



## Psychological Stress and Role Management on Construction Technology Industry: Post-Pandemic Challenges

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### ABSTRACT

Psychological stress is an unpleasant feeling and emotion for a person who is in a state of restlessness, anxiety, and tension because of the mental or physical stress that occurs. The purpose of this study was to find out the level and factors of psychological stress faced by employees in terms of barriers to the role of company management, particularly in the context of construction technology industry. This study was conducted on construction workers in the district of Hulu Selangor affected by the Covid-19 pandemic. This study uses random sampling referring to the population of selected companies. The study sample was 70 people from a total target population of 70 people. The researcher used the method of distributing questionnaires from google forms medium which contains five-section, namely Part A (demographics of respondents), Part B (psychological stress factors among workers) and Part C (aspects of company management role) is the content for the research instrument. The data collected will be analysed using the Statistical Package for School Science (SPSS) program. Descriptive methods were used to obtain the mean, percentage, frequency, and standard deviation in this study. According to the study's findings, the level of psychological stress among worker's was a moderate and employees also perceived the psychological stress associated with their managerial responsibilities in the context of construction technology sector. To foster a healthier and more productive workplace, this discovery can offer all parties involved with useful information they can use as a guide to leverage technological solutions and structural adjustments to prevent employees from experiencing psychological stress in the future.

## 1. Introduction

The Covid-19 pandemic was deemed a pandemic by the World Health Organisation (WHO) on March 11, 2020, after it had spread to every country [1]. The outbreak has had a significant impact on every element and sparked a range of unfavourable responses from the local population. The most daily cases were 1,421 cases (33.2%) in the state of Selangor. The Covid-19 epidemic exposes

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us to new standards such the practice of social seclusion, isolation during quarantine, and adherence to various SOPs. The Health and Safety Executive (HSE) has issued a statement reveals that mental health problems accounted for approximately 25% of all reported illnesses in construction technology sector during the period from March 2018 to March 2019 [19]. Due to this, people have experienced psychological stress symptoms including feelings of melancholy, rage, fear, disappointment, guilt, and despair as well as other negative emotions like loneliness, anxiety, longing, neglect, and delirium.

A bad mood and emotion are described as psychological stress. According to previous studies [2], stress is a condition in which a person experiences mental tension because of an extremely challenging circumstance. Employees' psychology, physiology, and behaviour are all impacted by mental health issues. Physiology is impacted by psychological pressures such as sadness, fatigue, and psychosomatic diseases when they occur frequently. This is because of the pandemic's increased economic cost and financial difficulties [3]. Stress in organisations occurs when the work required does not match the capabilities, resources, and needs of the employees [18]. Stress also can be caused by things like worry, uncertainty, and the economy [4]. Three recognized characteristics make up the factors that can affect how stressed-out workers in the construction business feel. This can help determine how much psychological stress construction employees are under so that the responsible company can lessen it and take the necessary measures.

The purpose of this study is to identify the level of psychological stress among workers and to analyse business role management in relation to the psychological stress experienced by workers in the construction sector after the pandemic.

## **2. Literature Review**

### *2.1 Psychological Stress Level*

According to the previous studies [5], stress is identified as the cause of almost all psychological problems and disorders. A person who faces stress will experience depression, sadness, anxiety, and some psychosomatic problems. Psychological stress among employees is an obstacle to good work productivity. Stress is intricately linked to the occurrences that transpire both within and beyond the confines of the job and contribute to accidents [19]. The problem of psychological stress is affected by several aspects that can bring and disturb the well-being of employees in continuing work productivity. In this study, the psychological stress from the three aspects refers to the construction industry workers who have been stuck because of the Covid-19 pandemic.

Stress can be categorized as uncomfortable feelings, negative emotions such as anger, anxiety, stress, and frustration that stem from aspects of work them as workers [6]. Psychological stress such as depression, lethargy, and psychosomatic disorders in case of long-term effects on physiology. This can affect performance and work production results [7]. According to the previous studies [8], employees who have a healthy physiology and psychology are very important in producing job satisfaction and productivity. According to [9] states that stress is a situation where the perception of an individual to overcome all the problems that occur in that situation.

In general, according to the previous studies [10] there are three factors that cause stress to occur, namely environmental factors, organizational factors, and personal factors. This is explained, environmental conditions affect an individual from various aspects of life including oneself, family, and workplace organization. Organizational factors will have an impact in terms of organizational changes, excessive workload, and lack of support between employees and employers. Finally, personal factors involve aspects in terms of behavioural changes and role conflicts of an individual.

## **2.2 Role of Management**

According to the dynamic theory, everyone in the organization needs cooperation in overcoming difficulties in completing a job. The influence of emphasizing the role of company management on work performance is strongly supported by the essence of work-related stress theory. A high level of emphasis on the role of management is an important element in organizations to improve quality work performance [7]. With the implementation of the work-from-home approach implemented, management needs to divide tasks and work that are compatible with the method of working from home that is directed to employees to obtain optimal work results [11].

Employers are also affected by this pandemic, but they still need to prioritize the welfare of employees in dealing with any problems that occur [12]. The employer was forced to cut wages and make sudden dismissals due to debt pressure when operations had to be stopped but it was still necessary to pay for all machine services used for current work [3]. Some organizations underestimate the issue of mental health in the workplace when it is a global issue that has a major impact on organizational productivity [4]. According to the previous studies [1], the employer must be responsible in the event of any issue that may affect the safety, health, and welfare of employees at work.

In this study, the management of the company needs to take care of the welfare of construction industry workers in terms of psychological health and the risk of workers. Theory of work stress factors has also stated that stress factors are from the environment where with systematic management all obstacles and challenges can be overcome in a controlled manner without having to make drastic decisions [10].

## **3. Methodology**

Study designs, data collection, sample populations, study instruments, instrument validity, study reliability, pilot studies and data analysis techniques are all covered in depth. The study's goals and objectives were achieved by methodology and techniques.

### **3.1 Research Design**

Quantitative data were employed in the study's survey design to gather information, which was then statistically analysed. According to the previous studies [13] asserts that a survey study is a method for gathering data directly from a sample utilising a questionnaire. Surveys and questionnaires were used in the study to collect data from a random sample of the study population.

### **3.2 Population and Sample**

This research carried out on construction industry workers in the Hulu Selangor district which has a total population of 70 people from various grades and job levels. The total sample size is determined from the total population of construction industry workers. Based on the previous studies [14] the number of samples required for a population of 70 people is a total of 59 construction industry workers who will be respondents. However, the researcher has taken respondents from the total population, which is 70 respondents as a sample.

### *3.3 Instrument*

An evaluation scale that combines a nominal scale and a Likert scale is used in this questionnaire. Data were gathered using a periodic Likert scale of 1 to 5, with the options "Strongly Disagree (1)," "Disagree (2)," "Not sure (3)," "Agree (4)," and "Strongly Agree (5)" for each component (A: Demographics, B: Psychological Stress Level, and C: Role of Management). Cronbach's Alpha value for the level of psychological stress tested on 30 construction industry workers is 0.929, and for the aspect of the company's management role is 0.847. So, the questionnaire instrument used by the researcher show very good and effective reliability and have a high level of consistency.

The Statistical Package for Social Sciences (SPSS) programme will be used to analyse the filled-out surveys. To get the data needed for the study, raw data will be analysed. Collecting, processing, analysing, storing, and removing filtered data for storage are all tasks that are involved in data analysis. Based on the study's goals, the researcher generates results using the material that has been examined. The SPSS program's data processing for the instruments employed is based on the study's objectives and will provide the answers to the study's research questions.

### *3.4 Analysis Method*

The collection of raw data is analysed to obtain the information to be studied. Data analysis involves collecting, processing, analysing, storing, and extracting data that has been filtered for storage. The Statistical Package for Social Sciences (SPSS) program was used to analyse the raw data collected to process new data using descriptive statistics. Scores mean are used to explain the level of psychological stress experienced by employees. It is also used to explain stress factors on the aspects business role management in relation to the psychological stress experienced by workers in the construction sector after the pandemic.

This study uses the score mean interpretation level measurement from previous research [15]. There are three levels of interpretation, namely a low level of mean score (1.00 to 2.39), a moderate stress level (2.40 to 3.79), and a high stress level (3.80 to 5.00). Findings from the research results for the questionnaires distributed to the respondents were analysed to determine the mean level and standard deviation.

### *3.5 Limitations of Study*

This study focuses on workers in the construction industry in Hulu Selangor only. By prioritizing the psychological stress factor based on the company role management. Study samples will be selected from the population of the studies that have been identified and determined. The selected construction workers responded voluntarily without any coercion and the respondent's information as confidential and used for study purposes only.

## **4. Results**

### *4.1 Psychological Stress Level*

Table 1 shows the distribution value of the mean, standard deviation, and the interpretation value of the mean score for items in Part B. Respondents agree with the statement that they are stressed by the work done to the detriment of mental health with the highest mean value (score mean=3.74, sd=0.958) compared to stress affecting physical health (score mean =3.58, sd=0.924). The value obtained states that employees are more affected mentally than their physical health.

Since, the values for items B3, B7, and B8 indicate the lowest value that the statement has concerning the physical health of the respondent. The average value of the mean score of the employee's psychological stress level is (mean=3.35) at the moderate level referencing the table of measures of the above stress level.

**Table 1**  
 Analysis of psychological stress levels

ItemVariable	MeanSD	Level
B1 I feel depressed about the work done to the detriment of my mental health	3.74 0.958	Moderate
B2 I feel depressed about the work done to the detriment of my physical health	3.58 0.924	Moderate
B3 I once sought hospital treatment because I depressed by the work done	2.84 1.150	Moderate
B4 The quality of my work is deteriorating due to the stress experienced	3.51 1.176	Moderate
B5 I was depressed by an unhealthy work environment (Example: uncomfortable workspace, problematic colleagues)	3.68 1.029	Moderate
B6 I lost focus in doing the work because the instructions given by the superiors were unclear and not understood	3.64 0.948	Moderate
B7 I often take time off due to the work pressures faced at work	2.94 1.127	Moderate
B8 I often have health problems at work such as migraines and shortness of breath due to work stress	2.90 1.065	Moderate
B9 I experience lethargy and lack of rest time because I often do more work than the set work time	3.52 0.973	Moderate
B10 I quickly feel bored with the work done it causes pressure that leads to decreased work performance	3.12 1.089	Moderate
The average value of the mean score	3.35 1.044	Moderate

Based on the results of the analysis of the level of psychological stress of the employee, the average value of the mean score obtained is 3.35 at the moderate level. The average mean score obtained indicates that the employee's stress level is at a moderate level based on a table of stress level measurements. This shows that the level of psychological stress of the workers in the construction industry is still in good condition. The findings of this study are supported by the findings in the previous study [4] which stated three (low, moderate, and high) levels of stress experienced among workers and explained that moderate stress showed the highest readings. Workers are more mentally stressed than physically with the work done during the pandemic.

This statement is in line with the previous study [11] which found that the level of psychological stress carried out on health office staff throughout the pandemic was at a moderate level. In addition, based on the items provided to the respondents, they can be described even if they have been in a stressful situation, they are still able to control their feelings and emotions and can continue their work. The analysis of the findings showed that the percentage of employees who had seen a mental health specialist was in small numbers. However, this should be noted by each employee organization as the findings of the study recorded that the level of stress of employees from the organizational structure aspect is at a high level. The findings are in line with a study conducted from previous study [7] which stated that the level of work stress for Sibuh government hospital staff is at a high level.

#### 4.2 Role of Management

Table 2 shows the analysis of psychological stress factors from the aspect of the role of the company's management. Based on the items disseminated, the researchers found that most of the respondents chose to answer on a scale of 4 and 5 for the aspect of the company's management role. The highest mean value on item C1 (score mean=4.31) explains that the company's management plays an important role because if the employer is affected then the employee will also be affected.

For item C6 which states about being dismissed without notice to get the lowest mean value (mean=2.74), it is explained that the respondent is not exposed to the problem. The average value of the mean score for the psychological stress factor in terms of the company's management role is (mean=3.55) at a moderate level.

**Table 2**  
 Analysis of Role Management

ItemVariable	Mean	SD	Level
C1 Employees are affected by employers who are also affected by the pandemic	4.31	0.790	High
C2 An employer once cut my salary without giving any notice	2.93	1.133	Moderate
C3 Employers are more concerned with profit than employee health	3.74	1.282	Moderate
C4 Employers instruct employees to stay present at work	3.97	1.116	High
C5 Employers provide exposure to SOPs in the workplace after pandemic	3.96	0.806	High
C6 I was dismissed without notice elsewhere during the pandemic and this company has given me job opportunities	2.74	1.282	Moderate
C7 Salary cuts by employers caused the family's income to be affected	3.46	1.175	High
C8 The employer makes the payment of the employee's salary according to the daily salary	3.06	1.190	Moderate
C9 Employers provide compensation to employees who were laid off during the pandemic	3.40	1.108	Moderate
C10 Employers are responsible for providing Covid-19 checks to workers such as RTK, PCR, and others	3.90	0.903	High
The average value of the mean score	3.55	1.079	Moderate

Finally, the findings of the study of psychological stress factors in terms of the company's management role found that employee perception was moderate. Employees agree with the statement that employees are affected by employers who are also affected by the pandemic. In line with the statement in the study conducted from previous study [16] which found that the role factor in management was at a moderate level. Meanwhile, the study showed a significant relationship between management role factors and work stress levels among hospital staff [7]. Based on the findings of the statement on the questionnaire which stated that the employee was dismissed without notice was at a moderate level where only a small number of employees were affected by the problem.

According to previous study [17] the role in management is known as role ambiguity, role conflict, responsibility towards others, lack of sense of responsibility, lack of support from management, and lack of involvement in decision-making processes and meeting rapid technological changes. In addition, the findings found that the source of family income was affected by the company's decision on the issue of salary cuts in addressing problems during the pandemic. This can be explained by the fact that the decisions and actions of the management have affected the employees. This can be attributed to the statement which stated that the management of the group of employees should be consultative and participate especially in the planning and making of important decisions of the organization [6].

#### 4. Conclusions

The study's aims and questions have been met, according to the discussion of the study's results. To make the study more significant, however, there are still some things that can be included. improvements in terms of sample size, population selection, choice of more important variables, and concentration of places. As a result, the researchers have gathered several viewpoints and recommendations for next researchers who are likely to carry out this work further. Employees of Hulu Selangor were the target audience for this study's responses. The only participants in this study were those employed in Hulu Selangor's construction sector. After the pandemic, cases were

observed, and most of them were in the state of Selangor, which led to the choice of the study location.

According to the results, there was a moderate level of psychological stress among construction workers in Hulu Selangor following the epidemic. The study's main question was also addressed by the way in which the employees perceived the psychological stressors associated with their managerial responsibilities. Whereas the employee chooses this scenario based on some issues stated in the questionnaire statement, stress from the structural aspect of the company's organisational structure is the dominant factor. This discovery can give all parties concerned information they can use as a guide to stop employees from experiencing psychological stress in the future. To foster a healthier and more productive workplace, this discovery can offer all parties involved with useful information they can use as a guide to leverage technological solutions and structural adjustments to prevent employees from experiencing psychological stress in the future.

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