culture where workers can report issues without fear helps address mental health and safety incidents in the construction industry?	To evaluate the impact of a reporting culture on mental health and safety outcomes.	Campbell, M.A. and Gunning, J.G. (2020). "Strategies to improve mental health and well-being within the UK construction industry." Proceedings of the Institution of Civil Engineers-Management, Procurement and Law, 173(2), pp.64-74.
Q5.3: How effective do you think providing resources for mental health and including mental health in safety	To explore the relationship between resource availability and incident prevention.	Eaves, S., Gyi, D.E. and Gibb, A.G. (2016). "Building healthy construction workers: Their views on health, wellbeing and better workplace design." Applied Ergonomics, 54, pp.10-18.

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
planning are in preventing incidents in the construction industry?		
Q5.4: How effective do you believe the establishment of confidential reporting mechanisms for mental health concerns and safety incidents is in addressing mental health and promoting a safe work environment in the construction industry?	To assess the perceived effectiveness of confidential reporting mechanisms in enhancing safety and mental health.	HSE (2023). "The silent struggle of mental health in construction." HSE Network. Available at: https://www.hse-network.com/the-silent-struggle-of-mental-health-in-construction/ (Accessed: November 6, 2024).
Q5.5: How effective do you believe the provision of reasonable accommodations for workers with	To evaluate the impact of reasonable accommodations on mental health and safety outcomes.	Jacobsen, H.B., Caban-Martinez, A., Onyebeke, L.C., Sorensen, G., Dennerlein, J.T. and Reme, S.E. (2013). "Construction workers

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
mental health conditions is in addressing mental health and preventing safety incidents among construction workers?		struggle with a high prevalence of mental distress, and this is associated with their pain and injuries." Journal of Occupational and Environmental Medicine, 55(10), pp.1197-1204.
Q5.6: How effective do you believe the involvement of workers in the development and review of mental health and safety policies is in addressing mental health and promoting a safe work environment in the construction industry?	To explore the role of worker involvement in policy development on mental health and safety.	Kotera, Y., Green, P. and Sheffield, D. (2019). "Mental health shame of UK construction workers: Relationship with masculinity, work motivation, and self-compassion." Revista de Psicología del Trabajo y de las Organizaciones, 35(2), pp.135-143.

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
Q5.7: How effective do you believe the enforcement of disciplinary actions for violations of mental health and safety policies is in addressing mental health and preventing safety incidents among construction workers?	To assess the perceived effectiveness of disciplinary actions in promoting compliance with mental health policies.	Stocks, S.J., McNamee, R., Carder, M. and Agius, R.M. (2010). "The incidence of medically reported work-related ill health in the UK construction industry." Occupational and Environmental Medicine, 67(8), pp.574-576.
Q5.8: How effective do you believe the regular evaluation and improvement of mental health and safety policies and practices is in addressing mental health and	To evaluate the importance of ongoing policy evaluation in enhancing mental health and safety.	Campbell, M.A. and Gunning, J.G. (2020). "Strategies to improve mental health and well-being within the UK construction industry." Proceedings of the Institution of Civil Engineers-Management, Procurement and Law, 173(2), pp.64-74.

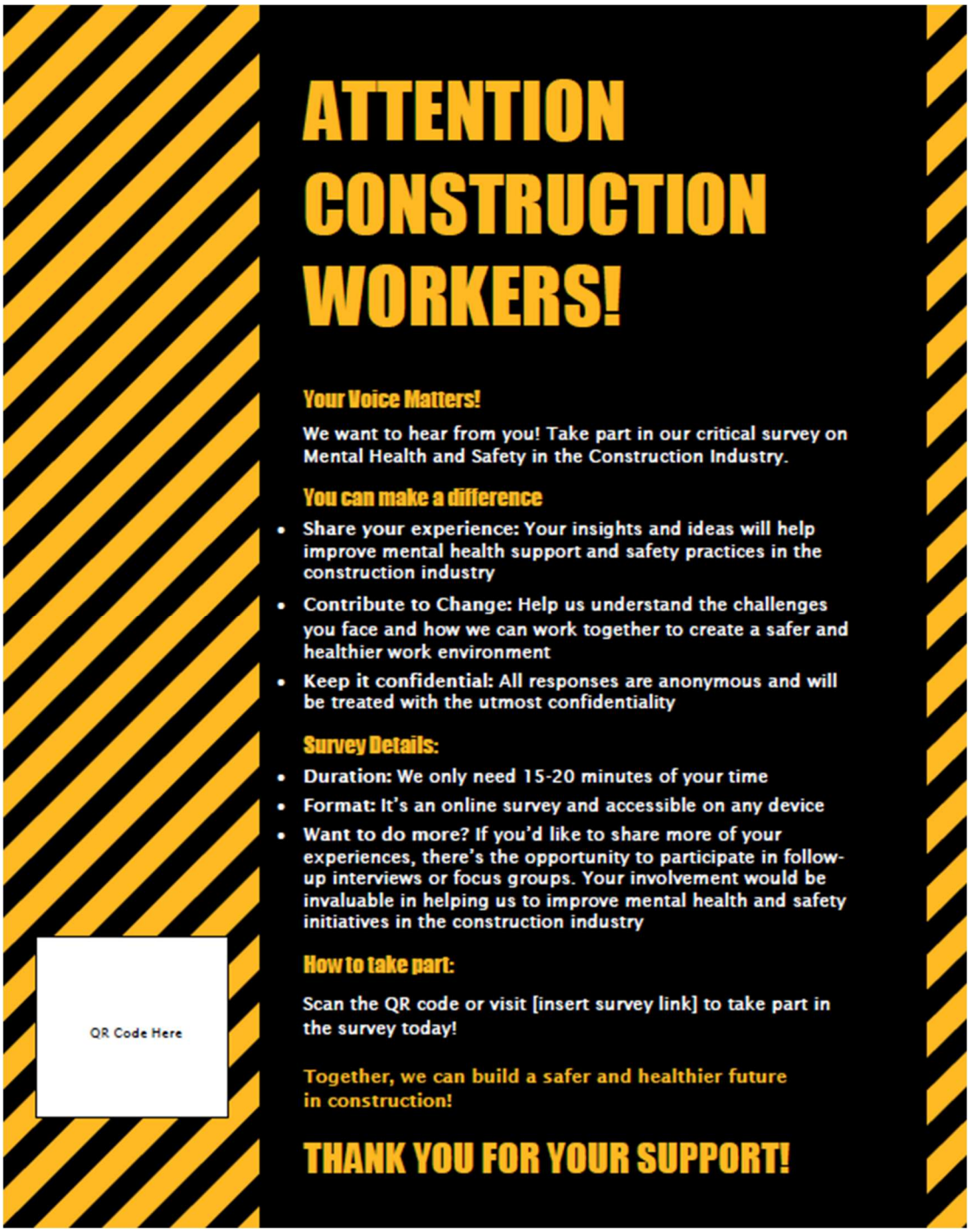
Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
promoting a safe work environment in the construction industry?		
Q6.1: How challenging do you think stigma and lack of awareness about mental health are in addressing mental health and safety incidents in the construction industry?	To evaluate the impact of stigma and awareness on mental health and safety outcomes.	Kotera, Y., Green, P. and Sheffield, D. (2019). "Mental health shame of UK construction workers: Relationship with masculinity, work motivation, and self-compassion." Revista de Psicología del Trabajo y de las Organizaciones, 35(2), pp.135-143.
Q6.2: How challenging do you think high turnover rates in the construction workforce are in addressing mental health and safety incidents?	To assess the influence of workforce turnover on mental health and safety initiatives.	Stocks, S.J., Turner, S., McNamee, R., Carder, M., Hussey, L. and Agius, R.M. (2011). "Occupation and work-related ill-health in UK

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
		construction workers." Occupational Medicine, 61(6), pp.407-415.
Q6.3: How challenging do you perceive the lack of resources and funding for mental health initiatives in the construction industry to be in addressing mental health and safety incidents?	To explore the impact of resource availability on mental health initiatives and safety.	Blake, H., Bullock, H. and Chouliara, N. (2023). "Enablers and barriers to mental health initiatives in construction SMEs." Occupational Medicine, 73(6), pp.317-323.
Q6.4: How challenging do you perceive the macho culture and perceived masculinity associated with the construction industry to be in	To evaluate the influence of cultural norms on mental health and safety reporting.	Kotera, Y., Green, P. and Sheffield, D. (2019). "Mental health shame of UK construction workers: Relationship with masculinity, work motivation, and self-compassion." Revista de

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
addressing mental health and safety incidents?		Psicología del Trabajo y de las Organizaciones, 35(2), pp.135-143.
Q6.5: How challenging do you perceive the lack of time and competing priorities in the construction industry to be in addressing mental health and safety incidents?	To assess the impact of time constraints on mental health initiatives and safety practices.	Eaves, S., Gyi, D.E. and Gibb, A.G. (2016). "Building healthy construction workers: Their views on health, wellbeing and better workplace design." Applied Ergonomics, 54, pp.10-18.
Q6.6: How challenging do you perceive the lack of leadership support and commitment to mental	To explore the role of leadership support in the effectiveness of mental health initiatives.	Campbell, M.A. and Gunning, J.G. (2020). "Strategies to improve mental health and well-being within the UK construction industry." Proceedings of the Institution of Civil

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
health initiatives to be in addressing mental health and safety incidents?		Engineers-Management, Procurement and Law, 173(2), pp.64-74.
Q6.7: How challenging do you perceive the lack of access to mental health resources and services in remote construction sites to be in addressing mental health and safety incidents?	To evaluate the impact of resource accessibility on mental health outcomes in remote locations.	Jacobsen, H.B., Caban-Martinez, A., Onyebeke, L.C., Sorensen, G., Dennerlein, J.T. and Reme, S.E. (2013). "Construction workers struggle with a high prevalence of mental distress, and this is associated with their pain and injuries." Journal of Occupational and Environmental Medicine, 55(10), pp.1197-1204.

Research Question	Rationale for Inquiry	Supporting Reference from Literature Review
Q6.8: How challenging do you perceive the reluctance of construction workers to seek help or disclose mental health concerns to be in addressing mental health and safety incidents?	To assess the impact of help-seeking behaviour on mental health and safety outcomes.	HSE (2023). "The silent struggle of mental health in construction." HSE Network. Available at: https://www.hse-network.com/the-silent-struggle-of-mental-health-in-construction/ (Accessed: November 6, 2024).
Q6.9: How challenging do you perceive the lack of coordination and collaboration among stakeholders in the construction industry to be in addressing mental health and safety incidents?	To explore the influence of stakeholder collaboration on mental health initiatives and safety.	Campbell, M.A. and Gunning, J.G. (2020). "Strategies to improve mental health and well-being within the UK construction industry." Proceedings of the Institution of Civil Engineers-Management, Procurement and Law, 173(2), pp.64-74.



Appendices 2: Figure 6 Poster used to advertise Quantitative Survey on Construction Sites (printed in A3 Colour)

Appendices 3 – Participant Informed Consent Form

Participant Informed Consent Form

Study Title: Investigating the Causal Link Between Mental Health and Accidents in the Construction Industry

Researcher: [Researcher's Name]

Institution: [Institution Name]

Contact Information: [Researcher's Email]

Purpose of the Study:

This study aims to explore the potential causal relationship between mental health and workplace accidents within the construction industry. Through this research, we hope to identify factors that contribute to these incidents and develop strategies to improve workplace safety and mental health support.

Procedures:

Participants who have experienced workplace accidents or near-misses that they believe were influenced by their mental health will be asked to participate in a semi-structured interview lasting approximately 30 to 45 minutes. The interview will explore the participant's mental health, the details of the incident/accident, and potential preventive measures.

Voluntary Participation:

Participation in this study is entirely voluntary. You may choose to withdraw from the study at any time without any penalty or loss of benefits to which you are otherwise entitled.

Confidentiality:

All information collected in this study will be kept confidential. Your responses will be anonymised, and no identifying information will be included in the research findings. The data will be stored securely and only accessible to the research team.

Risks and Benefits:

There are minimal risks associated with participating in this study. Discussing your experiences may evoke emotional responses; however, you are free to skip any questions or discontinue the interview at any time. The insights gained from this study will contribute to a better understanding of the relationship between mental health and workplace safety, potentially leading to improved support and preventive measures in the construction industry.

Compensation:

There is no financial compensation for participating in this study. However, your contribution will provide valuable insights that may benefit the construction industry and its workers.

Contact Information:

If you have any questions or concerns about this study, you may contact the researcher, [Researcher's Name], at [Researcher's Email] or [Researcher's Phone Number]. If you have any ethical concerns, you may contact the Ethics Committee at [Institution Name] at [Ethics Committee Contact Information].

Consent:

By signing below, you indicate that you have read and understood the information provided above, and you agree to participate in this study. You understand that your participation is voluntary and that you may withdraw at any time without penalty.

Participant's Statement:

I have read and understood the information provided above. I voluntarily agree to participate in this study and understand that I can withdraw at any time without penalty. I consent to the use of my anonymised data for research purposes.

Participant's Signature:

_____

Date:

_____

Researcher's Statement:

I have explained the study to the participant and answered any questions they had. I will adhere to the ethical guidelines and ensure the confidentiality and anonymity of the participant's data.

Researcher's Signature:

_____

Date:

_____

Appendices 4 – Semi Structured Interview Prompts

Interview Schedule for Semi Structured Interview

Section 1: Mental Health Awareness

- In your opinion, how is mental health perceived within the construction industry?
- Have you noticed any changes in attitudes towards mental health in recent years?
- Can you share any experiences where mental health issues were discussed in your workplace?

Section 2: Personal Experiences

- Have you or someone you know experienced mental health challenges while working in construction? If comfortable, could you share that experience?
- How do you think these challenges impacted safety and performance on the job?
- Can you describe any specific incidents or near-misses that you believe were influenced by mental health factors?

Section 3: Safety Practices and Policies

- What current practices or policies does your organisation have in place to support mental health?
- How effective do you think these measures are in promoting mental well-being and safety?
- What improvements or additional support do you think could be implemented to better address mental health in the workplace?

Section 4: Recommendations and Closing

- Based on your experiences, what recommendations would you make to improve mental health support and safety practices in the construction industry?
- Is there anything else you would like to add or discuss that we haven’t covered?

Appendices 5 – Focus Group Schedule Prompts

Focus Group Questioning Schedule

Section 1: Perceptions of Mental Health

- How would you describe the general perception of mental health within the construction industry?
- What are some common attitudes or beliefs about mental health that you have encountered among your colleagues?
- Have you noticed any changes in these perceptions over time?

Section 2: Personal Experiences

- Can anyone share a personal experience related to mental health in the workplace? How did it affect you or your colleagues?
- How do you think mental health challenges impact safety and performance on construction sites?
- Are there specific incidents or near-misses that you believe were influenced by mental health factors?

Section 3: Current Practices and Support

- What practices or policies does your organisation currently have in place to support mental health?
- How effective do you feel these measures are in promoting mental well-being and safety?
- What additional support or resources do you think would be beneficial for addressing mental health in the construction industry?

Section 4: Recommendations and Improvements

- Based on your discussions, what recommendations would you make to improve mental health support and safety practices in the construction industry?
- Are there any successful initiatives or programs you have seen implemented that could serve as a model for others?