



Review on the Stressors and the Psychosocial Factors Affecting Workers in Heavy Industries

Hanan Obaid Saeed Aljahdami¹, Ahmed Rasdan Ismail^{1,*}, Lucy Semerjian^{1,2}, Vorathin Epin³

¹ Department of Environmental Health Sciences, College of Health Sciences, University of Sharjah, University City, Sharjah, United Arab Emirates

² Research Institute of Science and Engineering, University of Sharjah, Sharjah, United Arab Emirates

³ Mechanical Engineering Department, Universiti Petronas Malaysia, 32610 Seri Iskandar, Perak, Malaysia

ARTICLE INFO	ABSTRACT
Article history: Received 10 January 2025 Received in revised form 31 January 2025 Accepted 30 June 2025 Available online 10 July 2025 Keywords: Mining; construction; oil and gas; stressors; psychosocial; work environment; mental health; health conditions; heavy industries; occupational psychology	The issue addressed in this review is the significant impact of psychosocial factors on mental health within the global industrial sector, with a focus on mining, construction and the oil and gas industry. It delves into the pervasive influence of stressors, ranging from organizational functioning to physical conditions and how they affect workers in these industries. Specifically, workers in mining encounter challenges that affect both efficiency and safety, while the construction sector grapples with issues such as poor organizational structure. In the oil and gas industry, hazardous conditions and social isolation contribute significantly to worker stress. The study emphasizes the necessity for tailored interventions that take into account factors such as age, education and health conditions to address industry-specific stressors effectively. Furthermore, it highlights the global nature of workplace stressors and underscores the importance of holistic approaches for enhancing employee well-being. This review emphasizes the urgency of addressing these industry-specific stressors to promote mental health and improve overall well-being in the evolving landscape of global industrial work. Additionally, it aims to compare the listed factors and stressors among the three heavy industries: mining, construction and oil and gas.

1. Introduction

1.1 Background

The workplace environment plays a crucial role in shaping employees' behaviour, psychological well-being and overall performance within an organization. Research indicates that challenges such as inadequate infrastructure, negative interpersonal interactions, limited career growth opportunities and unfavourable organizational policies are positively linked to employees' negative emotions. Conversely, positive interpersonal interactions and career growth opportunities help mitigate these negative emotions, enhance job satisfaction and foster a positive organizational culture [42]. Negative events, such as excessive workload and behavioural conflicts, foster stress and dissatisfaction among employees. A contemporary workplace's dynamic nature significantly

* Corresponding author

E-mail address: a.binismail@sharjah.ac.ae

<https://doi.org/10.37934/ard.136.1.7991>

influences the well-being of its employees and research shows that ensuring a positive link between work engagement (WE) and perceived organizational support (POS) can mitigate the adverse effects of this dynamic nature [43]. For instance, in the construction industry, employees face mental health challenges, including stress, anxiety and depression, especially among those with lower incomes and insecure employment statuses, which ultimately affects the industry's overall performance [41]. It is therefore crucial to design a physical workplace environment (PWE) aligned with the organizational structure while supporting employees' preferences and needs. A well-designed PWE can improve communication, innovation, collaboration and productivity, thereby influencing employee behaviours, outcomes and attitudes [40].

As the industrial sector continuously expands worldwide, "rapid globalization and technological advances have transformed the way of working" [1], bringing more individuals into industries such as mining, oil and gas and construction. Regardless of their position, workers in these industries experience psychosocial impacts that affect their mental health. "Therefore, the workplace is considered to be one of the most important settings for mental health promotion" [34]. Moreover, "working environment stress is a universal phenomenon that adversely affects not only the physical health, psychological health and behaviours but also the performance of employees in any organization" [11]. The field of occupational health psychology (OHP) examines these issues by applying psychology to improve the quality of work life and to protect workers' safety, health and well-being. Workers in heavy industries face multiple hazards and stressors, including organizational management, career development, working hours, interpersonal relationships and individual abilities, all of which can lead to occupational stress and work-related mental health issues such as depression, anxiety and fatigue [9]. These stressors have socioeconomic consequences, including absenteeism, labour turnover and loss of productivity, as well as adverse health effects, such as chronic stress contributing to digestive, cardiovascular, atherosclerosis and neurological disorders [1]. For instance, a 14-year longitudinal study found that elevated workplace stress levels were associated with an increased risk of metabolic syndrome, a precursor to coronary heart disease, while addressing psychosocial stressors in the workplace was found to be a critical preventative measure against hypertension and related health conditions [7,17].

Industrial workplace disasters, such as the Deepwater Horizon oil spill and the Fukushima-Daiichi nuclear disaster, often stem from a combination of technical failures and overlooked social dynamics within the workplace. Human error, influenced by psychosocial factors such as perceived job insecurity due to organizational changes or economic instability, contributes significantly to accidents in high-risk industries, impacting job satisfaction, safety behaviour and compliance with safety regulations [2,3]. Furthermore, workplace psychosocial stressors have been linked to a 76% higher likelihood of taking sick leave due to diagnosed mental disorders [12]. Addressing these stressors requires consideration of six key factors: organizational functioning, job-related tasks, physical working conditions, career opportunities, HR policies and social workplace dynamics [14]. Effective strategies include involving employees in decision-making, ensuring open communication, providing adequate resources and training, fostering job security and cultivating positive interpersonal relationships. By addressing these factors organizations can promote mental health and overall well-being, creating a healthier, more productive workforce. The review article aims to overview the psychosocial factors that affect workers' mental health in three heavy industries, mining, construction and oil and gas sector. Moreover, the listed factors and stressors among the three industries will be compared to each other.

1.2 Literature Review

1.2.1 Psychosocial health conditions in mining industry

The process of extraction fine and useful natural minerals and stones from earth's surface or underground is called mining. Examples of mining materials could be such as: gold, manganese, bauxite, coal, metal, nonmetal, stone and sand and gravel. Mining workers are exposed challenging work environments, extended work hours, occasional unsafe conditions, highly unionized settings and significant performance pressure. All of this can lead to environment that poses health hazards for workers, potentially impacting their mental well-being and manifesting symptoms and conditions like anxiety, stress related to the job, depression, sleep disturbances, mental exhaustion and more.

Psychological pressure, stress and other related mental health problems can lower the efficiency of their work and safety, moreover, stressors can also lead to occupational accidents, as Hongxia *et al.*, [31] stated in their research paper that "The substantial incidence of significant mine accidents in China is attributed to the notable job stress experienced by mine workers". Therefore, various studies were conducted to address the factors and stressors that affects the miners. In Kerman Province, Iran, in 2014 a report was conducted to evaluate stress, anxiety and depression among workers in copper mine. The author stated, "Psychological stress in the workplace includes stress factors that impact the mental health of workers and are able to damage their job function and safety" [27]. In addition, the Australian mining sector exhibits a raised prevalence of stress, leading to increased costs associated with productivity impairment due to stress [17]. Pelders *et al.*, [19] also mentioned in the published paper (Contributors to Fatigue of Mine Workers in the South African Gold and Platinum Sector) "Fatigue results in impaired mental and physical performance." The relationship between stress and performance is a fact covered in multiple studies. However, stressors that lead to occupational stress are wide and different, targeting the correct one would resolve the impact of psychosocial health consequences which will create better work life and less stress work environment, therefore, higher productivity and better performance.

Miners were involved in mental health assessments in different countries by using various methods and techniques. The review article will discuss stressors and psychosocial factors existing in mining work environment in the following countries: Indonesia, Ghana, South Africa, Australia, U.S and Iran.

1.2.2 Stressors and psychosocial factors in mining industry

A study conducted under the title Mine Workers psychology in Indonesia, 2020, The study aimed to investigate the quality of working life and occupational stress in mine workers, as "A good quality of work life in the company makes workers comfortable and will increase productivity" [9]. Hence the research targets both quality of work life and occupational stress, two questionnaires with a Likert scale were filled by a random sample in the mining company. Quality of work life questionnaire included job restructuring, labour force participation, reward system and occupational environment, while occupational stress questionnaire included biological stress, physical stress and social stress. The result of the study indicates a "correlation between job restructuring and psychological stress of -0.20 with a P value of $0,039$ " [9] and "occupational environment also has a correlation with biological stress of -0.236 ($P = 0.014$) and psychological stress of -0.355 ($P = 0.001$)" [9]. The study concludes that fostering a positive environment is achieved by providing chances for personal growth through training, innovation or guidance prior to commencing work.

Furthermore, another study was placed in South Africa in regards of assessing how skills shortage can lead to work stress in mining industry, adds a point to the previous study conclusion. "Employees

working in occupations affected by skills shortages are often burdened with additional duties and responsibilities and thus may be more prone to work stress, which could possibly adversely affect their mental health and optimal functioning.” [14]. The research was supported with a self-administrated questionnaire consisted of 3 sections, self-constructed biographical questionnaire, abridged version of the Work and Life Circumstances Questionnaire (WLQ) and open-ended question to collect insight into engineers’ and artisans’ recognition of the effect of skills shortages on their experience of work stress. The results of the present study indicate that mining firms should implement measures to alleviate work-related stress, thereby safeguarding the well-being of engineers and artisans. The key question that relates the skills shortage to work stress was “How would you describe the impact of skills shortages on your stress levels?” Responses to this question revealed that 13% acknowledged that skills shortages affected their stress levels. Moreover, the results explained other factors contributing to the work stress levels in mining workers such as the physical work environment, it had a statistically significant impact on the experience of work-related stress. The physical work environment is a critical factor in mining sector, as In Ghana, a study was conducted in regards of “The impact of physical and psychosocial risks on employee well-being and quality of life” it aimed to investigate both physical and psychosocial risks within the mining industries in Ghana and their potential effects on the quality of life and overall well-being of workers. Findings from 307 respondents indicated that mining equipment, environmental conditions and work demands and control emerged as noteworthy predictors of quality of life and general well-being.

Furthermore, in China, research was conducted to Study on the job stress of miner. The result of the questionnaire was approving that quality of working conditions significantly influences miners' job stress. Favourable job characteristics, such as a clean and comfortable environment and reasonable tasks, can reduce work pressure. Conversely, factors like heavy workload, tight deadlines and hazardous tasks increase the burden on miners, as workers involved in shift work face non-traditional working hours beyond the regular 8-16 working day. Managing evenings, nights or rotating shifts poses challenges related to circadian rhythm regulation, sleep deprivation and work-family balance, potentially impacting workers' mental health. The relationship between role stress and job stress among miners is evident, with a larger role stress associated with greater working pressure. Besides the mentioned stressors, demographics play a role in increasing or decreasing work-related stress. “Age as a demographic variable also had important implications, with older workers experiencing better well-being and quality of life” [29]. Moreover, the same variable was discussed in another research paper stating that younger workers have higher fatigue levels, therefore, higher stress levels. “Greater fatigue was significantly associated with younger age, indebtedness, a lack of exercise, poor nutrition, less sleep, increased alcohol use, poor self-reported health, more sick leave, higher stress and lower job satisfaction” [19]. In addition to the age, employee's healthy habits were a major concern in number of studies, “Workplace stress has also been indirectly linked to employees’ health through the experience of stress being associated with greater engagement in negative health behaviours such as tobacco smoking, inadequate diet, insufficient physical activity and alcohol use” [17]. Furthermore, Factors stated in other research papers included variations in age, gender, education, unhealthy dietary habits, substance abuse, insufficient sleep and rest, medical conditions, psychological challenges like stress and demanding activities or obligations beyond the workplace.

As mentioned earlier, stressors can be classified into 6 main categories, each of which carries number of sub factors. Factors and stressors gathered and analysed from previous studies are summarized in Table 1.

Table 1
Stressors in mining industry

Country	Organizational functioning	Job-related tasks	Physical working conditions	Career opportunities	HR policy	Social issues
Indonesia [9]	Organizational Management.	Working Hours. Shifts. Individual Abilities	Equipment	Career Development	-	Social and Personal Relationships
Ghana [29]	-	Work Demands and Control	Equipment and Ambient Conditions	-	-	-
South Africa [19]	-	Shift Schedule and Task Requirement	Work and Environmental Conditions	-	-	Socioeconomic and Living Conditions Poor Housing, Overcrowding and Long Commuting Times
Australia [17]	-	Long Work Roster- Remote Work Location	-	-	-	Work-Life Balance Difficulties and Relationship Stress and Family Stress
U.S. [39]	Organizational Demands	-	-	-	-	Interfacing With the Families
Iran [27]	-	-	Inappropriate Environment. Lack of a Stable Work Environment. Unbearable Physical Environment.	-	Lack Of Employment Security	-
China [31]	Organization Style	Job Characteristic		Occupation Development, Self-Efficacy		Interpersonal Relationship. Work Family Conflict.

1.2.3 Psychosocial health conditions in construction sector

Turning our attention to the construction sector, where the work environment and demands differ significantly, a closer examination of the psychological well-being of construction workers becomes imperative. “The expanding and fast-growing construction sector in general and a lack of employment opportunities in other sectors have drawn large number of workers to this sector” [26]. Construction workers constitute a frontline workforce involved in diverse construction tasks such as concrete work, machine and crane operation, plumbing, piping, painting, electrical work and carpentry across various construction projects [33]. The number of workers in this field is increasing, because the construction field is a fundamental sector in every country, as there are “more than 25 million of the workforces is engaged in the construction industry in India” [26] not to mention the other workers in the other countries.

The mental well-being of construction workers significantly impacts the overall performance of construction firms, it is crucial for the construction industry to prioritize the psychological health of its workers, understand the factors contributing to their mental well-being and implement preventive measures to address potential issues. While research in occupational health often focuses on physical health, there is a limited emphasis on the psychological health of individuals in the construction sector. Despite numerous studies on health, there is minimal research dedicated to assessing the psychological health of construction industry employees, particularly in developing countries [15,18]. It was also mentioned in other papers that “in Pakistan, the construction industry is troubled with psychosocial and organizational factors which influence employees’ productivity and also project performance” [23]. Moreover, according to a study on occupational stress in the construction industry, approximately 70% of construction professionals experience stress, anxiety or depression [25]. This underscores the necessity for additional research to further explore the effects of stress on individuals in the construction field [24]. Furthermore, the importance of studying the workers psychological health conditions falls into the consequences that can “increase in turnover rate, decrease in job satisfaction, a general deterioration in work productivity and poor performance outcome.” [15].

1.2.4 Stressors and psychosocial factors in construction sector

The construction field presents various challenges for workers, including demanding physical conditions such as hard labour, shifts and exposure to extreme weather conditions, along with low wages and inadequate safety equipment in some countries. These factors can contribute to the development of psychological mental health problems among workers. Analysing numerous papers revealed a set of stressors affecting construction workers. Unlike workers in the manufacturing sector, construction workers are involved in temporary projects at specific locations, which can blur boundaries between tasks and overlap with heavy equipment movement paths. In the research paper “Integrated model for the stressors, stress, stress-coping behaviour of construction project managers in the UK,” questionnaire results highlighted the relationship between stress and stressors among construction project managers. The identified stressors include workgroup cooperation (a personal stressor), which can positively impact individual project performance but negatively affect organizational performance. Career-developing environment (an organizational stressor) impacts project managers, although the nature of this impact is not explicitly stated. Interestingly, work overload (a task stressor) does not directly affect the performance of construction project managers, contrary to literature observations. However, tight schedules are considered one of the most repeatable stressors among construction workers. In South Korea, a study was conducted to investigate the Impact of Work Environment and Occupational Stress on the Safety Behaviour of Individual Construction Workers [13] examined “the relationship between the factors of the construction site’s working environment and construction workers’ safety behaviour” and resulted that in construction sites with heavy workloads and tight schedules, it is crucial for managers to check for symptoms of depression and lowered safety motivation of the construction workers. Furthermore, it was evident by a research paper under the title: “Development of Construction Workers Job Stress Scale to Study and the Relationship between Job Stress and Safety Behaviour: An Empirical Study in Beijing,” stating “The job itself has the most significant negative impact on the safety behaviour of construction workers. Role management organization style, interpersonal relationships, career development and family-work conflict have a relatively low influence on safety behaviour, compared to the job itself” [22].

Shifting the focus to the demographic and health-related aspects, it is pertinent to explore how factors like age, education and health conditions interplay with psychosocial stressors in the workplace. According to a systematic review published to assess the domains of psychosocial risk factors affecting young construction workers by Frimpong *et al.*, [5], it was mentioned that the domain of physical health conditions—poor general health and work-related injuries, in addition to pre-existing psychological conditions like depression and PTSD—and professional and health knowledge, including low educational attainment, lack of construction knowledge and low professional skills, are associated with poor mental health [36]. Age influences substance abuse, job satisfaction and decision authority. Moreover, personal lifestyle, involving substance use and alternative lifestyles, is linked to psychosocial risk and impacts mental health.

They are assessing Assessment of how the age and industrial experience of employees affect intrinsic psychosocial stressors among construction workers and employing a comprehensive theoretical framework to investigate the inherent psychosocial stressors—such as top management, career development, social support, motivation and work stress—that impact the productivity of construction workers in Pakistani contracting firms , taking into account diverse age groups and industry experiences. This was targeted in the research paper “Intrinsic psychosocial stressors and construction worker productivity: impact of employee age and industry experience” by Maqsoom *et al.*, [23].

The study concluded that the stress experienced by top management adversely affects workers across different age groups and levels of experience. Performance decline is observed among younger workers when job demands surpass their capabilities and an unreliable managerial approach diminishes motivation. Career development holds significant importance for younger workers, underscoring their desire for promotions based on merit. Social support is crucial for younger workers, especially in challenging situations. A workplace that fosters support is essential for overcoming obstacles that hinder productivity. Younger workers find motivation in appreciation and promotions, whereas less experienced workers value recognition for their performance. Both age groups are notably impacted by workplace stress, including an unhealthy environment leading to absenteeism and a negative association with job satisfaction. Factors and stressors gathered and analysed from previous studies are summarised in Table 2.

Table 2
Stressors in construction sector

Country	Organizational functioning	Job-related tasks	Physical working conditions	Career opportunities	HR policy	Social issues
Korea [13]	Lack of organizational justice. Lack of reward	Job demand, high and heavy workloads, tight schedules,	-	-	-	-
UK [24]	Poor organizational structure	Work overload, tight deadlines, long working hours	Poor home environment	Career-developing environment	-	Workgroup cooperation
Beijing [22]	Organizational style, role management	Tight schedules high-intensity and heavy tasks.	-	Career development	-	Family-work conflict, interpersonal relationship
Ghana [18]	-	Tight deadline pressures, limited time for relaxation, differences in task levels	-	-	-	-

U.S. [35]	-	Job demands, skill underutilization, overcompensating on the job,	Exposure to physical/chemical elements and harassment/	-	-	Social support
North America [38]	-	Job demands, job control, job certainty, skill under-utilization, exposure hours	safety compliance, safety climate	-	-	Social support
Netherlands [32]	-	Lack of job control, high job demands	-	Lack of learning opportunities and future perspectives	-	-

1.2.5 Psychosocial health conditions in the oil and gas sector

Moving beyond the construction industry, the oil and gas sector presents its stressors and psychosocial factors that play a crucial role in shaping the mental health of its workforce. The global reliance on energy has consistently increased over the past few decades. Booming economies like China and India are rapidly emerging as significant consumers of oil. China witnessed a twofold surge in its oil consumption from 1996 to 2006. These changes in the oil and gas sector allow more workforce to be involved. "The workplace's burden remains a significant concern to workers in the oil and gas industry, where workers are continually exposed to various kinds of occupational risks." [8]. Occupational risk hazard is highly expected to create work-related stressors. The experts engaged in the upstream (exploration and production) sector face challenging working conditions, including adverse weather, the potential for fire, gas leaks, oil spills and unforeseen technical malfunctions, among other factors. In the Oil and Gas sector, "ergonomic hazards are 30%, physical hazards 26%, chemical hazards 23%, psychosocial hazards 18% and biological 3%." [8]. "A study by Sutherland and Cooper revealed that offshore workers reported higher rates of anxiety than the general population and that perceived stress from "safety problems at work." Other than anxiety, occupational stress was also noticed among offshore workers. Work stress in the oil and gas industry can diminish workers' safety and raise the risk of occupational injuries. As in the article by Chen *et al.*, [37] the impact of occupational stress on the mental health of Chinese offshore oil workers was investigated to indicated that "the mental health of workers was significantly affected by occupational stress associated with offshore oil production".

1.2.6 Stressors and psychosocial factors in the oil and gas sector

Many individuals view working on an offshore oil rig as a demanding task. The combination of residing and working on-site, following a shift-work schedule with extended hours, encountering elevated risks and operating in a remote environment are typical characteristics of offshore employment. Social issues are a top stressor in the oil and gas sector due to the type of work that puts the worker in remote locations for an extended period, which makes the social issues directly linked to stress among oil and gas workers. As mentioned by Pandey *et al.*, [21], "Another important stressor is physical and social isolation, as most of the workers and professionals are located in remote locations, mostly on seashores or deep-sea oil installations." The Impact of Work stress is linked to social issues as mentioned in "(A Qualitative Study of Work Stress and Employees' Expectations of Stress Management Interventions in the Context of Indian Oil & Gas Industry

Professionals”) research paper study. In terms of family life, less attention to spouse, children, family scored (41%) while increased work-family interference scored (25%). Stress, anger directed to family scored (20%), the lack of time for social relations scored (45%). Finally, feeling loneliness scored (35%).

Moreover, the living environment as a stressor is mentioned in multiple studies, for example, Alroomi *et al.*, [10] stated “the living environment in remote occupations affects work performance. For instance, working and living in a poor environment (i.e., with uncomfortable temperature, lighting, noise, staff density and a minimal degree of privacy) can adversely affect a construction project manager’s work performance” The explained point is supported by another research conducted in Malaysia. The result of the study showed low levels of stress among oil and gas workers and they refer to the results for the following reasons “relaxation and leisure facilities are available for the employees to use once they are off from their jobs. In addition, the 2-weeks working schedule followed by a 2-weeks break, may have contributed to the moderately low level of stress” [30]. The living environment is important to oil and gas workers, its either elevate their stress levels or reduce it by providing relaxation facilities helps the workers to manage their stress levels.

The other stressor that has been mentioned in the reviewed studies is Shift system. It was mentioned as a major stressor in number of studies, yet in Russia, it is considered to “reserves and reduces the potential for workers to adapt to these extreme conditions and causes the presence of occupational risks” [20]. However, reducing occupational risks doesn’t necessarily guarantee a reduction in psychological hazards. Per Korneeva *et al.*, [20], shift workers experience an array of social and domestic challenges, including group isolation, obligatory interactions not only during work but also on breaks, extended separation from family, limited freedom to choose social contacts, restricted movement, blending of formal and informal structures within the shift team due to close contacts and relative isolation from other groups, a lack of privacy, information overload, coordination challenges during task execution, harmonization of communication during off-work periods and a reduction of personal space. All these elements collectively contribute to the emergence of distinct psychological risks in the professional lives of shift workers.

Finally, to assess the stressors, factors and their relationship of them to the mental health of the worker and how it impacts to the work environment, a study conducted in Malaysia by Naji *et al.*, [4] showed a significant relationship between the three proposed predictors in the study (organizational communication, work environment and leadership) and psychosocial hazards at the workplace. Improving leadership organizational communication and work environment among upstream oil and gas employees can substantially reduce accidents for the workplace employees, as most accidents are the outcome of psychological strain and stress. As in the previous sections, a summary Table 3 will present the stressors in different countries in the Oil and Gas sector. Table)

Table 3

Stressors in oil and gas industry

Country	Organizational functioning	Job-related tasks	Physical working conditions	Career opportunities	HR policy	Social issues
China [37]	Organizational structure	Ergonomics	Physical environment of the workplace safety	Career and achievement	-	Interface between job and family/social life management problem and relationship with others at work

India [21]	Expectations/demands of bosses/management	Project-related operational issues, deadlines, too many responsibilities	Allocation of work, lack of resources	-	-	-
Kuwait [10]	-	-	-	-	-	Responsibilities towards family, living environment
Croatia [16]	-	High responsibility day/night shift workers, long periods.	Harsh work condition	-	-	Lack of family support, cultural and ethnic differences, separation from the family
Nigeria [28]	Organizational culture	Work control/autonomy, roles and demands	-	-	-	Relationships and support
Russia [20]	-	Group isolation, remoteness from the main industrial centres	Extreme natural and climatic conditions	-	-	Long separation from relatives; restriction in freedom

2. Current Research Limitation and Future Research

While this review comprehensively analyses studies across various countries, it is essential to acknowledge a limitation in the representation of factors. The primary categorisation is based on industry types rather than specific countries. Each country's nuances and variations may not be fully captured, as the review aggregates findings on a per-country basis rather than an exhaustive representation. The decision to focus on industry-level analysis was made to ensure a comprehensive overview of stressors and psychosocial factors within each industry. However, this approach may not account for country-specific contextual influences on occupational health. Future research could explore the interplay between national and industry-specific factors to provide a more nuanced understanding of psychosocial dynamics in the workplace."

3. Conclusions

In conclusion, the expanding global industrial sector, encompassing mining, construction and the oil and gas industry, brings forth a myriad of stressors and psychosocial factors that significantly impact the mental health of workers. As Tumane *et al.*, [1] aptly notes, rapid globalisation and technological advances have transformed work, making the workplace a pivotal setting for mental health promotion. In heavy industries like mining, stressors range from organizational functioning to physical working conditions, affecting miners worldwide.

According to Pizarro *et al.*, [6], it is essential to develop national and international policies to address mental health concerns within the mining industry and to ensure their implementation and adherence on global scales. These policies should include guidance on managing the risks of mental disorders and related conditions, the creation of tools for monitoring and promoting the mental well-being of miners and the establishment of a national database to track mental health issues and associated problems.

The review article emphasises the importance of addressing specific stressors, as seen in the research conducted in Iran, Australia and China, among other countries. The impact of stress on

physical health, performance and the risk of developing conditions like metabolic syndrome underscores the critical need for a nuanced understanding. Shifting to the construction sector, workers face unique challenges such as work overload, tight deadlines and poor organizational structure. The research emphasises the need for a comprehensive approach, considering factors like workgroup cooperation and career development. Age, education and health conditions also play a role, influencing stress levels and overall well-being among construction workers. In the oil and gas sector, hazardous working conditions organizational issues and social isolation contribute to stress among workers globally. The study underlines the interconnectedness of psychosocial factors and the necessity of addressing issues like organizational communication and leadership to reduce accidents and enhance employee well-being. Overall, the review underscores the global nature of workplace stressors, emphasising the importance of tailored interventions and a holistic approach to promote mental health, improve work environments and enhance overall worker well-being across diverse industries.

Acknowledgement

Special gratitude to University of Sharjah, UAE for their endless support on this kind of research. The review article is funded by University of Sharjah.

References

- [1] Tumane, Rajani G., Shubhangi K. Pingle, Avinash S. Gaikwad and Beerappa Ravichandran. "Impact of Occupational Stress and Its Associated Factors on Cognitive, Hormonal and Stress Responsive Protein in Mining Based Industrial Workers." In *Identifying Occupational Stress and Coping Strategies*. IntechOpen, 2023.
- [2] Derdowski, Lukasz Andrzej and Gro Ellen Mathisen. "Psychosocial factors and safety in high-risk industries: A systematic literature review." *Safety science* 157 (2023): 105948. <https://doi.org/10.1016/j.ssci.2022.105948>
- [3] Molek-Winiarska, Dorota and Tomasz Kawka. "Reducing work-related stress through soft-skills training intervention in the mining industry." *Human factors* 66, no. 5 (2024): 1633-1649. <https://doi.org/10.1177/00187208221139020>
- [4] Naji, Gehad Mohammed Ahmed, Ahmad Shahrul Nizam Isha, Abdulsamad Alazzani, Paula Brough, Muhammad Shoaib Saleem, Mysara Eissa Mohyaldinn and Mohammed Alzoraiki. "Do leadership organizational communication and work environment impact employees' psychosocial hazards in the oil and gas industry?." *International journal of environmental research and public health* 19, no. 8 (2022): 4432. <https://doi.org/10.3390/ijerph19084432>
- [5] Frimpong, Samuel, Riza Yosia Sunindijo, Cynthia Changxin Wang and Elijah Frimpong Boadu. "Domains of psychosocial risk factors affecting young construction workers: a systematic review." *Buildings* 12, no. 3 (2022): 335. <https://doi.org/10.3390/buildings12030335>
- [6] Pizarro, José Matamala and Francisco Aguayo Fuenzalida. "Mental health in mine workers: a literature review." *Industrial health* 59, no. 6 (2021): 343-370. <https://doi.org/10.2486/indhealth.2020-0178>
- [7] Trudel, Xavier, Mahée Gilbert-Ouimet, Michel Vézina, Denis Talbot, Benoît Mâsse, Alain Milot and Chantal Brisson. "Effectiveness of a workplace intervention reducing psychosocial stressors at work on blood pressure and hypertension." *Occupational and environmental medicine* 78, no. 10 (2021): 738-744. <https://doi.org/10.1136/oemed-2020-107293>
- [8] Benson, Chizubem, Christos Dimopoulos, Christos D. Argyropoulos, Cleo Varianou Mikellidou and Georgios Boustras. "Assessing the common occupational health hazards and their health risks among oil and gas workers." *Safety science* 140 (2021): 105284. <https://doi.org/10.1016/j.ssci.2021.105284>
- [9] Inayah, Zufra and Wiwik Widyawati. "Mine Workers' Psychology." In *1st UMGESHIC International Seminar on Health, Social Science and Humanities (UMGESHIC-ISHSSH 2020)*, pp. 643-645. Atlantis Press, 2021. <https://doi.org/10.2991/assehr.k.211020.092>
- [10] Alroomi, Anwar S. and Sherif Mohamed. "Occupational stressors and safety behaviour among oil and gas workers in Kuwait: the mediating role of mental health and fatigue." *International journal of environmental research and public health* 18, no. 21 (2021): 11700. <https://doi.org/10.3390/ijerph182111700>
- [11] Ahmad, Aftab, Mudrasah Rahman, Shagufta Yasmin, Nasif Raza Jafri, Usama Abrar and Saad Aslam. "Impacts of workplace stress: An exploratory cross-sectional study of Oil and Gas Sector in Pakistan." *Sukkur IBA Journal of Management and Business* 8, no. 1 (2021): 70-79. <https://doi.org/10.30537/sijmb.v8i1.778>

- [12] Duchaine, Caroline S., Karine Aubé, Mahée Gilbert-Ouimet, Michel Vézina, Ruth Ndjaboué, Victoria Massamba, Denis Talbot *et al.*, "Psychosocial stressors at work and the risk of sickness absence due to a diagnosed mental disorder: a systematic review and meta-analysis." *JAMA psychiatry* 77, no. 8 (2020): 842-851. <https://doi.org/10.1001/jamapsychiatry.2020.0322>
- [13] Jung, Minhyuk, Soram Lim and Seokho Chi. "Impact of work environment and occupational stress on safety behavior of individual construction workers." *International journal of environmental research and public health* 17, no. 22 (2020): 8304. <https://doi.org/10.3390/ijerph17228304>
- [14] Thasi, M. and F. van Der Walt. "Work stress of employees affected by skills shortages in the South African mining industry." *Journal of the Southern African Institute of Mining and Metallurgy* 120, no. 3 (2020): 243-250. <https://doi.org/10.17159/2411-9717/666/2020>
- [15] Fordjour, Genevieve Ataa and Albert PC Chan. "Tracing symptoms of psychological health status among construction employees." *Journal of health and medical sciences* 3, no. 1 (2020): 104-118. <https://doi.org/10.31014/aior.1994.03.01.104>
- [16] Pavičić Žeželj, Sandra, Olga Cvijanović Pelozo, Frano Mika, Sanja Stamenković, Sabina Mahmutović Vranić and Selma Šabanagić Hajrić. "Anxiety and depression symptoms among gas and oil industry workers." *Occupational Medicine* 69, no. 1 (2019): 22-27. <https://doi.org/10.1093/occmed/kqy170>
- [17] Street, Tamara D., Sarah J. Lacey and Claire Somoray. "Employee stress, reduced productivity and interest in a workplace health program: A case study from the Australian mining industry." *International journal of environmental research and public health* 16, no. 1 (2019): 94. <https://doi.org/10.3390/ijerph16010094>
- [18] Fordjour, Genevieve Ataa and Albert PC Chan. "Exploring occupational psychological health indicators among construction employees: A study in Ghana." *Journal of Mental Health and Clinical Psychology* 3, no. 2 (2019): 6-18. <https://doi.org/10.29245/2578-2959/2019/2.1177>
- [19] Pelders, Jodi and Gill Nelson. "Contributors to fatigue of mine workers in the South African gold and platinum sector." *Safety and Health at Work* 10, no. 2 (2019): 188-195. <https://doi.org/10.1016/j.shaw.2018.12.002>
- [20] Korneeva, Yana and Natalia Simonova. "Analysis of psychological risks in the professional activities of oil and gas workers in the far north of the Russian Federation." *Behavioral Sciences* 8, no. 9 (2018): 84. <https://doi.org/10.3390/bs8090084>
- [21] Pandey, Satish and Dinyar M. Pestonjee. "A qualitative study of work stress and employees' expectations of stress management interventions in context of indian oil & gas industry professionals." *Sustainable Development of Human Capital: Exploring Perspectives from Grassroots to Global Research and Practice*. New Delhi: Excel Publications (2018).
- [22] Wu, Xiang, Yuanlong Li, Yongzheng Yao, Xiaowei Luo, Xuhui He and Wenwen Yin. "Development of construction workers job stress scale to study and the relationship between job stress and safety behavior: An empirical study in Beijing." *International journal of environmental research and public health* 15, no. 11 (2018): 2409. <https://doi.org/10.3390/ijerph15112409>
- [23] Maqsoom, Ahsen, Abdul Mughees, Umar Safdar, Bilal Afsar and Zeeshan Badar ul Ali. "Intrinsic psychosocial stressors and construction worker productivity: impact of employee age and industry experience." *Economic research-Ekonomska istraživanja* 31, no. 1 (2018): 1880-1902. <https://doi.org/10.1080/1331677X.2018.1495571>
- [24] Naoum, Shamil George, Carlos Herrero, Charles Egbu and Daniel Fong. "Integrated model for the stressors, stress, stress-coping behaviour of construction project managers in the UK." *International Journal of Managing Projects in Business* 11, no. 3 (2018): 761-782. <https://doi.org/10.1108/IJMPB-07-2017-0071>
- [25] Berthelsen, Mona. "Effects of shift work and psychological and social work factors on mental distress. Studies of onshore/offshore workers and nurses in Norway." (2017).
- [26] Mathew, Geethu, Naveen Ramesh, Deepthi Shanbhag, Ramakrishna Goud, Sharan Subramanian, Carol Lobo, Alex Xavier and Prudhvi Dasari. "Quality of life and probable psychological distress among male workers at a construction site, Kolar district, Karnataka, India." *Indian Journal of Occupational and Environmental Medicine* 20, no. 1 (2016): 54-59. <https://doi.org/10.4103/0019-5278.183846>
- [27] Beheshti, M. H., A. A. Alinaghi Langari and F. Laal. "Evaluation of stress, anxiety and depression among workers of one copper mine in Kerman Province, Iran, in 2014." *Journal of Occupational Health and Epidemiology* 4, no. 1 (2015): 50-56. <https://doi.org/10.18869/acadpub.johe.4.1.50>
- [28] Nwaogazie, Ify L. and Joy N. Ekwemuka. "Assessment of Workplace Stressors in Oil and Gas Companies in Port Harcourt." *Int'l J. Current Adv. Research* 3, no. 8 (2015).
- [29] Amponsah-Tawiah, Kwesi, Stavroula Leka, Aditya Jain, David Hollis and Tom Cox. "The impact of physical and psychosocial risks on employee well-being and quality of life: The case of the mining industry in Ghana." *Safety Science* 65 (2014): 28-35. <https://doi.org/10.1016/j.ssci.2013.12.002>

- [30] Harun, Haryanni, Rohani Salleh, Mumtaz Ali Memon, M. Noor Rosli Baharom and Azrai Abdullah. "Job satisfaction organizational commitment and stress among offshore oil and gas platform employees." *Asian Social Science* 10, no. 11 (2014): 28. <https://doi.org/10.5539/ass.v10n11p28>
- [31] Hongxia, Li, Fan Yongbin, Tian Shuicheng, Liu Fen and Li Huan. "Study on the job stress of miners." *Procedia engineering* 84 (2014): 239-246. <https://doi.org/10.1016/j.proeng.2014.10.431>
- [32] Boschman, J. S., H. F. Van der Molen, J. K. Sluiter and M. H. W. Frings-Dresen. "Psychosocial work environment and mental health among construction workers." *Applied ergonomics* 44, no. 5 (2013): 748-755. <https://doi.org/10.1016/j.apergo.2013.01.004>
- [33] Leung, Mei-yung, Isabelle Yee Shan Chan and Jingyu Yu. "Preventing construction worker injury incidents through the management of personal stress and organizational stressors." *Accident Analysis & Prevention* 48 (2012): 156-166. <https://doi.org/10.1016/j.aap.2011.03.017>
- [34] Czałaba, Czesław, Katarzyna Charzyńska and Barbara Mroziak. "Psychosocial interventions in workplace mental health promotion: an overview." *Health promotion international* 26, no. suppl_1 (2011): i70-i84. <https://doi.org/10.1093/heapro/dar050>
- [35] Abbe, Omosefe O., Craig M. Harvey, Laura H. Ikuma and Fereydoun Aghazadeh. "Modeling the relationship between occupational stressors, psychosocial/physical symptoms and injuries in the construction industry." *International Journal of Industrial Ergonomics* 41, no. 2 (2011): 106-117. <https://doi.org/10.1016/j.ergon.2010.12.002>
- [36] Ramos, Sofia B. and Helena Veiga. "Risk factors in oil and gas industry returns: International evidence." *Energy Economics* 33, no. 3 (2011): 525-542. <https://doi.org/10.1016/j.eneco.2010.10.005>
- [37] Chen, Wei-Qing, Tze-Wai Wong and Tak-Sun Yu. "Influence of occupational stress on mental health among Chinese off-shore oil workers." *Scandinavian journal of public health* 37, no. 7 (2009): 766-773. <https://doi.org/10.1177/1403494809341097>
- [38] M. Goldenhar*, Linda, Larry J. Williams and Naomi G. Swanson. "Modelling relationships between job stressors and injury and near-miss outcomes for construction labourers." *Work & Stress* 17, no. 3 (2003): 218-240. <https://doi.org/10.1080/02678370310001616144>
- [39] Kowalski, Kathleen M. and Audrey Podlesny. "The effects of disaster on workers: a study of burnout in investigators of serious accidents and fatalities in the US mining industry." (2000).
- [40] Hamed, Sapia Abdul, Mohd Ramzi Mohd Hussain, Haza Hanurhaza Md Jani, Syikh Sazlin Shah Sabri and Nazrul Rusli. "The Influence of Physical Workplace Environment (PWE) for A Healthy Culture of Employees." *Journal of Health and Quality of Life* 2, no. 1 (2024): 1-11. <https://doi.org/10.37934/jhqol.2.1.111a>
- [41] Muniandy, Praveena, Muneera Esa and Nurul Ain Syahirah Mohd Noor. "Awareness of mental health issues in malaysian construction industry." *Journal of Health and Quality of Life* 1, no. 1 (2024): 21-48. <https://doi.org/10.37934/jhqol.1.1.2148>
- [42] Ibrahim, Nor Hafizah, Khan, Z. and Makhbul, M. "Analyzing the impact of work events on emotions: Exploring dimensional influences." *Semarak Advanced Research in Organizational Behaviour** 1, no. 1 (2024): 10-18. <https://doi.org/10.37934/sarob.1.1.1018>
- [43] Ruzain, Muhammad Faiz. "Effects of perceived organisational support and psychological contract fulfilment on work engagement." *Semarak Advanced Research in Organizational Behaviour** 1, no. 1 (2024): 1-9. <https://doi.org/10.37934/sarob.1.1.19>