



Awareness of Mental Health Issues in Malaysian Construction Industry

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ABSTRACT

The Health and Safety Executive (HSE) has issued a statement indicating that mental health issues have been associated with a significant proportion of diseases within the construction sector from March 2018 to March 2019. This study aims to examine the level of awareness within the Malaysian Construction Industry regarding mental illness and the industry's perception of this issue. The main objective of this study is to ascertain the underlying factors contributing to mental health issues experienced by employees within the construction industry. Additionally, it seeks to examine the effects of employees' mental health on the performance of the construction industry, specifically in relation to absenteeism and presenteeism. The research approach employed in this study is a quantitative methodology. Based on the data collected from the survey, this study establishes that employees in the construction industry encounter mental health challenges. Although the majority of participants in the survey exhibit stable mental health conditions, the data also reveals the presence of respondents who experience mental health concerns. This study examines the occurrence of mental health issues, including anxiety, stress, depression, and post-traumatic stress disorder (PTSD), among construction workers. The focus is on individuals who are mostly employed in white-collar positions within the construction industry and fall within the age range of 26 to 30 years. Additionally, the study considers employees who have accumulated between 0 to 5 years of work experience. Individuals who are employed in professions with a higher likelihood of insecure employment and lower income tend to exhibit a greater susceptibility to mental health issues. Therefore, it is imperative that the topic of mental health difficulties is not disregarded and is actively addressed by scholars and governmental agencies in Malaysia, in order to promote a healthier mental wellness for employees in the future. The data also indicates that the average rates of absenteeism and presenteeism are 5.8% and 22.4% respectively, resulting in a combined average cost of RM 311.99. Further investigation is necessary in order to enhance scholarly and practical understanding.

Keywords:

Mental health issue; Construction industry; performance of construction industry; Malaysia

1. Introduction

In the context of the contemporary era of globalization, mental health has emerged as a crucial area of investigation that is being actively pursued by researchers worldwide. These researchers

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systematically gather data pertaining to various issues associated with mental health on an ongoing basis. The prevalence of mental health disorders is a growing concern due to their significant impact on the development and exacerbation of various other health issues. The aforementioned issues encountered social stigmas within the community, resulting in a global burden due to the absence of widespread awareness and understanding of the root cause [1]. The rate of increase in the proportion of individuals seeking mental health treatment in our nation surpasses the available resources [2]. The studies conducted to evaluate the issue among Malaysians have been deemed unreliable due to their inadequate approach. The NHMS IV report from 2011 revealed that the assessment tools used in these studies had poor validity, and the respondents provided incomplete information, leading to flawed and unreliable results.

A comprehensive literature analysis was conducted to examine the mental health concerns associated with the construction sector, revealing insufficient information across many nations that substantiates the global nature of this problem [3]. Nevertheless, despite the widespread recognition of mental illness, many individuals remain hesitant to engage in mental health-related procedures due to the associated stigmas. Additionally, there is compelling evidence indicating a lack of adequate resources within our nation's mental health services [2]. The upcoming phase will go into the examination of the Malaysian government's involvement, as well as the contributions made by other public entities, in addressing mental health concerns. The purpose of this study is to thoroughly gather and analyse data pertaining to the underlying causes, statistical patterns, and overall impacts of a particular phenomenon. Additionally, this research aims to compile and synthesize data from prior studies undertaken on the same area.

The Health and Safety Executive (HSE) has issued a statement highlighting global concerns regarding the prevalence of mental health disorders within the construction industry. The statement reveals that mental health problems accounted for approximately 25% of all reported illnesses in this sector during the period from March 2018 to March 2019. According to Ogwuche [4], there has been a notable rise in the number of reported cases, reaching a total of 16,000 instances. This increase can be attributed to the inclusion of various mental health conditions such as stress, anxiety disorder, and depression. Additionally, the data indicates a specific increment of 2,000 cases compared to the previous year's report. According to a report by the Malaysian Ministry of Health in 2015, the prevalence of mental health disorders among adults was found to be 29%, representing a 10% rise from the prevalence rate observed in 1996 [5]. The available data on mental health in Malaysia is currently restricted, as it is derived from a mental health survey done every four years as part of the National Health and Morbidity Survey (NHMS). According to the Malaysian Mental Healthcare Performance Report of 2016, this study is regarded as the most comprehensive nationwide survey done. According to the most recent statistical report released by the National Health Monitoring System (NHMS) in 2019, it has been observed that a significant number of individuals, including both Malaysians and other communities residing in Malaysia, are experiencing symptoms of depression. Specifically, approximately half a million individuals are affected by this mental health condition, with 2.3% of the population aged 16 years and above being affected [6].

According to Hassan [7], it has been indicated that mental illness is anticipated to emerge as a significant issue and crisis for the Malaysian population in the near future. The advent of the COVID-19 pandemic has resulted in an unanticipated surge in mental health deterioration within our local population. According to recent reports, there have been three instances of suicide recorded in June 2019. However, the number of suicide cases has significantly increased, reaching a total of 336 new cases by March 2021. In the year 2020 alone, there were a total of 631 reported suicide occurrences [6]. Despite the existence of previous research, the issue of mental health in the construction sector appears to have been largely overlooked by stakeholders. Previous research has mostly focused on

the prevalence and risk factors of mental health disorders, including depression and anxiety, among the Malaysian population. However, these studies have neglected to address the impact of these disorders on individuals' productivity levels [1]. In this review, we examine the association between mental disorders and workers' productivity in Malaysia. However, it is important to note that the Construction Industry Standard (CIS) in Malaysia plays a crucial role in ensuring the safety and well-being of people within the construction sector. The Building Industry Development Board Malaysia (CIDB), which oversees the Construction Industry Standard (CIS), requires employers to ensure that their employees have the necessary certification and CIDB Green Card before accessing building sites in Malaysia. The purpose of this measure is to assure that all personnel are compatible and aware of the potential hazards in their environment that may pose a risk. However, the focus of CIS is mostly on aspects related to physical safety, such as the utilization of plant machinery and the management of ingress and egress flows [8]. It does not give equal attention to both mental and physical awareness. While it is premature to definitively establish a causal relationship between this factor and the construction worker's diminished mental acuity, as they are not directly affected by the possibility of disease, it is plausible that this could be one of the contributing factors identified in this research discovery. The objectives of the research are as follows:

- i. To identify the cause of mental health problems faces by the employees in the construction industry.
- ii. To identify the impacts of employee's mental health on the construction industry's performances in general.

2. Literature Review

2.1 Introduction

In the Literature Review section, the paper will interpret the studies conducted by other researchers on the construction industry and mental health. This paper identifies thirty (30) primary sources and thirty-nine (39) additional relevant sources of journal papers, journal articles, e-books, and the internet to be reviewed in relation to the stated topic. The listed research paper was discovered using the keywords "Construction Industry", "Mental Health", "Presenteeism", "Absenteeism", and "Malaysia". Google Scholar's primary database provides the greatest amount of literature to be reviewed, followed by Scopus and Mycite. In this section, the paper uses thirty (30) primary papers that are most closely related to the three elements of the key finding, as well as data and facts from other relevant sources, to establish a conclusion regarding the research aim and objective. This literature review will centre on the research objective, which is to determine if mental health is an imminent threat in the Malaysian construction industry based on the statistics shown by the Health and Safety Executive (HSE) of worldwide cases and to highlight the findings on the cause of mental health, specific mental health problems faced by employees in the construction industry, and the effects encountered by the construction industry.

2.2 Concept of Mental Health

2.2.1 Mental health according to World Health Organization (WHO)

WHO defines mental health as the subjective well-being, intergenerational potential, autonomy, perceived self-efficacy, competence, and recognition of the capacity to realize one's intellectual and emotional potential, as well as an individual's state of well-being in recognizing their abilities. In addition, according to the World Health Organization, mental health incorporates the capacity of

individuals to deal with life's typical stresses, contribute to their communities, and maintain a high level of work productivity. In the WHO Department of Mental Health and Substance Dependence's main publication report, the department promotes the importance of sound mental health to a person's and a community's ability to achieve their goals. WHO points out that mental health should be a concern for everyone, not just those with a physical disorder because mental illness affects not only the affected individual but also the community as a whole, posing a threat to global development [9].

WHO linked mental function to a person's physical and social functioning and health outcomes. WHO lists several burden diseases in the world that are associated with mental disorders, with injuries topping the list with 12%, followed by neuropsychiatric disorders (such as depression, bipolar disorder, alcohol use disorder, and schizophrenia) with 13%, and cardiovascular disease with 10% of the total diseases listed. WHO also linked the socially unrecognized problem of mental health with the cost and economic burden that will be borne by the respective individual, family and friends, workplace employers, and communities. According to the perspective and data collected by WHO on the issue of cost in the construction industry, a lack of awareness of the early warning signs of mental illness causes both the employee and the employer to incur cost losses, where the employer must contribute to their employee's treatment and care expenses as well as a loss of productivity at work, and where the employee may suffer a severe mental disorder and lose income [9]. As a result, the WHO emphasizes the significance of mental awareness to people all over the world, as well as the significance of recognizing the early symptoms of mental disorders in order to assist sufferers in undergoing rehabilitation with a trained professional. In the next subsection of mental health risk and cost to the Malaysian Construction Industry, the paper will elaborate on the expense of mental health in the context of the Malaysian construction industry.

2.2.2 The viewpoints of Malaysian and local construction sector communities regarding mental health

There is a growing prevalence of mental disorders in Malaysia, necessitating increased access to rapid and effective mental healthcare to alleviate this burden. Ministry of Health Malaysia [10] reports that the prevalence of mental disorders has increased dramatically over the past decade in Malaysia. Malaysia is transitioning from a country with a middle income to a country with a high income, with rapid cultural and lifestyle changes due to increased urbanization and globalization, and correspondingly elevated levels of perceived stress. In the context of cultural shifts, many continue to experience persistent economic difficulties, which contribute to social problems such as increased marital separation, changes in traditional parenting styles and family structure, and an increase in addiction to drugs and alcohol.

According to the most recent epidemiological data, published in 2015 by the Malaysian Ministry of Health, the prevalence of mental disorders among individuals was 29% (95% CI 27.9–30.5) [11,12] This represents a threefold increase compared to the 1996 prevalence rate of 10%. The rural region of East Malaysia had the highest prevalence of mental disorders at 43%, followed by the capital city of Kuala Lumpur at 40%. There are more severe socioeconomic conditions in rural areas, including greater destitution and unemployment. This, along with increased stigma, decreased access to general and mental healthcare, and the practice of seeking alternative care from religious practitioners or shamans, can all contribute to an increased risk for the development and maintenance of mental health issues [11,13].

In addition, institutional failure was caused by the Malaysian community's false belief that mental illness is not a significant issue that will eventually pass. The most common reason why

a patient with a mental illness does not receive treatment from a specialist is due to the stigmas associated with the mental illness itself, wherein the patient's family members are embarrassed to discuss the patient's mental health issues [14]. The stigmas and perceptions associated with having a mental patient in the family, which can degrade the family name and title, are the most significant obstacles to an effective procedure and treatment. Nonetheless, plenty of government entities, including acts and legislation, have been established to provide additional attention to safety and health concerns. Government Mental Health Services in Malaysia, for example, periodically update the patient population statistics and the available mental health services. Malaysian government mental health services are outlined in Figure 1 below.

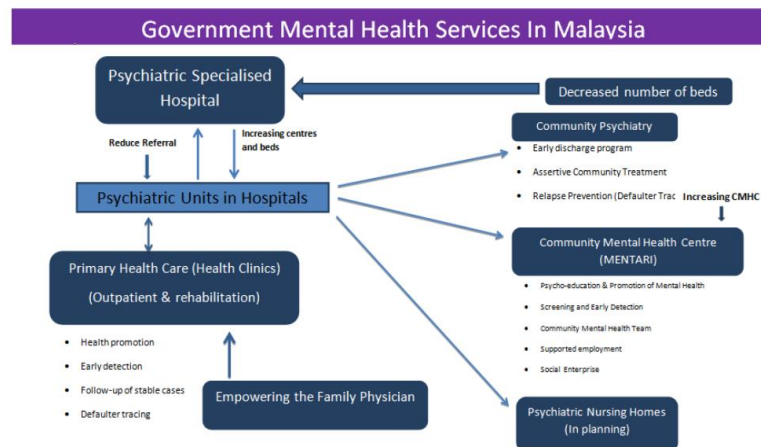


Fig. 1. Government mental health services in Malaysia

Vision 2020 envisioned Malaysia's transformation from a developing nation to a developed nation, requiring an annual average construction contribution of 6.0% of gross domestic product (GDP) growth [15]. The sector's response to the industry's high demand is to increase the construction industry's productivity, leading to an increase in the entry rate of office workers and construction workers – both foreign and domestic workers. The construction employer disregards the smaller context of welfare and mental health, despite the fact that this event has a positive effect on society in general. Ayob [16], added that the increase in construction industry fatality and injury rates was believed to be the result of accountable individuals' dearth of attention to occupational safety and health. It is undeniable that certain construction workers are kept in tense, uncomfortable housing and are exposed to a number of pollutions that cause psychological illness among workers, despite the fact that the government lists a number of affordable and obligatory accommodations. Regardless of the fact that laws and regulations have been mandated, white-collar employees in the construction industry have reported mental health issues (such as depression, stress, and anxiety disorder) as a result of overwork. Consequently, this subsection will discuss the organizations, laws, and regulations associated with physiologic and psychological health in the Malaysian construction industry.

2.2.3 Occupational safety and health act 1994

Occupational Safety and Health (OSH) is used globally as a monitoring tool for the protection and health of workers in the workplace. Jaafar [17], characterized OSH as a global issue that cannot be applied to a single country based on typology and country-specific issues. The government mandates occupational safety and health policies based on the provisions of the Occupational Safety and Health

Acts of 1994 due to the high-risk rate in the construction industry, where workers are exposed to noise and air pollution, as well as the dangers of the site from falling from high levels, electrical shocks, and plant and machinery usage and movement. The Occupational Safety and Health Administration (OSHA) was created to provide a means for employers to fulfil their obligations to their employees. This act was enforced against all legitimate employers due to the fact that safety for the labourers was a secondary concern for them during the construction projects, as the employer did not communicate and implement a comprehensive accident prevention policy, instead focusing on the value of the benefits to the company [16]

2.2.4 Construction industry development board (CIDB)

Construction Industry Development Board (CIDB) Malaysia is a government initiative that was devised and established in 1995 in accordance with the Construction Industry Development Act (Act 520). This organization's primary objective is to improve the productivity, sustainability, safety, and quality of the construction industry by emphasizing innovation, knowledge, and professionalism [18]. The Construction Industry Standard, as outlined in Act 520, encompasses several reports. One of these reports specifically addresses the topic of safety and health requirements that must be adhered to by employers involved in construction projects. This report is known as Construction Industry Standard (CIS), CIS 27: 2019 Occupational Safety and Health – Specification and Bill of Quantities (BQ) For Construction Works.

The purpose of the CIS of Occupational Safety and Health is to serve as a guide and to moderate and facilitate the technical committee of the employer on the construction project. According to the CIS, the contractor is obligated to provide a safe and healthy working environment, as well as an adequate welfare facility, and to uphold the stated responsibility. The contractor shall establish, under Safety and Health, a committee responsible for monitoring the health of employees for a minimum of one (1) meeting every three (3) months. This requirement pertains to the project's employer/contractor if there are at least 40 workers present. In addition, in accordance with the Safety and Health Plan (S&H Plan) section of the CIS, the contractor must develop and organise the fulfilment of all safety and health requirements throughout the construction period so that workers can perform their practical duties with minimal risk to their safety and health, as well as provide adequate risk mitigation on-site. CIS, on the other hand, focuses on physical health, while mental health is viewed as a general concept and falls solely under the guideline standard.

2.2.5 Mental health awareness level in Malaysian construction industry

Prior to this, the level of cognizance in the Malaysian community was discussed, with the result being that a lot of Malaysians are still unaware of the significance of psychological therapy for the person in need. Despite the establishment of the mental health awareness campaign by the government and other associated bodies, mental health stigmas and perceptions are still on the decline. In this subsection, we will examine the literature review conducted by other scholars on the Malaysian Construction Industry's awareness.

In their study, Jaafar [17] comment upon the physiological issues exhibited by workers, which serve as contributing factors to accidents and illnesses prevalent within the construction industry. The safety of blue-collar workers is contingent upon various factors related to their physical capacities, including but not limited to their health condition, stress levels, and potential drug and alcohol intake or addiction. The study did not adequately emphasize the significance of addressing the problem with the worker's stress levels, instead attributing their mental state solely to the

episodes that occurred. The study additionally emphasises that the challenges arising from human attributes are the responsibility of the workers themselves, as they strive to mitigate the impact of mental illness on their performance. Nevertheless, the construction industry is inherently characterised by a high level of risk and complexity, making it widely recognised as one of the most hazardous sectors [2,17]. However, it is common for the construction industry to prioritise productivity over the well-being and safety of its workers [19]

The prevalence of mental illness is significantly associated with the level of education and skills among workers. A research study was conducted to examine the incidence of psychiatric disorders in a Malaysian hospital, revealing that a majority of immigrant workers admitted to the hospital were unskilled, accounting for 76.9% of the total cases. The elevated degree of stress experienced by workers, particularly those who are immigrants, can be attributed to the employer's practice of assigning excessive workloads within limited time frames [20]. Moreover, the statistical data derived from the conducted study substantiates that roughly 50% of the respondents, who are Indonesian migrant workers, have symptoms of depression syndrome [21]). Furthermore, a recent study conducted by Htay [22] provides evidence that those who do not receive financial assistance from their employers for physical illnesses (80.9%) are more likely to experience symptoms of depression. This observation highlights the continued deficiency in mental health awareness, even within the government. It raises concerns over the extent to which employers prioritize their own financial gain over the implementation of mental health awareness, without a sufficient sense of duty or legal requirements. The aforementioned conclusion, as articulated by YB Datuk Dr. Hj. Abdul Latif B. Ahmad, elucidates the challenges faced by the construction industry in addressing matters pertaining to mental health and safety, notwithstanding the positive trajectory and growth observed in the employment rate [23].

In contrast, mental health disorders are undoubtedly a global concern that also affects white-collar workers in construction projects. The reason for this phenomenon can be attributed to the cognitive demands placed on construction projects, which exert pressure on meeting project deadlines, adhering to budgetary constraints, and achieving high-quality outcomes. Prior to 1994, there was a lack of legislation or official directives from the government mandating employers to prioritise the well-being and safety of white-collar employees within the workplace. The absence of legislation mandating the creation of a situation has led employers to choose a traditional approach, resulting in a lack of satisfaction in the implementation of mental health awareness [24].

Nevertheless, a limitation arises in the OSH Act 1994 as it primarily emphasizes the provision of a secure physical environment, without adequately addressing the importance of promoting mental health awareness. Moreover, the phenomenon observed in office settings, which is also prevalent across several industries requiring longer periods of stationary work, serves as a contributing element to the development of mental health issues among employees. The level of awareness of ergonomics remains relatively low in Malaysia, as indicated by previous studies conducted by [25]. This suggests that the nation's progress in promoting mental health awareness has been sluggish. The concept of ergonomics was formally introduced in Malaysia in 1992 through the founding of the ergonomic division sector within the National Institute of Occupational Safety and Health (NIOSH) Similar to other industrialised nations, Malaysia likewise faces a deficiency in awareness of illnesses associated with stress, which are frequently reported by workers, despite the existence of extensive studies on this matter conducted over several years

Another aspect involved in safeguarding workers' rights is the Employment Act of 1995 in Malaysia. This legislation has been enacted by the country as a later measure that addresses issues pertaining to labour, social security, and other relevant human rights concerns. The act encompasses various provisions pertaining to workers' needs, including limitations on monthly working days, wage

considerations, restrictions on the employment of women (specifically prohibiting night work and underground work), provisions for maternity protection, regulations for domestic servants and rest days, regulations on working hours, provisions for holidays, and other conditions of service. These discussions indirectly aim to prevent workers from experiencing mental illness

2.3 Type and Cause of Mental Health Issues in Malaysian Construction Industry and Other Case Studies in Various Countries

Mental health illnesses can be classified into around 300 distinct conditions according to the Diagnostic and Statistical Manual of Mental Illnesses, Fifth Edition (DSM-5). Common mental health disorders that are prevalent worldwide include bipolar disorder, persistent depressive disorder (dysthymia), generalized anxiety disorder (GAD), major depressive disorder (MDD), obsessive-compulsive disorder (OCD), post-traumatic stress disorder (PTSD), schizophrenia, and social anxiety disorder [26]. This subsection will provide further elaboration on the findings identified in the literature study about the specific types of mental health issues and the contributing factors of disease experienced by workers within the Malaysian construction industry.

2.3.1 Occupational stress

Occupational stress is a multifaceted condition encompassing physiological, behavioural, and medical issues. A study conducted by Oswald [27] examined the mental health of white-collar workers in the construction industry. The findings revealed that a significant proportion, specifically 68%, of these workers experienced occupational stress. Occupational stress is intricately linked to the occurrences that transpire both within and beyond the confines of the job. The phenomenon of pensiveness, which has been examined as one of the consequences of work stress, has been found to contribute to accidents. The scholarly work of Leung [28] has provided valuable insights to other researchers on the topic of stress. According to French scholars French [29] it has been shown that workers have a natural tendency to associate their mental state with the environment. In the present context, the job environment serves as a stressor, or a known stress-inducing factor, which is encountered by construction employees. It has been observed that mental health-related stress disorders may arise when individuals are unable to adapt to their immediate surroundings inside the workplace. Figure 2 explains that the job demands of variance of needs will develop job stress and other potential health illness.

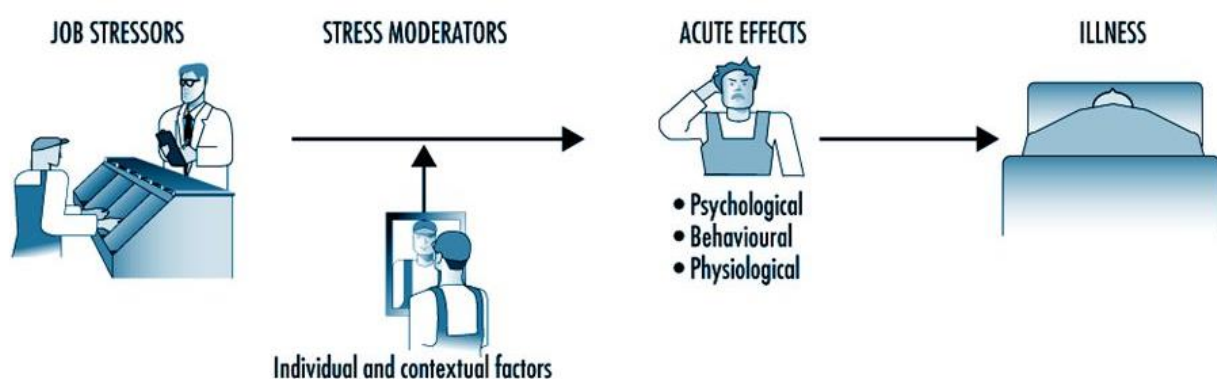


Fig. 2. The job stress model of the National Institute for Occupational Safety and Health (NIOSH)

The model additionally elucidates that workplace stressors or work-related psychosocial factors can elicit immediate psychological, behavioural, and physiological responses, which may subsequently contribute to the development of various health conditions. This medical condition exhibits interconnectedness with various adverse consequences, including the development of heart disease, the manifestation of severe physiological symptoms, and the experience of unpleasant emotional states. Therefore, it has been demonstrated that stress should not be regarded solely as a prevalent mental health condition, but rather as a significant psychological issue. This issue not only contributes to various factors that diminish the performance rate of the construction industry but also gives rise to other illnesses that pose a threat to an individual's well-being.

2.3.2 Depression

Briefly, depression is characterised by persistent and severe feelings of sadness, loss of interest in daily activities, and dejection. The author added that depression symptoms such as agitation and restlessness, delayed movement and speech, difficulty in thinking, lower concentration level, and difficulty making decisions can impact the quality of personal and professional life [30]. It was believed that poor psychosocial well-being and employment stressors led to depression

These natural activities will lead to a variety of illnesses, including depression. As COVID-19 spreads globally, the pandemic has affected nearly all industries and their employees, as well as the employer [31]. According to the 2019 National Health and Morbidity Survey, depression and mental illness is prevalent among adult Malaysians at a rate of 2.3 per cent, or approximately 500,000 individuals. While a severe case of depression can lead to suicide and is regarded as one of the main suicide risk factors it also contributes to numerous construction worker deaths [32].

2.3.3 Post-traumatic stress disorder (PTSD)

Post-traumatic stress in the construction industry occurs when a serious injury or fatality occurs on the job site. PTSD could affect the families of the deceased, as well as the workers and other witnesses to the tragedy. In the context of post-traumatic stress disorder (PTSD) construction industry workers, may be the ones who witness or assist in administering first aid when injuries occur; consequently, they may experience severe emotional stress that can contribute to other illnesses in the future. 6% to 32% of workers who have encountered traumatic events develop PTSD Schäfer [33]. The worker will experience recurrent nightmares and a physical inability to sleep well, unstable emotional feelings of guilt, bitterness, grief, and anger, psychological incapacity to make decisions as well as to process information and recall familiar terms, and physical inability to produce a decision and to process information. In addition, employees with PTSD syndrome may experience behavioural withdrawal and excessive substance abuse. Untreated PTSD illnesses will resort to alternative coping mechanisms or other related illnesses, such as depression

2.3.4 Anxiety disorder

There is a thin line separating the feelings of being overwhelmed and anxiety, where the sensation of nervousness is 'normal' daily stress. Anxiety, on the other hand, is the dread that is triggered in a person by the anticipation of negative events. Anxiety causes individuals to perceive hazards and threats that are not occurring or will not occur in the future [32]. When an employee in the construction industry fears unfavourable social interactions, they are more likely to develop an anxiety disorder. This will prevent them from reporting any errors or problems that arise on the job

site. An interview session with a former construction worker who has dealt with an anxiety disorder for almost 40 years that the illness is a result of increased stress.

2.4 Common Factors on Mental Health Issues in Malaysian Construction Industry and Other Case Studies in Various Countries

In developed countries such as Nigeria, the involvement of white-collar professionals in management work, such as stakeholder management, cost management, and time management, is one of the factors that increase the prevalence of mental illness among. In his writing, Manfred makes a number of suggestions that emphasize the increasing rate of work pressure in the industry, thereby predicting a higher stress level [34]. This includes architects, engineers, managers, construction workers, surveyors, and other personnel involved in construction work. The rate of stress is higher for these workers, who include architects, engineers, managers, construction workers, surveyors, and other personnel involved in construction. These employees have a tendency to report high levels of tension associated with their daily work activities. Another common cause of stress in the construction industry is the lengthy working hours, tight project deadlines, lack of organizational support, and safety. WHO also listed physical, work organisation, sociological, and psychosocial factors as those that will influence the incidence of mental illness. Musculoskeletal discomfort is linked to psychosocial work factors, as highlighted by WHO.

This psychosocial work factor will then be associated with mental disorders such as depression and burnout, as well as other chronic health conditions and physical maladies. Other challenges in the workplace environment include work objectives, organisational change, the threat of employment loss, conflicting stakeholder demands, and technological advancement. These obstacles are contributors to the occupational stress that occurs in the organisation, for which the organisation bears responsibility, and the organisation must incorporate these factors into its operations. Rusli and Cindy discuss in their paper the mitigating strategies that have been used in numerous Malaysian industries to alleviate occupational stress. However, they point out that the organization's intervention in these strategies is lacking. For instance, the burden from time and deadlines, as well as performance and additional workloads, fall under the intervention of the organisation [35]. Lian and Tam emphasize that organizational factors are the domain factors that influence occupational stress, despite the fact that individual factors can also influence the rate of occupational stress. They emphasise the cases of female workers, for instance, who have unique circumstances that require a separate examination, despite the fact that numerous studies have already been conducted. To be noted, the social policies in the working environment must be thoroughly adopted by the organization, as they are not utilized to their fullest extent despite their existence [36]

Another study revealed that the majority of managers are unaware of stress management techniques, and there are no specific programmes available for managers whose employees suffer from job stress [37]. In Hong Kong, inadequate safety equipment was identified as one of the causes of stress [38]. In Australia, inadequate safety equipment was identified as one of the causes of stress. The connection between mental health issues in Malaysia and job stress was also influenced by gender, with researchers finding that the majority of Malay women with mental health issues are influenced by high job demand and low job control. Other contributors to the development of depression or anxiety include employment issues, social isolation, and physical health issues [32].

2.5 Mental Health Risk and Cost to the Malaysian Construction Industry: Work Impairment and Work Productivity

Due to emotional problems, one in four respondents reduced time spent on work or other activities, and more than half of respondents reported that their accomplishments fell short of expectations [22]. Mental health issues that are specified in the context of occupational stress will increase the rate of cost and occupational health in, which will have a negative impact on the industries and the organization's productivity. This was a factual statement, as Cooper and Dewe explained in their writing that stress has a negative effect on organisational development, company profitability, employee health, and job performance.

Moreover, the higher rate of stress that occurs in the office as a result of the stressor will result in a decrease in team performance, physical and mental exhaustion, a decrease in working capacity, and the potential failure of the project as a whole. In 2007, approximately 10.5 million working days were lost due to stress illness or stress-related issues in the United Kingdom, a developed sovereign nation. In general, the issues will lead to delays in project completion and failure to meet the deadline, as well as indirectly affect the budget and the quality of the work, as workers tend to make more rigid, simplistic, and superficial decisions when faced with this problem.

Workers with a high level of tension will and may have a negative impact on the project if they lose focus on their work. According to a 2010 WHO statement, depression carries the heaviest burden of disability compared to other mental disorders, as it can contribute to a decrease in productivity and a decline in work quality. Depression illness can increase tardiness and turnover rates, thereby increasing the likelihood of workplace accidents [39]. Thus, it is true that this mental illness will lead to an increase in accidents, particularly on construction sites, where the rate of accidents is higher than in other industries. In the United States and China, however, studies have revealed a correlation between mental distress and the occurrence of accidents. Tabuteau [40] found that when a worker exhibits depressive symptoms, the likelihood of sustaining an injury increases by over twofold. Anxiety disorder will cause the employee to have communication difficulties, which will then lead to larger problems, such as miscommunication between the employee with anxiety disorder and other employees, including the employer. Consequently, there will be widespread perplexity on the job site. This will affect the three primary goals of time, budget, and quality.

2.5.1 Presenteeism

In actuality, the majority of us tend to report to work despite feeling ill. The need to go to work may stem from the urgency of receiving a full monthly salary, strict company policies, or personal obligations to complete outstanding tasks at work. However, if we compel ourselves to perform tasks despite having certain health issues (such as fatigue, headaches, or the flu), these unpleasant emotions will impede our ability to complete the tasks. Numerous studies have linked presenteeism with a variety of medical conditions, ranging from irritable bowel syndrome (IBS) to allergies, with migraines and allergies producing a greater value of decreased productivity compared to the monetary value of direct healthcare expenditures. This condition is known as presenteeism, in which employees are physically present at work but are not putting forth their best effort [41]. The levels of productivity can also be affected by on-the-job training or office environments, which can be viewed as direct factors, while indirect factors such as worker health are discussed. Presenteeism is associated with productivity losses where specific calculations for presenteeism to be converted to a detailed amount of currency are still in the study with the worker's genuine in their work's productivity

2.5.2 Absenteeism

Absenteeism, the opposite of presenteeism, also impacts the productivity levels of employees. Absenteeism is the habitual absence of an employee from work, which is typically justified by a medical certificate, but in reality, is due to personal interest and a lack of duty. Absenteeism of the employees resulted in direct costs to the company in the form of wages paid to the employees during their absences as compensation for medical and illness benefits, as well as indirect costs resulting from a reduction in daily labour. Absenteeism can be calculated as its specific cost by quantifying the worker's absences in work-related to illness with knowledge of the employee's actual hours of work [41]. The studies conducted by psychologists and social scientists focused primarily on short-term variables, and their findings were criticized for relying on the employees' fundamental problems while lacking a true systematic component to prove absenteeism.

In a study conducted in 2020, data on presenteeism and absenteeism among the Malaysian population in 2018 revealed a large number of total costs associated with absenteeism and presenteeism, as well as attrition (refer to Table 1). From the table below, we can conclude that the cost of presenteeism and absenteeism is a significant burden for industries. Although the exact values are predetermined, the table illustrates the significance of these two in our community, as well as the effect of mental health on presenteeism and absenteeism.

Table 1

Cost of presenteeism, and absenteeism of mental health problems in Malaysia from various type of employment

No	Item	Estimate
1	Size of labour force	15.23 million
2	Mean daily wage	RM134
3	Mean number of days in absenteeism per worker, per year	8
4	Mean number of days in presenteeism per worker, per year	62
5	Mean staff turnover, per year	2.4 million
6	Total cost of presenteeism due to mental health conditions	RM3.28 billion
7	Total cost of absenteeism due to mental health conditions	RM9.84 billion
8	Total cost of staff turnover due to mental health conditions	RM1.34 billion

2.6 Conclusion

It is indisputable that providing a healthy environment in the context of mental health is not a simple task, as it will necessitate a complex measurement that may also necessitate long-term surveillance in the organisation [35]. Again, it is true that mental health issues are a serious problem in the construction industry, which has the second-highest suicide rate in the world, according to the general consensus. In terms of physical safety, regulations and oversight have been implemented and vastly improved over the years, whereas mental healthcare is still lagging behind [42]. Consequently, it is undeniable that neither the global nor Malaysian construction industries are entirely cognizant of the significance of mental health illness, despite the fact that a multitude of risks are acknowledged to affect the industry and the community.

3. Methodology

This study employs quantitative methodologies to derive the findings necessary to address the research question. Based on the obstacles that were identified requiring solutions, it is evident from the literature research that there exists a significant knowledge gap regarding mental health issues

and the implementation of interventions by construction organisations in Malaysia. In order to gain a thorough comprehension of the underlying rationale behind these facts, the research study employed a quantitative approach by utilizing and administering a survey questionnaire. This questionnaire was issued to a specific number of organizations and selected through a precise calculation and sampling methodology.

3.1 Sample and Data Collection

Sampling is used in research studies when it is unlikely that researchers will be able to collect all the necessary data from their target population due to resource or time constraints [43]. Beforehand, the survey clearly defines the respondent target, which includes the population of construction companies. By specifying the study's target population, sampling frames and methodologies are chosen based on their suitability to the research situation. The primary focus of this study is on construction firms with G7 construction licenses from CIDB Malaysia. According to Yusof [44], contractors with G5, G6, and G7 licences implemented the safety law involved in the construction industry for the law and legislation, as well as the work environment scope on occupational health and safety.

According to the CIMS under CIDB, there are 1,627 companies listed with a G7 license local construction contractor reference in Klang Valley. With unknown quantities of total white-collar and blue-collar workers and a large number of listed companies, the study cannot be completed within the time and cost constraints. Therefore, non-probability sampling techniques are used. Due to time constraints, the researcher employs non-probability sampling to determine the total population number of blue-collar and white-collar employees in G7 licensed construction companies. In addition, the division will charge a fee for the department's data information in order to process the application. Consequently, the investigation employed convenience sampling.

Convenience sampling is a sampling method that is commonly employed in quantitative studies, although it can also be used in qualitative studies [45]. This technique is used to measure the usefulness of a study result to a large group of people; in this study, the measurement of survey results among white-collar and blue-collar workers in G7 construction companies in Klang Valley will represent white-collar and blue-collar workers in Malaysian construction companies. In accordance with the Standard Operation Standard (SOP) of the Malaysian Government Movement Control Order (MCO) and Conditional Movement Control Order (CMCO) in Malaysia during the study period, Klang Valley was selected as the study's target location, as it is easily accessible to the researcher if any additional requirements are needed to contact the respondents. In addition, convenience sampling is employed in response to the insufficient duration and expense of the study.

In light of the fact that the complete population is unknown, the sample size is calculated using Cochran's formula. Cochran's formula exists in two forms, one for an infinite population size and the other for a finite population size. Given the following formula, the [46].

$$n_0 = \frac{z^2 pq}{e^2} \tag{1}$$

With n_0 being the sample size, z being the critical value of the desired level of confidence, p being the estimated proportion of an attribute in the population, q being equal to $1-p$, and e being the precision level. In this instance, the population count is unknown. However, the level of confidence, proportion of the attribute, and level of precision can be determined according to the requirements

of the study. Using a confidence level of 99% and a precision of 5%, and presuming that the maximum variation in this study is 50%, we can conclude:

$$n_0 = \frac{(2.58)^2(0.5)(0.5)}{(0.05)^2} = 665.64 \quad (2)$$

The study has a sample size of 666 individuals who are employed in both blue-collar and white-collar jobs.

3.2 Measurement of Construct

The survey is conducted by adapting a previously used and examined mental health questionnaire survey. The survey consists of four sections, beginning with an introduction to the survey title and respondent information. The purpose of the first page is to inform the respondent about the survey before beginning the questionnaire. The first section is the respondent background information. This section collects information about the respondent's profile background. The second section consists of queries regarding mental health symptoms, with an emphasis on measuring the relationship between the issues posed and the respondent's mental health. The questions are based on the PHQ9 for depression test questions, the Primary Care Evaluation of Mental Disorders Patient Health Questionnaire (PRIME-MD-PHQ) for anxiety test questions, the primary care PTSD screen (PC-PTSD) for PTSD test questions, and the CAGE-AID for addiction test questions. The questions on the stress test are adapted from the questionnaire (Hamid & Hisammuddin [55]). The third section will provide the answer to the first research question, "What is the cause of mental health issues in the construction industry?" The third section consists of questions regarding the sources of mental health, while the fourth segment consists of questions that will answer the second research question, which is "What are the effects of employee mental health on the construction industry as a whole?" The questionnaire employed a closed-ended format in which all questions were required to be answered.

Regarding the second research question, the cost of an employee's mental health can be separated into indirect and direct categories. Direct costs can be measured and calculated, whereas indirect costs cannot be quantified to specific monetary values. The study focuses on absenteeism and presenteeism calculations. Absenteeism is a measurement of how a worker fails to report to work, whereas presenteeism measures the productivity loss of a worker who is physically present at work but lacks motivation. The company's HR department can measure direct costs by retaining the medical report and medical leave information. Although direct costs can be helpful in quantifying costs for this study, the lack of time to obtain confidential information from companies will make it impossible to complete the study by the deadline. Thus, it is determined that the study will only examine indirect costs. According to previous research, there are multiple kinds of questionnaires, including SF-32, SPS-16, the Health and Work Questionnaire, the Health-Related Productivity Questionnaire Dairy, and the Work Limitations Questionnaire (WLQ). QLSF were used regarding mental health and absenteeism, but the study confirms slackness in the questionnaire (Almond). The majority of studies measured either absenteeism or presenteeism. The researchers decided to use the WPAI-GH questionnaire, which measures both absenteeism and presenteeism. Research by Wee [47], focuses on the same country's employees, Malaysia, and on the same urban area as this thesis study, which determined to focus on Klang Valley alone. This study sought to identify the factors that predict employee absenteeism and presenteeism by income, physical and mental health, which is

similar to the second objective of this study, which was to determine the cost of mental health to industry.

3.3 Data Collection and Analysis Approach

There are numerous techniques for collecting research data, including focus group discussions, interviews, questionnaires, record reviews, and observation. Different data collection techniques are appropriate for distinct research methodologies and inquiries. In this study, the researcher concentrates on using survey questionnaires as one method of data collection. A Likert scale survey query is a method for assessing the respondent's individual opinion, behaviour, and attitude through the rating of answer alternatives. This form of questionnaire is appropriate for this study, which requires participants' opinions and emotions. Each item is assigned a numeric score that permits quantitative analysis of the response. In this survey study, the frequency-5 point is adapted for all questions in sections 2 and 3. The range of the Likert scale is 1 = never, 2 = rarely, 3 = occasionally, 4 = frequently, and 5 = very frequently. The fourth and fifth queries in section four use an 11-point Likert scale. In sections 1 and 4, the survey also includes open-ended questions. The question required a response based on the respondent's actual knowledge outside the scope of the researcher's data. The open-ended queries are designed in a concise format that does not exceed a specified number of words.

According to data provided by the Centralized Information Management System (CIMS) of the CIDB, the building construction category included 1,627 G7-licensed local Klang Valley-based firms. From a total population of 1,627, a sample of 544 companies was calculated. However, the survey questionnaire was emailed to approximately 770 organisations. The human resources department of the company created the survey using a Google form and disseminated it to other employees. The email was sent sequentially. The study gives the respondent approximately 14 days to complete the questionnaire, while certain organizations are given more than 14 days to respond. The respondent provided 339 responses for the investigation. The collected raw data were compiled into Excel sheets, as two survey formats in English and Bahasa Melayu were used for respondent convenience. The data will be presented employing descriptive and Spearman correlative analysis. SPSS is used to generate both analyses.

4. Results and Discussion

4.1 Respondents' Profiles

According to the collected data, the research concludes that 56% of respondents are male and 44% are female. The total number of survey respondents is 339, with male employees comprising the majority (109 respondents), 14% more than female employees (154 respondents). The age group with the maximum respondent frequency is those in their late 20s, followed by those in their early 30s, and the age group with the fewest respondents is those between 46 and 50 years old. In addition, the educational level data reveals that 50.7% of all respondents hold a bachelor's degree certificate (172 employees), followed by diploma certificate holders (61 employees), master certificate holders (45 employees), and doctorate/Ph.D. certificate holders (3 employees). Other education levels include college graduates (35 employees), vocational training graduates (21 employees), high school graduates (1 employee), and employees with no formal education (1 employee).

Considering the respondent's work experience in the construction industry, the highest number of years of experience in this field is between 0 and 5 years. While those with 6-10 years of experience are ranked second, those with 16 years or more (22 employees) have the least years of experience in

the field. The respondent's marital status is included in the survey study as one of the factors that may influence the mental health type of survey, as marriage can aid the respondent's emotional responses and boost their self-esteem, and vice versa [48]. According to the collected data, the most responsive employees are those who are single, with 155 responses. The second highest marital status ranking was among respondents who were married with children, infants, or adolescents under 18 years old, with 103 individuals. Six respondents are those who are already married and have adolescents, as well as adults older than 18 years old. Divorced and widowed respondents are 4.1% and 2.4%, respectively, or 6.5% of the total 339 respondents, indicating that these life-event stressors reduce the likelihood of mental illness. This can be stated because previous research indicates that life event stressors, such as divorce and deprivation, are the origins of poorer health outcomes and immunization [38]. Moving on, according to the Malaysian Household Income and Basic Amenities Survey (HIS/BA), there are three main classifications of household income: Bottom 40% (B40), Middle 40% (M40), and Top 20% (T20). The survey conducted for data collection showed that the B40 respondents with the lowest range of monthly income under RM 4,849 have the greatest response rate. The lowest ranking is among the T20 respondents whose monthly income earnings exceeding RM 10,960.

4.2 Results

4.2.1 Mental health symptoms ranking

According to the data presented in Table 2, among the five types of mental health questions in this survey, anxiety disorders rank highest. According to a previous study, white-collar construction project professionals experienced anxiety due to multiple stressors [49]. In this survey, all respondents are white-collar professionals from various professions, including architects, project managers, engineers, quantity surveyors, site supervisors, and high-status professional organizations. In addition, according to a study by Mohd Yussof [50], 68% of construction project professionals in the Malaysian construction industry experienced occupational stress.

Table 1
 Type of Mental Health's total Weight Mean and Rank

Question Number	Type of Mental Illness	Total Weight Mean	Rank
Q1-Q6	Depression	1.970	3
Q7-Q9	Anxiety	2.021	1
Q10-Q13	PTSD	1.523	4
Q14-Q18	Stress	2.016	2
Q19-Q20	Addiction	1.189	5

Stress disorder occupies the second-highest rank among mental health symptoms. According to predictions by the Malaysian Health Ministry, more than 10% of the Malaysian population will suffer from mental health issues by 2020, and in 2016, 70% of respondents to a survey of 1,000 safety representatives showed signs of stress, which is the greatest threat to workplace health [51]. In this study's survey, questions 14, 15, 16, 17, and 18 received the highest percentages of respondents who indicated they have problems from the range of "Rarely", "Sometimes", "Often", and "Very Often", indicating that stress-related mental illness is prevalent among employees.

Depression illness ranks third among mental health symptoms, after anxiety and stress disorders. With a total weight mean of 1.97 and based on questions 1 to 6, the majority of respondents are quick to confront depression. According to a 2012 study, 45 percent of injured construction workers have been diagnosed with depression, demonstrating that depression is a serious issue [52]. The fact

that the majority of respondents are young people in the B40 and M40 categories of income correlates with a previous study survey indicating that respondents with lower socioeconomic status and younger age have a higher depression rate [48].

PTSD is the fourth form of mental illness. Three significant cases of anxiety, depression, and stress as well as post-traumatic stress disorder (PTSD) have been reported in construction industries in Malaysia and other nations, whereas addiction and other mental health issues are less frequently discussed. Using three distinct questions related to PTSD, the Primary Care PTSD Screen for DSM-5 (PC-PTSD-5) reveals that the majority of respondents have no issues with PTSD, with more than 70% selecting "Not at All" for each question.

Substance abuse and mental health disorders are among the significant difficulties encountered by construction workers. In Malaysia, there is less information available on substance and alcohol abuse among construction employees. The majority of people who begin using drugs between the ages of 18 and 24 are male, live in rural areas, and have modest incomes, according to general data collected [53]. Figure 3 of the DOSM report reveals that the highest rate of substance addiction is among those with an education level between SPM and PMR. The higher level of education a Malaysian has, the less addicted they are [54].

In this study, more than 90% of respondents have not consumed alcohol in the past two weeks, and only 1% consume alcohol "Very Frequently." While 90% of respondents have not used drugs within the last two weeks, 9% of respondents "Rarely" and "Sometimes" use drugs. On the basis of data from DOSM, NMHS, and other sources from the overseas study, it can be concluded that drug and alcohol addiction is most prevalent among low-income, low-education workers.

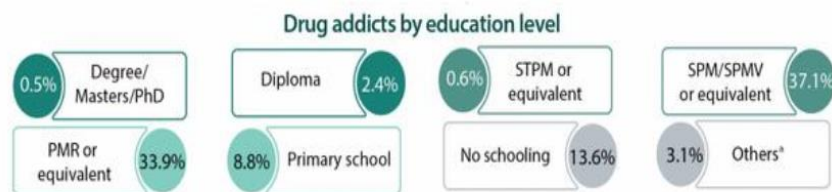


Fig. 3. Drug Addicts by Malaysian Education Level

4.2.2 Sources of mental illness

According to Table 3, the stressor of mental health with the highest total weight of 2.578 is pressure from clients or employers. The employees are subject to performance pressure as a result of the clients' and employers' expectations. 61% of the total respondents who answered "Rarely", "Sometimes", "Often", and "Very Often" indicate that they have been pressured by their employees, whereas only 31% are "Often" and "Very Often" disturbed by the emotions of being pressured by their employers. Thus, we can conclude that a number of respondents have mental health symptoms due to the factors of an incompetent supervisor, which may result in stress among employees. The second-highest rank of mental health symptoms in this survey study is stress, which relates to the fact that employees with greater responsibilities and work pressure tend to exhibit higher levels of stress [34]. Abdul Hamid [58], also added that the inflexibility of deadlines by clients is the second most significant cause of stress.

The second-highest mental health stressor among respondents is the absence of employee and client evaluations. 20% of all respondents indicated that they did not receive recognition for their work "Often" or "Very Often." However, 50% of them concur that they are extolled by their employers. Previous research indicates that praise can improve an employee's performance [56]. The

third source of mental health with a total weight of 1.966% is work pressure, which causes employees to fear performing their work routine. Due to the work strain, 42% of all respondents exhibit feelings of anxiety, timidity, and fear when performing the tasks that have been specifically assigned to them. As previously explained, work pressure can be a general cause of stress with all respondents suffering from stress-related mental illness.

The fact that employees are required to work longer hours is also detrimental to their mental health. 40% of the total respondents have been working more than eight hours per day, while 34% have been working more than five consecutive days. Long work hours can negatively impact an employee's physical and mental health, increasing the likelihood of depression and anxiety. In addition, this activity may contribute to occupational and psychological stress [57]. Working for an extended period of time with few vacation days is another factor that may contribute to anxiety, tension, and depression among the respondents of this study, which indicates that these are the three mental health conditions that are most affected by them.

Further, the responsibility of ensuring the safety of others is one of the top five most distressing responsibilities of a project manager, supervisor, or engineer [58]. This study indicates that 17% of respondents who responded "Sometimes", "Often", and "Very Often" are responsible for the safety of others. 11% of respondents are in a position where they are genuinely responsible for their subordinates. These respondents are engaged in a variety of engineering endeavours, including site management, project leadership or management, and architectural engineering.

According to the result, another minor cause of poor mental health is that employees did not comprehend or had difficulty with their duties and responsibilities. According to research from a previous study, respondents do not have any issues with their responsibilities and work duties, despite encountering other complications in the workplace that cause mental health issues on occasion [58]. Similar to the rate of respondents in this research, where 53% are well-understood and perform their work effectively, despite the fact that the data indicates that the respondents face severe mental health symptoms. 47% of them indicate that they are having problems with their employment and responsibilities, while 5% of all respondents are experiencing extreme difficulties.

Communication is a crucial component of discussing issues and altering mutual options. However, disagreements within a group can contribute to communication difficulties. Under the organizational culture category, poor communication is an internal cause of tension among employees and employers [59]. The collected data indicates that 22% of respondents who responded "Sometimes," "Often," and "Very Often" have communication issues that may affect their mental health. Nonetheless, the majority of respondents, 61% of them, confess they have no difficulty communicating with others.

Eleventh on the list of factors of mental health is "I do not receive sufficient support from my coworkers." According to published research, mental disorders such as depression are associated with a lack of social support [60]. 68% of all survey respondents concurred that they are supported by their coworkers. 5% of respondents report that a lack of support from their coworkers is the primary cause of their interior turmoil in the workplace.

In addition, compared to large, higher-grade contractors, minor grade contractors have fewer resources in terms of construction equipment and personnel [44]. According to the information gathered from respondents, the majority of businesses have sufficient resources. More than half of the 339 respondents concurred with the previous statements, with 58% responding "Not at All" to questions regarding labour or equipment shortages on the job site. In contrast, only 1% of respondents indicated their site lacks equipment, labour, or both.

The worker's responsibilities can be a source of stress causing people to feel tense, overwhelmed, and anxious. The data collected for this study reveals that 67% of the total respondents have no

difficulty complying with the company's rules, whereas 33% of the respondents' experience difficulties, with 13% responding "Rarely", 9% responding "Sometimes", 8% responding "Often", and 3% responding "Very Often." According to [58], the survey of the contractors' management team on the construction site revealed that more than half of the respondents indicated that they were not affected by the condition, but still reported a number of respondents with the problem. Thus, both investigations involving construction contractors in Malaysia demonstrate that the data are comparable. According to the DSM-5 criteria for PTSD, the workers had direct or indirect exposure to events involving death, severe injury, threat of death, or sexual violence while performing their duties. Under long-term changes in behaviour, any individual with PTSD may engage in alcohol and substance use. However, injury rates in the construction industry are lower among upper-grade-level contractors due to their adherence to guidelines, access to skilled management, and equipment, and the presence of on-site OSH management [44]. In the final step of this survey research, data was collected from G7-licensed construction companies. This fact may influence the proportion of respondents who responded "Not at all" to both queries by more than 80% while only 2% of respondents report that workers under their responsibility have been injured on the job and 2% of respondents overall say they have been blamed for an injury among their employees.

Table 2
 Sources of Mental Health Questions' Total Weight and Ranks

No.	Questions	Respondents					Total Weight	Std. Deviation
		1	2	3	4	5		
1.	I have trouble with my duties and responsibilities	52.7	22.6	12.5	8.6	3.3	1.90	1.14
2.	I don't get enough support from my employer	59.7	13.1	8.9	10.6	7.5	1.93	1.32
3.	I have been pressured by the client/ employer	38.5	13.9	16.7	12.5	18.1	2.57	1.52
4.	My works are not praised by employer/client	49.1	16.7	13.9	10.3	9.7	2.14	1.34
5.	I have been afraid to do my work because of the work performance pressure	58.1	13.9	9.4	10.0	8.3	1.96	1.36
6.	I have been working more than 5 days straight	65.6	6.4	7.8	8.1	12.0	1.94	1.47
7.	I work more than 8 hours per day	60.3	11.7	8.3	11.1	8.3	1.95	1.39
8.	I don't get enough support from my co-workers	67.3	8.9	35.8	10.6	5.3	1.77	1.28
9.	I find out it difficult to comply with all the rules	66.7	13.1	9.4	7.5	3.0	1.63	1.10
10.	I have communication problem with others	61.1	17.0	7.8	8.9	5.0	1.79	1.21
11.	My site has a labour/equipment shortage	57.8	17.3	15.3	8.3	11	1.77	1.06
12.	My job is dangerous	63.1	11.1	6.9	7.5	11.1	1.92	1.40
13.	I am responsible for other people safety	65.9	6.7	10.0	5.8	11.4	1.90	1.43
14.	People under my responsibility has been injured during working period	84.9	6.1	3.9	2.5	2.5	1.31	0.88
15.	I have been blamed for the injury caused under my responsibility	86.0	6.7	1.6	3.9	1.6	1.28	0.84

4.2.3 Employee's work productivity and impairment

Absenteeism is determined by combining the responses to questions 1 (hours missed from work due to health issues) and 3 (weekly hours worked). The formula $(Q1/Q1+Q3) \times 100\%$ was adapted from and was used to calculate the absenteeism for each individual. According to the compiled data, the average rate of absenteeism for 399 respondents is 5.783%. The average cost of employee absence is RM127.23. The mean total cost of absenteeism is calculated using the formula: mean absenteeism percentage score multiplied by the average hourly wage of a Malaysian construction worker. The average hourly wage in Malaysia is RM22.00 based on the formula $\text{annual salary}/(52 \times 5 \times 8)$ [61]. Table 4 displays the collated data.

Table 3

Total Mean Absenteeism and Total Mean Absenteeism Cost

Total Mean Absenteeism	Absenteeism Cost (RM)
5.78	127.23

Presenteeism is computed with the aid of question number 4, in which respondents are asked to select a scale ranging from 0 (health problems that did not affect their work) to 10 (health problems that prevented them from working entirely). The greater the number selected by respondents, the more severe the impairment and the lower the rate of productivity. Using the formula $(Q5/10) \times 100\%$, the mean total presenteeism is calculated to be 22.374%. The study uses the formula $(\text{Presenteeism}/100) \times \text{total work hours in a week} \times \text{average hourly wage rate for Malaysian construction workers}$ to calculate the total mean presenteeism cost for each respondent. Using the same formula as the mean absenteeism cost, the total mean presenteeism cost is RM184.76 based on the calculated mean presenteeism. The data for the presenteeism calculated data analysis are shown in Table 5.

Table 4

Total Mean Presenteeism and Total Mean Presenteeism Cost

Total Mean Presenteeism	Presenteeism Cost (RM)
22.37	184.76

On the basis of the calculation in the absenteeism and presenteeism subsection, the total number for mean Absenteeism and Presenteeism is calculated using the formula total mean Absenteeism plus total mean Presenteeism. The sum of both items was RM311.99.

4.2.4 Correlation between respondent's mental health and presenteeism

The correlation between Pearson product-moment is the most frequently employed correlation coefficient for determining the linear relationship between two variables [62]. Using spearman correlation analysis, Table 6 reveals a significant correlation between presenteeism and the mean sum of respondent mental health ($r_{339} = .766, p.001$). The correlation coefficient is 0.70, indicating a strong positive correlation between these two variables. The correlation results indicate that presenteeism is increasing at the same rate as the other variable, mental health of respondents. Thus, the study demonstrated that mental health has a significant impact on worker presenteeism. Moreover, $p.0001$ in statistics indicates that there is less than one chance in a thousand that the results are incorrect [62]. However, the Pearson analysis correlation is only intended to reveal any correlation between variables that is neither a cause nor an effect of another variable under discussion.

Table 5
 Correlation between Respondent’s Mental Health and Presenteeism

		Presenteeism	Mean Sum of Respondents’ Mental Health
Spearman’s rho	Presenteeism	1.000	.766**
	Correlation Coefficient		
	Sig.(2-tailed)		<.001
	N	339	339
Mean Sum of respondents’ Mental Health	Correlation Coefficient	.766**	1.000
	Sig.(2-tailed)	<.001	
	N	339	339

** Correlation is significant at the 0.01 level (2-tailed)

4.2.5 Correlation between respondent’s demographic and mental health

On the basis of previous studies in which demographic context was assumed to be a contributing factor to mental health, a correlation analysis was conducted with the variables of the total mean of respondent's mental health. This analysis aims to determine if the demographic background may be a co-factor to the factors that will influence the presenteeism and absenteeism rate. The relationship between gender and the mental health of respondents was found to be statistically insignificant ($r = .007$, $p = .001$), as shown in Table 7. There is no significant relationship between the respondent's gender and mental health. Both men and women have equal odds of experiencing mental health issues.

There is a negative correlation between age and the respondents' average mental health. The statistically significant value of ($r = -0.50$, $p = .001$) indicates that younger age groups have a higher mean prevalence of mental health issues. The correlation coefficient between education and mental health was found to be just barely positive and statistically significant ($r = .170$, $p = .001$). The negative correlation indicates that a lower level of education translates into a higher means of mental health problems and vice versa.

There is a positive correlation between respondents' construction industry work experience and their average mental health. The correlation significance is found to be less than 0.01, with a statistically significant value of ($r = .043$, $p = .001$) for the value. In contrast, marital status has a statistically insignificant positive correlation with mental health outcomes ($r = .114$, $p = .001$). Results indicate that there is a positive relationship between marital status and other variables, such that an increase in the value of one variable leads to an increase in the value of another variable, but that marital status is not a significant cause of mental health issues among the respondents in the sample.

The correlation significance between the respondent's income and mental health mean is extremely low. With a statistical result of ($r = .080$, $p = .001$). The positive correlation between these two variables indicates that a higher rate of income produces better mental health outcomes on average. Age and education have a significant negative correlation with mental health, whereas other respondent demographic characteristics have a positive correlation. The majority of demographic types of exhibits either a weaker positive or weaker negative correlation to the mean mental health of respondents.

Table 6
 Correlation between Mean Sum of respondent's Mental Health and Demographics background

		Gender	Age	Education	Experience	Marital	Income	Mean Sum of respondents' Mental Health	
Spearman's rho	Gender	Correlation Coefficient	1.000	-.186**	.174**	-.180**	-.147**	-.261**	.007
		Sig. (2-tailed)	.	.001	.001	.001	.007	.000	.895
		N	339	339	339	339	339	339	339
	Age	Correlation Coefficient	-.186**	1.000	.118*	.798**	.708**	.657**	-.051
		Sig. (2-tailed)	.001	.	.030	.000	.000	.000	.345
		N	339	339	339	339	339	339	339
	Education	Correlation Coefficient	.174**	.118*	1.000	.027	.033	.019	-.170**
		Sig. (2-tailed)	.001	.030	.	.618	.548	.723	.002
		N	339	339	339	339	339	339	339
	Experience	Correlation Coefficient	-.180**	.798**	.027	1.000	.683**	.667**	.043
		Sig. (2-tailed)	.001	.000	.618	.	.000	.000	.428
		N	339	339	339	339	339	339	339
	Marital	Correlation Coefficient	-.147**	.708**	.033	.683**	1.000	.565**	.114*
		Sig. (2-tailed)	.007	.000	.548	.000	.	.000	.036
		N	339	339	339	339	339	339	339
	Income	Correlation Coefficient	-.261**	.657**	.019	.667**	.565**	1.000	.060
		Sig. (2-tailed)	.000	.000	.723	.000	.000	.	.270
		N	339	339	339	339	339	339	339
	Mean Sum of respondents' Mental Health	Correlation Coefficient	.007	-.051	-.170**	.043	.114*	.060	1.000
		Sig. (2-tailed)	.895	.345	.002	.428	.036	.270	.
		N	339	339	339	339	339	339	339

** . Correlation is significant at the 0.01 level (2-tailed)

4.2.6 Correlation between respondent's mean sum of respondent's mental health and mean sum of respondents' source of mental health

Using the Spearman correlation analysis, Table 8 demonstrates a positive correlation between the mean sum of mental health and the mean sum of mental health sources for all respondents. With a significant value of ($r_{339} = .687, p .001$), the study indicates that having a mental health stressor in the employee's work life has a negative effect on the employee's mental health. According to Table 6, the greater prevalence of mental health in this study has led to an increase in presenteeism.

Table 7

Correlation between Mean Sum of Respondent's Mental Health and Mean Sum of Respondent's Source of Mental Health

			Mean Sum of respondents' Mental Health	Mean Sum of respondents' Source of Mental Health
Spearman's rho	Mean Sum of respondents' Mental Health	Correlation Coefficient	1.000	.687**
		Sig.(2-tailed)	.	.000
		N	339	339
	Mean Sum of respondents' Source of Mental Health	Correlation Coefficient	.687**	1.000
		Sig.(2-tailed)	.000	.
		N	339	339

** . Correlation is significant at the 0.01 level (2-tailed)

4.3 Discussion

This study concentrates primarily on the mental health of construction workers. Studies and statistical data from the past indicate that mental health is an actual crisis in Malaysia, with employees in the construction industry suffering from mental health issues. The survey method was used to collect data in response to the research questions: what is the cause of mental health issues faced by construction industry employees and what are the effects of employee mental health on the overall performance of the construction industry? The survey consists of four sections of questionnaire inquiries that were sent to 770 construction companies according to a list compiled by CIMS. Using descriptive analysis, the research interprets the collected data.

According to the collected data, the study identifies certain mental health stressors among the respondents. Section 3 of the questionnaire includes four categories of stressors: job demands, responsibilities, work and family life balances, and social skills in teamwork. Thus, the questionnaire was disseminated to respondents and their responses answered the first research question, "What is the cause of mental health issues that construction workers have experienced?" The survey questions disseminated in section 4, Employee's Work Productivity and Impairment, provide information on the respondents' absenteeism and presenteeism. According to the calculated data, the average rate of absenteeism is 5.8%, while the average rate of presenteeism is 22.3%. The data indicates that employees are present at work but have a reduced rate of productivity, indicating that they are not fully focused on the job. This may result in time-wasting, delays in project deadlines, minor or significant errors, decreased profitability, and the need for additional employees to

complete the tasks. The study concludes that the second research question, "What are the effects of employee mental health on the performance of the construction industry in general?" is answered in terms of absenteeism and presenteeism.

As for the primary findings of this research, based on the data discussed in the previous section, the study concludes that the majority of respondents, who are representative of other construction industry employees, are not significantly affected by mental illness. Although a number of the data indicate that the respondents are affected by mental health symptoms, the proportion of respondents who say they are not affected by such symptoms is greater. For example, 8% of respondents indicate they have no thoughts of self-harm or suicide. The fact that only 2% of respondents are severely affected by the thought indicates that the majority are not affected by the issues. Moreover, according to the data, the absenteeism rate demonstrates that mental health-related absences have minimal impact on the workplace. However, since the majority of employees work from home, the genuineness of the response may be contradictory. 333 out of 399 employees responded that they had no remaining medical leave for the remainder of the week. In the calculated data, presenteeism is given a high value. The greater the respondent's chosen value, the lesser their productivity rate and the greater the impairment they produce.

Implications of the findings, based on the discussed results, it was determined that anxiety, stress, depression, and PTSD are prevalent among white-collar construction workers aged 26 to 30 with 0 to 5 years of experience. The majority of workers with less likelihood of employment security and a lower income are more likely to experience mental health issues [42]. Therefore, construction companies should provide briefings and training for several weeks prior to the commencement of actual work. This is to provide industry newcomers with adagio momentum and prevent sudden anxiety from the workload, which can contribute to other mental health issues such as stress and depression.

In addition, the majority of respondents fall within the B40 income range, where it is a fact that Malaysian employees are underpaid. Among the respondents, mental health issues such as anxiety, tension, depression, and PTSD were detected. According to a central bank's 2018 annual report, Malaysian workers are paid less than their counterparts in Singapore and South Korea. This issue is related to their levels of productivity and impairment. According to the report, workers' productivity is lower than their compensation, and the problems should be addressed in order to achieve a balance between the input of wages and the output of productivity [63].

In addition, this issue is also associated with presenteeism, as evidenced by a high mean presenteeism rate among respondents whose productivity output is greater than their wages, which may be a factor in the impairment and lower productivity level reported in the data collected. According to the previous study's literature review, specific laws for mental health implementation in the construction industry lag significantly behind other laws and regulations governing health and safety in the construction industry. Therefore, the government should provide initiatives to resolve the issue.

National Health and Morbidity Survey (NHMS) conducts mental health surveys every four (4) years, despite the fact that data on mental health-related issues in Malaysia are limited (Malaysian Mental Healthcare Performance, 2016). Along these lines, the government should provide funds for the mental health survey to be conducted more frequently. For more thorough data collection, a more detailed questionnaire would be more appropriate than this one.

5. Conclusion

The study aims to answer the two research questions mentioned previously. In this study, the collected data provides a different perspective on mental health among construction industry employees, particularly white-collar workers, as the majority of respondents fall into this category. The collected data indicate that mental illness among respondents is not particularly severe, but the numbers are still high enough for these issues to be avoided. In this study, the presenteeism rate indicates that the respondents' productivity must be discussed, whereas the low absenteeism rate may also have an effect on the respondents' productivity at work since they did not take any leaves and thus contributed to a reduced productivity rate.

For limitation of this study, as a result of time constraints, this research is restricted to the state of Kuala Lumpur's population. Therefore, it is not recommended to use the collected data to represent other construction industries. Aside from that, we have discussed mental health symptoms, mental health sources, absenteeism, and presenteeism in this study. For a number of respondents who have been followed up and had their answers in the documents rechecked, the study found there is quite a counterfeit to what they are telling by heart. This issue may be influenced by scepticism regarding mental health. In this vein, future research should focus on methodologies that demonstrate the participants' genuine awareness of their perceptions and perspectives regarding mental health. In addition, companies in the Malaysian construction industry should be required to complete a questionnaire regarding their contribution to the mental health of their employees, similar to the one included in Burke [64] report.

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