

## The Causes of Mental Health Problems Among Construction Professionals in Malaysia

Umah Devi Subramaniam<sup>1</sup>, Hasniza Abu Bakar<sup>1,\*</sup>.

<sup>1</sup>Faculty of Civil Engineering and Built Environment,  
University Tun Hussein Onn Malaysia, Batu Pahat, Johor, 86400, MALAYSIA

\*Corresponding Author Designation

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**Abstract:** Construction activities in Malaysia were in a stressful environment for the workers and it consist of various and higher demands. Employers are becoming more sophisticated in the modern Malaysian construction industry causing greatly increased the benchmarking for the efficient delivery of construction projects which have contributed construction professionals' mental health problems . This problems can only be solved when there are proper identification of the factors causing the problems. Thus, this research comprises two main objectives which are to identify the significant factors causing mental health problems among construction professionals and to analyze the major factors influencing the impacts of mental health problems. Thus, the research method of this study has used an analysis of literature review and questionnaire survey. The assessment involves construction professionals such as architects, engineers, project managers and supervisors. There were 110 questionnaires received from the construction professionals from all over Malaysia. Therefore, for assessing the factors that cause mental health problems among construction professionals that have been identified from the literature review and the average index method has been used for the analysis. The job characteristics and demand factors: high-pressure workplace, poor working environment, long working hours; organisation factors: organisational policies, treatment and reward; health problem factors: high risk of accidents and unwell condition have been highlighted to be the extremely significant factors that should be taken into concern. The major factors and their influence towards the impacts of mental health problems were analyzed using average index (AI) method. The ways to control mental health problems was analyzed using mean score (MS) method and ranking method. The result showed that controlling work-related demands, taking part in relaxation trainings, adapting positive attitudes, conducting regular exercise and reducing harmful exposure in workplace can be a useful guide for practitioners in controlling mental health problems among construction professionals and also reduce the impacts caused by mental health problems.

**Keywords:** Mental Health, Construction Professionals

### 1. Introduction

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\*Corresponding author: [hasniza@uthm.edu.my](mailto:hasniza@uthm.edu.my)

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Mental health problems become unavoidable and provide an important element in any organization's success and incremental development. Mental health problems is defined by Department of Health, (2014) as a complex condition of internal balance that encourages individuals utilise their talents in conformity with society's fundamental values [1]. Organisation pressure to maintain costs and expenses at minimal level whereas raising income and achieving so much within fewer time combined with having different responsibilities to be performed in the relationships and job of one individual, may cause effect on the construction professionals' mental health state. Potentially negative mental health problems, including stress, depression and anxiety, may have terrible impacts for both the construction professionals and the organisation as well [2]. Construction work in Malaysia may be very stressful and requires working at height, underground, within confined areas and vulnerable to dropping objects. The situation in Malaysia, as a developing country also tends to be a breeding ground sufficiently favourable to mental health problems for not only those who are in politics but also to those who are in highly responsible job roles which include professionals in construction industry.

The construction sector endured from job-related factors of mental health problems that influenced the health and work success of construction professionals [3]. Due to rapid growth of Malaysian industries, the construction industry in Malaysia has been acquainted with the time-consuming busy and stressful sectors. In the triangle, efficiency, time and expense are known as the conventional priorities of construction projects in Malaysia. In the technologically advanced construction industry in Malaysia, employers are becoming more sophisticated and the performance analysis level for the successful execution of the project has hugely enhanced as a consequence [4]. As a consequence, it is very normal for construction employees, particularly construction professionals, to work overtime in specific and to exhaustively satisfy the expectation. Mental health problems among construction employees not only a serious issue in Malaysia but also occur in other nations. In Malaysia 38% of the respondents (designers) in Klang Valley feel the pressure of mental health problems due to poor management and job demand, working environment and poor relationship among colleagues [4]. In china, construction project managers suffered from high levels of job burnout. Majority of engineering design professionals in Suzhou experience a great level of stress, with over 14% of them suffering from a extremely high level of mental health problems [5].

This research intended to outline problems within the construction industry that contribute to mental health problems and strives to specify the causes of the mental health crisis to generate greater awareness and understanding among individuals and corporations. The objectives are to identify the significant factors causing mental health problems among construction professionals and to analyze the major factors influencing impacts of mental health problems.

### 1.1 Categorization of factors causing mental health problems among construction professionals

A review of previous research and literature have revealed various factors which were not categorized appropriately. Health problems factors known as one of the factors causing mental health problems among construction professionals. Based on Zakaria, Mansor and Abdullah (2012) [6], there are several health issues, such as whole-body vibration, hearing loss and dermatitis, are increasingly apparent in construction workers because of working in such conditions. Research performed in Malaysia found that construction professionals lost their focus at work and feeling exhausted because of inadequate health conditions, thus resulted in greater risks of injuries at work [4]. This risk of workplace accidents leads workers to be stressed and drives them into problems with mental health. In a study by Zainon *et al.*, (2018) study it was also found that a sum of 254 which is about 75.8% of the construction employees reported suffering from eye, nose and throat (ENT) diseases [7]. This shows clearly that the construction professionals health will affect their work progress and end up with pressures and stress. Secondly, organisational factor refers to the sources of mental health problem emerging from or within an organisation itself. This involved the structure of the organisation and the level of autonomy assigned to professionals [8]. The weak organisational structure involves the

inclusion of hierarchies as well as bureaucracy in organisations of the construction industry. Inadequate use of skills, uncertainty in responsibilities, insufficient compensation, and shortage of job development opportunities can cause problems in construction professionals' mental health. The level of autonomy indicates the level of workload control [8]. Excessive workload happens when disparities in job requirements and the capability of an employee to cope. Poor organizational management may lead the construction professionals to have less job autonomy, inadequate salaries and benefits for construction professionals which could cause mental health problems.

Next, job characteristics and demand factors can cause mental health problems. Job characteristics refers to the nature and demand of the job. The construction sector has its own working nature. It also requires few demands to full fill the job's natural requirements. Construction industries are especially prone to mental health problems, as the job characteristic comprises several factors which may lead to poor mental health, such as increasing production demands, risky jobs, complicated decision-taking and not feeling productive enough [9]. Construction industry having its own characteristics and demands which can affect the mental health of the construction professionals. Health and Safety Executive (2017) [2] stated that mental health problem mainly caused by experiencing an extremely hazardous and higher rate of pressure in workplace daily. The way in which construction works have been structured will directly contribute to the mental health problem among construction professionals by means of insecure and short-term contracts, transitional jobs and long work hours. Physical work is one the job characteristics which is common among the construction professionals. A survey stated that the physical works leaves them too exhausted for community time [10].

Besides that, personal factor which is related to interpersonal or personal factors of an individual can cause mental health problems. There are two most popular types of behaviours of type A and type B [8]. Person of type A behaviour usually known as impulsive, aggressive, competitive or presumptuous. They operate by timetables and schedules, are anxious, insecure, typically aggressive and unable to relax, which is the reverse of behaviours of type B, which are easier and simpler and more placid to go. Form B people will not strain themselves and the job is performed only to fulfil the requirements. Type A people experience more mental health problems than Type B people, according to recent reports [8]. Alcohol intake is one of the personal habits of construction professionals that can cause mental health problems. The consumption of alcohol raises the mental vulnerability and suicide that already exist [11]. Finally, relationship factors can cause mental health problems too. Analysis has also found that unmarried, widowed or separated are risk factors for male and female suicides because of the thought of hopelessness and helplessness [12]. Construction professionals reported losing control over their family responsibilities by living away and travelling a lot [13]. Thus, the job characteristics in construction industry tends to cause unstable relationships among family and derive the construction professionals into mental health problems. A research found that supervisors' or managers' support of work would significantly minimize the detrimental effects of employees' mental health concerns [13]. Weak relationships can lead to stress and low performance too.

## 1.2 Impact of Mental Health

Workplace accidents is one of the impacts of mental health problems among construction professionals. If the amount of mental health illnesses begins to grow, the safety behaviours of the professionals destroy accordingly. Research has shown that mental health problem has a significant influence on safety behaviour [14]. Bad interpersonal interactions can lead individuals to feel mental exhaustion, according to an analysis of the burnout condition of construction professionals which can raise the risk of dangerous behaviour. Furthermore, family and job will affect each other because of the spill over impact of the safety atmosphere [14]. Eventually, the adverse emotional response may lead to dangerous behaviour causing workplace accidents. Next, mental health problems among the construction professionals may affect the productivity of the works in construction industry. According to Johns and Gary (2010) [15], absenteeism and presenteeism are two major principles relevant to the

productivity of professionals in the construction industry [15]. Absenteeism is described as failing to report on planned work which can result in employers losing their employees' productivity [15]. It is also related to other counterproductive actions like lateness, decreased efficiency and turnover [15]. Presenteeism is a similar term that is described many times in the literature such as attending work while sick or decrease in the productivity due to health concerns' [15]. Both of this are caused by the mental health problems which can reduce the productivity of professionals. Poor mental health can impact the construction professional's wellbeing. Construction professionals may suffer from insufficient sleep, poor self-confidence, lack of focus and panic attacks. They may also be less able to deal with everyday stresses including demands for jobs, social conditions, relationships and financial issues [13]. Suicide was higher compared to other professionals in Australia [13]. The high suicide rates in the building industry underline the value of encouraging mental health as a way of preventing suicide. There are also several researchers who study the effect on the well-being of construction professionals of mental health problems. Unsafe behavior can lead to injuries that also affect the well-being of construction professionals [14].

## **2. Material and Method**

### 2.1 Material

#### 2.1.1 Questionnaire development

Questionnaire survey was used to verify and justify the proposed research area. In this research, the questionnaire survey consists of 4 sections. The first section contains questions related to the respondent, which were job role, number of years working and marital status. Section B was used to identify the level of agreement for the factors causing mental health problems among construction professionals in Malaysia. This was accomplished by determining the level of agreements of the factors contributing to mental health problems. The respondents were asked by using five Likert Scales to state the level of agreement of each factors of mental health problems. Next, in part C and D the respondents were asked about their agreeability on the factors influence the impacts of mental health problems and the suitable measures to control mental health problems among construction professionals. The rating values of 5, 4, 3, 2, and 1 were assigned to the options strongly agree, agree, undecided, disagree and strongly disagree respectively in obtaining the respondents' perception towards factors influencing the impacts of mental health problems among construction professionals.

### 2.2 Method

The research methodology for this project highlights the steps required to achieve the aim and objectives of study. It starts with problem identification, followed by literature review, questionnaire development, data collection and analysis and finally thesis writing.

#### 2.2.1 Data collection

The quantity of survey participants was concluded concisely beforehand to evaluate the rate of response. In this research, the construction professionals in this study are referred to as project managers, supervisors, engineers, and architects who have more than 5 years' experience in the construction industry. The construction professionals who have five years of experience were be selected randomly to answer the questionnaire. The questionnaire was distributed in google forms and also manually to be answered. About 110 questionnaires were collected to be analysed.

#### 2.2.2 Data analysis

After all the required data were gathered from the surveys, they were then organized and presented in more practical and simplified form, such as in the form of summary and tables, in order to understand them better. Statistical Package for Social Science (SPSS) used to analyse respondent demographic background. Two objectives such as identifying the significant factors causing mental health problems

among construction professionals and to analyze the major factors influencing impacts of mental health problems were fulfilled using the appropriate analysis method. Average Index (AI), and were used to analyze the data for significant factors causing mental health problems among construction professionals and major factors influencing the impacts of the mental health problems. Additionally, the suitable ways to manage mental health problems among construction professionals were proposed. Mean score method and ranking method were used to analyse the suitable ways.

### 2.2.2.1 Average Index

Formula:

$$AI = \sum \frac{(1X_1 + 2X_2 + 3X_3 + 4X_4 + 5X_5)}{(X_1 + X_2 + X_3 + X_4 + X_5)} \quad (2.1)$$

Where;

X1, X2, X3, X4, X5 = Number of respondents for scale 1,2,3,4,5

## 3. Results and Discussion

### 3.1 Identification significant factor causing mental health problems among construction professionals

About 110 questionnaires were successfully obtained and analysed to fulfil the objectives of the study. Based on Table 1, most of the respondents state that job characteristics and demand factors have highly contributed to the mental health problems that they are facing. High pressure workplace is one of the subfactors that they felt contributing to mental health problems. Construction industry is one of the hectic sectors and it requires high performance of the professionals to compete with other sectors. The professionals cannot escape from the fact that they will face all kinds of risks while carrying out their professions which might contribute to the pressure in the workplace.

Next, poor working environment was also stated as an extremely significant factors for mental health problems. Long working hours also one of the subfactors of job characteristics and demand category which is contributing to mental health problems. Most of the professionals organize the resources into activities, execute the activities in logical sequences and manage to complete the projects within the stipulated time and budget. They will be involved in most major part of construction projects. This might need them to work over-time to full fill the criteria. Thus, this caused the respondents to state that long working hours making them to face mental health problems. Secondly, the respondents also stated that organisation factors also contribute to the mental health problems. Respondents found that the reward they got was relatively low compared to their effort or the external market and this was causing them to feel the mental distress.

Furthermore, the health problem factors also found to be the factors mental health problems among the construction professionals. It is known that when a persons' health is not well, it might contribute to many dangerous actions and decisions taken will not be under control. About 90% respondents found that their workplace which is generally having high risk of accidents making them unhealthy which apparently cause mental health problems. Moreover, the unwell conditions caused by headaches due to the workload and some other reasons at workplace also causing 90% of the respondents to face mental health problems. Table 1 shows the summary of significant factors causing mental health problems.

**Table 1: Summary of significant factors causing mental health problems**

Item	Category of factors	Factors	Average index (AI)	Percentage agree and strongly agree (%)
1	Job characteristics and demand factors	Long working hours making me stress.	4.7	93
		Inflexible working hours.	4.67	98
		I work in an extreme weather environment.	4.52	85
		High level of time pressure.	4.71	93
		Excessive workload makes me unwell.	4.80	92
2	Organisation factors	The financial incentive provided by my company are not generous.	4.65	91
		I find the reward I get is relatively low compared to my effort or the external market.	4.63	91
3	Health Problem factors	I am worried of the risk of accident in my workplace.	4.61	90
		I am having headache frequently in workplace.	4.65	90

### 3.2 Factor influencing impacts of mental health problems among construction professionals

Average Index (AI) analysis was used to determine the factor influencing impacts of mental health problems among construction professionals from the four categories of factors and the subfactors from those categories of factors. All the factors listed were highly impacting the impacts of the mental health problems of the professionals. There were three major impacts of mental health problems which were identified from previous research such as workplace accidents, poor work productivity and construction professionals' wellbeing. Average index which was in between 4.5 to 4.0 is showing that the factor was extremely influencing the impacts of mental health problem. Table 2 shows the major factors influencing impacts of mental health problems among construction professionals.

Based on the table, there were few categories of factors of mental health problems which are extremely influencing the impacts of mental health problems among construction professionals. Firstly, the workplace accidents are highly influenced by the health problem factors. About 88.9% of the respondents stated that they are worried of accidents and 92% of them states that they are exposed to workplace accidents frequently which can contribute to mental health problems which subsequently causing workplace accidents. Next, job characteristics and demand factors such as dangerous working environment (98%) and poor working environment like working in extreme weather (91%) and working in constrain spaces (93%) causing the workplace accidents too. The respondents found that the personal factor such as alcohol consumption (93%) might cause the workplace accidents due to unwell and unaware condition.

**Table 2: Major factor influencing impacts of mental health problems among construction professionals**

Impacts of Mental Health Problem	Category of factors	Factors	Average Index (AI)	
Workplace accidents	Health Problem factors	I am worried of the risk of accident in my workplace.	4.55	
		I am exposed to workplace accidents frequently.	4.71	
	Job characteristics and demand factors	Dangerous works makes me worry.	4.57	
		I use to work in a dangerous environment.	4.72	
		I work in an extreme weather environment.	4.54	
		I work in a closed and space constraint environment.	4.62	
	Personal factors	I consume alcohol for relaxation due to high work pressure.	4.61	
		I consume alcohol once in a while.	4.61	
	Poor Work Productivity	Organisation factors	My company is not interested in my career.	4.7
			My company does not provide adequate support for my work.	4.55
I find the reward I get is relatively low compared to my effort or the external market.			4.7	
Job characteristics and demand factors		My work is full of uncertainty.	4.75	
		Dangerous works makes me worry.	4.58	
Relationship factors		I work in an extreme weather environment.	4.64	
		I have conflict with my colleagues.	4.61	
		I have poor relationship with my superiors.	4.59	
Construction professionals' wellbeing	Health Problem factors	I am worried of the risk of accident in my workplace.	4.64	
		My work is full of uncertainty.	4.58	
	Job characteristics and demand factors	Requires complex decision making.	4.65	
		Long working hours making me stress.	4.66	
		I work in an extreme weather environment.	4.65	
		High level of time pressure.	4.56	
	Relationship factors	Excessive workload makes me unwell.	4.57	
		I am having lack of family time due to long working hours.	4.59	
		I have poor relationship with my superiors.	4.57	

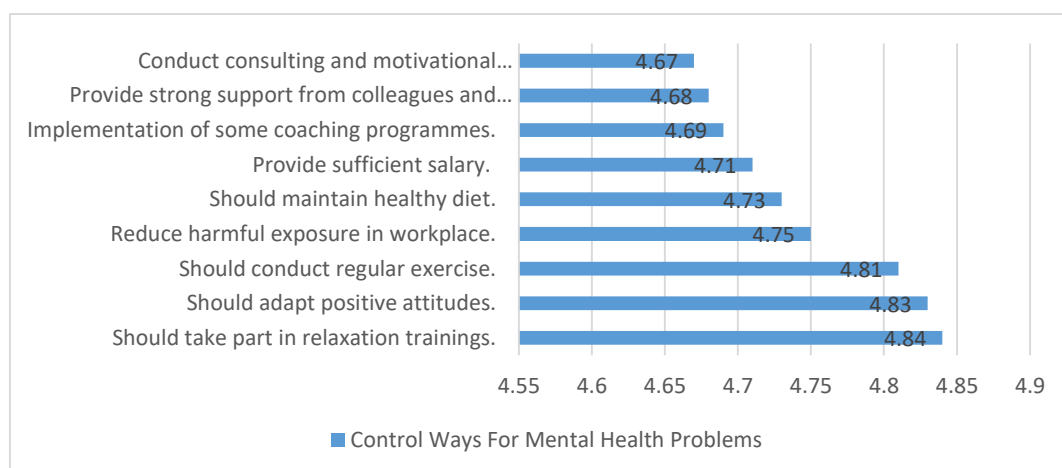
Next, poor work productivity is one of the impacts of mental health problems. Most of respondents strongly believe that poor work productivity can be caused organisation factor such as organisational policies, treatment and reward. The respondents stated that their company not interested in their career development (92.7%), their company does not provide support for their work (91.8%) and they are not

satisfied with the rewards given (92.7%). This might be due to their dissatisfaction towards the benefits that their company providing to them and cause them feeling demotivated to work efficiently. Besides that, the job characteristics and demand factors such as unfavourable job characteristics (94.5%), dangerous working environment (90%) and poor working environment (95.4%) were causing poor productivity of the professionals. This result would be because of the fact that the professionals are spending most of their time with their jobs and workplace. Thus, the unfavourable characteristics and demand of the job would trigger their mental health problems causing low productivity of work. Next, relationship factors such as poor relationship with colleagues (90%) and supervisors (90%) has been highlighted by the respondents in this study. This might cause low in productivity of the construction professionals since lack of support in workplace.

Construction professionals' wellbeing can be affected by many factors of mental health problems. There are few factors found to be major influence of construction professionals' wellbeing. Firstly, health problem factors such as high risk of accidents (90%) are known to be one of the influencing factors of construction professionals' wellbeing based on the result of this study. This might be because it effects the health of the professionals and eventually cause them to be unwell at workplace. Next, job characteristics and demand factors also effect the wellbeing of the professionals. The respondents stated that unfavourable job characteristics such as work full of uncertainty (90%) and requires complex decision making (92.7%) can derive to unwell condition. Long working hours (90%), working in extreme environment (92.7%), high level time pressure (89%) and excessive workload (90%) also influenced the construction professionals' wellbeing. These factors might cause them to feel tired and exhausted to carry out their daily life which may lead to mental health problems affecting the construction professionals' wellbeing. Finally, the relationship factors also affect construction professionals' wellbeing. The respondents stated the poor family relationship (91.8%) and poor relationship with peers (98.2%) causing them unwell. This is a valid response where every human should have good relationships in life to make them feel that they are being loved and appreciated. Life without good relationships might end up with dangerous decisions and unwell health.

### 3.3 Control Ways for Mental Health Problems among Construction Professionals

Next, the suitable ways to control mental health problems among construction professionals have been analysed using mean score method and ranking method. The ways to control mental health problems among construction professionals listed in the questionnaire were obtained through the reviews of previous studies. The respondents were asked to rate the level of agreements on which way they find the most suitable ways to control mental health problems among construction professionals. Based on the results, all the ways fall under most suitable category. Figure 1 shows Ranking for Ways to Control Mental Health Problems among Construction Professionals.



**Figure 1: Ranking for Ways to Control Mental Health Problems among Construction Professionals**



The respondents stated that the control over the work-related demands is the most suitable way that can reduce their mental health problems. The employers should make sure that the demands that they put onto their employees will not make them feel tired and exhausted to live their life happily. Next, the secondly ranked way is the professionals felt that they should take part in relaxation trainings which can help them to control their emotions and be calm while taking any decisions. Thirdly, the construction professionals prefer that they should adapt positive attitudes to make sure they can deal with mental health problems in a correct manner. Conducting regular exercise was in the fourth rank. This might be because the respondents felt that exercising regularly can keep their body healthy and also relaxes their mental. Construction firms should reduce harmful exposure in workplace. This was chosen as one of the suitable ways to control mental health problems among construction professionals and it was ranked in the fifth place. This might be because exposure such as extreme weather, harmful substances or dangerous environment might trigger mental health problems mental.

#### 4. Conclusion

This study has successfully achieved the first objective in identifying the significant factors causing mental health problems among construction professionals in Malaysia. The literature review was performed to obtain the factors and categories the factors into five categories which are health problems factors organisational factors, job characteristics and demand factors, personal factors and relationship factors. The job characteristics and demand factors: high pressure workplace, poor working environment, long working hours; organisation factors: organisational policies, treatment and reward; health problem factors: high risk of accidents and unwell condition have been highlighted to be the extremely significant factors that should be taken into concern. Identification of major factors and its influence towards the impacts of mental health problems were analyzed using average index method. The top five ways to control mental health problems was analyzed using mean score method and ranking method. The top 5 ways such as control work-related demands, take part in relaxation trainings, adapt positive attitudes, conduct regular exercise and reduce harmful exposure in workplace should be adapted to reduce the risk of mental health problems among construction professionals. This, this study would educate the employers and the professionals about the factors which might cause mental health problems that they should eliminate.

##### 4.1 Recommendation

In general, this study has been able to achieve its objectives. However, this study still has weaknesses that need to be improved due to the problems that arise during the course of this study. Thus, to improve the strength, further study is suggested. Increase the number of questionnaires distributed to all the states in Malaysia. This will further strengthen the data obtained. Next, focus on more open-ended answers regarding the solutions needed to be taken to manage the mental health problems among the construction professionals to increase the justification towards the findings of the study.

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