

**ASSESSMENT OF OCCUPATIONAL STRESS TOWARDS
TURNOVER INTENTION IN CONSTRUCTION INDUSTRY**

KONG CHI YAN

**A project report submitted in partial fulfilment of the
requirements for the award of Bachelor of Science
(Honours) Quantity Surveying**

**Lee Kong Chian Faculty of Engineering and Science
Universiti Tunku Abdul Rahman**

April 2022

DECLARATION

I hereby declare that this project report is based on my original work except for citations and quotations which have been duly acknowledged. I also declare that it has not been previously and concurrently submitted for any other degree or award at UTAR or other institutions.

Signature : Chi Yan

Name : KONG CHI YAN

ID No. : 1702947

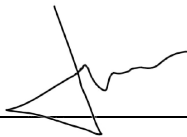
Date : 12.5.2022

APPROVAL FOR SUBMISSION

I certify that this project report entitled “**ASSESSMENT OF OCCUPATIONAL STRESS TOWARDS TURNOVER INTENTION IN CONSTRUCTION INDUSTRY**” was prepared by **KONG CHI YAN** has met the required standard for submission in partial fulfilment of the requirements for the award of Bachelor of Science (Honours) Quantity Surveying at Universiti Tunku Abdul Rahman.

Approved by,

Signature :



Supervisor :

Sr. Li Zi Qian

Date :

12.5.2022

Signature :

Co-Supervisor :

Date :

The copyright of this report belongs to the author under the terms of the copyright Act 1987 as qualified by Intellectual Property Policy of Universiti Tunku Abdul Rahman. Due acknowledgement shall always be made of the use of any material contained in, or derived from, this report.

© Year_2022, KONG.C.Y._All right reserved.

ACKNOWLEDGEMENTS

First and foremost, I would like to thank and show appreciation to everyone who helped, guided and gave me suggestions throughout the whole process of this final year project. I would like to express my sincere gratitude to my research supervisor, Sr. Li Zi Qian for his invaluable advice, guidance and his enormous patience throughout the development of the research.

In addition, I am extremely grateful to my parents and friends. I could not have completed my final year project without the support. I appreciate their continued support and encouragement which helped me in completing my task.

Last but not least, I also take the opportunity to thank all the respondents who engaged themselves in answering my questionnaire survey. Without their patience and cooperation, I could not be able to obtain valuable data and proceed with my study. Once again, I would like to express my deepest appreciation to those who helped me in my final year project.

ABSTRACT

A high turnover intention in the construction industry is a long-term challenge that brings a lot of negative events to construction companies. This is because the construction industry is very dependent on human capital throughout its process. However, the study on the relationship between Occupational Stressors (OS) and Turnover Intention (TI) are mainly from other industries rather than focusing on the construction industry. Thus, this study aims to examine the potential of occupational stress triggering TI in the Malaysian construction industry. The objectives are (1) identifying the stressors of occupational stress in the construction industry, (2) investigating the relationship between occupational stressors and turnover intention in the construction industry and (3) proposing retention and stress management strategies in the construction industry. This study adopted a quantitative research method by which questionnaire surveys were participated by 270 employees from the Malaysian construction industry with an overall response rate of 77.14%. A total of eleven OS and twelve retention and stress management strategies were identified through a comprehensive literature review and further evaluated in this study. The findings revealed that the five most significant OS among the employees in the Malaysian construction industry are: (1) Pay Level; (2) Working Hours; (3) Work-Life Balance; (4) Work Overload; and (5) Role Conflict while the top five significant retention and stress management strategies were (1) "Provide flexible working hours"; (2) "Have a good working environment"; (3) "Change organizational policy"; (4) "Improve fairness of pay level"; and (5) "Provide compensation package". This study provides an integrated framework to discuss the relationship between OS, TI and retention and stress management strategies. In short, this study revealed an in-depth investigation of the OS that led to high TI in the Malaysian construction industry which can provide awareness to the construction stakeholders as well as the society in the Malaysian construction industry.

TABLE OF CONTENTS

DECLARATION	i
APPROVAL FOR SUBMISSION	ii
ACKNOWLEDGEMENTS	iv
ABSTRACT	v
TABLE OF CONTENTS	vi
LIST OF TABLES	x
LIST OF FIGURES	xi
LIST OF SYMBOLS / ABBREVIATIONS	xii

CHAPTER

1	INTRODUCTION	1
	1.1 Research Background	1
	1.2 Research Problem	3
	1.3 Research Aim and Objectives	4
	1.4 Research Methodology	5
	1.5 Chapter Layout	6
2	LITERATURE REVIEW	8
	2.1 Introduction	8
	2.2 Stress	8
	2.2.1 Physical Stress	8
	2.2.2 Emotional Stress	9
	2.2.3 Occupational Stress	9
	2.3 Impact of Stress	10
	2.4 Types of Stressors	11
	2.4.1 Task Stressors	14
	2.4.2 Personnel Stressors	16
	2.4.3 Organizational Stressors	18
	2.4.4 Physical Stressors	20
	2.5 Turnover	22
	2.6 Effect of Turnover on Construction Project	22
	2.7 Type of Turnover	23

	2.7.1 Voluntary Turnover	23
	2.7.2 Involuntary Turnover	23
2.8	Turnover Intention	24
2.9	Occupational Stress-Turnover Intention Relationship	24
2.10	Strategies to Reduce Stress and Turnover Intention	27
	2.10.1 Employee's Retention Strategies	27
	2.10.2 Stress Management	30
2.11	Proposed Conceptual Framework	32
2.12	Conclusion	33
3	RESEARCH METHODOLOGY	34
3.1	Introduction	34
3.2	Research Method	34
	3.2.1 Quantitative Research	36
	3.2.2 Qualitative Research	36
	3.2.3 Mixed Method	37
	3.2.4 Triangulation Method	38
3.3	Research Philosophy	38
	3.3.1 Positivism	39
	3.3.2 Pragmatism	39
	3.3.3 Interpretivism	40
	3.3.4 Postmodernism	41
	3.3.5 Critical realism	42
3.4	Research Approach	43
3.5	Justifications of the selected Research Method and Philosophy Research	44
3.6	Research Design	45
3.7	Research Instrument	50
	3.7.1 Questionnaire	50
	3.7.2 Questionnaire Design	51
3.8	Data Collection Method	52
	3.8.1 Primary Data Collection	52
	3.8.2 Secondary Data Collection	52

	3.8.3 Construct Measurement	53
3.9	Sampling Process	54
	3.9.1 Defining the Population and Sample Frame	54
	3.9.2 Sampling Design	55
	3.9.3 Sampling Size	55
	3.9.4 Executing Sampling Process	56
3.10	Data Analysis	56
	3.10.1 Cronbach's Alpha Reliability Analysis	56
	3.10.2 Friedman Test	57
	3.10.3 Kruskal-Wallis H Test	57
	3.10.4 Mann-Whitney U Test	58
	3.10.5 Spearman's Correlation Test	58
3.11	Conclusion	59
4	DATA ANALYSIS	60
	4.1 Introduction	60
	4.2 Respondents Background	60
	4.3 Cronbach's Alpha Reliability Test	63
	4.4 Relationship between Occupational Stressor and Turnover Intention	63
	4.5 Current Company Implementation on Retention Strategies and Stress Management Strategies in Reducing Turnover Intention	74
	4.6 Stressors of Occupational Stress in the Malaysia Construction Industry	79
	4.7 Symptoms of Stress	83
	4.8 Employees' Satisfaction on Company's Culture and Policy	84
	4.9 Employees' Satisfaction on Company's Current Implementation in Reducing Turnover Intention	95
	4.10 Discussion	108
	4.10.1 Occupational Stressors in the Malaysia Construction Industry	108
	4.10.2 Relationship between Occupational Stressors and Turnover Intention of	

	Employees in the Malaysia construction industry	109
	4.10.3 Retention and Stress Management Strategies in Reducing Turnover Intention	113
	4.10.4 Employees' Satisfaction on Company's Culture, Policy and Current Implementation	116
	4.11 Conclusion	118
5	CONCLUSION AND RECOMMENDATIONS	119
	5.1 Introduction	119
	5.2 Accomplishment of Research Objectives	119
	5.3 Research Contributions	122
	5.4 Research Limitations	124
	5.5 Research Recommendations	125
	REFERENCES	126
	APPENDICES	138

LIST OF TABLES

Table 1.1:	Accomplishment of research objectives.	6
Table 2.1:	Types of Occupational Stressors and Sources.	13
Table 3.1:	Types of Research Method.	35
Table 3.2:	Questionnaire Design.	51
Table 4.1:	Background of Respondent.	61
Table 4.2:	Cronbach's Alpha for Each Section of the Questionnaire.	63
Table 4.3:	Mean Rank of Occupational Stressor that lead to Turnover Intention.	64
Table 4.4:	Rejected Null Hypothesis for the Relationship between Occupational Stressor and Turnover Intention.	65
Table 4.5:	Mean Rank of The Retention and Stress Management Strategies.	74
Table 4.6:	Spearman Rank Correlation between Occupational Stressor and Retention and Stress Management Strategies. 76	
Table 4.7:	Mean Rank of Occupational Stressor in Malaysia Construction Industry.	80
Table 4.8:	Rejected Null Hypothesis for the Stressors of Occupational Stress in Malaysia Construction Industry.	81
Table 4.9:	Mean Rank of Symptoms of Stress.	83
Table 4.10:	Mean Rank of Employees' Satisfaction on Company's Culture and Policy.	85
Table 4.11:	Rejected Null Hypothesis for the Employees' Satisfaction on Company's Culture and Policy.	86
Table 4.12:	Mean Ranking for Employees' Satisfaction on Company's Current Implementation in Reducing Turnover Intention.	95
Table 4.13:	Rejected Null Hypothesis for the Employees' Satisfaction on Company's Current Implementation in Reducing Turnover Intention.	97

LIST OF FIGURES

Figure 1.1:	Research Methodology Process.	5
Figure 2.1:	Proposed Conceptual Framework.	33
Figure 3.1:	Research Design.	45
Figure 3.2:	Literature Review Process.	47

LIST OF SYMBOLS / ABBREVIATIONS

CDC	Center for Disease Control and Prevention
CIOB	Chartered Institute of Building
GDP	Gross Development Product
OS	Occupational Stressor
OSHA	Occupational Safety and Health Administration
SPSS	Statistical Package for the Social Sciences
TI	Turnover Intention

CHAPTER 1

INTRODUCTION

1.1 Research Background

Construction industry is one of the main sectors that help improving the quality of Malaysian life. It always contributes to gross development product (GDP), boosting the nation's economy. Construction industry is very unique as it approaches the management of human resources in a very complex working environment. Traditionally, a construction project combines the different roles and goals of multiple stakeholders (Leung, Chan and Cooper, 2015). Professional in the construction industry includes architect, consultant, construction manager, engineer, quantity surveyor, contractor, safety officer, skilled worker, supplier and other professionals who participate in the construction progress. Hence, human capital is the fundamental property of all construction companies in which that to allocate the right person in the right position for the success of a company (Rojas, 2013). Similarly, Chih, et al. (2016) reported that the construction industry is one of the most dependent on employees' skills and knowledge industry among other industries. Hence, human capital is the most significant source in the completion of a project (Ugural, Giritli and Urbanski, 2020).

Over a few decades, Turnover Intention (TI) has been a challenging issue for the construction industry since it brings negative events such as actual turnover, unstable workforce, decreasing employee productivity and increasing cost of human resources. Besides, TI is considered a measurement before the actual turnover. Priyashantha (2019) noted that TI is not the actual turnover behaviour, but it will create the actual turnover behaviour in future. According to Gregory, et al. (2007) as cited in Moehanah (2015), the intention to leave is the strongest predictor of actual turnover. Moreover, Ahmad Faizal Mahdi, et al. (2012) also indicated that TI among employees is more useful and practical to predict in the study. Should the employer or organisation becomes aware of the employee's TI, they can explore the antecedents of the employee TI and react accordingly. Hence, any preventive actions can be developed to prevent it to become actual turnover (Phayoonpun, 2015).

In this regard, Malaysia has scored the highest turnover rate of 9.5% and the second-highest involuntary turnover of 6.0% in Southeast Asia in 2015. Apart from this, the construction industry has an approximately 6.2% monthly turnover rate which results in the highest average turnover (Darina, 2020). Recently, the study conducted by Vuleta (2021) reported that the national average turnover rate was 36.4% in 2019 which is higher than 27.0% in 2018. The turnover can be categorised into voluntary and involuntary turnover (Phang and Teoh, 2021). Bebe (2016) claimed that voluntary turnover refers to an employee who has the intention to leave his or her organization while involuntary turnover refers to an employee who is and was forced to leave the job or organization due to several reasons such as poor job performance.

Several studies indicated that turnover also brings a negative impact to the organization such as an increase in the unnecessary cost incurred. The U.S. Bureau of Labor Statistics (2017) expressed that turnover can cost approximately 33% of an employee's total compensation (Smith and Quality, 2019). The extra expenses incurred due to employee turnover include the cost of rehiring activities such as advertisement costs, training costs and supervisory time (Alex, et al., 2019). In the same vein, Tijani, Jin and Oseyi-kyei (2021); Vuleta (2021) found that a higher retention rate or a lower turnover rate can maximize a company's profits up to 4 times. Furthermore, it is elaborated that increased turnover reduces the organizational commitment and frequent absenteeism of employees (Fukui, Rollins and Salyers, 2020). Ugural, Giritli and Urbanski (2020) explained that employee turnover may lead to the loss of skilled employees which can be risky to a company's development.

Occupational stress is a growing concern in the construction industry as well. According to Silva, Samanmali and Silva (2017), construction industry has been rated as a stressful industry for long period. Previous research noted that employees easily face occupational stress during the construction period since the delivery process consists of various complicated tasks (Leung, Chan and Cooper, 2015). Similar finding by the Chartered Institute of Building (CIOB) (2006) in which that approximately 84% of construction professionals suffer from stress and depression. Leung, Chan and Copper (2015) outlines that the stress level suffered by employees depends on

the stressors they faced. Meanwhile, the negative emotions impacted by occupational stress may lead to the negative behaviour of employees towards their industry, such as TI (Tongchaiprasit and Ariyabuddhipongs, 2016). In other words, the employee may direct their emotions towards their intention to stay or leave their company. Occupational stress is perceived as the source of TI among employees (Zhang and Lee, 2010; Yukongdi and Shrestha, 2020; Suong, 2020).

1.2 Research Problem

Recently, the construction sector faced a shortage of approximately 800,000 to 1 million workers, which leads to a 30% increase in labour costs (SinChew Daily, 2021). Hirschmann (2021) noted that there is a decrease in the workforce of the construction industry. The employed people decrease to 1.4 million people compared to 1.5 million employed people in the previous year, 2015. Hee and Ling (2011) highlighted that the shortage of personnel in the construction industry is mainly due to the increasing employee turnover rate in the construction industry. As a result, this causes shortage of labour.

According to the Malaysia Salary Employment Outlook (2017), there are approximately 44% of employees intended to leave their current organisations in the next 12 months (Amir Firdaus, 2018). The high turnover rate within the construction industry might cause a severe impact on the overall performance and cost of a construction project (Thomas, 2015). It is not surprising that the studies look into the factors towards the TI and the impact brought about to firms and existing employees have been initiated. Among these studies include Hang-Yue, Foley and Loi (2005), Zhang and Lee (2010), Ali Mohammad Mosadeghrad (2013), Emiroglu, Akova and Tanriverdi (2015), Fadilah Puteh and Hidayati Arshad (2015), Thomas (2015), Chamini and Randeni (2016), Alex, et al. (2019) and Arijanto, et al. (2020).

Occupational stress is a common cause of voluntary turnover in organizations which leads to the loss of human resources (Zhang and Lee, 2010). 51% of employees suffered from occupational stress (Ram, 2019). It is not surprising that the study pertaining to the stress and stressors among employees has been initiated. The related studies that looked into occupational stress include Leung, Skitmore and Chan (2007), Leung, et al. (2008a), Leung,

Chan and Yu (2012), Muhammad Rizwan, et al. (2014), Leung, et al. (2015), Leung, Chan and Cooper (2015), Sharma and Singh (2016) and Naoum, et al. (2018). However, these findings are related to the relationship between stress, job satisfaction, job performance and employees turnover (Suong, 2020; Yukongdi and Shrestha, 2020; Dodanwala and Santoso, 2021).

This is, however, the aforementioned studies only showed that stress is an important forecaster of TI without examining the direct impact of stressors on TI in the construction industry. Related studies like Muhammad Javed, et al. (2014), Enshassi and Al.Swaity (2015), Moehanah (2015), Chamini and Randeni (2016), Alex, et al. (2019), Ayodele, Chang-Richards and González (2020), Dodanwala and Santoso (2021), Junaidi, et al. (2020), Suong (2020) and Yukongdi and Shrestha (2020), Rathore and Singh (2020) were mainly focused in other sectors such as hospitality, banking, education and public enterprises sectors only.

According to CIOB (2006), 84% of the construction professional stated that stress in the construction industry is due to poor retention levels. Hence, it draws attention to the relationship between stress and the TI of employees. An understanding of the types of stressors that affects TI among employees in the Malaysian construction industry is essential to control the turnover rate and mitigate the negative effects in term of time, cost and quality of the project. Therefore, it is vital to identify the possible retention and stress management strategies that are to mitigate the arising of TI and the implementation of strategies for construction workers will retain the employees respectively.

1.3 Research Aim and Objectives

The aim of the study is to examine the potential of occupational stress triggering turnover intention in the Malaysian construction industry and suggest effective retention and stress management strategies. The aim is achieved through the following objectives:

1. To identify the stressors of occupational stress in the construction industry.

2. To investigate the relationship between occupational stressors and turnover intention in the construction industry.
3. To propose retention and stress management strategies in the construction industry.

1.4 Research Methodology

Figure 1.1 shows the research methodology process. The research methodology process includes preliminary study, literature review, methodology and work plan, data analysis and conclusion and recommendation.

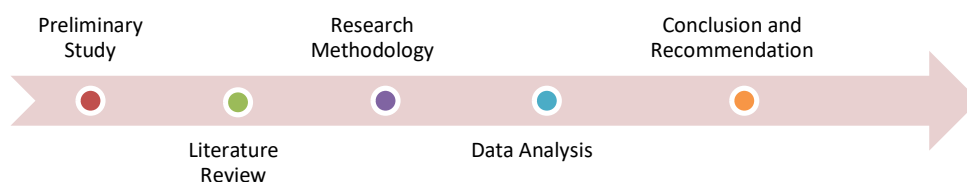


Figure 1.1: Research Methodology Process.

In the early stage, a preliminary study was carried out to provide a background study and current issues that happened in the Malaysian construction industry. The aim and objectives were identified under the preliminary study stage.

Next, literature review was carried out to examine the definition of each variable and its linking between the independent variables and the dependent variable in order to provide a better understanding of this study.

The research methodology reviewed the background of the research method and research philosophy and select the most suitable in this stage. The research design illustrated the process from the initial stage. Furthermore, it consists of a research instrument, data collection method, sampling process and data analysis tool.

Data analysis illustrated the result of the main issues that the study investigated. The statistics generated from the data were depicted with appropriate diagrams to describe and illustrate the relationship and linking between variables. Table 1.1 shows the accomplishment of research objectives by analysing the data collected from questionnaire.

Table 1.1: Accomplishment of research objectives.

Objectives	Section of Questionnaire
1	B : To identify the stressors of occupational stress in the construction industry.
2	C : Relationship between Occupational Stressors and Turnover Intention
3	D : Retention and Stress Management Strategies

In conclusion and recommendations, the accomplishment of research objectives in this study was discussed. Meanwhile, the social implication and practical implications identified were further elaborated in this section. Besides, it consists of recommendations for future research and the limitation found in the research process.

1.5 Chapter Layout

The first part of Chapter 1 provides an overview of the TI of the employee in the Malaysian construction industry. The introduction consists of the background of the study, research problem, aim and objectives, research methodology and chapter layout.

Chapter 2, the literature review provides a further understanding of the types of OS such as Task Stressors, Personnel Stressors, Organizational Stressors and Physical Stressors. Besides, the concept of turnover and TI is discussed in this chapter. The impact and connection between OS and TI are discussed to provide further understanding. Information given in this chapter come from a variety of sources such as journal article, books and relevant websites. A conceptual framework will be proposed and the relationship between types of stressors and TI will be investigated.

Chapter 3, research methodology discloses the methodology for this study in which data is being collected and processed before analysis. The research method will be discussed in this chapter includes the quantitative method, qualitative method, triangulation method and mixed method. It also justifies the adopted research approach and research philosophy. The research

design will be discussed in this section, followed by the research instrument, sampling design, data collection method, and proposed data analysis tools.

Chapter 4, data analysis will evaluate the data collected from the questionnaire in which researchers interpret the result in a way that is easier to access and understand. The respondent's background will be explained before carrying out the Reliability Test. The result of the study will be tested by using Cronbach's Alpha Reliability Test, Friedman Test, Kruskal-Wallis Test, Mann-Whitney Test and Spearman's Correlation Test.

Chapter 5, conclusion and recommendation makes a summary of the result of the data analysis which is completed. The recommendation will be discussed based on the interpretation of the result of the study.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter consists of a literature review for each variable, a review of relevant theory and a proposed conceptual framework. The literature review is widely used in construction management research to advance the understanding of certain topics. The definition of stress, the impact of stress, types of OS, TI and types of TI were discussed in this section by conducting a literature review. Besides, the correlation between OS and TI will be described based on previous studies conducted. Moreover, the strategies to reduce stress and TI would be discussed based on previous studies. The conceptual framework generated in this study would explain the relationship between the variables formulated in the hypotheses.

2.2 Stress

Usman Bashir and Muhammad Ismail Ramay (2010) defined stress as a state of mind in which the person faced problems between demand and responsibilities and is worried if the desired work outcome was not achieved. CIOB (2006) demonstrated stress is an unfavourable reaction people have to extreme pressure or other demand placed on them. Furthermore, if stress is managed well, different perspectives of response such as behavioural, emotional, mental and physical beyond the availability of stress coping strategies (Robbins and Stephen, 2004, as cited in Suong, 2020). They further noted that stress is a consequence of employees who face pressure due to a lack of knowledge and capability. Generally, the stress in construction personnel was discussed in three-dimensionally in terms of physical stress, emotional stress and work stress.

2.2.1 Physical Stress

Physical stress is essential to construction personnel due to the higher pressures on employees' physical competencies in construction compared to other industries. It has been revealed that an employee who suffered from

physical stress will probably have physiological reactions and stress indicators such as sleep disorders, headaches and musculoskeletal soreness (Leung, Chan and Yu, 2012). Moreover, physical stress can occur from suffering injury, infection, inadequate oxygen, environmental pollution and other problem among employees (Sungoh, 2021).

2.2.2 Emotional Stress

According to Leung, Chan and Cooper (2015), emotional stress was described as pertains to negative emotions such as anxiety, depression, anger and frustration. The warning sign of the emotional stress of construction personnel included worrying about work progress and being exhausted due to work (Leung, Chan and Yuen, 2010). Additionally, emotional stress was also defined as psychological stress which results from fears, sadness, anger, anxiety and panic attacks (Sungoh, 2021).

2.2.3 Occupational Stress

Work stress refers to occupational stress or job stress which emphasized the individual and the surrounding environment (Leung, Chan and Cooper, 2015). They highlighted that the construction personnel are generally well-trained in terms of their professional and workable knowledge, however, the ability and values are different among the personnel.

There are a plethora of definitions of occupational stress. For instance, Yang and Carayon (1995) defined work stress as a feeling of a person's psychology linked to their working environment. Occupational stress is described as a psychological hazard (Sidhu, et al., 2020). Additionally, occupational stress was interpreted as a feeling of anxiety or nervousness related to the job, which leads to an employee's emotional and working behaviours (Lu and Kuo, 2016). It was also discovered as a complex reaction that is related to the psychological and behavioural components (Sharma and Gedeon, 2012). Jebelli, Hwang and Lee (2018) also agreed that occupational stress is a negative physical and mental reaction that occurs when employees cannot fulfil the job demand. In the same way, Chaudhary and Lodhwal (2017) conveyed that all organizations are currently under a high level of occupational stress level due to stressors. The source of stress, namely

stressors will affect the level of stress experienced by employees (Leung, Chan and Copper, 2015). Collectively, occupational stress is a significant aspect to be managed in the construction industry (Chae, et al., 2021).

Given all three types of stresses that have been mentioned, this research will only focus on occupational stress in which the stress occurs while an employee is working for their organization.

2.3 Impact of Stress

The impact of stress has received much attention in the past decades. It is noted that work-related stress can negatively impact the psychological well-being of employees (Nwaogu and Chan, 2021). Cooper and Dewe (2008), as cited in Leung, Chan and Cooper (2015) explained that stress will bring a serious impact on health, performance, profitability and organisational development.

Ali Mohammad Mosadeghrad (2014) claimed that stress acts as a threat to the health conditions of employees. This study revealed that a high level of occupational stress was associated with poor health and increased TI. Meanwhile, the unawareness of the effect of stress on their health by the organization will cost a huge amount of money and may lead to lawsuits. Leung, Chan and Cooper (2015) described that the organization have a legal duty to provide a safe and healthy environment to their employees. Negative emotion is one of the impacts of stress on an individual which might cause employees to direct their emotions which affects TI in their industry (Yu, et al., 2021). Additionally, it is reported that the increasing occupational stress on employees not only raises negative outcomes such as turnover (Rose, 2003) but also will lead to psychological and mental fatigue (Kashif, et al., 2017).

Furthermore, Senaratne and Rasagopalasingam (2016) also further described that stress brings an impact on different types of performance among employees, such as task, interpersonal and organizational. It further explained that task performance is related to the cost, time and quality target of projects while interpersonal performance is related to interpersonal relationships and cooperation among employees, and job satisfaction that led to TI. In addition, organizational performance is related to group cohesiveness, sense of belonging and intention to stay of employees (Leung, Chan and Cooper, 2015;

Senaratne and Rasagopalasingam, 2016). Correspondingly, occupational stress is an independent variable of job outcomes such as performance and turnover rate (Muhammad Javed, et al., 2014). Akgunduz (2015) further proved that occupational stress such as role conflict and role ambiguity has a negative relationship with an employee's job performance.

It can be summarized that occupational stress brings an impact on employees' health conditions, task performance, interpersonal performance and organizational performance such as TI.

2.4 Types of Stressors

Public Employees Federation Health and Safety Department (2006) proposed that a stressor is an event that leads to a stress response. Furthermore, Adnan Enshassi and Al.Swaity (2015) expressed that stressor is a significant component of stress which bring out stress reaction. Leung, Chan and Yu (2009) indicated that the employee's stress level is a response to the stressor and subjective environmental components. Occupational stress was naturally present within the organization due to different types of stressors (Fadilah Puteh and Haidayati Arshad, 2015).

A plethora of studies attempt to classify OS. Several studies have examined that OS in the construction industry is commonly categorized into different types such as task, organizational, physical and personnel (Leung, et al., 2005; Leung, et al., 2008a; Leung, et al., 2008b; Leung, et al., 2010; Senaratne and Rasagopalasingam, 2016). Meanwhile, OS such as work conflict, work overload, and work ambiguity were discussed in the study of Khan, et al. (1964), as cited in Usman Bashir and Muhammad Ismail Ramay (2010). Moreover, Nwaogu and Chan (2021) related the task stressors to long working hours, work overload, work pressure and role ambiguity. Similarly, the relationship among four stressors such as role ambiguity, role conflict, role overload and work-family conflict towards TI were analysed in the study (Hang-Yue, Foley and Loi, 2005). In the same way, Leung, et al. (2008a) revealed that personal, task and physical stressors are critical stressors affecting the stress level of construction professionals in both consultant firms and construction companies.

Related similar studies that explore OS with work overload and long working hours (Public Employees Federation Health and Safety Department, 2006; Leung, Chan and Yu, 2009; Junaidi, et al., 2020; Sidhu, et al., 2020; Suong, 2020), role conflict and role ambiguity (Sidhu, et al., 2020), demographics variables (Carbery, et al., 2003; Ali Mohammad Mosadeghrad, 2013; Huffman and Olson, 2016), pay level (Smith, et al., 2004; Chamini and Randeni, 2016; Ayodele, Chang-Richards and González, 2021) and working environment (Leung, Chan and Yu, 2009; Arijanto, et al., 2020; Sidhu, et al., 2020).

In this study, different classifications of OS were reviewed and categorized into Task Stressors, Organizational Stressors, Personnel Stressors and Physical Stressors. Table 2.1 shows the types of OS that have been reviewed from the previous studies.

Table 2.1: Types of Occupational Stressors and Sources.

		Ali Mohammad Mosadeghrad (2013)	Ali Mohammad Mosadeghrad (2015)	Arijanto, et al. (2020)	Ayodele, Chang-Richards and González, (2020)	Bell, Rajendran and Theiler (2012)	Chamini and Randeni (2021)	Carbery, et al. (2003)	Chen, Lin and Lien (2011)	Dodanwala and Santoso (2021)	Enshassi and Al.Swaity (2015)	Emiroğlu, Akova and Tanriverdi (2015)	Fukui, Rollins and Salyers (2020)	Hang-Yue, Foley and Loi Junaidi, et al. (2020)	Leung, et al. (2005)	Leung and Chan (2012)	Leung, Chan and Yu (2009)	Leung, Chan and Yuen (2010)	Liu, et al. (2020)	Karatepe (2013)	Muhammad Javed, et al. (2014)	Muhammad Rizwan, et al. (2014)	Naoum, et al. (2018)	Priyashantha (2020)	Rathore and Singh (2020)	Sharman and Devi (2011)	Sharma and Gedeon (2012)	Sidhu, et al. (2020)	Siti Hawa Mohd Kasmuri, et al. (2020)	Tijani, Jin and Osei-kyei (2020)	
Task Stressors	Work Overload	/	/	/	/			/	/			/	/	/	/	/	/	/	/		/	/	/			/	/	/	/	/	
	Role Conflict	/	/					/	/			/		/	/	/	/	/	/		/	/	/		/	/			/	/	
	Role Ambiguity	/	/	/				/	/			/		/	/	/	/	/	/		/	/	/		/	/			/	/	
Organizational Stressors	Work-life Balance				/	/					/										/			/	/						
	Work-Family Conflict				/	/				/		/				/			/	/		/									/
	Pay Level	/	/		/		/	/		/		/				/			/			/			/						/
Personnel Stressors	Marital Status	/						/	/		/	/	/											/						/	
	Working Hours											/		/													/			/	/
	Education Level							/		/		/																			
Physical Stressors	Work Environment	/	/	/	/		/			/							/	/					/				/	/	/	/	/
	Home Environment	/	/	/	/		/			/							/	/					/				/	/	/	/	/

2.4.1 Task Stressors

Leung, Chan and Yu (2009) declared that task stressors are commonly described as work overload, role conflict and role ambiguity in the regular task assigned to employees. Role stress is defined as one of the sources of task-related stress (Vandenberghe, et al., 2011). Nelson and Burke (2000), as cited in Sharma and Devi (2011); Chen, Lin and Lien (2011); Nair, Lim and Aik (2016) expressed that role factors such as role overload, role conflict and role ambiguity contribute to the stress of employees. Similarly, it is stated that a higher level of role stress will lead to increased job stress in the study by Singh and Dubey (2011) and Akgunduz (2015).

2.4.1.1 Work Overload

It is suggested that role workload is a concept related to heavy workload or work overload (Rodell and Judge, 2009). According to Junaidi, et al. (2020), workload is widely understood as an activity that an employee must complete within a certain period to achieve work efficiency and effectiveness. When the workload is too heavy for employees, it will respond to a situation of role overload (Vandenberghe, et al., 2011). Akgunduz (2015) mentioned that the increasing role overload is due to the unfulfillment of a role from the aspect of time and energy.

Leung, Chan and Yu (2009) perceived work overload as a critical source of occupational stress. Sharma and Singh (2016) examined the stress-producing factors and concluded that work overload occurs when employees are not able to complete their tasks within the normal working time. Senaratne and Rasagopalasingam (2016) explained that too many tasks instructed and a lack of certain knowledge required to complete the task assigned will cause the employee to feel stressed. Similarly, the stress might due to heavy workload, high expectations and high responsibility risk of work (Suong, 2020).

2.4.1.2 Role Conflict

Role conflict is another task stressor likely to be experienced by employees in the construction industry (Lingard, 2004). According to Beehr (1995), as cited in Leung, Chan and Yu (2009), role conflict refers to an employee facing a conflict between job demand and their capability to complete the task.

Role conflict occurs when the task assigned to the employee is not clearly defined and specified (Muhammad Javed, et al., 2014). Similarly, Rose (2003); Akgunduz (2015) expressed that uncertain role expectations will cause role conflict among employees. For instance, an employee was requested to perform two roles simultaneously or perform one role and prevents the other role (Akgunduz, 2015). Therefore, employees may experience role conflicts when they faced challenges between various demands and their identification of demands (Vandenberghe, et al., 2011). Hence, it is further explained that role stressors such as role conflict increase the stress level of employees (Ali Mohammad Mosadeghrad, 2013).

2.4.1.3 Role Ambiguity

Role ambiguity is referred to a situation when an employee does not know what should be performed in his or her job (Akgunduz, 2015). The role ambiguity occurs when there is a lack of clarity regarding their work role and job scope (Beehr, 1995, as cited in Leung, Chan and Yu, 2009).

Similarly, Muhammad Ridzuan (2014) elaborated that role ambiguity occurs when there is a lack of information regarding the requirement and how the roles are performed by the employees. Ali Mohammad Mosadeghrad (2013) claimed that role ambiguity also increases the stress level of employees. Therefore, it should focus on reducing role ambiguity to diminish role stress effectively. Meanwhile, some studies applied role theory to examine the relationship between role stress and occupational stress (Gupta and Adhikari, 2008, as cited in Sharma and Devi, 2011). The role theory explained that employees experience difficulties in performing their tasks smoothly due to limited resources such as time, energy, and role discrepancies. In short, an employee's role and task scope should be clearly defined, and a management system should be applied to reduce the stress (Ali Mohammad Mosadeghrad, 2014).

2.4.2 Personnel Stressors

Each employee has a different level of stressors resistance which depends on their demographic variables in terms of personal character and cultural background. Demographics involves a variety of elements, such as gender, personal status, age, working experience, education level and other elements (Siti Hawa Mohd Kasmuri, et al., 2020). Everyone will experience different stress levels based on the same issues. It might be stressful for one, but it might not be a big problem for others (Suong, 2020). Carbery, et al. (2003) found that demographic variables such as marital status and education level have a significant relationship in the measures of TI. Furthermore, Huang, Lin and Chuang (2016) expressed that demographic characteristics such as marital status, gender and education level all have impacts on retention strategies.

2.4.2.1 Marital Status

Marital status was assessed in a few previous studies. Marital status is related to OS that results in TI. For instance, Emiroglu, Akova and Tanrıverdi (2015); Carbery, et al. (2003) observed that married employees have a lower TI compared to single employees and this may be because married employees have more responsibilities on financial resources. Thus, it can be expressed that married employees have lower TI due to financial obligations which result in a more stressed situation for employees.

Emiroglu, Akova and Tanrıverdi (2015); Morello, Issa and Franz (2018) also concluded that female employees have far more responsibilities within their families and career, and sometimes they have limited career opportunities. Consequently, it was found that female employee has a higher TI than male employees in their research (Ali Mohammad Mosadeghrad, 2014; Emiroglu, Akova and Tanrıverdi, 2015). On the contrariwise, there is a positive relationship between marital status and TI that married respondents will lead to high TI (Priyashantha, 2019).

2.4.2.2 Education Level

Education level is one of the demographic variables according to previous studies. According to Vanishree (2014), educated employees are more aware of their role which results in reducing role ambiguity and lead to reducing the stress level of employees.

Iqbal (2010), as cited in Emiroglu, Akova and Tanriverdi (2015) explained that educated employees will have higher expectations towards their current employers the company is difficult to fulfil their needs. Thus, it leads to a positive relationship between education level and degree of TI. In the meanwhile, Carbery, et al. (2003) found a direct relationship between education and TI among employees. This is further elaborated that an employee with a lower educational level has lower TI.

2.4.2.3 Working Hours

Dodanwala and Santoso (2021) claimed that the construction industry demands longer working hours due to the physical nature of the task and the characteristics of construction work (Ayodele, Richards and Gonzalez, 2020). This culture happened because there is a limited window of time available for most of the projects (Van de Molen and Hoonakker, 2000). As consequence of the heavy workload, it led to long working hours in order to complete the particular task within the period. Their personal life and physical stress levels are influenced due to long working hours (Leung, Chan and Copper, 2015).

Overtime working is one of the reasons for occupational stress in some studies (Usman Bashir and Muhammad Ismail Ramay, 2010); Muhammad Rashid Badar, 2011; Lingard, 2014). Working hours that exceed 40 hours in seven days and continue for three repeated weeks are defined as overtime (Hasanah, 2016, as cited in Junaidi, et al., 2020). According to Leung, Chan and Cooper (2015), personnel felt stressed due to often being requested to work overtime and criticized for their poor performance. Thus, it is proved that employees who worked for longer hours have a higher level of stress (Rose, 2003). Furthermore, Junaidi, et al. (2020) indicated that working overtime had a positive relationship with TI. This has coincided with Thomas (2015) that 63.33% of employees claimed that the workload will lead to employee turnover in the organization.

2.4.3 Organizational Stressors

An organizational stressor commonly refers to the causes of stress coming from the organization itself (Leung, Chan and Yu, 2009). It is further elaborated that these stressors are concerned with the policy and climate in an organization. For instance, pay level was the highest ranking in the study (Ayodele, Chang-Richards and Gonzalez, 2021) and it is critical stress in which employees respond to their TI (Smith, et al., 2004). Bell, Rajendran and Theiler (2012) and Chae, et al. (2021) disclosed that poor work-life balance is an OS among employees. Additionally, Anderson, Coffey and Byerly (2002) expressed that work to family conflict is one of the OS in the organisation. Thus, organizational stressors included pay level, work-life balance and work-family conflict.

2.4.3.1 Pay Level

Ali Mohammad Mosadeghrad (2014) found that inadequate pay level is the source of occupational stress. It further explained that low income or pay level results from the short employment duration and low hourly payments (Ayodele, Chang-Richards and Gonzalez, 2020).

In the construction industry, employees faced a challenge regarding unpaid overtime even though their workload is extremely high (Lingard, 2004). Pay refers to the essential payment of an employment package which is crucial for construction industry employee turnover (Rojas, 2013; Loganathan and Kalidindi, 2016, as cited in Siti Hawa Mohd Kasmuri, et al., 2020). Thomas (2015) claimed that pay level is a significant factor that keeps an employee in their job since it has been utilized as a fair reward through challenging work (Phayoonpun, 2015). Construction usually demands long working hours which make employee expect a higher salary for the effort they put into their task (Dodanwala and Santoso, 2021). Additionally, pay level can make most employees feel that they are worth more than what they paid (Alex, et al., 2019). Thus, employees would leave the current organization for a job with a better level of pay (Dodanwala and Santoso, 2021). Rojas (2013) evidenced that workers are likely to leave the organization if they received better pay offers from other organizations with the same position offered. It also

summarized that the employee's perception of the organization is better through increment in the pay level (Park, Christie and Sype, 2014). In contrast, there was no relationship between pay and employee turnover (Ali Mohammad Mosadeghrad, 2013).

2.4.3.2 Work-life Balance

Work-life balance is essential in their lives (Bashir Ahmad, et al., 2012; Priyashantha, 2019). It is the most important part for every employee since it can turn into a source of stress (Sharma and Singh, 2016). Work-life balance is crucial in attaining the emotional and mental stability of employees, which leads to organizational efficiency (Nor Siah Jaharuddin and Liyana Nadia Zainol, 2019).

Most employees at the managerial level and non-managerial level experience a work-life imbalance problem (Fadilah Puteh and Haidayati Arshad, 2015). When an organization demands employees complete tasks of two or more people (Smith and Quality, 2009), it will result in longer working hours and yet employees faced an imbalance between personal life and work life. Thus, it caused a work-life imbalance among employees in the organization. An imbalance between work and personal life will cause higher stress levels that might turn into a greater TI (Nor Siah Jaharuddin and Liyana Nadia Zainol, 2019). Fadilah Puteh and Haidayati Arshad (2015); Priyashantha (2019) examined the relationship between work-life conflict and TI and revealed that the employee's leaving decision is associated with work-life conflict. Chiang, Birtch and Kwan (2010), the result outlined that a high working life balance could reduce occupational stress. Besides, Ayodele, Richards and Gonzalez (2020) also stated that work-life imbalances are harmful and dangerous to the nature of the job which led to turnover. It is also further explained that every employee expects a balance between their work and personal life.

2.4.3.3 Work-family Conflict

Employees have fewer work-family resources since they faced serious issues such as the balance between work and family demands (Liu, et al., 2020). Work-family conflict can happen in several aspects between the interference

of work and home management, parenting roles and leisure activities with family (Lingard, 2004). Karatepe (2013) also further elaborated that the stress experienced by an employee at work will bring an impact on their work-life and family life and it turned into work-family conflict. In the same way, Muhammad Ridzuan, et al. (2014) reported that work-family conflict is currently a challenging issue among employees.

Nohe and Sonntag (2014) revealed that work-family conflict increases TI, but the family-work conflict did not predict an increase in TI. Additionally, Rose (2003); Muhammad Ghayyur and Waseef Jamal (2013); Muhammad Ridzuan, et al. (2014); Lu, et al. (2017) concluded that work-family conflict has a significant positive relation to occupation stress. This is because employees who experienced work-family conflict may try to reduce their conflict by deciding to leave their job (Nohe and Sonntag, 2014). As a result, the work-family conflict will lead to voluntary TI (Yang, et al., 2018). In other words, they may apply to another different job to eliminate the work-family conflict. However, Yang (2005), as cited in Phayoonpun (2015); Sug-Ing (2008), as cited in Phayoonpun (2015) revealed that there is no significant between work-family conflict and TI.

2.4.4 Physical Stressors

Physical stressors are environmental causes of stress present in the surrounding environment of employees (Leung, Chan and Yu, 2009). According to Supandi (2017), as cited in Arijanto, et al. (2020), the working environment is the surrounding around work that affect the spirit of an individual in completing his task. Physical stressors refer to the job set such as the design and layout of an office or worksite (Senaratne and Rasagopalasingam, 2016). Leung, Chan and Yu (2009) found that physical stressors such as work environment and home environment have a positive relationship to the stress of employees. However, there is still a lot of organization that did not pay attention to the conditions of the work environment in the company (Pima, Swasto and Prasetya, 2014, as cited in Arijanto et al., 2020).

2.4.4.1 Work environment

Employees in the construction industry often work in different places such as head office and site office (Leung, et al., 2015). As a consequence, the poor environment that affects stress to arise included the working environment in both office and on-site environments of construction personnel (Leung, Chan and Cooper, 2015). Thus, it proved that the office environment affects the stress level of employees, especially young construction personnel.

The environmental elements that are important to employees refer to room temperature, staff density, lighting and noise (Leung, Chan and Yu, 2009; Adnan Enshassi and Eman Al. Swaity, 2014; Leung, Chan and Copper, 2015; Arijanto, et al., 2020). In site environments, employees may expose to high temperatures and excessive noise due to a huge quantity of workers and equipment (Leung, Chan and Cooper, 2015). This brings impact in disrupting employees' memory and attention since they need to work on-site for long working hours. In sum, CIOB (2006) listed the main physical factors that affect occupational stress include inadequate temperature control, lack of privacy, office accommodation and noise level.

2.4.4.2 Home environment

The home environment is a critical component of employees' stress levels. It is one of the basic needs that need to be satisfied to develop higher-order needs (Leung, Chan and Copper, 2015).

Consequently, it is found that a poor home environment has a significant effect on both work and emotional stress levels among employees (Leung, et al., 2018a). In fact, a lot of employees at the managerial level are now working from home due to the COVID-19 pandemic and they spent more time in their living spaces. Thus, it shows the importance of the home environment to employees in construction employees, which fully relates to the traditional person-environment theory. As a result, the working environment brings an effect on TI (Arijanto et al., 2020). Arijanto et al. (2020) mentioned TI occurs if these factors could not make them feel comfortable in the organization.

2.5 Turnover

Employee turnover is a major problem in the construction industry (Chamini and Randeni, 2016). Similarly, turnover is described as a common issue in almost all organizations (Fadilah Puteh and Haidayati Arshad, 2015; Alex, et al., 2019). Chamini and Randeni (2016) defined employee turnover as a rotation of workers in the labour market, jobs and occupations. According to Mayhew (2017), as cited in Alex, et al. (2020), turnover is estimated by the number of employees who leave the organization and the positions are replaced by others. Arokiasamy (2013), cited in Ayodele, Chang-Richards and Gonzalez (2021) also claimed that labour turnover is an important component in human resource management.

2.6 Effect of Turnover on Construction Project

Turnover can cost approximately 33 % of an employee's total compensation (Smith and Quality, 2019). Thus, it is vital to understand the stressors affecting employee TI since it will lead to high costs incurred (Huffman and Olson, 2017). On the contrarywise, a company with low employee turnover can turn up into four-time profits-wise. (Tijani, Jin and Osei-kyei, 2021; Vuleta, 2021).

Moreover, employee turnover may cause monetary and non-monetary costs for a replacement for an employee such as training, recruitment and compensation. Direct turnover costs include recruitment costs, alternative costs, transition costs and training costs while indirect turnover costs include poor performance and construction progress. Arijanto, et al. (2020) stated that TI will lead to increasing costs in an organization such as incurred training costs and recruitment costs by the company. The extra expenses incurred on rehiring activities due to employee turnover include advertisement costs, training costs and supervisory time (Alex, et al., 2019).

Besides, it also provided that the company will face negative events such as an unstable workforce, decreasing employee productivity, and increasing cost of human resources. High employees turnover rates may influence construction companies in terms of productivity and performance (Ugural and Giritli, 2021). Loss of employee talent may lead to delays in construction projects along with the replacement cost incurred. A new employee who replaces the previous employee may not have the same

knowledge and experience to execute the same task (Bilau, 2015). Furthermore, it is elaborated that new employees may lead to accidents or injuries due to their little experience level of the organizational environment. More than that, turnover of an employee may leave increase the workload of existing employees since the replacement of a position may be time-consuming.

On top of these losses, an organization or company need to understand the OS that affect TI to provide suitable and effective strategies to reduce the negative impact due to a high level of TI (Arijanto, et al., 2020).

2.7 Type of Turnover

Turnover can be categorised into voluntary and involuntary turnover (Phang and Teoh, 2021). The different types of turnover happen to employees due to different situations applied.

2.7.1 Voluntary Turnover

Voluntary turnover refers to an employee who has the intention to leave his or her organization (Bebe, 2016). Besides, voluntary turnover is happened due to various reasons or causes that lead to unsatisfaction and unhappiness of employees (Dodanwala and Santoso, 2021). Voluntary employee turnover is widely discussed to identify the causes of employee TI in the construction industry (Ugural and Giritli, 2021). This is because the voluntary turnover of key employees has an impact on construction organizations due to the loss of scarce skills and knowledge of particular employees (Ugural and Giritli, 2021). As a result, the impact of voluntary turnover is harmful to the organization since it may cause a high cost of replacement and a lack of skilled employees.

2.7.2 Involuntary Turnover

Involuntary turnover is defined as when the employee does not have the intention to leave or terminate the job (Dodanwala and Santoso, 2021). Basically, involuntary turnover refers to the meaning of leaving the organisation unwillingly. Rathore and Singh (2020) also described that involuntary turnover is referred to those employees who are not intended to leave such as dismissal, retrenchment and death. Furthermore, employees that

were forced to leave the job or organization are normally due for several reasons such as poor job performance (Bebe, 2016). In some situations, it may be due to economic issues such as COVID-19, which lead to poor performance of the company. For instance, the organisation may need to reduce the number of members for cost savings due to a financial crisis.

2.8 Turnover Intention

Turnover is described as a movement of employees within the organization or company (Rathore and Singh, 2020). The intention is referred to a desire that arises in an individual to take action for something (Arijanto, et al., 2020). In the same way, the TI is also known as intent to quit which is an awareness of leaving an organization (Ngamkroekjoti, Ounprechavanit and Kijboonchoo, 2012; Maslow, et al., 2013, as cited in Dodanwala and Santoso, 2021) and willingness to get a new job outside of the organization (Nor Siah Jaharuddin and Liyana Nadia Zainol, 2019).

According to Chen, Lin and Lien (2011), the definition of TI is a critical issue for personnel management. It is further explained that TI is concerned with employees' feelings. In fact, if employees experience negative emotions, it will lead to a lack of commitment and loyalty which turn into the TI. Despite this, the TI is also known as the frequency of thoughts to leave the job (Tongchaiprasit and Ariyabuddhiphongs, 2016). Hence, the intention to leave is the strongest predictor of the actual turnover (Gregory, et al., 2007, as cited in Moehanah, 2015). Ahmad Faisal Mahdi, et al. (2012) indicated that TI among employees is more useful and practical to predict in the study. The turnover rate of employees will be mainly calculated based on the level of occupational stress among employees (Muhammad Javed, et al., 2014). Thus, TI may lead to making a clearer procedure of turnover and predicting before it turns into an actual turnover.

2.9 Occupational Stress-Turnover Intention Relationship

Occupational stress is recognized as a cause of TI (Zhang and Lee, 2010; Suong, 2020; Yukongdi and Shrestha, 2020). Many attempts have been made, including Ahmad Faisal Mahdi, et al. (2012); Ali Mohammad Mosadeghrad (2014); Waspodo, Handayani and Paramita (2013) in order to explore the

correlation between stress and TI. Additionally, Chen, Lin and Lien (2011) suggested that TI is a critical and challenging issue for personnel management. Stressors that influence employee turnover in the construction industry have been explained by conducting a systematic review approach (Ayodele, Chang-Richards and Gonzalez, 2020).

Suong (2020) investigated the effect of stress on the intention to leave his or her job. The result illustrated a significant relationship between work pressure, time pressure, relationship pressure and TI. This study also highlighted that the stress level of a job is directly proportional to the employee's TI. However, a widely accepted cybernetics theory of stress suggested that it is not every individual who suffers from occupational stress will lead to TI (Edwards, 1992). In addition, employees with occupational stress positively affect TI (Karatepe and Baddar, 2006; Ali Mohammad Mosadeghrad, 2013; Tongchaiprasit and Ariyabuddhiphongs, 2016; Arijanto, et al., 2020). Similarly, Wang (2014) mentioned that employees who experienced a high level of occupational stress have a higher intention to leave their job. Ahmad Faisal Mahdi, et al. (2012) also claimed that an unsatisfied expectation may cause occupational stress which led to higher TI.

From a viewpoint of task stressors, about 63.33% of employees mentioned that the workload will lead to an increase in employee turnover (Thomas, 2015). An increase in workload may result in TI (Karatepe, 2013). Chen, Lin and Lien (2011); Nair, Lim and Aik (2016) expressed that role factors such as role overload, role conflict and role ambiguity contribute to the stress of employees which will lead to TI. Similar studies also revealed that investigated the effect of role stressors and TI which have resulted in a significant effect between them (Hang-Yue, Foley and Loi, 2005; Leung, et al., 2005). Muhammad Javed, et al. (2014) also investigated the relationship between role conflict and occupational stress toward the TI. This study also proved that role conflict is positively affecting TI. Similarly, there is a significant relationship between role conflict and TI. (Muhammad Javed, et al., 2014).

From a viewpoint of personnel stressors, many studies have tested the significant relationship between demographic variables towards TI in the literature. For instance, Carbery, et al. (2003) and Emiroglu, Akova and

Tanriverdi (2015) revealed that marital status will lead to lower TI while Emiroglu, Akova and Tanriverdi (2015) and Ali Mohammad Mosadeghrad (2014) show that marital status leads to higher TI. More than that, Junaidi, et al. (2020) and Thomas (2015) concluded that working overtime had a positive relationship with TI. Leung, Chan and Cooper (2015) declared that stress due to working overtime will lead to a decrease in performance but an increase in intention to quit. Thus, a high turnover rate occurs when the organization have not provided a proper schedule and flexibility to the employee (Muhammad Javed, et al., 2014). According to Mosadeghrad and Ferdosi (2013), as cited in Alex, et al. (2019), an employees' qualification and experience have a significant relationship with employee turnover. It illustrates that education level is significant to the TI of employees.

From the viewpoint of organizational factors, there is a positive connection between work-life conflict and TI (Priyashantha, 2019). In other words, the work-life conflict is directly proportional to intention. Similarly, Nor Siah Jaharuddin and Liyana Nadia Zainol (2019) proposed that work-life balance is correlated with TI. Furthermore, various studies tested work-family conflict and TI (Muhammad Javed, et al., 2014; Nohe and Sonntag, 2014). The work-family conflict will result in poor performance and high TI (Karatepe, 2013; Nohe and Sonntag, 2014). Surprisingly, work-family conflict illustrated a non-significant relationship with TI in this study which is contrary to other studies conducted. (Muhammad Javed, et al., 2014). Other than that, Ali Mohammad Mosadeghrad (2014) and Thomas (2015) conducted their study which result shows a significant relationship between employees' income and their intention to quit.

From the viewpoint of physical stressors, factors such as working environment and employees turnover are negatively impacting on turnover rate (Chamini and Randeni, 2016). Leung, Chan and Yu (2009) found that physical stressors such as work environment and home environment have a positive relationship to the stress of employees which will lead to TI. According to the study by Alex, et al. (2019), the working environment is linked to employee turnover and the working environment is proved in a negative relationship with employee TI. In short, the working environment brings an effect on TI (Arijanto, et al., 2020).

All of the stressors mentioned above have been investigated in previous studies, however, there is limited information on the construction industry. Hence, the relationship between the OS and TI will be investigated among employees in the construction industry. The identification of the critical factors affecting TI is important in providing an alternative solution to reduce the effect of employee turnover (Ayodele, Chang-Richards and Gonzalez, 2021).

2.10 Strategies to Reduce Stress and Turnover Intention

84% of the construction professional stated that stress in the construction industry is due to poor retention levels (CIOB, 2006). Thus, it is very important to take action for stress management and apply retention strategies. This study called into strategies on how to overcome TI arise among employees and it provided a strong analysis of the factors (Muhammad Javed, et al., 2014).

2.10.1 Employee's Retention Strategies

In Malaysia, labour shortage and high turnover rate in the construction industry is a critical issue that has highlighted the significance of retaining employees for organizational success and the future. Employee retention is defined as an effort of an organization to motivate employees by using their techniques. From the managerial perspective, the retention of high-quality employees is very significant in recent years. The importance of retention for employees is different for every industry and country.

Base pay and salary are the top reason for an employee to stay. It is a major problem since employees are expected to have a higher level of salary which is beyond the organization's capability (Mahadi, et al., 2020). Every organization has its salary budget for the employees which means the salary can be raised to certain limits. Thus, fairness of pay is a consideration or way to retain employees. Pay is not only about money, but also a key resource that motivates people (Dias, 2012). It is further explained that there are two types of pay factors which includes internal pay factors and external pay factors. Internal pay considerations include the employer's ability to pay, types of organization, the value of employees and job position while external pay

considerations include the current economic status (Dias, 2012). This study also demonstrated that many organizations do not have a standard process for their pay plans which may result in unfairness. A communication strategy should be implemented in the organization since the employees have the right to know how the organization determine their pay rates. Furthermore, transparency in the pay level and allowing communication within the process help in the retention planning process. Thus, a standard and fair process and communication within pay level are important in retaining employees.

62% of organizations have a written and documented compensation policy for their employees (Scott, 2011). Compensation is more than the regular salary offered to the employee by an employer in exchange for what the employee had performed for the organization (Mahadi, et al., 2020). A compensation package includes regular pay, commission, bonuses and other benefits such as insurance and retirement schemes. Compensation plans should be attractive to retain current employees, otherwise, it will more likely result in poor company performance and a higher turnover rate among employees (Dias, 2012). In addition, this study further elaborated that the company should review its compensation and benefits package if it no longer matches the core values of an organization. According to the Bureau of Labour Statistics (2011a), 62% of companies or organizations provided health-care benefits to their employees in 2010. Medical insurance would be attractive to construction personnel since there are a lot of hazards that could be happened in the on-site environment. In other words, a proper compensation plan can increase the loyalty and organizational commitment among employees.

A mentoring programme integrated with a feedback system should be developed to provide a strong foundation for employee retention and growth. Organizations can pair the less experienced person with more professional and experienced personnel with a specific goal developed. This can provide opportunities for both the person in improving communication and gaining experience (Mitchel, 2007). Senior leadership is an important determinant for retention from an employee's respective view (Mahadi, et al., 2020). This is because an employee can get feedback from their mentor in terms of their performance. Employers need to give feedback to each employee so that the employees can bring more effort to the expectations set by the company. It

also prevents employees from putting effort in the wrong direction (Quarles, 2007). Meanwhile, having a good relationship with their supervisor will positively be related to their intention to stay in the organization. Besides, the roles of employees can be clearly defined and assigned when they frequently communicate with their mentors. It results in reducing the role stress of employees. In contrast, poor leadership in an organization will lead to a higher stress level for employees which decreases employees' motivation and increases intention to leave the organization (Mahadi, et al., 2020).

Career development opportunities are positively related to the retention of employees (Alex, et al. 2019). It is further explained that career development opportunities also referred to being promoted to a higher level of responsibility or position (Mahadi, et al., 2020). In order to strengthen the bond with employees, the organization must focus on the development of employees (Muhammad Irshad and Fahad Afridi, 2015). Additionally, it is supported that employees with high commitment levels will have less TI. This is because every employee will look forward to achieving their goals and objectives. Therefore, recruiting from the internal organization can reduce the impact of employee turnover since the employees may be discovered that they are a good fit within the organization. The employer can provide a better career opportunity to current employees instead of outsiders which motivates their current employees at the same time. Thus, career development is a mutually beneficial process for both employers and employees.

In addition, a training programme or workshop can help the construction professional in self-growth. It is also further explained that the trained employees will get motivated in work and the overall performance of the organization can be improved if the company highly invest in the training and development programs for the employees. Training enhances the skills of employees (Muhammad Irshad and Fahad Afridi, 2015). Besides, it is proven that a lack of training sessions for employees will lead to an increase in stress levels (Adnan Enshassi and Eman Al. Swaity, 2014). For instance, the implementation of a work-life balance training program serves the personal interest and professional development which can result in enhancing productivity at work (Dias, 2012). Thus, training constructional personnel by

understanding the importance of work-life balance is a key solution as a retention strategy.

According to the Bureau of Labor Statistics, there were 3.3 million injuries, and 4,340 fatalities were reported (Bureau Occupational Safety and Health Administration (OSHA) has a mission to ensure a safe working environment for employers by providing external training to all companies on OSHA standards. (Dias, 2012). Construction employees should have a good understanding of the safety law and safety awareness when working on the construction site. Thus, safety training is to ensure the safety of the employee which protected them from injuries caused by work-related incidents. Furthermore, team training can be described as a process that inspires the team member to improve in decision making and problem-solving (Dias, 2012). Teamwork is an innovative and effective solution; however, teamwork is very time-consuming and difficult to make a decision (Van der Molen and Hoonakker, 2000). Team building workshop and teamwork training also could help in increasing trust among employee which reduce workload and avoid role conflict. Other than that, training employees can improve the communications between employees and the company, yet the employee will be motivated (Dias, 2012).

2.10.2 Stress Management

According to Bureau Occupational Safety and Health Administration (OSHA), stress is defined as a health hazard at work (Dias, 2012). Improvements in company policy and compensation will retain an employee in short term (Mahadi, et al., 2020). Thus, in order to retain employees in long term, the organization should implement stress management strategies for each employee.

According to Sungoh (2021), biological coping skills can be used in stress management since stress may occur due to a lack of sleep. For instance, employees need seven to eight hours of sleep every day. According to a survey among Malaysian employees, there are 90% of employees do not have a balanced diet and 42% of employees are either overweight or obese. Additionally, employees should avoid consuming stimulants such as alcohol, nicotine and caffeine before their bedtime. Eat healthy meals become one

important and necessary healthy practice for everyone since good nutrition will improve the immunity system healthier. Moreover, exercise such as walking, running, swimming even playing with family members can help in burning out some calories.

Working environment is one of the retention strategies (Muhammad Irshad and Fahad Afridi, 2015). By developing environmental coping skills, construction companies need to provide a very comfortable environment and surrounding to employees such as sufficient space and a clean environment (Sungoh, 2021). It is further explained that sufficient space is important due to the classification and arrangement of records for all previous projects should be kept properly (Leung, et al., 2015). It is impossible to control the noise level on construction sites, however, the sound insulation material can be used to minimize the noise that could affect the employees. Besides, a study found that light and noise are factors that disturb the working environment which may be harmful to employees' psychological and physical welfare (Muhammad Irshad and Fahad Afridi, 2015). It is also demonstrated that a good and positive work environment will increase the intention to stay as they feel that they are valued in the organization. Thus, an organization can reduce the intention to leave employees by providing a comfortable and safe working environment.

In addition, stress management workshops should be provided to employees which help in reducing the turnover rate. For instance, the implementation of creative work-family management in a “win-win” manner considers the demands of both workers and the organization (Liu, et al., 2020). For instance, the organization can provide training or workshop based for the entire project team since cross-training based can improve the multi-tasking skills of workers. Furthermore, an organization can provide employees more support such as counselling and child-care arrangements which may reduce their work-family conflicts and role overload (Hang-Yue, Foley and Loi, 2005).

From the occupational stress point of view, an organizational policy that suits every employee is very important in reducing stress levels. Flexible working hours may create a balance between an employee's personal life and family matter (Muhammad Javed, et al., 2014). Furthermore, work-life balance

strategies should be implemented so that employees can prioritise their free time and manage personal time. It is stated that employees should have a list or plan such as a to-do list because this can help them to combine similar tasks which leads to time-saving. In the same way, an organization should make sure the roles of employees for each project are assigned (Leung, et al., 2015). It is expressed that organizations should frequently review or relocated their task to balance their workloads.

Silva, Samanmali and Silva (2017) highlighted that stress management facilities are important for employees. For instance, health facilities at the site are important for curing physical illness. Meanwhile, a qualified counsellor can take care of mental illness employees. Similarly, proper counselling programs are important to control the effects of stress. By considering the issues of occupational stress, the stress assistance programme can be designed by qualified personnel.

In order to implement stress management strategies, some measures and solutions can be proposed to the problem of OS to reduce stress levels and TI. For instance, strategies to cope with OS should be developed, such as training employees in overcoming stress techniques, time and stress management, communication skills and teamwork (Akgunduz, 2015; Hang-Yue, Foley and Loi, 2015).

2.11 Proposed Conceptual Framework

Figure 2.1 shows the conceptual framework proposed consists of both independent and dependent variables. The types of OS, also known as independent variables in the study are task stressors, personnel stressors, organizational stressors and physical stressors, whereas TI is perceived as the dependent variable.

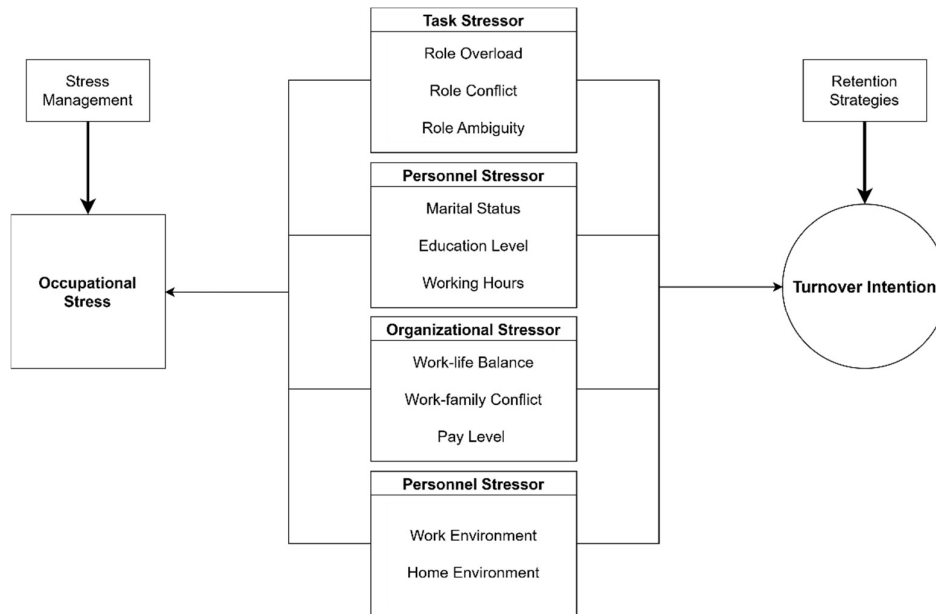


Figure 2.1: Proposed Conceptual Framework.

2.12 Conclusion

In short, this chapter discussed the literature review from previous studies and revealed the relationship between OS and TI. After reviewing the previous research, it can be concluded that four types of OS may influence TI which include Task stressors, Organizational stressors, Personnel stressors and Physical stressors. Meanwhile, the previous studies indicated that TI brings significant impacts to the construction project. However, preventive strategies such as retention strategies and stress management strategies are reviewed in this chapter to reduce the existence of TI among employees.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

Research is defined as a practice that adopted a systematic approach to discovering an outcome that increases knowledge (Saunders, Lewis and Thornhill, 2016). From the perspective of design science, the core objective of educational management research is to develop knowledge to solve an organizational problem. Moreover, the research consists of collecting data systematically with a purpose developed in which the data collected from various sources will be gathered in a particular document with the sources listed along with the data presented (Saunders, Lewis and Thornhill, 2016). In addition, research is any systematic review carried out to deliver information for resolving the problem such as reporting, explanatory and predictive studies (Cooper and Schindler, 2014).

3.2 Research Method

Research methods consist of the methods of data collection and analysis (Creswell and Creswell, 2014). Types of research methods include the quantitative method, qualitative method mixed-mode method and triangulation method. Table 3.1 shows the characteristics of each type of research method.

Table 3.1: Types of Research Method.

Types of Research Method	Concept	Question	Data analysis	Interpretation	Suggested Philosophy	Sources
Quantitative	Theory to data	Instrument based question	Statistical analysis	Statistical Interpretation	Positivism, Pragmatism, Postmodernism	Creswell and Creswell (2014)
Qualitative	Data to theory	Open-ended questions	Text and image analysis	Themes, patterns interpretation	Interpretivism, Pragmatism	Creswell and Creswell (2014)
Mixed Method	Both qualitative and quantitative	Both instrument-based questions and open-ended questions	Both statistical analysis and text and image analysis	Both statistical and patterns interpretations	Pragmatism	Creswell and Creswell (2014)
Triangulation Method	Half qualitative and half quantitative	Half instrument-based questions and half open-ended questions	Half statistical analysis and half text and image analysis	Half statistical and half patterns interpretations	Critical realism	Sekaran and Bougie (2016).

3.2.1 Quantitative Research

Quantitative research is a method for analysing hypotheses by investigating the relationship among variables (Creswell and Creswell, 2014). According to Cooper and Schindler (2014), quantitative research challenged specific measurements of some things and predicted consumer behaviour, understanding, judgment or attitudes. Bias in quantitative research can be avoided due to the limited involvement of the researcher. The purpose of quantitative research is to collect data that provide a thorough explanation of events, circumstances and interfaces between people and things based on theory (Cooper and Schindler, 2014). Furthermore, the researcher normally interprets the data collected without contact with the participants.

Besides, it entitles to involve a large sample size however this could lengthen the data collection and research process. The statistical procedures can be used to analyse numbered data (Creswell and Creswell, 2014). It is explained that the analysis can be ongoing during the project and maintain a clear difference between facts and judgement during the data analysis stage. Quantitative data comprise participant reactions that are coded, categorized, and numbered so that they may be controlled by arithmetical analysis (Cooper and Schindler, 2014). Thus, the final report has a set consisting of an introduction, literature, methodology, analysis and conclusion. Moreover, there are assumptions about deductive theories assessment by controlling for alternative explanations in quantitative research (Creswell and Creswell, 2014).

3.2.2 Qualitative Research

Qualitative research is a methodology for discovering and identifying the value individuals or groups attribute to a social or human problem (Creswell and Creswell, 2014). It is intended to describe how the procedure is and why things occur (Cooper and Schindler, 2014). According to Saunders, Lewis and Thornhill (2016), this technique is adopted in both the data collection and data analysis stages in which it intends to develop an awareness of a situation according to the research questions. Moreover, qualitative research illustrates the terms with the meaning which naturally happening events in the social world. Qualitative research collects and interprets data from a selection of

sources such as individuals, organizations, texts, backgrounds and environment, media and incidents (Cooper and Schindler, 2014). It is suggested that it consists of the high involvement of the researcher in order to provide in-depth understanding. For instance, a researcher may observe the interview questions and add interpretation of information during the interviewing process.

Besides, it has a small sample size that makes the data collection process faster which directly shortens the feedback period and data analysis period. In data analysis, it adopted human analysis followed by computer since it is primarily non-quantitative (Cooper and Schindler, 2014). Qualitative data is about a text, thorough descriptive of incidents and situations which may consist of transcription of video and interview. The data is typically collected in the participant's setting, inductive data analysis building from details to common ideas while the researcher interprets the meaning of the data which makes the final written report have a flexible arrangement (Creswell and Creswell, 2014). By conducting group and individual interviews, the qualitative data consists high level of security and it has been conducted in a highly secure environment.

3.2.3 Mixed Method

Mixed methods research is a method to review both quantitative and qualitative data collection, and data of mixed methods (Creswell and Creswell, 2014). In other words, mixed method research is a combination method that combines both quantitative and qualitative methods and analytic procedures unequally (Saunders, Lewis and Thornhill, 2016).

This method uses different designs that may require theoretical assumptions and frameworks. A combination of qualitative and quantitative data produces a deeper understanding instead of the information provided by one method alone because it combines the qualitative and quantitative data through different types of research design (Creswell and Creswell, 2014). For instance, one database can examine the other database in terms of accuracy or validity. Similarly, both data can explore different types of questions and

receive different responses from the participants. In other words, a mixed method can provide a better insight into the data collected.

3.2.4 Triangulation Method

Triangulation is a combined method that may be used if the results from one approach equally validate the results from the other approach (Saunders, Lewis and Thornhill, 2016).

Triangulations methods have equally good quantitative data methods and qualitative data methods in which they decrease the biases that may come from any single method (Hales, 2010). This type of triangulation method is very similar to the mixed method. However, it emphasises the data collection through various methods as opposed to data collected for different locations and populations. Furthermore, it is described that the triangulation method is used to collect both the quantitative and qualitative data in the same phase and it has been collected equally in both methods (Saunders, Lewis and Thornhill, 2016). In the same way, it highlighted the strength and weaknesses of the different methods.

3.3 Research Philosophy

Research philosophy is described as a system of principles and theories on the enhancement of knowledge (Saunders, Lewis and Thornhill, 2016). Several types of assumptions will be made by undertaking the research such as Ontology, Epistemology and Axiology. According to Saunders, Lewis and Thornhill (2016), Ontology assumption is about the nature of truth while Epistemology is emphasized human knowledge. Meanwhile, Axiology is the role of values in the research process. Familiarising with research philosophies can help researchers consider values and beliefs about research conducted (Saunders, Lewis and Thornhill, 2016). The understanding of different research philosophies helps in explaining the reason for choosing qualitative, quantitative, triangulation and mixed methods for the research (Creswell and Creswell, 2014). Thus, research philosophies which include positivism, critical realism, interpretivism, post-modernism and pragmatism are further explained.

3.3.1 Positivism

Positivism is related to natural scientists which involves working with a visible social reality to produce observable and measurable facts such as law-like overviews (Saunders, Lewis and Thornhill, 2016). Positivism assumption symbolized the traditional form of research which stand for quantitative research rather than qualitative research (Creswell and Creswell, 2014).

Besides, positivism normally uses existing theory to develop a new hypothesis for further research. The problem studied reflects the importance to identify and examining the causes that influence the outcomes of an experiment (Creswell and Creswell, 2014). It intended to reduce the ideas into small and critical ideas to be investigated. For instance, natural science has been created from an engagement with the world by collecting data and observations made based on hypotheses being formulated (Saunders, Lewis and Thornhill, 2016).

Furthermore, positivism ensures accurate knowledge and emphasises strictly scientific methods designed to generate data. It is normally adopted a highly structured methodology and quantitative method of analysis. For instance, science and scientific research are the methods to get the truth as positivists believe that there is an empirical truth out there (Sekaran and Bougie, 2016). A previous study indicated that the cause and effect that researchers can detect is being used to operate the world. However, positivism does not relate to any human interpretation or bias.

3.3.2 Pragmatism

Pragmatism is a worldview that arises from behaviours, circumstances, and outcomes rather than predecessor conditions (Creswell and Creswell, 2014). Pragmatism declares that concept is only relevant where they support action (Saunders, Lewis and Thornhill, 2016).

Pragmatism research emphasizes the research problem and question and uses all approaches available to understand the problem (Creswell and Creswell, 2014) and promote practical solutions (Saunders, Lewis and Thornhill, 2016). It is further explained that pragmatism focuses on practical, applied research where different perspectives on research for problem-solving

and informed future practice as a contribution. Pragmatism research commenced and was experienced by researchers with doubts and beliefs while the method adopted depends on the research problem and research questions. Additionally, researchers are allowed to choose the methods and techniques of research that best fit their requirements and purpose (Creswell and Creswell, 2014). Therefore, the practical effect of ideas and knowledge is valued for facilitating actions to be carried out effectively.

Moreover, pragmatism emphasizes the socially constructed nature of research however every researcher may have different opinions and explanations for the problem (Saunders, Lewis and Thornhill, 2016). It is further discussed that these different perspectives and ideas help to obtain a vision of the world. Furthermore, pragmatists acknowledge that there are many few ways of interpreting the world and undertaking research that nothing can ever give the whole picture and that there may be multiple truths.

3.3.3 Interpretivism

Interpretivism is known as constructivism (Creswell and Creswell, 2014), which is utilized as a criticism of positivism but from a subjectivist perspective (Saunders, Lewis and Thornhill, 2016). Besides, the purpose of interpretive research is to create different understandings and interpretations of social worlds and perspectives that emphasize narratives, stories, perceptions and interpretations.

Researchers are part of what is researched since he or she is the interpretations key to contribution (Saunders, Lewis and Thornhill, 2016). Subsequently, it is suggested that interpretivists are crucial to discovering significant worldwide laws that apply to everybody. Interpretivism underlines that human is different from physical phenomena since they create meanings. They believed that individuals with different existing variables such as cultural background, circumstances and time will make different meanings that can create different social realities (Saunders, Lewis and Thornhill, 2016). Therefore, interpretivists focus on a specific context such as their backgrounds to understand the historical and cultural setting of participants (Creswell and Creswell, 2014). Furthermore, interpretivism researchers try to focus on this

complexity by gathering what is important to their research participants. Thus, the questions become wide-ranging so that the participant can construct the meaning by answering the more open-ended questioning (Creswell and Creswell, 2014). Exploration of the social world of the research contributors and recognising that world from their perspective is very challenging (Saunders, Lewis and Thornhill, 2016). Variations that make an organisation complex are not simply restricted to different organisational roles. Similarly, the interpretations of an item could be different due to the difference between historical or geographical contexts.

Furthermore, the individual developed the various meaning of their experience which led the researcher to explore the complexity of views instead of narrowing meaning into a few categories. Additionally, interpretivism argues that exploration cannot be studied using the same method as physical phenomena. (Saunders, Lewis and Thornhill, 2016). In short, interpretivism is normally seen as a method of qualitative research (Creswell and Creswell, 2014). Qualitative researchers use open-ended questions so that the participants can share their views and opinions. The process of this research is inductive since the meaning generated from data collection is done by the questioner.

3.3.4 Postmodernism

Postmodernism concentrates on the character of language and power relations (Saunders, Lewis and Thornhill, 2016). Instead of considering the organisational world as constituted by things and entities, it focuses on the continuing procedures of managing, supervising and ordering that represent such individuals.

Undertaking this postmodernism challenges organisational concepts and beliefs and seeks to determine what perceptions and truths they ignore and whose importance they provide (Saunders, Lewis and Thornhill, 2016). It is indicated that they believed that any systematic arrangement is temporary and can only be made through our language in terms of categories and classifications. This is because they think that language is always incomplete and insufficient. Other silenced perspectives are potentially valuable and have

the power to create alternative worlds and truths. Under postmodernism, it is open to any form of data which includes texts, conversations, voices, numbers and images. It undertakes an in-depth investigation of phenomena by focusing on absence and silence meaning, interpretations and voice.

Moreover, it recognised that power relationships between researchers and research topics shape the information created within the research process. It is stated that its introduction of power relations and challenge of major views is a contribution (Saunders, Lewis and Thornhill, 2016).

3.3.5 Critical realism

Critical realism is a form of research philosophy, known as direct realism (Saunders, Lewis and Thornhill, 2016). It is further described that this philosophy focuses on the concept “what you see is what you get”, which means the structure of reality shapes the observable events. Furthermore, critical realism is a mixture of faith in an external truth with the rejection of that independent measurement for external truth (Sekaran and Bougie, 2016).

Critical realism is claimed as two steps to understanding the world, for instance, there are phenomena and incidents we experienced, and it leads to a mental process that goes on sometime after the experience (Saunders, Lewis and Thornhill, 2016). Therefore, it focuses on justifying observable organizational outcomes by looking for the underlying causes through daily social and organizational life. Furthermore, it also illustrated that reality that is categorized into external and independent is the most critical factor, however, it does not directly reachable through the examination of research (Saunders, Lewis and Thornhill, 2016). Critical realism is crucial to understanding the world with confidence since critical realism consists of an in-depth historical analysis of existing structures and evolving organizations that cannot be reduced to statistical data collection and quantitative methods. Thus, a range of techniques and types of data need to fit the subject matter.

In this critical realism, researchers need to minimise bias and errors by conducting value-laden research (Saunders, Lewis and Thornhill, 2016). This is because they believed that researcher in critical realism is biased. Thus, triangulation is suggested to be used among various techniques and researchers

can understand better the incidents happening around us (Sekaran and Bougie, 2016).

3.4 Research Approach

According to Cooper and Schindler (2014), a deduction is defined as a form of argument that seems to be conclusive. It is further explained that these reasons are said to support the conclusion and act as proof. A deductive approach is used when the study developed a theoretical or conceptual framework which is subsequently tested using data (Cooper and Schindler, 2014). In other words, if the study is conducted to test a theory that is often developed from the literature review, it is using a deductive approach. The deduction is more focusing on natural science research.

An inductive approach is defined as an approach that explores the data and the conceptual framework did not start with any predetermined theories (Saunders, Lewis and Thornhill, 2016). An inductive approach is deemed to be used if the research starts with collecting data and generating a theoretical framework. This approach is not encouraged without a competent knowledge of the literature in the research area and the conclusion made should be supported by the observation made (Saunders, Lewis and Thornhill, 2016).

An abduction approach is a to and fro between a deductive approach and an inductive approach in which it begins with a surprising statement or conclusion. If the study starts with collecting data to explore phenomena and generate and modify an existing theory, it is using an abductive approach. The abduction approach required a longer period of data collection and analysis which lead the ideas to have to emerge gradually.

In short, there are three types of approach developments which include the deduction approach, induction approach and abduction approach. The deductive approach emphasizes using data for theory, contrast wise, the inductive approach focuses on using data to develop theory (Saunders, Lewis and Thornhill, 2016).

3.5 Justifications of the selected Research Method and Philosophy Research

Pragmatism focuses on applied research where different viewpoints on research for solving issues and contributing to future practice (Saunders, Lewis and Thornhill, 2016). Pragmatism research was used for this study so that the TI among employees could be explored on a deeper level. Pragmatism helps in exploring how an individual in the construction industry feels and experienced, acting is shaped. Therefore, it applies to this study since the study aims to investigate the impact of OS on employee TI in the Malaysian construction industry. In other words, this study will focus on the correlation between OS and TI. Besides, it also tested the relationship between OS and retention and stress management strategies which is to evaluate effective retention and stress management strategies to be implemented in the organization. This will be beneficial for each of the organizations and society in the construction industry.

The deduction approach holds several important characteristics such as it is commonly applied to investigate a causal relationship between variables (Saunders, Lewis and Thornhill, 2016). The data collection is used to evaluate propositions or hypotheses related to an existing theory. Moreover, the concept of theory to data is applied in the deduction approach. In this study, a theoretical framework can be developed between the OS and TI will be investigated to obtain the findings on how OS affect the TI among employees. By using the deductive approach, the study could be completed in a shorter period since the data collection is conducted once. Furthermore, the deductive approach is usually associated with quantitative research, where the focus is on using data to test the theory.

In quantitative research, the issue is best addressed by understanding what factors or causes influence an outcome (Creswell and Creswell, 2014). Thus, the quantitative method is adopted in this study. The statistical data will be measured and analysed by statistical and graphical techniques to obtain the finding. The quantitative method is appropriate to obtain the findings that show the result in which OS affect the TI the most and what is the relationship between them. A similar study on a similar topic, factors affecting staff TI

conducted by Alex, et al. (2019) adopted quantitative research and closed-ended questionnaires for the data collection. Furthermore, the use of the quantitative method is advantageous because it is a flexible approach to data collection. The comparison between stressors can be conducted easily by collecting quantitative data.

In summary, pragmatism is the most suitable philosophy in this study while the deductive approach and quantitative method are advantageous in this study.

3.6 Research Design

Research design is the blueprint for achieving objectives and answering questions (Creswell and Creswell, 2014). A research design is the techniques or planning by which the plans are to be carried out (Cooper and Schindler, 2014). Figure 3.1 illustrates the research design of this study.

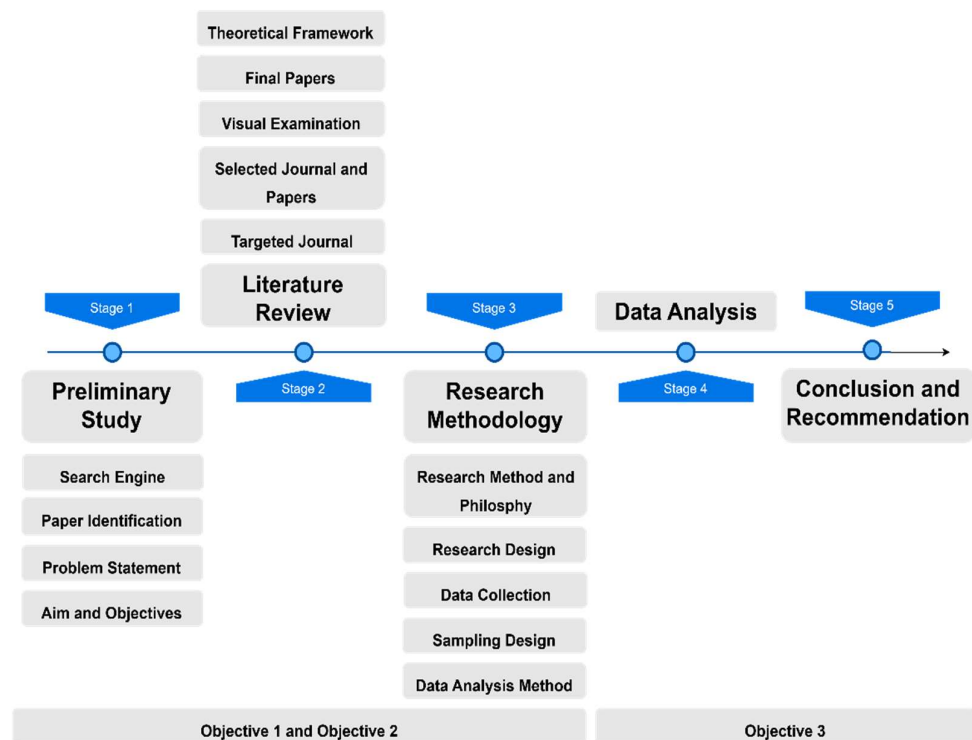


Figure 3.1: Research Design.

In the preliminary study, it is vital to spend time formulating and clarifying the research topic of the study (Saunders, Lewis and Thornhill, 2016). A research problem is a topical issue that leads to the need for a study

(Creswell and Creswell, 2014). Therefore, a database and topical news article were accessed to understand the related issues and problems before designing the study. For instance, it was found that Sin Chew Daily articles reported on the recent labour shortage issues in the Malaysian construction industry due to turnover. Besides, it was discovered that occupational stress is a factor in the TI of employees. In the following, the process of paper identification was carried out through popular academic search engines such as Google Scholar, ResearchGate, Science Direct and SAGE Journals. It was carried out based on a search of keywords, online websites, books and academic journals. Chapter 1 started with a brief introduction of the construction background, TI and OS after all the ideas and information have been scanned and studied. After that, it is followed by an explanation of the impact of OS and TI on the organization.

A research gap was discovered during the reviewing process. The previous studies indicated that occupational stress is a factor that arises TI among employees. Few studies explored the types of OS such as personnel stressors, organizational stressors, physical stressors and task stressors. However, there are limited studies that show the relationship between OS and the TI of employees. Furthermore, the existing studies have only concentrated on the factors of TI instead of focusing on the impact of OS on TI. Thus, this study would investigate the impact of OS and TI among employees in the Malaysian construction industry in order to provide stress management strategies and retention strategies related to the construction industry. These strategies play an important role since human capital is a crucial capital in the construction industry. This research gap and topical issues were illustrated in the problem statement to indicate the importance of this study.

Next, the aim and objectives are formed in this study. The purpose of this study is to study the potential of occupational stress triggering turnover intention in the Malaysian construction industry and suggest effective retention and stress management strategies. This aim can be achieved by fulfilling three objectives (1) to identify the stressors of occupational stress in the construction industry, (2) to investigate the relationship between occupational stressors and turnover intention in the construction industry and (3) to propose retention strategies and stress management strategies in the

construction industry. The three objectives will be achieved as per the process depicted in Figure 3.1.

It is followed by the critical literature review which only accessed publications that is relevant such as occupational stress and TI in organizations and gathered all related journal articles. The targeted journal and papers that were beneficial to the study will be selected by carrying out a critical literature review. The journal articles are obtained from Google Scholar, ResearchGate, Science Direct and SAGE Journals. Subsequently, the independent variables and dependent variables of the study have been identified. Among various types of OS, the independent variables are narrowed down to Task Stressors (Work Overload, Role Ambiguity and Role Conflict), Personnel Stressors (Marital Status, Education Level and Working Hours), Organizational Stressors (Work-life Balance, Work-family Conflict and Pay Level) and Physical Stressors (Work Environment and Home Environment) while the dependent variable is TI. The literature review is carried out to examine all these variables to provide a basic understanding of this study. Figure 3.2 shows the literature review process.

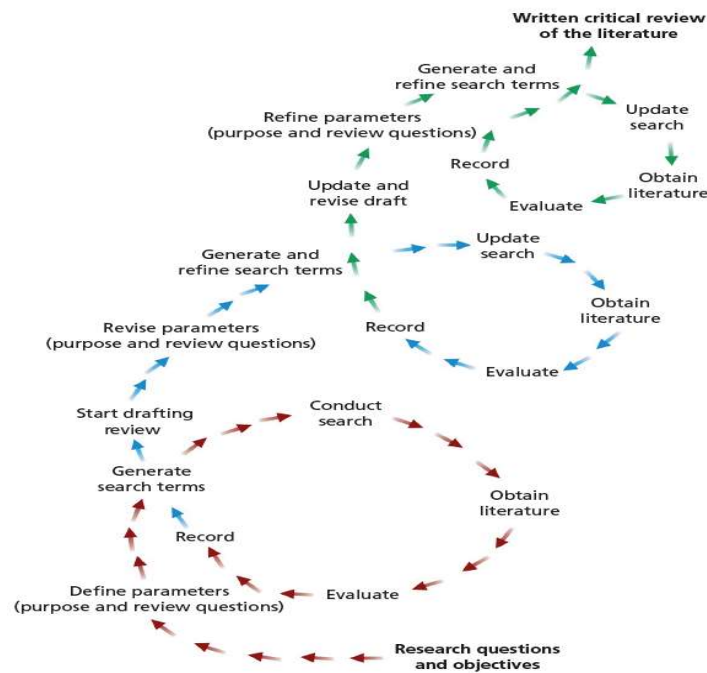


Figure 3.2: Literature Review Process.

(Source: Saunders, Lewis and Thornhill, 2016).

Before the study elaborated on these types of stressors, an explanation of the stress and their impact on employees and the organization is provided. The types of stress include physical stress, emotional stress and occupational stress while the impact on health and performance such as TI has been discussed. After that, types of turnover and their impact on the construction project were discussed meanwhile the relationship between occupational stress and TI in existing studies is reviewed. Lastly, the stress management strategies and retention strategies are reviewed and explained from the construction industry perspective. A theoretical framework of this study is proposed to illustrate the process of this study.

A research methodology was discussed before selecting the suitable research method for this study. This chapter discussed the types of research methods and research philosophy to provide in-depth understanding through literature reviewing. The research method such as quantitative method, qualitative method, triangulation method and mixed method was explained while research philosophy such as positivism, pragmatism, interpretivism, postmodernism and critical realism was reviewed and analysed in order to select the most suitable method and philosophy in this study. To achieve the aim of the study, pragmatism philosophy and quantitative method are adopted to study the correlation between each OS and TI, which includes the impact of OS on TI. Besides, the research design of this study is formulated by describing the whole process of the study.

The data collection method depends on the objectives, research question, and research tactics (Sekaran and Bougie, 2016). There are three important and widely used data collection method such as interviewing, observation and questionnaires. In this study, a questionnaire is adopted to collect a large number of quantitative data by being distributed electronically to the target population, for instance, the survey questionnaire is sent to the respondents through social media such as Facebook, Whatapp and Email. The questionnaires are designed by adopting scale measurements such as nominal, ordinal and interval into the questions designed. The questionnaire is separated into 4 sections which include Section A, Section B, Section C and Section D.

The data collected from questionnaires could be analysed in a more accurate way which leads to time and cost-saving.

A sampling process must be executed before proceeding to the data analysis. The sampling process starts with defining the population, followed by determining the sample frame, sampling design, sample size and executing the sampling design. Furthermore, the chosen data analysis method is to achieve the objectives of the study. Among different types of data analysis methods, there are a few influential tests adopted in this study such as Cronbach's Alpha Reliability Test, Friedman Test, Kruskal-Wallis Test, Mann-Whitney Test and Spearman's Rank Correlation Test. Each of the tests is explained under the data analysis tool and which sections have adopted the particular test. SPSS software is chosen to be used for conducting the data analysis of this study.

The data obtained from the questionnaire survey is to help the researcher to transform the data into useful information in the industry. In data analysis, the background of respondents is analysed before carrying out the Reliability Test. The respondents' background is explained in terms of gender, age, marital status, educational level, types of organization, employment status, working position, income and working years in the current company. Data analysis summarizes the result and conclusion of data collected by carrying out the appropriate test such as Cronbach's Alpha Reliability Test, Friedman Test, Kruskal-Wallis Test, Mann-Whitney Test and Spearman's Correlation Test. Data analysis is important to be conducted to evaluate the research aim and objectives. It is followed by the generalisation of result to interpret the result obtained.

The conclusion of this study is a summary or brief statement of the important findings in the report (Creswell and Creswell, 2014). The accomplishment of objectives will be explained in this chapter to indicate the completion of the study. Additionally, the recommendation for future researchers is given based on the study's progress and result. The limitations will be explained for future researchers to conduct similar topics. In short, the conclusion is made according to the overall process of conducting the study.

3.7 Research Instrument

A research instrument is a technique or tool used to obtain and analyse data from the data collected. The research instrument selection should be considered along with the type of study conducted such as quantitative, qualitative or mixed method (Insights, 2020).

3.7.1 Questionnaire

The questionnaire is used as a general term to refer to all data collection method in which all respondents is requested to answer the same set of questions in a predetermined order (Saunders, Lewis and Thornhill, 2016). It is widely used in data collection methods within the survey strategy. Each respondent will be asked to participate in the questionnaire or a set of questions, and the questionnaire works the best with a set of standardized questions which will be interpreted the same by all respondents.

In this study, a questionnaire survey is adopted to collect the data from respondents. Each respondent will be asked to sign a consent form before answering the questionnaire. It is critical to ensure that participants are responding voluntarily to this survey since this ensures that the data is legitimate, objective, and correct. Respondents were also informed in the survey questionnaire that the information gathered would only be used for educational purposes. The opening of the survey includes an educational email address where respondents can contact the researcher at any moment. The reasons for adopting a questionnaire survey are due to time and cost-saving. By distributing a questionnaire to the respondents, it may reach people quickly and it gives flexibility to them over where and when they decide to complete the questionnaire. Moreover, data accuracy is one of the reasons because questionnaire can be automatically exported to the spreadsheets which reduce human error and enable data validation.

3.7.2 Questionnaire Design

It is difficult to produce a good questionnaire since it needs to collect the precise data which needs to achieve the objectives. In this study, there are four sections in the questionnaire survey which include Section A, Section B, Section C and Section D as listed in Table 3.2.

Table 3.2: Questionnaire Design.

Section	Item
A	Demographic Information
B	Stressors of occupational stress in the construction industry
C	Relationship between OS and TI
D	Retention and Stress Management Strategies

Section A collected the personal information of respondents which includes email, gender, age, marital status, highest educational attainment, types of organisations, employment status, working position, household income classification, current working years and stress symptoms. Multiple choice questions and rating questions are adopted in Section A.

Section B identified the OS in the construction industry which includes Task Stressors, Personnel Stressors, Organizational Stressors and Physical Stressors. 20 statements adopted the Likert scale questions to collect opinion data on the most related working situation to employees, from Number 1 = Strongly disagree to Number 5 = Strong agree.

Section C discussed the OS which intends the respondent to leave their company the most are identified. There are eleven OS that is correlated with the employees' intention to leave their company. The questions used the Likert-scale rating in which the respondents may choose between Number 1 = Not at all likely to Number 5 = Extremely likely.

Lastly, Section D revealed how respondents react to the current company's culture and implementation of retention and stress management strategies. There are twelve retention strategies and stress management in the discussion meanwhile the implementation of the current company was discussed in this section concurrently. It consists of three set of questions that

collect the respondents' satisfaction with current company implementation on reducing TI and their opinion on the retention and stress management strategies. It also adopted a rating scale that starts from Number 1 = Not at all likely to Number 5 = Extreme likely.

3.8 Data Collection Method

Data can be collected from more than one source to obtain the necessary information. The method used to collect data varies at times according to the types of study (Craig, n.d.) such as primary data or secondary data. Primary data is directly collected from the sources such as consumers while secondary data is referring to the information interpreted, collected and recorded by other researchers or in the previous study.

3.8.1 Primary Data Collection

Primary data is employed in the study and refers to data that was collected on the spot for a specific purpose (Hox & Boeiji, 2005). It would be more reliable for the study because no changes to the data obtained could be made. For instance, interview and survey questionnaires are commonly used to collect the primary data in a study.

To acquire first-hand data for this study, the questionnaire survey will be sent to the target demographic using online social media such as Whatapp, Facebook, and Gmail in order. In this study, the data collection is conducted over a month. The time needed is considered longer than secondary data, however, it has higher accuracy and reliability in the data.

3.8.2 Secondary Data Collection

The first step in an exploratory study is conducting representative secondary data (Cooper and Schindler, 2014). By reviewing the literature review, the methodologies that proved successful and unsuccessful can be identified and used as a reference or supporting data for this study.

In this study, secondary data is collected for the literature review process. Besides that, the secondary data is used in chapter 3 for the research design. The information on the research method, research philosophy, data

collection method, sampling process and data analysis tool was obtained from the secondary data. The secondary data can be used as references or findings from other researchers which are quick and easy to be found since it is past data.

3.8.3 Construct Measurement

3.8.3.1 Nominal Scale

A nominal scale allows the researcher to assign subjects to certain categories or groups (Sekaran and Bougie, 2016). A nominal scale is a less sophisticated type of measurement because it is used only to categorize the respondents instead of quantifying them.

In this study, a nominal scale is used for Part A which is the demographics of participants. The data obtained could only use to describe the characteristics and background of the respondents. Thus, the nominal scale was used to obtain demographic data such as gender, type of employment, working position, marital status, employment status and stress symptoms.

3.8.3.2 Ordinal Scale

An ordinal scale categorizes the variable according to some preference (Sekaran and Bougie, 2016). The ordinal scale is used to rank the preference or usage of a subject by individuals.

In this study, an ordinal scale is used to measure the identity of the respondent and the data obtained could use to indicate the level in such a way as more than or less than. The data would be used in ranking as there would be a number representing their identity. An ordinal scale was used in this study to obtain the demographic of respondents including age, income and employment period in the current company. Besides, the Likert scale is one of the interval scale measurements which is adopted in this study for Section B, Section C and Section D. The questions in the survey are arranged on a five-point Likert scale and each answer is denoted by the number 1 to number 5. Number 1 represent Strongly Disagree while number 5 represents Strongly Agree.

3.8.3.3 Interval Scale

An Interval scale is used when the difference between two variables is large or equal. It is a quantitative measurement that builds on ordinal measurement. There are no zero points on the interval scale.

In this study, an interval scale is applied to the demographics of respondents. For instance, age, household income classification and working years with the current company are adopted in the interval scale in Section A.

3.9 Sampling Process

The sampling process refers to a sequential step to select a sufficient number of right elements from the target population. The steps in the sampling process include defining the population, determining the sample frame, determining the sampling design, determining the suitable sample size and executing the sampling process.

3.9.1 Defining the Population and Sample Frame

The sampling process starts with defining the target population. The target population for this study is individual who is 18 years old or above and have working experience in the Malaysian construction industry. The sample frame is a physical representation of all elements in the target respondents from which the sample is drawn (Sekaran and Bougie, 2016). The sampling frame is useful in providing the elements of the population. However, the sampling frame listed must be relevant to the research topic so that the target population may help in achieving the objectives.

This study collects the email, age, marital status, educational level, type of organization, employment status, working position, income classification and working years. For instance, the past or present employment of participants shall be from a developer, main contractor, consultant, supplier or sub-contractor company. Besides, the working position of participants will be categorised into a few groups such as Management level, Site Personnel, Quantity Surveyor, Finance and Human Resources Division, Consultant and others who worked in the construction industry.

3.9.2 Sampling Design

There are two types of sampling design which are probability and non-probability sampling. Probability sampling refers to the elements in the populations that have some known chance or probability of being selected as sample subjects. Probability sampling is a balance between the accuracy of your findings and the amount of time and cost consumed in collecting data (Sekaran and Bougie, 2016). In contrast, non-probability sampling does not have a known or predetermined chance of being selected as subjects.

In this study, non-probability sampling is used. It is not required in constructing an equal chance of selection for the target population. Thus, snowball techniques are used to get the response from the population while the first respondent answered the questionnaire will help to identify other qualified respondents to participate in this survey. Snowball sampling is effective in data collection, especially through the online questionnaire. Respondents could send the attachment or link to other individuals to participate in this study. For instance, the respondent may send the questionnaires to their colleagues or working partners in the construction industry.

3.9.3 Sampling Size

A precise finding from the sample to the population can be generated by determining the sample size. A sample size of 30 or more is appropriate for most of the research as explained in Roscoe's rules of thumb (Hill, 1998). It is proved that the larger the sample size, the lower the error in reaching the target population (Sekaran and Bougie, 2016). The Central Limit Theorem explains that the distribution of the sample means will be approximately normally distributed as the random samples from the populations gets larger, especially over 30 (Akhilesh, 2022).

In this study, the Central Limit Theorem is applied due to the time constraint and weak relationship in the construction industry. Sample sizes equal to or greater than 30 are considered sufficient for the Central Limit Theorem concept. It is beneficial to the study as it implies that if their mean and variance are equivalent, the theorem can be utilized. Besides, a sufficiently large sample size can predict the characteristic of the population more

accurately. Thus, the data collection for the questionnaire would collect more than 30 responses for each choice in Part A which collects the demographic of respondents. It is to make sure this research could generate a precise finding.

3.9.4 Executing Sampling Process

The sampling process must be executed sequentially and make sure the process is conducted correctly since it is a complicated process. Once the population, sampling frame, sampling design and sample size are determined, researchers shall utilise all the information collected in the data analysis (Natalie, 2021).

3.10 Data Analysis

Before entering data analysis, the data analysis tools must be reviewed, and the most appropriate tools should be chosen to achieve the objectives of the study. The main purpose of data analysis is to interpret the data collected accurately and generate an accurate result for the study.

To analyse the data collected, Statistical Package for the Social Sciences (SPSS) version 28.0 was used for this study to generate a reliable result. SPSS is a comprehensive platform that can be used to perform various statistical analyses using the data collected. Thus, few descriptive and influential tests are conducted using SPSS such as descriptive statistics, Cronbach's Alpha Reliability Test, Friedman Test, Kruskal-Wallis Test, Mann-Whitney U Test and Spearman's Correlation Test. The result generated from these tests will be tabulated in a table that can be easily understood.

3.10.1 Cronbach's Alpha Reliability Analysis

Cronbach's Alpha Reliability Analysis is a popular test of inter-item consistency. Generally, the reliability which less than 0.60 is considered to be poor, between 61 to 80 is considered acceptable while over 80 is considered good (Sekaran and Bougie, 2016). The statistic is usually used to measure the consistency of responses to the questionnaire in scale items. In the result of Cronbach's Alpha test, those with lower than 0.60 should be removed from the measure to increase the inter-item consistency (Pallant, 2001). However, this

could affect the validity of the measures even though it improves the reliability of the measure.

In this study, Cronbach's Alpha Reliability Analysis is used to test the internal consistency reliability of the generated scale for each section of the questionnaire. Besides, the entire questionnaire will also be tested in chapter 4.

3.10.2 Friedman Test

Friedman Test is a non-parametric method to the one-way ANOVA with repeated measures that test the difference between groups when the dependent variable being measured is ordinal (LaerdStatistic, n.d. A). Besides, it can be used for continuous data that has contravened the necessary assumptions to run the one-way ANOVA. There are four assumptions to be achieved to proceed with a Friedman test. For instance, (1) one group is measured under three or more circumstances; (2) random sample; (3) dependent variable should measure at ordinal level, and (4) sample does not need to be normally distributed.

In this study, the Friedman test is used in revealing if there is a statistically significantly different in the perceived (1) the OS in the construction industry; (2) the relationship between OS and TI of employees in the construction industry; (3) the relationship between retention and stress management strategies in the construction industry; (4) employees' satisfaction on company's culture and policy; (5) employees' satisfaction on company's current implementation in reducing TI by checking the value of $p = < 0.01$. By conducting the Friedman test, the mean rank of each section can be identified.

3.10.3 Kruskal-Wallis H Test

Kruskal-Wallis H Test is a rank-based nonparametric test used to determine the significant differences between two or more groups of independent variables on the ordinal dependent variable (LaerdStatistic, n.d. B). It is considered the non-parametric method of one-way ANOVA and the extension of Mann-Whitney is allowed to compare more than two independent groups. There are four assumptions to achieve before using the Kruskal-Wallis H test,

for instance (1) the dependent variable should be at the ordinal level; (2) the independent variable should consist of two or more independent groups; (3) have independence of observations; (4) determine whether the distribution in each group have the same variability to decide on compare median or mean rank.

In this study, Kruskal-Wallis H Test is used for a few sections such as (1) types of OS against demographic of respondents; (2) symptoms of stress against working situation; (3) symptoms of stress against demographic of respondents (4) employees' satisfaction on company's culture and policy against demographic of respondents; and (5) employees' satisfaction on company's current implementation in reducing TI against demographic of respondents.

3.10.4 Mann-Whitney U Test

Mann-Whitney U test also called as Wilcoxon rank-sum test is used to compare two independent samples provided the dependent variable is at least ordinal. There are four assumptions to be passed to use this test in the study. The assumptions are (1) the dependent variable should be at the ordinal level; (2) the independent variable should consist of two independent groups; (3) have independence of observations; and (4) two variables are not normally distributed.

In this test, the Mann-Whitney U test is used to evaluate and investigate whether there are significant differences between (1) types of stressors against the demographic of respondents; (2) symptoms of stress against working situation; (3) symptoms of stress against demographic of respondents (4) employees' satisfaction on company's culture and policy against demographic of respondents; and (5) employees' satisfaction on company's current implementation in reducing TI against demographic of respondents.

3.10.5 Spearman's Correlation Test

Spearman's Rank Correlation Coefficient is a non-parametric measure of the strength and direction of the relationship that exists between two variables

(Nwaogu and Chan, 2021). There are three assumptions to using this test which is (1) two variables should be at the ordinal level; (2) two variables should represent paired observation, and (3) a monotonic relationship between two variables. The significance level can be set at 0.05. For example, the relationship between OS, TI and retention and stress management strategies can be found provided the stress index can quantify the intensity of work engaged by construction personnel.

In this study, Spearman's Rank Correlation Coefficient is used to test the correlation between (1) OS and retention and stress management strategies; and (2) symptoms of stress and working situation in the construction industry.

3.11 Conclusion

This chapter defined the OS, TI and the relationship between them in this research study. In this chapter, it explained that pragmatism philosophy and quantitative method are adopted to study the correlation between each OS and TI, which includes the impact of OS on TI. The snowball techniques are used to get the response from the population while the first respondent answered the questionnaire will help to identify other qualified respondents to participate in this survey. Furthermore, the Cronbach's Alpha Reliability Test, Friedman Test, Kruskal-Wallis Test, Mann-Whitney Test and Spearman's Rank Correlation Test were adopted to analyse all the data collected in order to generate findings to the research study.

CHAPTER 4

DATA ANALYSIS

4.1 Introduction

In this chapter, the data collected was analysed and interpreted using the data analysis tools proposed in the previous chapter. There were a total of 270 respondents participated in this study. Microsoft Excel will serve as a supporting software that recorded the data and aids the SPSS analysis. This chapter demonstrated the descriptive analysis, reliability analysis, and inferential analysis which included Cronbach's Alpha Reliability Test, Friedman Test, Kruskal-Wallis Test, Mann-Whitney Test and Spearman's Correlation Test. Tables were attached to this chapter to make the analysis easier to understand.

4.2 Respondents Background

Only a total of 270 respondents who worked in the construction industry participated in the questionnaire. Subsequently, the response rate is 77.14% of the questionnaire were returned and examined. Table 4.1 below summarized the respondent's demographic profile who participated in this study.

Table 4.1: Background of Respondent.

	Demographics Characteristic of Respondent	Frequency (N)	Percentage (%)
Gender	Male	150	55.60
	Female	120	44.40
Age	18-24	116	43.00
	25-34	67	24.80
	35-44	46	17.00
	45 or above	41	15.20
Marital Status	Single	125	46.30
	In a relationship	66	24.40
	Married	79	29.30
Highest Educational Attainment	Pre-University (Matriculation, STPM, Foundation, Diploma)	45	16.70
	Undergraduate (Bachelor)	189	70.00
	Postgraduate (Master, PhD)	36	13.30
Types of Organization	Developer	58	21.50
	Contractor	102	37.80
	Consultant	68	25.20
	Supplier/Specialist/Subcontractor	42	15.50
Employment Status	Full-time permanent employee	149	55.20
	Full-time temporary employee	37	13.70
	Part-time permanent employee	33	12.20
	Part-time temporary employee	51	18.90
Working Position	Management Level	32	11.80
	Site Personnel	37	13.70
	Quantity Surveyor	90	33.30
	Consultant	44	16.30
	Financial and Human Resources	30	11.10
	Others	37	13.80
Income Level Classification	B40 (Income range below RM4,849)	137	50.80
	M40 (Income range between RM4,850 to RM10,959)	94	34.80
	T20 (Income range between RM10,960 to 15,039)	39	14.40
Working Years in Current Company	Currently unemployed	33	12.20
	Within 1 year	72	26.70
	1-3 year	72	26.70
	4-6 year	54	20.00
	7 years or above	39	14.40

As shown in Table 4.1, there are 150 (55.60%) respondents who are male and 120 are males (44.40%) with four groups of age which are 18 to 24, 25 to 34, 35 to 44 and 45 or above. There are 116 respondents from the age group 18 to 24, about 43%, followed by 67 respondents aged 25 to 34 which contains 24.80% and 46 respondents aged 35 to 44 which is 17% of the total respondents. The least respondents who participated are aged 45 or above which only consists of 41, representing 15.20% of the total respondents. Furthermore, almost half of the respondents (46.30%) are single, and a quarter of respondents are in a relationship (24.40%) and married (29.30%). Most of the respondents (70.0%) held a Bachelor of Degree, followed by Pre-University (16.70%) and Master of Degree (13.30%).

From the data obtained, it was reported that 37.80% of the feedback is from the developer company, followed by the consultant (25.20%), contractor (21.50%) and supplier, specialist or subcontractor company (15.50%). more than half of the respondents are full-time permanent employees (55.20%), followed by part-time temporary employees (18.90%), full-time temporary employees (13.70%) and part-time permanent employees (12.20%).

Regarding the working position, the management level comprises of director of the company and the project manager who handles the project wholly and has decision power over the project. site personnel refer to the project engineer and site supervisor who monitor the project progress and handle the site issues. finance and human resources maintain a balance between costs and revenues and allocations of human resources by hiring, recruiting and motivating. consultant refers to architect and engineer while others refer to the supplier, sales engineer, safety officers, and other working positions. there are few working positions held by the respondents such as quantity surveyor (33.30%), followed by the consultant (16.30%), others (13.80%), site personnel (13.70%), management level (11.80%) and financial and human resources (11.10%). Besides, the respondents were categorized under B40 (50.80%), M40 (34.80%) and T20 (14.40%). The average working years with the current company was 4 to 6 years, with a minimum of 1 year and a maximum of 7 years or above.

4.3 Cronbach's Alpha Reliability Test

Cronbach's Alpha was calculated to test the internal consistency reliability of the generated scale (Adnan Enshassi and Eman Al. Swaity, 2014). A higher value of Cronbach's Alpha value guarantees that the item applies the proper concept. This study is categorized into four sections which include Section A, Section B, Section C and Section D. The Cronbach's Alpha is 0.759 for the entire questionnaire which indicates the reliability coefficients are acceptable. The value for Cronbach's Alpha which is between 0.6 to 0.70 is considered acceptable while over 0.80 is considered reliable and has good internal consistency (Sekaran and Bougie, 2016). The scale reliability for each section was summarized in Table 4.2 below.

Table 4.2: Cronbach's Alpha for Each Section of the Questionnaire.

No.	Section	Cronbach's Alpha	Number of Items
1.	Section B	0.639	20
2.	Section C	0.826	11
3.	Section D	0.897	36

4.4 Relationship between Occupational Stressor and Turnover Intention

Table 4.3 summarized a total of eleven mean rankings of the relationship between OS and TI. The top five OS which lead to the TI of employees are ranked as Pay Level (mean rank = 7.67), Working Hours (mean rank = 7.42), Work-Life Balance (mean rank = 7.34), Work Overload (mean rank = 6.96), And Role Conflict (mean rank = 6.73). The result reveals that these five OS are the major contributor to the TI of the employees in the construction industry. The remaining OS are ranked in a sequence of Work Environment (mean rank = 6.64), Work-Family Conflict (mean rank = 6.19), Role Ambiguity (mean rank = 5.59), Marital Status (mean rank = 4.18), Home Environment (mean rank = 3.68), and Educational Level (mean rank = 3.61).

Table 4.3: Mean Rank of Occupational Stressor that lead to Turnover Intention.

Working Situation Statements Related to Occupational Stressor	Code	Occupational Stressor	Mean Rank	Chi-square	Asymp. Sig.
(OS1) My salary and incentives are lower than my expectations	C7	Pay Level	7.67	739.436	<0.01
(OS2) My salary is not match with my workload that I handle.					
(OS3) I am forced to do more work than I can handle which lead to long working hours.	C8	Working Hours	7.42		
(OS4) I always have to work overtime so that the things can done on time.					
(PE1) My job requires too many demands on my time.	C4	Work-life Balance	7.34		
(PE2) don't have much time for myself every day.					
(TS1) I am forced by the digital devices to work with very tight schedules.	C1	Work Overload	6.96		
(TS2) I get conflicting information from two or more people when I am completing a task.	C2	Role Conflict	6.73		
(TS3) I receive conflict requests from two or more people during work.					
(TS4) I have to deal with and satisfy two or more groups who operate differently.					
(PH3) My working environment does not provide an adequate space for me to focus on my task	C10	Work Environment	6.64		
(PH4) The noise from my working environment brings impact on my working performance.					
(PH5) I do not have adequate light and temperature in my workplace.					
(PE3) I don't ever seem to have time for family.	C5	Work-Family Conflict	6.19		
(PE4) I have not enough time for communication with my partner/family.					
(TS5) Sometimes I need to break the rules or policy to carry out my job.	C3	Role Ambiguity	5.59		
(PE5) I don't have complaining from anyone since I am single.	C6	Marital Status	4.18		
(PH1) My home environment is not comfortable to conduct Work From Home.	C11	Home Environment	3.68		
(PH2) I lives with my family and I do not have own working space to perform my job.					
(OS5) My education level do not match the requirements and skills needed for my job demand.	C9	Educational Level	3.61		

The Friedman test revealed that there is a statistically significant difference in perceived of the relationship between the OS and TI as the value of $p = < 0.01$.

The post-hoc analysis was conducted to compare the differences in respondents' perception of the OS according to respondents' background information. Table 4.4 presented the rejected null hypothesis which is statistically significant with $p < 0.05$.

Table 4.4: Rejected Null Hypothesis for the Relationship between Occupational Stressor and Turnover Intention.

Code	Null Hypothesis	Asymp. Sig.
Gender		
C2	The perception of "Role Conflict" is same against gender of male and female.	0.037
Age		
C2	The perception of "Role Conflict" is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above.	<0.001
C5	The perception of "Work-family Conflict" is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above.	0.001
C7	The perception of "Pay level" is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above.	0.008
C9	The perception of "Educational level" is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above.	0.002
C10	The perception of "Work Environment" is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above .	0.044
C11	The perception of "Home Environment" is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above.	<0.001
Marital Status		
C2	The perception of "Role Conflict" is same against marital status of single, in a relationship and married.	0.004
C4	The perception of "Work-life Balance" is same against marital status of single, in a relationship and married.	0.050
C5	The perception of "Work-family Conflict" is same against marital status of single, in a relationship and married.	0.003
C9	The perception of "Educational level" is same against marital status of single, in a relationship and married.	<0.001
C11	The perception of "Home Environment" is same against marital status of single, in a relationship and married.	<0.001

Educational level		
C1	The perception of “Work Overload” is same against educational attainment of Pre-University, Undergraduate and Postgraduate.	<0.001
C2	The perception of “Role Conflict” is same against educational attainment of Pre-University, Undergraduate and Postgraduate.	<0.001
C5	The perception of “Work-family Conflict” is same against educational attainment of Pre-University, Undergraduate and Postgraduate.	<0.001
C7	The perception of “Pay Level” is same against educational attainment of Pre-University, Undergraduate and Postgraduate.	<0.001
C8	The perception of “Working Hours” is same against educational attainment of Pre-University, Undergraduate and Postgraduate.	0.004
C10	The perception of “Work Environment” is same against educational attainment of Pre-University, Undergraduate and Postgraduate.	0.003
Type of Organization		
C1	The perception of “Work Overload” is same against type of organization in category of Developer, Contractor, Consultant and Supplier, Specialist or Subcontractor.	<0.001
C2	The perception of “Role Conflict” is same against type of organization in category of Developer, Contractor, Consultant and Supplier, Specialist or Subcontractor.	0.043
C5	The perception of “Work-Family Conflict” is same against type of organization in category of Developer, Contractor, Consultant and Supplier, Specialist or Subcontractor.	0.001
C7	The perception of “Pay Level” is same against type of organization in category of Developer, Contractor, Consultant and Supplier, Specialist or Subcontractor.	0.012
C8	The perception of “Working Hours” is same against type of organization in category of Developer, Contractor, Consultant and Supplier, Specialist or Subcontractor.	0.020
C10	The perception of “Work Environment” is same against type of organization in category of Developer, Contractor, Consultant and Supplier, Specialist or Subcontractor.	0.017
Employment Status		
C2	The perception of “Role Conflict” is same against employment status in category of full-time permanent employee, full-time temporary employee, part-time	< 0.01

	permanent employee and part-time permanent employee.	
C4	The perception of “Work-life Balance” is same against employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	0.012
C5	The perception of “Work-Family Conflict” is same against employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	0.003
C7	The perception of “Pay Level” is same against type of employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	< 0.001
C8	The perception of “Working Hours” is same against employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	0.002
C11	The perception of “Home Environment” is same against employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	0.035
Working Position		
C2	The perception of “Role Conflict” is same against working position in category of management level, site personnel, quantity surveyor, consultant, financial and human resources and others.	< 0.001
C5	The perception of “Work-family Conflict” is same against working position in category of management level, site personnel, quantity surveyor, consultant, financial and human resources and others.	0.001
C6	The perception of “Marital Status” is same against working position in category of management level, site personnel, quantity surveyor, consultant, financial and human resources and others.	0.042
C9	The perception of “Educational Level” is same against working position in category of management level, site personnel, quantity surveyor, consultant, financial and human resources and others.	< 0.001
C11	The perception of “Home Environment” is same against working position in category of management level, site personnel, quantity surveyor, consultant, financial and human resources and others.	<0.001

Income Classification		
C2	The perception of “Role Conflict” is same against household income classification of B40, M40 and T20.	0.004
C4	The perception of “Work-life Balance” is same against household income classification of B40, M40 and T20.	0.05
C6	The perception of “Marital Status” is same against household income classification of B40, M40 and T20.	0.003
C9	The perception of “Educational Level” is same against household income classification of B40, M40 and T20.	< 0.001
C11	The perception of “Home Environment” is same against household income classification of B40, M40 and T20.	<0.001
Working Years in Current Company		
C2	The perception of “Role Conflict” is same against working years in current company of currently unemployed, within 1 year, 1 to 3 years, 4 to 6 years and 7 years or above.	<0.001
C3	The perception of “Role Ambiguity” is same against household income classification of B40, M40 and T20.	0.010
C5	The perception of “Work-family Conflict” is same against household income classification of B40, M40 and T20.	<0.001
C7	The perception of “Pay Level” is same against type of employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	0.012
C9	The perception of “Educational Level” is same against type of employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	< 0.001
C10	The perception of “Work Environment” is same against type of employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	0.042
C11	The perception of “Home Environment” is same against type of employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	< 0.001

The result of the post hoc test between the OS and TI reported in Table 4.5 are summarized below:

(A) “Pay level” is the OS which is perceived higher by

(i) respondents with marital status of married (mean rank = 145.61) than the respondents with single (mean rank = 132.57) and in a relationship (mean rank = 128.94).

(ii) respondents who work in developer company (mean rank = 151.96) than contractor (mean rank = 140.32), consultant (mean rank = 132.86) and supplier/specialist/subcontractor (mean rank = 105.35).

(iii) respondents who worked as consultant (mean rank = 147.80) than site personal (mean rank = 140.47), quantity surveyor (mean rank = 139.57), management level (mean rank = 133.41), financial and human resources (mean rank = 129.73) and others (mean rank = 112.50).

(iv) respondents with T20 income classification group (mean rank = 153.95) than M40 (mean rank = 134.65) and B40 (mean rank = 130.83).

(v) respondent with 4 to 6 years (mean rank = 157.35) than 7 years or above (mean rank = 145.67), 1 to 3 years (mean rank = 139.76), currently unemployed (mean rank = 123.55) and within 1 year (mean rank = 114.83).

(B) “Working Hours” is the OS which is perceived higher by

(i) respondents who held Postgraduate (mean rank = 146.40) than with undergraduate (mean rank = 141.10) and pre-university (mean rank = 103.24).

(ii) respondents who work in contractor company (mean rank = 143.36) than consultant (mean rank = 143.15), developer (mean rank = 127.16) and supplier/specialist/subcontractor (mean rank = 115.52).

(iii) respondents who worked as part-time temporary employees (mean rank = 156.19) than part-time permanent employee (mean rank = 139.26), full-time temporary employee (mean rank = 130.32) and full-time permanent employee (mean rank = 128.87).

(C) “Work-Life Balance” is the OS which is perceived higher by

(i) respondents who is in a relationship (mean rank = 148.38) than married (mean rank = 142.85) and single (mean rank = 124.06).

(ii) respondents who work as full-time temporary employee (mean rank = 165.11) than part-time permanent employee (mean rank = 152.41), full-time temporary employee (mean rank = 129.14) and full-time permanent employee (mean rank = 121.66).

(iii) respondents who worked as T20 income classification (mean rank = 148.06) than B40 (mean rank = 138.77) and M40 (mean rank = 125.53).

(D) “Work Overload” is the OS which is perceived higher by

(i) respondents who held Postgraduate (mean rank = 144.14) than with undergraduate (mean rank = 143.64) and pre-university (mean rank = 94.41).

(ii) respondents who work in developer company (mean rank = 151.97) than consultant (mean rank = 143.32), contractor (mean rank = 136.66) and supplier/specialist/subcontractor (mean rank = 97.27).

(E) “Role Conflict” is the OS which is perceived higher by

(i) respondents who are male (mean rank = 135.51) than female (mean rank = 135.49).

(ii) respondents with age 45 or above (mean rank = 175.79) than 35 to 44 (mean rank = 154.25), 25 to 34 (mean rank = 140.54) and 18 to 24 (mean rank = 110.91).

(iii) respondents with marital status of married (mean rank = 156.99) than in a relationship (mean rank = 136.55) and single (mean rank = 121.36).

(iv) respondents who held Postgraduate (mean rank = 182.24) than with undergraduate (mean rank = 132.08) and pre-university (mean rank = 112.47).

(v) respondents who work in developer company (mean rank = 158.48) than contractor (mean rank = 134.70), consultant (mean rank = 124.23) and supplier/specialist/subcontractor (mean rank = 123.95).

(vi) respondents who work as part-time permanent employee (mean rank = 171.45) than full-time temporary employee (mean rank = 143.35), full-time

permanent employee (mean rank = 136.86) and part-time temporary employee (mean rank = 121.66).

(vii) respondents who worked as consultant (mean rank = 163.60) than financial and human resources (mean rank = 153.30), site personnel (mean rank = 148.04), management level (mean rank = 146.81), others (mean rank = 131.20) and quantity surveyor (mean rank = 108.53).

(viii) respondents with T20 income classification group (mean rank = 169.05) than M40 (mean rank = 134.56) and B40 (mean rank = 126.59).

(viii) respondents who work for 4 to 6 years (mean rank = 168.48) than 7 years or above (mean rank = 160.04), 1 to 3 years (mean rank = 143.42), currently unemployed (mean rank = 133.18) and within 1 year (mean rank = 123.66).

(F) “Work Environment” is the OS which is perceived higher by

(i) respondents with age 45 or above (mean rank = 152.87) than 25 to 34 (mean rank = 149.01), 18 to 24 (mean rank = 128.56) and 35 to 44 (mean rank = 117.85).

(ii) respondents who held Postgraduate (mean rank = 157.33) than with undergraduate (mean rank = 138.91) and pre-university (mean rank = 103.70).

(iii) respondents who work for currently unemployed (mean rank = 152.95) than 4 to 6 years (mean rank = 147.91), 7 years or above (mean rank = 139.22), 1 to 3 years (mean rank = 138.29) and within 1 year (mean rank = 113.39).

(G) “Work-family Conflict” is the OS which is perceived higher by

(i) respondents with age 45 or above (mean rank = 166.78) than 35 to 44 (mean rank = 145.87), 25 to 34 (mean rank = 142.21) and 18 to 24 (mean rank = 116.46).

(i) respondents with marital status of married (mean rank = 151.26) than in a relationship (mean rank = 148.38) and single (mean rank = 124.06).

(ii) respondents who held Postgraduate (mean rank = 176.89) than with undergraduate (mean rank = 132.62) and pre-university (mean rank = 114.48).

(iii) respondents who work in developer company (mean rank = 168.09) than contractor (mean rank = 130.75), consultant (mean rank = 128.63) and supplier/specialist/subcontractor (mean rank = 113.17).

(iv) respondents who work as part-time permanent employee (mean rank = 179.97) than full-time temporary employee (mean rank = 131.97), full-time permanent employee (mean rank = 131.38) and part-time temporary employee (mean rank = 121.31).

(v) respondents who worked as consultant (mean rank = 160.69) than management level (mean rank = 155.52), financial and human resources (mean rank = 152.75), site personnel (mean rank = 146.68), others (mean rank = 116.28) and quantity surveyor (mean rank = 113.62).

(vi) respondents who work for 4 to 6 years (mean rank = 167.39) than 7 years or above (mean rank = 150.17), currently unemployed (mean rank = 149.24,) 1 to 3 years (mean rank = 141.90) and within 1 year (mean rank = 90.86).

(H) “Role Ambiguity” is the OS which is perceived higher by

(i) respondents who work for currently unemployed (mean rank = 164.67), 4 to 6 years (mean rank = 141.37) than 7 years or above (mean rank = 140.33), 1 to 3 years (mean rank = 139.03) and within 1 year (mean rank = 111.58).

(I) “Marital Status” is the OS which is perceived higher by

(i) respondents who worked as site personnel (mean rank = 161.59), than management level (mean rank = 147.86), financial and human resources (mean rank = 146.17), consultant (mean rank = 134.43), quantity surveyor (mean rank = 128.71) and others (mean rank = 107.85)

(ii) respondents with T20 income classification group (mean rank = 144.51) than B40 (mean rank = 139.14) and M40 (mean rank = 126.46)

(J) “Home environment” is the OS which is perceived higher by

(i) respondents with age 18 to 24 (mean rank = 161.69) than 25 to 34 (mean rank = 124.22), 45 or above (mean rank = 110.77) and 35 to 44 (mean rank = 107.93).

(ii) respondents with marital status of single (mean rank = 160.96) than in a relationship (mean rank = 118.64) and marital status (mean rank = 109.30).

(iii) respondents who work as part-time permanent employee (mean rank = 163.36) than full-time temporary employee (mean rank = 132.80), full-time permanent employee (mean rank = 128.79) and part-time temporary employee (mean rank = 125.77).

(iv) respondents who worked as quantity surveyor (mean rank = 169.97) than financial and human resources (mean rank = 123.17), consultant (mean rank = 121.63), others (mean rank = 119.49) site personnel (mean rank = 114.36) and management level (mean rank = 112.16).

(v) respondents with B40 income classification group (mean rank = 152.33) than M40 (mean rank = 124.66) and T20 (mean rank = 102.50).

(vi) respondents who work for within 1 year (mean rank = 163.18) than currently unemployed (mean rank = 155.77), 1 to 3 years (mean rank = 135.57), 7 years or above (mean rank = 122.83) and 4 to 6 years (mean rank = 95.26).

(K) “Educational Level” is the OS which is perceived higher by

(i) respondents with age 18 to 24 (mean rank = 153.92) than 25 to 34 (mean rank = 132.69), 35 to 44 (mean rank = 115.43) and 45 or above (mean rank = 110.49).

(ii) respondents with marital status of single (mean rank = 153.19) than married (mean rank = 127.23) and in a relationship (mean rank = 114.41).

(iii) respondents who worked as quantity surveyor (mean rank = 164.22) than financial and human resources (mean rank = 139.07), consultant (mean rank = 121.32), site personnel (mean rank = 117.22), management level (mean rank = 116.41) and others (mean rank = 113.92).

(iv) respondents with B40 income classification group (mean rank = 153.36) than M40 (mean rank = 118.69) and T20 (mean rank = 113.27).

(v) respondents who work for currently unemployed (mean rank = 158.47), than within 1 year (mean rank = 155.36), 1 to 3 years (mean rank = 132.47), 7 years or above (mean rank = 131.94) and 4 to 6 years (mean rank = 101.60).

4.5 Current Company Implementation on Retention Strategies and Stress Management Strategies in Reducing Turnover Intention

Table 4.5 reported a total of twelve mean rankings for retention and stress management. The top five retention and stress management strategies are ranked as “Provide flexible working hours” (mean rank = 7.80), “Have a good working environment” (mean rank = 7.47), “Change organizational policy” (mean rank = 6.90), “Improve fairness of pay level” (mean rank = 6.71) and “Provide compensation package” (mean rank = 6.54). However, the other strategies are ranked as “Increase transparency of pay rate” (mean rank = 6.53), “Promote internal recruitment” (mean rank = 6.48), “Provide training and workshop” (mean rank = 6.40), “Have adequate sleep” (mean rank = 6.27), “Promote team building workshop” (mean rank = 5.86), “Implement mentoring programme (mean rank = 5.57) and “Implement stress management workshop” (mean rank = 5.47).

Table 4.5: Mean Rank of The Retention and Stress Management Strategies.

Code		Mean Rank	Chi-square	Asymp. Sig.
DB11	Provide flexible working hours	7.80	177.947	<0.01
DB8	Have a good working environment	7.47		
DB12	Change organizational policy	6.90		
DB1	Improve fairness of pay level	6.71		
DB3	Provide compensation package	6.54		
DB2	Increase transparency of pay rate	6.53		
DB5	Promote internal recruitment	6.48		
DB10	Provide training and workshop	6.40		
DB7	Have adequate sleep	6.27		
DB6	Promote team building workshop	5.86		
DB4	Implement mentoring programme	5.57		
DB9	Implement stress management workshop	5.47		

The Friedman test revealed that there is a statistically significant difference in perceived of the relationship between OS and current company implementation of retention strategies and stress management strategies in reducing TI as the value of $p = < 0.01$.

Spearman's Rank Order Correlation Test is used to examine the relationship between OS and current company implementation of retention and stress management strategies in reducing the TI of employees. Each of the retention and stress management strategies was found to correlate with at least 1 potential preventive strategy and at most 10 prevention measures. Table 4.6 summarized the rejected null hypothesis for the relationship between OS and retention and stress management strategies which are statistically significant with $p < 0.05$. It indicates that there was a strong, positive correlation between OS and current company implementation of retention and stress management strategies in reducing TI of employees.

Table 4.6: Spearman Rank Correlation between Occupational Stressor and Retention and Stress Management Strategies.

	Work Overload	Role Conflict	Role Ambiguity	Work-life Balance	Work-Family Conflict	Marital Status	Pay Level	Working Hours	Educational Level	Work Environment	Home Environment	Total number of significant correlations
Retention and Stress Management Strategies												
Provide flexible working hours	.313**	.286**	.133*	.297**	.206**	.031	.354**	.201**	-.170**	.155**	-.157**	10
Have a good working environment	.217**	.140*	.073	.196**	.064	-.020	.234**	.150*	-.120	.121*	-.060	7
Change organizational policy	.352**	.520**	.302**	.285**	.416**	.193**	.382**	.287**	-0.96	.325**	-.163**	10
Improve fairness of pay level	.330**	.128*	.003	.239**	.032	.000	.274**	.131*	-.050	.107	-.039	5
Provide compensation package	.219**	.106	.075	.247**	.146*	-.018	.191**	.148*	-.006	.078	-.094	5
Increase transparency of pay rate	.315**	.361**	.251**	.291**	.257**	.091	.322**	.245**	-0.77	.146*	-.099	8
Promote internal recruitment	.299**	.334**	.201**	.290**	.311**	.109	.305**	-.113	.258**	-.147*	0.015	9
Provide training and workshop	.188**	.158**	.179**	.172**	.127*	.003	.153*	.187**	-.032	.223**	-.090	8
Promote team building workshop	.161**	.197**	.218**	.179**	.223**	.089	.134*	.186**	.069	.192**	.012	8
Have adequate sleep	.059	-.021	.071	.157**	-.068	-.041	.097	.101	.045	.008	.098	1
Implement mentoring programme	.093	.235**	.183**	.125*	1.47*	.059	.127*	.185**	.081	.190**	-.005	7
Implement stress management workshop	.139*	.145*	1.74*	.084	.104	-.026	-.005	.097	.032	.119	-.003	3

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

* . Correlation is significant at the 0.05 level (2-tailed).

The result of the Spearman rank-order correlation between OS and TI reported in Table 4.6 are summarized below:

(A) “Provide flexible working hours.” is the strategy by which is perceived 10 correlations with Work Overload, Role Conflict, Role Ambiguity, Work-life Balance, Work-Family Conflict, Pay Level, Working Hours, Educational Level, Work Environment and Home Environment.

(B) “Have a good working environment” is the strategy by which is perceived 7 correlations with Work Overload, Role Conflict, Work-life Balance, Pay Level, Working Hours, Educational Level and Work Environment.

(C) “Change organizational policy” are the strategy by which are perceived 10 correlations with Work Overload, Role Conflict, Role Ambiguity, Work-life Balance, Work-Family Conflict, Marital Status, Pay Level, Working Hours, Work Environment and Home Environment.

(D) “Improve fairness of pay level” is the strategy by which is perceived 5 correlations with Work Overload, Role Conflict, Work-life Balance, Pay Level, Working Hours and Work Environment.

(E) “Provide compensation package” is the strategy by which is perceived 5 correlations with Work Overload, Role Conflict, Work-life Balance, Pay Level, Working Hours and Work Environment.

(F) “Increase transparency of pay rate” is the strategy by which is perceived 8 correlations with Work Overload, Role Conflict, Role Ambiguity, Work-life Balance, Work-Family Conflict, Pay Level, Working Hours and Work Environment.

(G) “Promote internal recruitment” is the strategy by which is perceived 9 correlations with Work Overload, Role Conflict, Role Ambiguity, Work-life Balance, Work-Family Conflict, Pay Level, Working Hours, Work Environment and Home Environment.

(H) “Provide training and workshop” is the strategy by which is perceived 8 correlations with Work Overload, Role Conflict, Role Ambiguity, Work-life Balance, Work-Family Conflict, Marital Status, Pay Level, Working Hours, Educational Level, Work Environment and Home Environment.

(I) “Promote team building workshop” is the strategy by which is perceived 8 correlations with Work Overload, Role Conflict, Role Ambiguity, Work-life Balance, Work-Family Conflict, Marital Status, Pay Level, Working Hours, Educational Level, Work Environment and Home Environment.

(J) “Have adequate sleep” is the strategy by which is perceived 1 correlation with Work-life Balance.

(K) “Implement mentoring programme” is the strategy by which is perceived 7 correlations with Role Conflict, Role Ambiguity, Work-life Balance, Work-Family Conflict, Pay Level, Working Hours and Work Environment.

(L) “Implement stress management workshop” is the strategy by which is perceived 3 correlations with Work Overload, Role Conflict and Role Ambiguity.

4.6 Stressors of Occupational Stress in the Malaysia Construction Industry

Table 4.7 shows the mean ranking of each OS that occurs in the Malaysian construction industry. The top five statements with highest mean rank are “I get conflicting information from two or more people when I am completing a task.” (mean rank = 16.27), “I have to deal with and satisfy two or more groups who operate differently.” (mean rank = 14.52), “I receive conflict requests from two or more people during work.” (mean rank = 14.20), “I always have to work overtime so that the things can done on time.” (mean rank = 13.35), and “I am forced to do more work than I can handle which lead to long working hours.” (mean rank = 11.30). The first three statements are related to Role Conflict which is under category Task Stressors while the remaining two statements are related to Working Hour which is under Personnel Stressors. Besides, the remaining stressors are ranked as “I don’t have much time for myself every day.” (mean rank = 13.36), “Sometimes I need to break the rules or policy to carry out my job” (mean rank = 13.35), “My salary is not match with my workload that I handle.” (mean rank = 13.30), “My job requires too many demands on my time.” (mean rank = 12.97), “My salary and incentives are lower than my expectations.” (mean rank = 12.62), “I don’t ever seem to have time for family.” (mean rank = 12.33), “I have not enough time for communication with my partner/family.” (mean rank = 11.71), “I am forced by the digital devices to work with very tight schedules.” (mean rank = 11.30), “I don’t have complaining from anyone since I am single.” (mean rank = 8.70) and “My education level do not match the requirements and skills needed for my job demand.” (mean rank = 6.74). The 5 lowest mean rank of statement are under the category of Physical Stressors such as “I lives with my family and I do not have own working space to perform my job.” (mean rank = 5.06), “My home environment is not comfortable to conduct Work From Home.” (mean rank = 4.98), “The noise from my working environment brings impact on my working performance.” (mean rank = 3.92), “I do not have adequate light and temperature in my workplace.” (mean rank = 3.58), and “My working environment does not provide an adequate space for me to focus on my task.” (mean rank = 3.33).

Table 4.7: Mean Rank of Occupational Stressor in Malaysia Construction Industry.

Code		Mean Rank	Chi-Square	Asymp. Sig.
	Task Stressors		369.333	< 0.001
TS2	I get conflicting information from two or more people when I am completing a task.	16.27		
TS4	I have to deal with and satisfy two or more groups who operate differently.	14.52		
TS3	I receive conflict requests from two or more people during work.	14.20		
TS5	Sometimes I need to break the rules or policy to carry out my job.	13.35		
TS1	I am forced by the digital devices to work with very tight schedules.	11.30		
	Personnel Stressors			
PE2	I don't have much time for myself every day.	13.36		
PE1	My job requires too many demands on my time.	12.97		
PE3	I don't ever seem to have time for family.	12.33		
PE4	I have not enough time for communication with my partner/family.	11.71		
PE5	I don't have complaining from anyone since I am single.	8.70		
	Organizational Stressors			
OS4	I always have to work overtime so that the things can done on time.	14.14		
OS3	I am forced to do more work than I can handle which lead to long working hours.	13.61		
OS2	My salary is not match with my workload that I handle.	13.30		
OS1	My salary and incentives are lower than my expectations.	12.62		
OS5	My education level do not match the requirements and skills needed for my job demand.	6.74		
	Physical Stressors			
PH2	I lives with my family and I do not have own working space to perform my job.	5.06		
PH1	My home environment is not comfortable to conduct Work From Home.	4.98		
PH4	The noise from my working environment brings impact on my working performance.	3.92		
PH5	I do not have adequate light and temperature in my workplace.	3.58		
PH3	My working environment does not provide an adequate space for me to focus on my task.	3.33		

The Friedman test revealed that there is a statistically significant difference in perceived OS in the Malaysian construction industry as the value of $p = < 0.01$.

Kruskal-Wallis test was used to compare the differences in respondents' perception of the OS according to respondents' background information in terms of demographic. Table 4.8 presented the rejected null hypothesis for the Stressors of Occupational Stress in the Malaysia construction industry against the demographic of respondents which is statistically significant with $p < 0.05$.

Table 4.8: Rejected Null Hypothesis for the Stressors of Occupational Stress in Malaysia Construction Industry.

Code	Null Hypothesis	Asymp. Sig.
Age		
PH3	The perception of "My working environment does not provide an adequate space for me to focus on my task." is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above.	0.037
Employment status		
PH5	The perception of "I do not have adequate light and temperature in my workplace." is same against the employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	0.049
Working position		
TS1	The perception of "I am forced by the digital devices to work with very tight schedules." is same between respondent's working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial and Human Resources and Others.	0.034

Household Income Classification		
OS4	The perception of “I always have to work overtime so that the things can done on time.” is same between household income classification of B40, M40 and T20.	0.023
PH1	The perception of “My home environment is not comfortable to conduct Work from Home.” is same between higher educational attainment of Pre-University, Undergraduate and Postgraduate.	0.039

The result of the post-hoc test for the OS reported in Table 4.7 are summarized below:

(A) “I always have to work overtime so that the things can done on time.”

is the statement which is perceived higher by

(i) respondents with T20 income classification (mean rank = 23.40) than B40 (mean rank = 17.98) and M40 (mean rank = 10.56).

(B) “I am forced by the digital devices to work with very tight schedules.”

is the statement which is perceived higher by

(i) respondents who are aged of 45 or above (mean rank = 19.00) than 35 to 44 (mean rank = 18.50), 18 to 24 (mean rank = 16.87) and 25 to 34 (mean rank = 15.13).

(C) “My home environment is not comfortable to conduct Work From Home.” is the statement which is perceived higher by

(i) respondents with pre-university (mean rank = 25.20) than undergraduate (mean rank = 15.93) and pre -university (mean rank = 5.00).

(D) “I do not have adequate light and temperature in my workplace.” is the statement which is perceived higher by

(i) respondents with full time permanent employee (mean rank = 20.21) than full time temporary employee (mean rank = 13.33) and part-time temporary employee (mean rank = 12.13)

(E) “My working environment does not provide an adequate space for me to focus on my task.” is the statement which is perceived higher by (i) respondents with age 25 to 34 (mean rank = 27.50) than 18 to 24 (mean rank = 16.09), 45 or above (mean rank= 16.00) and 35 to 44 (mean = rank).

4.7 Symptoms of Stress

Table 4.9 summarized the mean rank of the symptoms of stress faced by the employee in the construction industry. The five highest mean rank are arranged as Muscular Tension (mean rank = 6.24), Headaches (mean rank = 5.96), TI (mean rank = 5.84), Sleeping Difficulties (mean rank = 5.01) and Irritability (mean rank = 4.84). The findings revealed that these five symptoms of stress are the most frequently faced by employees in the construction industry. The remaining symptoms are ranked as anxiety (mean rank = 4.71), depression (mean rank = 4.39), a drop in work performance (mean rank= 4.11) and an increase in sick days and absenteeism (mean rank= 3.89).

Table 4.9: Mean Rank of Symptoms of Stress.

Code	Symptoms of Stress	Mean Rank	Chi-square	Asymp. Sig.
SS1	Muscular Tension	6.24	391.234	<0.001
SS2	Headaches	5.96		
SS9	Turnover intention	5.84		
SS3	Sleeping Difficulties	5.01		
SS6	Irritability	4.84		
SS5	Anxiety	4.71		
SS4	Depression	4.39		
SS8	A drop in work performance	4.11		
SS7	An increase in sick days and absenteeism	3.89		

The Friedman test revealed that there is a statistically significant difference in perceived Symptoms of Stress as the value of $p = < 0.01$ is shown in Table 4.9.

4.8 Employees' Satisfaction on Company's Culture and Policy

Table 4.10 summarized a total of twelve statements according to the mean rank of employees' satisfaction on company's culture and policy. The five highest mean ranks are "I appreciate to work under an agile organisational policy provided by the company" (mean rank = 7.82), "I am comfortable with the flexible working hours" (mean rank = 7.57), "I love to work under ambient and dedicated working environment" (mean rank = 7.46), "I am willingly participating in team building workshop which promote by the company" (mean rank = 7.25), and "I feel appreciated if the company promote internal recruitment" (mean rank = 7.20). Besides, it follows by "I encourage the implementation of mentoring programme in the company." (mean rank = 6.85), "I feel that adequate sleep and small rest after meal or long meeting is important." (mean rank = 6.65), "I appreciate if the company often organise stress management workshop" (mean rank = 6.56), "I am happy with the training and workshop provided by the company." (mean rank = 6.41), "I am happy with the compensation package provided by the company." (mean rank = 5.13), "I am familiar with the current pay rate and know how it is calculated." (mean rank = 5.04) and "I feel fair and satisfied and of my current pay level by company." (mean rank = 4.06).

Table 4.10: Mean Rank of Employees' Satisfaction on Company's Culture and Policy.

Code		Mean Rank	Chi-square	Asymp. Sig.
DA12	I appreciate to work under an agile organisational policy provided by the company.	7.82	437.782	< 0.001
DA11	I am comfortable with the flexible working hours.	7.57		
DA8	I love to work under ambient and dedicated working environment.	7.46		
DA6	I am willingly participating in team building workshop which promote by the company.	7.25		
DA5	I feel appreciated if the company promote internal recruitment.	7.20		
DA4	I encourage the implementation of mentoring programme in the company.	6.85		
DA7	I feel that adequate sleep and small rest after meal or long meeting is important.	6.65		
DA9	I appreciate if the company often organise stress management workshop	6.56		
DA10	I am happy with the training and workshop provided by the company.	6.41		
DA3	I am happy with the compensation package provided by the company.	5.13		
DA2	I am familiar with the current pay rate and know how it is calculated.	5.04		
DA1	I feel fair and satisfied and of my current pay level by company.	4.06		

According to Table 4.10, there was a statistically significant difference in perceived employees' satisfaction with the company's culture and policy with a value of $p = < 0.01$.

Kruskal-Wallis H test is used to test for employees' satisfaction with the company's culture and policy. Table 4.11 summarized the rejected null hypothesis for Employees' Satisfaction on Company's Culture and Policy against Demographics Profile of Respondents which is statistically significant with $p < 0.05$.

Table 4.11: Rejected Null Hypothesis for the Employees' Satisfaction on Company's Culture and Policy.

Code	Null Hypothesis	Asymp. Sig.
Age		
DA1	The perception of "I feel fair and satisfied and of my current pay level by company." is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above.	0.036
DA3	The perception of "I am happy with the compensation package provided by the company." is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above.	0.009
DA5	The perception of "I feel appreciated if the company promote internal recruitment." is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above.	0.042
DA6	The perception of "I am willingly participating in team building workshop which promote by the company." is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above.	0.027
DA12	The perception of "I appreciate to work under an agile organisational policy provided by the company." is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above.	0.035

Marital Status		
DA6	The perception of “I am willingly participating in team building workshop which promote by the company.” is same between marital status of single, in a relationship and married.	0.041
DA12	The perception of “I appreciate to work under an agile organisational policy provided by the company.” is same between marital status of single, in a relationship and married.	0.029
Educational level		
DA3	The perception of “I am happy with the compensation package provided by the company.” is same between educational level of Pre-University, Undergraduate and Postgraduate.	0.002
DA4	The perception of “I encourage the implementation of mentoring programme in the company.” is same between educational level of Pre-University, Undergraduate and Postgraduate.	0.001
DA5	The perception of “I feel appreciated if the company promote internal recruitment.” is same between educational level of Pre-University, Undergraduate and Postgraduate.	0.001
DA6	The perception of “I am willingly participating in team building workshop which promote by the company.” is same between educational level of Pre-University, Undergraduate and Postgraduate.	0.003
DA8	The perception of “I love to work under ambient and dedicated working environment.” is same between educational level of Pre-University, Undergraduate and Postgraduate.	0.008
DA11	The perception of “I am comfortable with the flexible working hours.” is same between educational level of Pre-University, Undergraduate and Postgraduate.	0.01

DA12	The perception of “I appreciate to work under an agile organisational policy provided by the company.” is same against the employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	<0.001
Type of organization		
DA3	The perception of “I am happy with the compensation package provided by the company.” is same between types of organization in category of Developer, Contractor, Consultant and Supplier, Specialist or Subcontractor.	0.006
DA9	The perception of “I appreciate if the company often organise stress management workshop.” is same between types of organization in category of Developer, Contractor, Consultant and Supplier, Specialist or Subcontractor.	0.011
DA12	The perception of “I appreciate to work under an agile organisational policy provided by the company.” is same between types of organization in category of Developer, Contractor, Consultant and Supplier, Specialist or Subcontractor.	< 0.001
Employment Status		
DA4	The perception of “I encourage the implementation of mentoring programme in the company.” is same against the employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	0.001
DA5	The perception of “I feel appreciated if the company promote internal recruitment.” is same against the employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	< 0.001

DA11	The perception of “I am comfortable with the flexible working hours.” is same against the employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	<0.001
DA12	The perception of “I appreciate to work under an agile organisational policy provided by the company.” is same against the employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	<0.001
Working Position		
DA3	The perception of “I am happy with the compensation package provided by the company.” is same between working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial and Human Resources and Others.	0.045
DA7	The perception of “I feel that adequate sleep and small rest after meal or long meeting is important.” is same between working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial and Human Resources and Others.	0.009
DA12	The perception of “I appreciate to work under an agile organisational policy provided by the company.” is same between working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial and Human Resources and Others.	0.035
Household income classification		
DA5	The perception of “I feel appreciated if the company promote internal recruitment.” is same between household income classification of B40, M40 and T20.	0.044

DA6	The perception of “I am willingly participating in team building workshop which promote by the company.” is same between household income classification of B40, M40 and T20.	0.011
Working year in current company		
DA5	The perception of “I feel appreciated if the company promote internal recruitment.” is same against working years in current company of currently unemployed, within 1 year, 1 to 3 years, 4 to 6 years and 7 years or above.	0.044
DA8	The perception of “I love to work under ambient and dedicated working environment.” is same against working years in current company of currently unemployed, within 1 year, 1 to 3 years, 4 to 6 years and 7 years or above.	0.004
DA9	The perception of “I appreciate if the company often organise stress management workshop.” is same against working years in current company of currently unemployed, within 1 year, 1 to 3 years, 4 to 6 years and 7 years or above.	0.012
DA11	The perception of “I am comfortable with the flexible working hours.” is same against working years in current company of currently unemployed, within 1 year, 1 to 3 years, 4 to 6 years and 7 years or above.	0.01
DA12	The perception of “I appreciate to work under an agile organisational policy provided by the company.” is same against working years in current company of currently unemployed, within 1 year, 1 to 3 years, 4 to 6 years and 7 years or above.	<0.001

The result of the post-hoc test for the employees' satisfaction with the company's culture and policy reported in Table 4.12 are summarized below:

(A) "I appreciate to work under an agile organisational policy provided by the company." is the statement which is perceived higher by

(i) respondents with age 45 or above (mean rank = 174.18) than 35 to 44 (mean rank = 150.63), 25 to 34 (mean rank = 137.34) and 18 to 24 (mean rank = 114.77).

(ii) respondents with marital status of married (mean rank = 151.63) than in a relationship (mean rank = 137.95) and single (mean rank = 124.02).

(iii) respondents who held Postgraduate (mean rank = 166.96) than with undergraduate (mean rank = 136.59) and pre-university (mean rank = 105.76).

(iv) respondents who work in developer company (mean rank = 158.27) than supplier/specialist/subcontractor (mean rank = 132.95). contractor (mean rank = 130.46) and consultant (mean rank = 125.22)

(v) respondents who work as part-time permanent employee (mean rank = 172.71) than full-time temporary employee (mean rank = 159.23), full-time permanent employee (mean rank = 132.03) and part-time temporary employee (mean rank = 104.33).

(vi) respondents who worked as consultant (mean rank = 164.40) than financial and human resources (mean rank = 149.57), site personnel (mean rank = 134.59), management level (mean rank = 134.13), others (mean rank = 124.04) and quantity surveyor (mean rank = 122.26).

(vii) respondents with T20 income classification group (mean rank = 157.46) than M40 (mean rank = 138.40) and B40 (mean rank = 127.26).

(viii) respondents who work for 4 to 6 years (mean rank = 156.28) than 7 years or above (mean rank = 149.49), 1 to 3 years (mean rank = 141.24), currently unemployed (mean rank = 124.30) and within 1 year (mean rank = 111.74).

(B) “I am comfortable with the flexible working hours.” is the statement which is perceived higher by

(i) respondents who held Postgraduate (mean rank = 143.39) than with undergraduate (mean rank = 141.19) and pre-university (mean rank = 105.29).

(ii) respondents who work as full-time temporary employee (mean rank = 170.01) than part-time permanent employee (mean rank = 158.08), full-time permanent employee (mean rank = 128.72) and part-time temporary employee (mean rank = 115.67).

(iii) respondents who work for 4 to 6 years (mean rank = 156.28) than 7 years or above (mean rank = 149.49), 1 to 3 years (mean rank = 141.24), currently unemployed (mean rank = 124.30) and within 1 year (mean rank = 111.74).

(C) “I love to work under ambient and dedicated working environment.” is the statement which is perceived higher by

(i) respondents who held Postgraduate (mean rank = 152.00) than with undergraduate (mean rank = 139.27) and pre-university (mean rank = 106.47).

(ii) respondents who work for 4 to 6 years (mean rank = 159.00) than 1 to 3 years (mean rank = 148.60), currently unemployed (mean rank = 130.23), 7 years or above (mean rank = 118.58) and within 1 year (mean rank = 116.35).

(D) “I am willingly participating in team building workshop which promote by the company.” is the statement which is perceived higher by

(i) respondents with age 45 or above (mean rank = 162.83) than 35 to 44 (mean rank = 144.47), 25 to 34 (mean rank = 130.34) and 18 to 24 (mean rank = 125.27).

(ii) respondents with marital status of in a relationship (mean rank = 146.76) than married (mean rank = 145.05) and single (mean rank = 123.52).

(iii) respondents who held Postgraduate (mean rank = 165.68) than with undergraduate (mean rank = 135.79) and pre-university (mean rank = 110.13).

(iv) respondents with B40 income classification group (mean rank = 140.29) than T20 (mean rank = 135.44) and M40 (mean rank = 128.54)

(E) “I feel appreciated if the company promote internal recruitment.” is the statement which is perceived higher by

(i) respondents with age 45 or above (mean rank = 160.20) than 35 to 44 (mean rank = 142.05), 25 to 34 (mean rank = 135.88) and 18 to 24 (mean rank = 123.95).

(ii) respondents who held Postgraduate (mean rank = 165.94) than with undergraduate (mean rank = 136.09) and pre-university (mean rank = 108.67).

(iii) respondents who work as full-time permanent employee (mean rank = 153.20) than part-time permanent employee (mean rank = 153.20), full-time permanent employee (mean rank = 132.97) and part-time temporary employee (mean rank = 107.53).

(iv) respondents with T20 income classification group (mean rank = 157.42) than M40 (mean rank = 139.95) and B40 (mean rank = 157.42).

(v) respondents who work for 4 to 6 years (mean rank = 161.59) than 7 years or above (mean rank = 142.31), 1 to 3 years (mean rank = 137.69), within 1 year (mean rank = 121.02) and currently unemployed (mean rank = 111.58).

(F) “I encourage the implementation of mentoring programme in the company.” is the statement which is perceived higher by

(i) respondents who held Postgraduate (mean rank = 173.74) than with undergraduate (mean rank = 133.02) and pre-university (mean rank = 115.34).

(ii) respondents who work as full-time temporary employee (mean rank = 166.62) than part-time permanent employee (mean rank = 164.38), full-time permanent employee (mean rank = 126.27) and part-time temporary employee (mean rank = 121.20).

(G) “I feel that adequate sleep and small rest after meal or long meeting is important.” is the statement which is perceived higher by

(i) respondents who worked as quantity surveyor (mean rank = 154.34) than consultant (mean rank = 147.48), financial and human resources (mean rank = 128.45), others (mean rank = 124.24), site personnel (mean rank = 116.23) and management level (mean rank = 107.95).

(H) “I appreciate if the company often organise stress management workshop.” is the statement which is perceived higher by

(i) respondents who work in developer company (mean rank = 161.17) than consultant (mean rank = 137.02), contractor (mean rank = 121.43) and supplier/specialist/subcontractor (mean rank = 131.76).

(ii) respondents who work for 7 years or above (mean rank = 152.45) than 1 to 3 years (mean rank = 146.49), 4 to 6 years (mean rank = 143.90), currently unemployed (mean rank = 131.95) and within 1 year (mean rank = 110.66).

(I) “I am happy with the compensation package provided by the company.” is the statement which is perceived higher by

(i) respondents with age 45 or above (mean rank = 166.87) than 25 to 34 (mean rank = 142.74), 35 to 44 (mean rank = 127.25), and 18 to 24 (mean rank = 123.50).

(ii) respondents who held Postgraduate (mean rank = 170.43) than with undergraduate (mean rank = 134.21) and pre-university (mean rank = 112.97).

(iii) respondents who work in developer company (mean rank = 158.48) than consultant (mean rank = 137.96), contractor (mean rank = 133.15), and supplier/specialist/subcontractor (mean rank = 105.79).

(iv) respondents who worked as consultant (mean rank = 161.60) than management level (mean rank = 150.00), financial and human resources (mean rank = 142.73), site personnel (mean rank = 132.28), quantity surveyor (mean rank = 123.27) and others (mean rank = 119.01).

(J) “I feel fair and satisfied and of my current pay level by company.” is the last ranked which is statement which is perceived higher by

(i) respondents with age 18 to 24 (mean rank = 150.73) than 25 to 34 (mean rank = 125.93), 35 to 44 (mean rank = 125.63) and 45 or above (mean rank = 119.13).

4.9 Employees' Satisfaction on Company's Current Implementation in Reducing Turnover Intention

Table 4.12 summarized mean rankings for employees' satisfaction on the company's current implementation in reducing TI. The 5 highest mean ranks for employees' satisfaction with the company's current implementation in reducing TI are "I love to work under ambient and dedicated working environment." (mean rank = 8.09), "I feel appreciated if the company promote internal recruitment." (mean rank = 7.56), "I am happy with the compensation package provided by the company." (mean rank = 7.36), "I appreciate to work under an agile organisational policy provided by the company." (mean rank = 7.35) and "I feel that adequate sleep and small rest after meal or long meeting is important." (mean rank = 6.66). Besides, it follows by "I am happy with the training and workshop provided by the company." (mean rank = 6.20), "I am willingly participating in team building workshop which promote by the company." (mean rank = 6.18), "I am familiar with the current pay rate and know how it is calculated." (mean rank = 6.11), "I am comfortable with the flexible working hours." (mean rank = 6.09), "I feel fair and satisfied and of my current pay level by company." (mean rank = 6.00), "I encourage the implementation of mentoring programme in the company." (mean rank = 5.82) and "I appreciate if the company often organise stress management workshop." (mean rank = 4.58).

Table 4.12: Mean Ranking for Employees' Satisfaction on Company's Current Implementation in Reducing Turnover Intention.

Code		Mean Rank	Chi-square	Asymp . Sig.
DC8	Implement stress management workshop	8.09	315.448	<0.001
DC5	Promote internal recruitment	7.56		
DC3	Provide compensation package	7.36		
DC12	Change organizational policy	7.35		
DC7	Have adequate sleep	6.66		
DC10	Provide training and workshop	6.20		

DC6	Promote team building workshop	6.18
DC2	Increase transparency of pay rate	6.11
DC11	Provide flexible working hours	6.09
DC1	Improve fairness of pay level	6.00
DC4	Implement mentoring programme	5.82
DC9	Have a good working environment	4.58

Friedman's test revealed that there was a statistically significant difference in perceived of employees' satisfaction on the company's current implementation in reducing TI with a value of $p = < 0.01$.

Kruskal-Wallis H Test is used to test for employees' satisfaction on the company's current implementation in reducing TI. Table 4.13 summarized the rejected null hypothesis for employees' satisfaction on the company's current implementation against the demographic profile of respondents which is statistically significant with $p < 0.05$.

Table 4.13: Rejected Null Hypothesis for the Employees' Satisfaction on Company's Current Implementation in Reducing Turnover Intention.

Code	Null Hypothesis	Asymp. Sig.
Gender		
DC4	The perception of "Implement mentoring programme" is same against gender in category of male and female.	0.039
DC6	The perception of "Promote team building workshop" is same against gender in category of male and female.	0.017
DC7	The perception of "Have adequate sleep" is same against gender in category of male and female.	0.034
DC8	The perception of "Implement stress management workshop" is same against gender in category of male and female.	0.034
DC11	The perception of "Provide flexible working hours" is same against gender in category of male and female.	< 0.001
Age		
DC1	The perception of "Improve fairness of pay level" is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above.	< 0.001
DC2	The perception of "Increase transparency of pay rate" is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above.	< 0.001
DC4	The perception of "Implement mentoring programme" is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above.	< 0.001
DC6	The perception of "Promote team building workshop" is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above.	< 0.001
DC7	The perception of "Have adequate sleep" is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above.	< 0.001
DC8	The perception of "Have a good working environment" is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above.	0.043
DC9	The perception of "Implement stress management workshop" is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above.	< 0.001
DC10	The perception of "Provide training and workshop" is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above.	< 0.001
DC11	The perception of "Provide flexible working hours" is same against age of 18 to 24, 25 to 34, 35 to 44 and 45 or above.	< 0.001
Marital Status		
DC1	The perception of "Improve fairness of pay level" is same against marital status of single, in a relationship and married.	< 0.001
DC2	The perception of "Increase transparency of pay rate" is same against marital status of single, in a relationship and married.	< 0.001
DC4	The perception of "Implement mentoring programme" is same against marital status of single, in a relationship and married.	< 0.001
DC6	The perception of "Promote team building workshop" is same against marital status of single, in a relationship and married.	< 0.001
DC7	The perception of "Have adequate sleep" is same against marital status of single, in a relationship and married.	0.024
DC9	The perception of "Implement stress management workshop" is same against marital status of single, in a relationship and married.	< 0.001
DC10	The perception of "Provide training and workshop" is same against marital status of single, in a relationship and married.	< 0.001
DC11	The perception of "Provide flexible working hours" is same against marital status of single, in a relationship and married.	< 0.001

Educational Status		
DC1	The perception of “Improve fairness of pay level” is same against educational level of Pre-university, undergraduate and postgraduate.	< 0.001
DC2	The perception of “Increase transparency of pay rate” is same against educational level of Pre-university, undergraduate and postgraduate.	< 0.001
DC3	The perception of “Provide compensation package” is same against educational level of Pre-university, undergraduate and postgraduate.	0.022
DC5	The perception of “Promote internal recruitment” is same against educational level of Pre-university, undergraduate and postgraduate.	< 0.001
DC6	The perception of “Promote team building workshop” is same against educational level of Pre-university, undergraduate and postgraduate.	< 0.001
DC9	The perception of “Implement stress management workshop” is same against educational level of Pre-university, undergraduate and postgraduate.	< 0.001
DC10	The perception of “Provide training and workshop” is same against educational level of Pre-university, undergraduate and postgraduate.	< 0.001
DC11	The perception of “Provide flexible working hours” is same against educational level of Pre-university, undergraduate and postgraduate.	< 0.001
DC12	The perception of “Change organizational policy” is same against educational level of Pre-university, undergraduate and postgraduate.	0.001
Types of Organization		
DC1	The perception of “Improve fairness of pay level” is same against types of organization in category of Developer, Contractor, Consultant and Supplier, Specialist or Subcontractor.	0.026
DC4	The perception of “Implement mentoring programme” is same against types of organization in category of Developer, Contractor, Consultant and Supplier, Specialist or Subcontractor.	0.003
DC5	The perception of “Promote internal recruitment” types of organization in category of Developer, Contractor, Consultant and Supplier, Specialist or Subcontractor.	0.033
DC9	The perception of “Implement stress management workshop” is same against types of organization in category of Developer, Contractor, Consultant and Supplier, Specialist or Subcontractor.	0.007
DC10	The perception of “Provide training and workshop” is same against types of organization in category of Developer, Contractor, Consultant and Supplier, Specialist or Subcontractor.	0.003
DC11	The perception of “Provide flexible working hours” is same against types of organization in category of Developer, Contractor, Consultant and Supplier, Specialist or Subcontractor.	0.027
DC12	The perception of “Change organizational policy” is same against types of organization in category of Developer, Contractor, Consultant and Supplier, Specialist or Subcontractor.	0.017
Employment Status		
DC1	The perception of “Improve fairness of pay level” is same against the employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	0.003
DC4	The perception of “Implement mentoring programme” is same against the employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	0.011
DC6	The perception of “Promote team building workshop” is same against the employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	0.004
DC7	The perception of “Have adequate sleep” is same against the employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	0.020

DC8	The perception of “Have a good working environment” is same against the employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	0.046
DC9	The perception of “Implement stress management workshop” is same against the employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	< 0.001
DC10	The perception of “Provide training and workshop” is same against the employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	< 0.001
DC11	The perception of “Provide flexible working hours” is same against the employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	0.015
Working Position		
DC1	The perception of “Improve fairness of pay level” is same against working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial and Human Resources and Others.	0.015
DC4	The perception of “Implement mentoring programme” is same against working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial and Human Resources and Others.	0.006
DC6	The perception of “Promote team building workshop” is same against working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial and Human Resources and Others.	0.002
DC9	The perception of “Implement stress management workshop” is same against working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial and Human Resources and Others.	< 0.001
DC10	The perception of “Provide training and workshop” is same against working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial and Human Resources and Others.	< 0.001
DC11	The perception of “Provide flexible working hours” is same against working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial and Human Resources and Others.	< 0.001
DC12	The perception of “Change organizational policy” is same against working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial and Human Resources and Others.	0.007
Income		
DC1	The perception of “Improve fairness of pay level” is same against working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial and Human Resources and Others.	0.001
DC4	The perception of “Implement mentoring programme” is same against working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial and Human Resources and Others.	0.004
DC6	The perception of “Promote team building workshop” is same against working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial	0.006

	and Human Resources and Others.	
DC7	The perception of “Have adequate sleep” is same against the employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	0.011
DC9	The perception of “Implement stress management workshop” is same against the employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	< 0.001
DC10	The perception of “Provide training and workshop” is same against working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial and Human Resources and Others.	< 0.001
DC11	The perception of “Provide flexible working hours” is same against working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial and Human Resources and Others.	< 0.001
Working Years in Current Company		
DC1	The perception of “Improve fairness of pay level” is same against working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial and Human Resources and Others.	0.005
DC4	The perception of “Implement mentoring programme” is same against working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial and Human Resources and Others.	< 0.001
DC5	The perception of “Promote internal recruitment” is same against the employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	0.045
DC6	The perception of “Promote team building workshop” is same against the employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	< 0.001
DC7	The perception of “Have adequate sleep” is same against the employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	0.023
DC9	The perception of “Implement stress management workshop” is same against the employment status in category of full-time permanent employee, full-time temporary employee, part-time permanent employee and part-time permanent employee.	< 0.001
DC10	The perception of “Provide training and workshop” is same against working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial and Human Resources and Others.	0.016
DC11	The perception of “Provide flexible working hours” is same against working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial and Human Resources and Others.	< 0.001
DC12	The perception of “Change organizational policy” is same against working position in category of Management Level, Site Personnel, Quantity Surveyor, Consultant, Financial and Human Resources and Others.	0.02

The result of the post hoc test for employees' satisfaction on the company's current implementation in reducing TI reported in Table 4.13 are summarized below:

(A) "Implement stress management workshop" is the implementation which is perceived higher by

(i) respondents who are female (mean rank = 146.52) than male (mean rank = 126.69).

(ii) respondents with age 18 to 24 (mean rank = 176.46) than 25 to 34 (mean rank = 121.13), 35 to 44 (mean rank = 96.62) and 45 or above (mean rank = 86.71).

(iii) respondents who work as part-time temporary employee (mean rank = 178.21) than full-time temporary employee (mean rank = 126.80), full-time permanent employee (mean rank = 125.43) and part-time permanent employee (mean rank = 124.73).

(B) "Promote internal recruitment" is the implementation which is perceived higher by

(i) respondents who held Postgraduate (mean rank = 151.68) than with undergraduate (mean rank = 139.21) and pre-university (mean rank = 106.98).

(ii) respondents who work in developer company (mean rank = 151.54) than consultant (mean rank = 137.15), contractor (mean rank = 136.58) and supplier/specialist/subcontractor (mean rank = 108.06).

(iii) respondents who work for 4 to 6 years (mean rank = 150.78) than 7 years or above (mean rank = 145.67), currently unemployed (mean rank = 143.20), 1 to 3 years (mean rank = 136.63) and within 1 year (mean rank = 113.88).

(C) "Provide compensation package" is the implementation which is perceived higher by

(i) respondents who held undergraduate (mean rank = 147.38) than pre-university (mean rank = 134.00) and postgraduate (mean rank = 136.59).

(D) “Change organizational policy” is the statement which is perceived higher by

(i) respondents who held Postgraduate (mean rank = 170.61) than with undergraduate (mean rank = 134.99) and pre-university (mean rank = 109.57).

(ii) respondents who work in developer company (mean rank = 159.93) than consultant (mean rank = 138.92), contractor (mean rank = 126.58) and supplier/specialist/subcontractor (mean rank = 117.88).

(iii) respondents who worked as consultant (mean rank = 164.40) than site personnel (mean rank = 153.27), financial and human resources (mean rank = 145.87), management level (mean rank = 130.23), others (mean rank = 125.54) and quantity surveyor (mean rank = 116.50).

(iv) respondents who work for 4 to 6 years (mean rank = 155.24) than 1 to 3 years (mean rank = 143.86), 7 years or above (mean rank = 133.99), currently unemployed (mean rank = 137.18) and within 1 year (mean rank = 112.38).

(E) “Have adequate sleep” is the implementation which is perceived higher by

(i) respondents with age 18 to 24 (mean rank = 157.81) than 25 to 34 (mean rank = 122.71), 35 to 44 (mean rank = 116.26) and 45 or above (mean rank = 114.88).

(ii) respondents with marital status of single (mean rank = 148.94) than married (mean rank = 124.13) and in a relationship (mean rank = 123.67).

(iii) respondents who work as part-time temporary employee (mean rank = 156.56) than full-time temporary employee (mean rank = 152.97), full-time permanent employee (mean rank = 128.56) and part-time permanent employee (mean rank = 114.71).

(iv) respondents with T20 income classification group (mean rank = 157.46) than M40 (mean rank = 138.40) and B40 (mean rank = 127.26).

(v) respondents who work for currently unemployed (mean rank = 168.33), than within 1 year (mean rank = 144.45), 7 years or above (mean rank = 129.74), 1 to 3 years (mean rank = 129.74) and 4 to 6 years (mean rank = 117.81).

(F) “Provide training and workshop” is the implementation which is perceived higher by

(i) respondents with age 45 or above (mean rank = 174.18) than 35 to 44 (mean rank = 150.63), 25 to 34 (mean rank = 137.34) and 18 to 24 (mean rank = 114.77).

(ii) respondents with marital status of married (mean rank = 151.63) than in a relationship (mean rank = 137.95) and single (mean rank = 124.02).

(iii) respondents who held Postgraduate (mean rank = 166.96) than with undergraduate (mean rank = 136.59) and pre-university (mean rank = 105.76).

(iv) respondents who work in developer company (mean rank = 158.27) than supplier/specialist/subcontractor (mean rank = 132.95), contractor (mean rank = 130.46) and consultant (mean rank = 125.22)

(v) respondents who work as part-time permanent employee (mean rank = 172.71) than full-time temporary employee (mean rank = 159.23), full-time permanent employee (mean rank = 132.03) and part-time temporary employee (mean rank = 104.33).

(vi) respondents who worked as consultant (mean rank = 164.40) than financial and human resources (mean rank = 149.57), site personnel (mean rank = 134.59), management level (mean rank = 134.13), others (mean rank = 124.04) and quantity surveyor (mean rank = 122.26).

(vii) respondents with T20 income classification group (mean rank = 157.46) than M40 (mean rank = 138.40) and B40 (mean rank = 127.26).

(viii) respondents who work for 4 to 6 years (mean rank = 156.28) than 7 years or above (mean rank = 149.49), 1 to 3 years (mean rank = 141.24), currently unemployed (mean rank = 124.30) and within 1 year (mean rank = 111.74).

(G) “Promote team building workshop” is the implementation which is perceived higher by

(i) respondents with age 18 to 24 (mean rank = 159.46) than 25 to 34 (mean rank = 133.87), 35 to 44 (mean rank = 106.83) and 45 or above (mean rank = 102.54).

(ii) respondents with marital status of single (mean rank = 148.94) than married (mean rank = 124.12) and in a relationship (mean rank = 123.67).

(iii) respondents who held undergraduate (mean rank = 143.38) than with postgraduate (mean rank = 117.78) and pre-university (mean rank = 116.59).

(v) respondents who work as part-time temporary employee (mean rank = 168.23) than part-time permanent employee (mean rank = 136.92), full-time temporary employee (mean rank = 134.01) and part-time temporary employee (mean rank = 124.35).

(vi) respondents who worked as consultant (mean rank = 164.40) than financial and human resources (mean rank = 149.57), site personnel (mean rank = 134.59), management level (mean rank = 134.13), others (mean rank = 124.04) and quantity surveyor (mean rank = 122.26).

(vii) respondents with B400 income classification group (mean rank = 149.83) than M40 (mean rank = 121.83) and T20 (mean rank = 118.12).

(viii) respondents who work for currently unemployed (mean rank = 173.44) than within 1 year (mean rank = 155.08), 7 years or above (mean rank = 118.40), 4 to 6 years (mean rank = 114.47) and 1 to 3 years (mean rank = 123.57).

(H) “Increase transparency of pay rate” is the implementation which is perceived higher by

(i) respondents with age 18 to 24 (mean rank = 162.48) than 35 to 44 (mean rank = 126.27), 25 to 34 (mean rank = 113.14) and 45 or above (mean rank = 106.06).

(ii) respondents with marital status of single (mean rank = 154.61) than married (mean rank = 119.07) and in a relationship (mean rank = 118.97).

(iii) respondents who held undergraduate (mean rank = 141.05) than pre-university (mean rank = 134.41) and postgraduate (mean rank = 107.71).

(I) “Provide flexible working hours” is the implementation which is perceived higher by

(i) respondents with age 18 to 24 (mean rank = 172.35) than 25 to 34 (mean rank = 121.28), 35 to 44 (mean rank = 105.12) and 45 or above (mean rank = 88.56).

(ii) respondents with marital status of single (mean rank = 161.21) than in a relationship (mean rank = 126.25) and married (mean rank = 102.55).

(iii) respondents who held undergraduate (mean rank = 147.27) than pre-university (mean rank = 129.88) and with postgraduate (mean rank = 80.72).

(iv) respondents who work in contractor company (mean rank = 150.02) than consultant (mean rank = 136.69), supplier/specialist/subcontractor (mean rank = 129.39) and developer (mean rank = 112.98).

(v) respondents who work as part-time temporary employee (mean rank = 164.04) than full-time temporary employee (mean rank = 135.35), full-time permanent employee (mean rank = 130.36) and part-time permanent employee (mean rank = 114.77).

(vi) respondents who worked as quantity surveyor (mean rank = 170.28) than site personnel (mean rank = 137.62), others (mean rank = 119.38), management level (mean rank = 117.27), financial and human resources (mean rank = 112.07), and consultant (mean rank = 105.38).

(vii) respondents with B40 income classification group (mean rank = 153.82) than M40 (mean rank = 125.68) and T20 (mean rank = 94.81).

(viii) respondents who work for within 1 year (mean rank = 167.30) than currently unemployed (mean rank = 159.67), 1 to 3 years (mean rank = 132.38), 4 to 6 years (mean rank = 105.81) and 7 years or above (mean rank = 103.23).

(J) “Improve fairness of pay level” is the statement which is perceived higher by

(i) respondents with age 18 to 24 (mean rank = 167.79) than 35 to 44 (mean rank = 119.35), 25 to 34 (mean rank = 118.02) and 45 or above (mean rank = 90.82).

(ii) respondents with marital status of single (mean rank = 159.20) than in a relationship (mean rank = 124.87) and married (mean rank = 106.87).

(iii) respondents who held undergraduate (mean rank = 144.57) than pre-university (mean rank = 131.09) and undergraduate (mean rank = 93.40).

(iv) respondents who work in contractor company (mean rank = 146.99) than consultant (mean rank = 141.00), supplier/specialist/subcontractor (mean rank = 133.26) and developer (mean rank = 110.47).

(v) respondents who work as part-time temporary employee (mean rank = 157.83) than full-time temporary employee (mean rank = 142.08) full-time permanent employee (mean rank = 135.10) and part-time permanent employee (mean rank = 95.41).

(vi) respondents who worked as quantity surveyor (mean rank = 154.40) than site personnel (mean rank = 150.58), financial and human resources (mean rank = 127.93), others (mean rank = 121.09), consultant (mean rank = 116.19) and management level (mean rank = 115.20),

(vii) respondents with B40 income classification group (mean rank = 151.33). than M40 (mean rank = 123.16) and T20 (mean rank = 109.63).

(viii) respondents who work for within 1 year (mean rank = 155.86) than currently unemployed (mean rank = 152.53), 1 to 3 years (mean rank = 135.75), 4 to 6 years (mean rank = 113.87) and 7 years or above (mean rank = 112.99).

(K) “Implement mentoring programme” is the statement which is perceived higher by

(i) respondents with age 18 to 24 (mean rank = 165.93) than 25 to 34 (mean rank = 117.31), 45 or above (mean rank = 111.21) and 35 to 44 (mean rank = 106.92).

(ii) respondents with marital status of single (mean rank = 157.94) than in a relationship (mean rank = 123.89) and married (mean rank = 109.69).

(iii) respondents who work in contractor company (mean rank = 151.28) than consultant (mean rank = 142.46), supplier/specialist/subcontractor (mean rank = 125.38) and developer (mean rank = 106.91).

(iv) respondents who work as part-time temporary employee (mean rank = 165.21) than full-time temporary employee (mean rank = 141.58), part-time permanent employee (mean rank = 130.52) and full-time permanent employee (mean rank = 124.93).

(v) respondents who worked as quantity surveyor (mean rank = 161.32) than site personnel (mean rank = 128.89), financial and human resources (mean rank = 125.02), others (mean rank = 123.46), consultant (mean rank = 118.95) and management level (mean rank = 117.02).

(vi) respondents with B40 income classification group (mean rank = 150.49). than T20 (mean rank = 122.99) and M40 (mean rank = 118.84).

(vii) respondents who work for currently unemployed (mean rank = 164.32) than within 1 year (mean rank = 159.07), 1 to 3 years (mean rank = 140.79), 7 years or above (mean rank = 116.04) and 4 to 6 years (mean rank = 93.46).

(L) “Have a good working environment” is the statement which is perceived higher by

(i) respondents with age 18 to 24 (mean rank = 148.92) than 45 or above (mean rank = 135.46), 35 to 44 (mean rank = 124.07) and 25 to 34 (mean rank = 120.13),

(ii) respondents with marital status of single (mean rank = 139.74) than in a relationship (mean rank = 135.36) and married (mean rank 128.91).

(iii) respondents who held undergraduate (mean rank = 139.12) than with postgraduate (mean rank = 138.93) and pre-university (mean rank = 117.54).

(iv) respondents who work in consultant company (mean rank = 142.85), than developer (mean rank = 139.09), contractor (mean rank = 136.14) and supplier/specialist/subcontractor (mean rank = 117.10).

(v) respondents who work as full-time temporary employee (mean rank = 161.26), than part-time temporary employee (mean rank = 145.72), full-time permanent employee (mean rank = 127.84) and part-time permanent employee (mean rank = 125.44).

(vi) respondents who worked as site personnel (mean rank = 146.11) than financial and human resources (mean rank = 144.25), consultant (mean rank = 142.90), quantity surveyor (mean rank = 141.92), management level (mean rank = 121.23) and others (mean rank = 105.72)

(vii) respondents with T20 income classification group (mean rank = 139.21) than B40 (mean rank = 138.99) and M40 (mean rank = 128.88).

(viii) respondents who work for currently unemployed (mean rank = 138.53) than 4 to 6 years (mean rank = 138.52), 1 to 3 years (mean rank = 137.71), within 1 year (mean rank = 133.67) and 7 years or above (mean rank = 128.06).

4.10 Discussion

The discussion of the study are divided into a few parts which include (1) OS in the Malaysia construction industry, (2) Retention and Stress Management Strategies in Reducing TI, (3) Relationship between OS and Retention and Stress Management Strategies in Reducing TI, (4) Employees' Satisfaction on company culture and policy, and current company's implementation.

4.10.1 Occupational Stressors in the Malaysia Construction Industry

After the extensive literature review and the research of this study, it was a belief that the employees in the construction industry could be facing occupational stress. According to the Center for Disease Control and Prevention (CDC), as cited by Concordia St. Paul (n.d.), symptoms of stress are the alarm in the brain that has been set by the stress to prepare the body to defend against the stressors. Better Health Channel (n.d.) also explained that the symptoms of occupational stress can be physical, psychological and behavioural. These symptoms of stress should be reduced by developing preventive strategies since a long-term effect of stress could be heart disease, obesity, high blood pressure and gastrointestinal problems and TI.

As depicted in Table 4.9 above, the symptoms of stress in this study include Muscular Tension, Headaches, TI, Sleeping Difficulties, Irritability, Anxiety, Depression, a drop in work performance and an increase in sick days and absenteeism. The current study found that the top five symptoms of stress that are most frequently faced by the employees in the construction industry are (1) "Muscular Tension", (2) "Headaches", (3) "TI", (4) "Sleeping Difficulties" and (5) "Irritability". The remaining four symptoms are ranked as (6) anxiety, (7) depression, (8) a drop in work performance and (9) an increase in sick days and absenteeism. The symptoms of stress indicate that the employees were facing occupational stress in their workplace (Better Health Channel, n.d.). Higher stress level leads to disorder of health such as

depression, high blood pressure and increase sleeplessness (Tyagi and Dhar, 2014). The important finding among all symptoms of stress is that “TI” is ranked in the top 3 symptoms of stress among employees. Hence, it is explained that TI is one of the symptoms of stress among employees. Therefore, it is vital to reduce the occupational stress and TI among employees in the construction industry.

As shown in Table 4.7, there are a total of twenty statements representing each stressor in the questionnaire to determine the most related working situation to OS in the construction industry. A stressor such as Task Stressors, Personnel Stressors Organizational Stressors and Physical Stressors is described in five statements. The study produced results in which Role Conflict is the most related to the respondents’ working situation which is represented by the statement “I get conflicting information from two or more people when I am completing a task”, “I have to deal with and satisfy two or more groups who operate differently” and “I receive conflict requests from two or more people during work”. Another finding is that Working Hours is the second significant OS which is described by the statement “I always have to work overtime so that the things can be done on time” and “I am forced to do more work than I can handle which leads to long working hours”. These results are in line with the previous study conducted by Cooper and Marshal (1976) as cited in Chaudhary and Lodhwal (2017), which showed that Role Conflict and Working Hours are the most frequently OS faced by the respondents in their daily working life.

4.10.2 Relationship between Occupational Stressors and Turnover Intention of Employees in the Malaysia construction industry

There are four types of OS discussed in this study which include Task Stressors (Work Overload, Role Ambiguity and Role Conflict), Personnel Stressors (Marital Status, Education Level and Working Hours), Organizational Stressors (Work-life Balance, Work-family Conflict and Pay Level) and Physical Stressors (Work Environment and Home Environment).

As per interpretation drawn from Table 4.3, it has been found that the top five OS which lead to the TI of employees are ranked in a sequence of (1)

Pay Level, (2) Working Hours, (3) Work-Life Balance, (4) Work Overload and (5) Role Conflict according to the mean ranking. It is not surprising that Pay Level is the 1st ranked among the OS that leads to the TI of the employees in the Malaysia construction industry. These findings further support the idea of Ayodele, Richards and Gonzalez (2020) which Pay Level is ranked in the first place. In the Hong Kong construction industry, it is similarly found that the most significant factor that the worker leaves the sector is due to a better pay level (Smith, et al., 2004). Smith, et al. (2004) as cited in Ayodele, Richards and Gonzalez (2020) explained that a higher pay level lowers the TI as the probability of finding a better-paid job will decrease with a growing pay rate.

There is no difference in opinions in the OS “Pay Level” between the perception of respondents in terms of gender. However, respondents who are married perceived “Pay Level” as higher compared to those who are not married. According to Beatrice (2019), almost half of the marriages end in divorce in Malaysia due to financial problems. This accords with the previous observations, which showed that a married person could have more financial burden due to their families. Interestingly, respondents in the T20 income classification group have ranked the Pay level in the first place among the different household income classifications. In contrast to earlier findings, Chaudhary and Lodhwal (2017) explained that employees with higher designation and income levels have lesser stress compared to other employees. However, this study revealed that Pay Level remains the most significant OS faced by employees in the construction industry regardless of their income classification group. Furthermore, consultants perceived Pay Level as higher OS due to the low pay level for the consultant role. For instance, a fresh graduate quantity surveyor who works in consultant roles will get a paid between RM2,400 to RM2,800. Compared to work in contractor company, they get a higher paid between RM3,000 to RM3,300.

Working Hours ranked in the 2nd place among the OS in the perception of contractor company. The Sang, et al. (2009) study noted that long working hours affect the occupational well-being and satisfaction of the construction personnel. The finding shows that Working Hours are perceived

as higher by contractor companies. A possible explanation for this is that contractor companies are fully responsible for the whole construction progress. For instance, employees such as project managers or site personnel are more likely to have longer working hours. As usual, they may need to stay at the construction site till late night to monitor the project's progress. Thus, it brings a significant impact on their personal life which may lead to work-life imbalance. Rose (2003) proved that employees who worked for longer hours have a higher level of stress. Moreover, there are some different opinions among the respondents with different educational attainment groups. Respondents with Postgraduate have perceived higher Working Hours as OS compared to those with undergraduate and pre-university. It may be because the employees with higher educational attainment tends to have job advancement with higher position due to the qualification obtained and they are more marketable in the industry.

Work-life Balance is the 3rd ranked occupational stress. It is found that two aspects have a significant difference in opinions between the groups including marital status and income classification. These findings help us to understand that there is no difference in opinions between gender. This is because work-life balance is equally important for both males and females as every employee expects a balance between personal life and work life. In the perception of that employee who is in a relationship and married, they tend to have more interest in work-life balance compared to single employees. These findings suggest that without work-life balance, they may have difficulties in accompanying partners or fulfilling their family responsibilities which may lead to a suffering marriage relationship (Priyansatha, 2019). Furthermore, respondents in the T20 income classification group have a higher mean rank compared to M40 and B40 groups. This is because the T20 group can concentrated and focus on the quality of life since they have lesser financial issues and burden. Thus, it is indicated that work-life balance is a critical factor that affects the TI of the employee. This result matches with those findings by Muhammad Javed, et al. (2014).

Work Overload is ranked as the 4th significant OS which increases TI. A construction project is complex and consists of a series of independent tasks

which needs to be completed within the timeframe given. Therefore, construction personnel have a routine to stay in the office after working hours to complete the task given. To prevent work overload for each employee, the organization should recruit sufficient employees for all projects according to organization demands. Moreover, Leung, et al. (2005) also explained that the excessive workload in the high-risk construction project will raise an intention to leave the project. Similarly, the study by Enshassi and Al.Swaity (2015) showed that “Work Overload” was identified as the most prominent factor. Enshassi and Al.Swaity (2015) further discussed that most construction professionals experienced stress due to too much work to do with a variety of responsibilities. As a result, it perceived that Work Overload is a significant factor faced by most of the employees in the construction industry. Similarly, the “Work Overload” is perceived as higher by respondents with Postgraduate compared to those with undergraduate and pre-university.

The 5th ranked stressor is Role Conflict. This finding matches the result shown in Table 4.6, which indicates the working situation related to role conflict commonly happens to employees. There are various studies have revealed that employees who experience role stress tend to have a higher TI (Ali Shah, et al, 2010; Rageb, et al., 2006 as cited in Nair, Lim and Aik, 2016). Furthermore, this study produced a result that revealed that male construction personnel has a higher mean than female construction personnel in ranking Role Conflict. In this male-dominated construction industry, men are more likely to be assigned more complex tasks than females which results in a higher possibility of Role Conflict. Additionally, it cannot be denied that females are more likely to be taken care of and tolerated by others in this industry due to their gender. As a result, men have more issues with role conflict compared to females. Another finding is that respondents of older age perceived Role conflict higher than those of younger age. This may be because older age employees possess the senior position and have more working experience to cope with the Role Conflict. In other words, they understand the significant impact due to Role Conflict and therefore this is more significant to those of older age. Lastly, consultants ranked it in a higher place among all the working positions. This can be explained by the consultant who is representing

the client or developer may create role conflict in dealing with the issues between the main contractor and client.

4.10.3 Retention and Stress Management Strategies in Reducing Turnover Intention

As depicted in Table 4.5 above, there are twelve retention and stress management strategies tested in the study which include “Provide flexible working hours”, “Have a good working environment”, “Change organizational policy”, “Improve fairness of pay level”, “Provide compensation package”, “Increase transparency of pay rate”, “Promote internal recruitment”, “Provide training and workshop”, “Have adequate sleep”, “Promote team building workshop”, “Implement mentoring programme” and “Implement stress management workshop”. Spearman’s rank correlation test revealed the relationship between OS and preventive strategies in the result of a maximum of 10 correlations and a minimum of 1 correlation. The top five significant retention and stress management strategies in reducing TI of employees in the Malaysia construction industry include (1) “Provide flexible working hours”, (2) “Have a good working environment”, (3) “Change organizational policy”, (4) “Improve fairness of pay level” and (5) “Provide compensation package”. The remaining strategies are ranked in a sequence of (6) “Increase transparency of pay rate”, (7) “Promote internal recruitment”, (8) “Provide training and workshop”, (9) “Have adequate sleep”, (10) “Promote team building workshop”, (11) “Implement mentoring programme” and (12) “Implement stress management workshop”.

“Providing flexible working hours” has been identified as the most effective preventive strategy for the employees in the construction industry with a maximum number of 10 significant correlations. Flexible working hours should be provided to the employees, especially during this COVID-19 pandemic. It avoids the employees from working in a crowded environment and create a balance between an employee’s personal life and family matter (Muhammad Javed, et al., 2014). In the construction industry, it is not common for flexible working hours due to the traditional thinking of old

presenteeism. For instance, fear of change, lack of trust and lack of understanding are the reasons that flexible working hours are not implemented. It is found that the productivity of workers is 20% higher than those office-based employees meanwhile home workers take 63% less sick leave (Vaughan, n.d.). Hence, a hybrid working model should be offered to the employees. To ensure effective communication between employees, core working hours such as 12 pm to 4 pm can be fixed for employees. However, most construction companies do not recognize that there is a huge opportunity to adopt a hybrid working mode that will benefit their workforce. Thus, it needs to create awareness among the companies that flexible working hours increase the productivity of the employees.

“Hava a good working environment” is ranked as the second most effective strategy which perceived 7 correlations with the OS. A construction site can be a high risks workplace in which the safety of construction and worker TI is connected to the work environment. The construction sector is often highlighted for undesirable working conditions on construction sites. Thus, implementing a set of safety procedures on-site not only reduces the risks on site but also reduces the TI of employees concurrently. This is in line with the research by Kim and Philips (2012) which stated that safety in the workplace will benefit worker retention. Ali Mohammad Mosadeghrad (2013) also proved that the working environment has associated with the TI of the employee in an organization (Senaratne and Rasagopalasingam, 2016). “Having a good environment” is important to the site personnel who worked in the site offices and visit construction sites from time to time. Thus, it is suggested that construction companies need to provide a comfortable environment and surrounding to employees to reduce the TI of employees.

“Change organizational policy” is the 3rd effective strategy for retention and stress management. It should be highlighted that it was also found with a significant ten correlations with the OS which has the same number of correlations as “Provide flexible working hours”. The study conducted by Enshassi and Al.Swaity (2015) has conclusively shown that organizational policy is one of the factors of organizational stress. Changing organizational policy in terms of health and safety, recruitment, regulations or

welfare could be an effective retention strategy by satisfying the employees and preventing them suffered from a lack of support from their company. For instance, the company may enforce policy to discourage the overtime working system and optimized productivity during working hours. For recruitment policy, the company should encourage internal recruitment to motivate the current employees. Additionally, organizational policy should be written clearly in a common language so that it is understandable for all employees. The consequence of a breach should also be informed to employees and dealt with promptly according to the procedures set out in the policy. If company managers adopt a flexible strategy for retention that aligns with the culture, values, and beliefs that the company's managers are promoting, a higher level of retention could be achieved (Sandhya & Kumar, 2014).

“Provide Compensation Package” and “Improve fairness of pay level” have an interrelation as effective strategies in reducing TI. Both of the strategies have several five correlations with the OS. It is explained that a high compensation level and pay level play a vital role in job satisfaction which critically reduces employee TI (Manyura, 2012). These two strategies are conforming to the significant OS found in this study. Similarly, it is found that the lack of recognition for fairness of pay level and compensation for a good performance is one of the factors of occupational stress in the previous study (Chen, Lin and Lien, 2011). Adam's Equity Theory cited by Chen, Lin and Lien (2011) reported that an employee expects a certain pay when they bring certain inputs to their jobs which are known as a social exchange process. Therefore, the construction company must provide compensation in the form of loyalty incentives such as rewards, quality and performance-based bonuses (Smith, et al., 2004). Additionally, providing a suitable pay scale can retain the employees in the construction industry (Thomas, 2015). In more detail, the construction company may regularly collect feedback from the employees regarding the pay level and compensation system. The employees may provide their opinion on how to improve the system which may cultivate a sense of belongingness among the employees. A sense of belonging will influence behaviour or decisions regarding their significant role in the TI (Wocke and Hyemann, 2012).

In short, the remaining stressors with weak correlation includes Have adequate sleep, Implement stress management workshop, Improve fairness of pay level and Provide compensation package are having lower rank which indicates that these methods need more a longer duration and custom alteration as per company policies to achieve its effective in minimising stress.

4.10.4 Employees' Satisfaction on Company's Culture, Policy and Current Implementation

This study also revealed the employees' satisfaction with the current company culture and policy. The findings show that most employees appreciated to work under an agile organisational policy provided by the company. Besides, the employees would feel comfortable working with flexible working hours. More than half of employees love to work in the ambient and dedicated working environment meanwhile they feel appreciated if the company promote internal recruitment. All these findings are perceived higher by the respondent with postgraduate compared to undergraduate and pre-university. With the explanation under OS, it is understood that respondents with higher educational attainment are more concerned about the quality of their life and working environment. Contrarywise, the findings also revealed that most employees do not satisfy with their current pay level by the company and are not familiar with the current pay rate. This is perceived by the respondents from age 45 or above and most of them are not disclosed with the pay rate calculation. On the other hand, respondents aged 18 to 24 are not satisfied with the compensation package, training and workshop provided by the company. Hence, the construction companies should pay attention to those cultures and policies that are not satisfactory, and the improvement should be made promptly to reduce the TI of employees.

In addition, the study found that the top 5 implementations in reducing TI that satisfy the employees among construction industries include "Implement stress management workshop", "Promote internal recruitment", "Provide compensation package", "Change organizational policy" and "Have adequate sleep". The perception of the internal recruitment promotion is higher by the developer company than in other organizations, meanwhile, it is

similarly going to the change of organizational policy which is perceived higher by the developer company. From the aspect of the implementation of stress management workshops, it indicates that female employees with families are more satisfied with the implementation compared to males in their company. The possible explanation is that females may have more stress compared to males since females could be the only ones to take care of their families. Therefore, females may have a significant reduction in stress level and turnover intention after participating in the stress management workshop. females are more prefer to choose a flexible job compared to a time job.

In contrast, the construction company should pay attention to the bottom five implementations that do not fulfil the employees' satisfaction. The bottom five implementation includes "Have a good working environment", "Implement mentoring programme", "Improve fairness of pay level", "Provide flexible working hours" and "Increase transparency of pay rate". For all of these five implementations, it has an agreement that it is perceived higher by respondents with young age between 18 to 24, respondents who are single and worked in a contractor company. In other words, the young age respondents are mostly not satisfied with the implementation of strategies. Furthermore, the mentoring programme is not commonly implemented for the employees among the construction companies. Mentoring programme should be implemented to improve personal and career development among employees. To retain the "new blood of the company", a good working environment should be provided because the TI at a young age is quite high compared to other groups. It is in line with many studies that it is common for young age people to leave their job between companies in the same industry (Chih, et a., 2016; Chaudhary and Lodhwal, 2017). Fairness of pay level and transparency of pay rate is both the dissatisfaction factors of employees. Therefore, the construction company should pay attention to improving the pay level and transparency of the pay rate to the employees. Providing flexible working hours will also help in satisfying the employees and reducing TI.

In conclusion, the construction company should make sure all the effective retention and stress management strategies should be implemented in the company to reduce the OS and TI of employees.

4.11 Conclusion

The results were generated based on the data collected from 270 construction personnel in the Malaysian Construction industry. The overall response rate in this research was at 77.14%. The data was tested through Cronbach's Alpha Reliability Test, Friedman Test, Kruskal-Wallis Test, Mann-Whitney Test and Spearman's Rank Correlation Test. The five statements with the highest mean rank are "I get conflicting information from two or more people when I am completing a task.", "I have to deal with and satisfy two or more groups who operate differently.", "I receive conflict requests from two or more people during work", "I always have to work overtime so that the things can be done on time." and "I am forced to do more work than I can handle which leads to long working hours.". Meanwhile, the five most significant OS in the construction industry were revealed as: (1) Pay Level; (2) Working Hours; (3) Work-Life Balance; (4) Work Overload and (5) Role Conflict. The most effective preventive strategy for the employees in the construction industry are (1) "Providing flexible working hours", (2) "Have a good working environment", (3) "Change organizational policy", (4) "Provide Compensation Package" and (5) "Improve fairness of pay level".

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter concludes all the information which has been collected and interpreted based on the research title. In this chapter, the conclusion of the finding is explained based on the result in the previous chapter and summarized based on the aim and objectives established early in this study. The accomplishment of research objectives and the research contributions will be discussed in this chapter. Lastly, this chapter also covers the limitations confronted throughout the study and the recommendations for future improvement in future research.

5.2 Accomplishment of Research Objectives

Turnover in the construction industry is considered a long-term challenge. The construction industry is a knowledge-base and expertise and experience-oriented industry. Therefore, to find and replace an employee from the industry is difficult and costly as it takes time and cost for an organization to train new employees to prepare him or them with skills and expertise. On the other hand, employees in any organization feel an imbalance or stress between their work and personal life, they will try to find a place somewhere else to get compensation. Thus, this study is essential as it furnishes a better understanding of the OS which leads to the TI of employees in the Malaysia construction industry. It identified the most significant OS that leads to higher TI as well as examined the most effective retention and stress management which can be used to reduce the TI of employees. The findings provide useful information to the stakeholders and society in reducing TI in the construction industry.

The purpose of this study is to examine the potential of occupational stress triggering turnover intention in the Malaysian construction industry. The aim of the study has been achieved by accomplishing three research objectives in this study. The objectives are (1) to identify the stressors of occupational

stress in the construction industry; (2) to investigate the relationship between occupational stressors and turnover intention in the construction industry; and (3) to propose retention strategies and stress management strategies in the construction industry.

A literature review related to OS in the construction industry has been conducted to provide a further understanding of the OS and TI. It successfully identified a few types of OS and retention and stress management strategies in the Malaysia construction industry. The previous research covered TI and its' impact and focused on other industries. Thus, a gap is identified whereby the research can look into OS and TI in the construction industry. A total of 270 responses were collected from construction stakeholders of various backgrounds through a questionnaire survey. To develop an integrated framework to identify the effective preventive measure for TI, quantitative research is adopted to explore the OS that led to the TI of the employee in the Malaysian construction industry meanwhile the Central Limit Theorem was adopted. The reliability of data collected was verified through Cronbach's Alpha Reliability Test before further analysing or interpreting the data. Moreover, the objectives of the study were fulfilled and summarized as follows:

Objectives 1: To identify the stressors of occupational stress in the construction industry.

There are 11 OS were identified from literature review and tested in this study which include Task Stressors (Work Overload, Role Ambiguity and Role Conflict), Personnel Stressors (Marital Status, Education Level and Working Hours), Organizational Stressors (Work-life Balance, Work-family Conflict and Pay Level) and Physical Stressors (Work Environment and Home Environment). All these OS were described by 20 statements that related to the real working life in Section B of the questionnaire.

The five statements with the highest mean rank are "I get conflicting information from two or more people when I am completing a task.", "I have to deal with and satisfy two or more groups who operate differently.", "I receive conflict requests from two or more people during work", "I always

have to work overtime so that the things can be done on time.” and “I am forced to do more work than I can handle which leads to long working hours.”. The first three statements are related to Role Conflict which is under the category of Task Stressors while the remaining 2 statements are related to Working Hour which is under Personnel Stressors. In short, these five working situations are the most related to the respondents’ working situation which indicates that most of the respondents faced OS such as Role Conflict and Working Hours in their working life.

Objectives 2: To investigate the relationship between occupational stressors and turnover intention in the construction industry.

The 11 OS were further analyzed with the relationship between OS and TI of employees in the construction industry. These OS were listed in a questionnaire for respondents to decide the rating scale for each occupational stress, from Number 1= Not at all likely to Number 5 = Extremely likely. The five most significant OS in the construction industry were revealed as: (1) Pay Level; (2) Working Hours; (3) Work-Life Balance; (4) Work Overload and (5) Role Conflict. Education level was perceived as the least significant OS and education level has less effect on increasing TI of employees. By identifying all the significant relationship between OS and TI, the study expands the existing knowledge of the retention and stress management strategies and provides deeper insight into developing effective strategies for reducing the TI of employees.

Objectives 3: To propose retention strategies and stress management strategies in the construction industry.

There are twelve retention and stress management strategies were explored and designed as a scale rating question in this study. The rating scale for each retention and stress management strategy is from Number 1= Not at all likely to Number 5 = Extremely likely. “Providing flexible working hours” has been identified as the most effective preventive strategy for the employees in the construction industry with a maximum number of 10 significant correlations. “Hava a good working environment” is ranked as the second most effective

strategy which perceived 7 correlations with the OS. It is followed by “Change organizational policy” which is the 3rd effective strategy for retention and stress management. Additionally, it is also found that “Provide Compensation Package” and “Improve fairness of pay level” have an interrelation as effective strategies in reducing TI with the same number of five correlations with the OS. It can be concluded that the retention and stress management strategies have a significant relationship in reducing the turnover intention of employees.

To develop retention strategies and stress management strategies in the construction industry, the employee’s satisfaction on company culture and policy and the current company’s implementation was tested. It is found that the employees’ company mostly does not provide a good working environment and mentoring programme to the employees. Moreover, most of the companies did not improve the fairness of pay levels and disclose the pay rate to employees. Lastly, most of the company does not provide flexible working hour to their employees. Hence, the most effective strategies for retention and stress management strategies should be implemented in all the construction companies.

In conclusion, this study has established an integrated framework for the relationship between OS and the TI of employees in the Malaysia construction industry as depicted in Figure 2.1. It also helps to gain a deeper understanding of the OS, TI, and current approaches to retention and stress management strategies among the construction company. This study is beneficial to the construction industry because it increases the awareness of retention and stress management strategies which brings an impact on reducing TI in the construction industry.

5.3 Research Contributions

The study contributes to the exploration of the literature on OS and employees’ TI by developing an integrated framework. The study focused on the major OS among the employees in the construction industry as well as the effective retention and stress management strategies. This study pinpoints the significant OS which leads to TI as well as retention and stress management strategies that help in reducing TI among employees in the Malaysia

construction industry. It helps to gain a deeper understanding on the current occupational stressors among the industry in order to manage the TI efficiently.

Additionally, this identification of retention and stress management helps the construction organizations, industry and government to bring down the TI by implementing effective strategies. Surprisingly, the implementation of stress management workshops and mentoring programmes was ranked at the bottom. Thus, it is suggested that the most effective strategies should be implemented in all construction companies for the reduction of TI among employees meanwhile the bottom-ranked strategies should be carried out an in-depth investigation to explore the reasons why it is not preferable to employees. The exploration is important so that the adjustment can be provided for the particular strategies and satisfy the employees among the construction organizations.

As an implication of the study, the findings would serve as a guide for the industrial practitioners and decision-makers, especially on the reduction of TI and improving the awareness of the mental health of construction workers. Although the topic of turnover has been studied for several decades, the fact that turnover of employees causes the relevant cost and impact on the construction project is still unavoidable. Since the construction industry is a knowledge-based and experience-oriented industry, it is difficult to find a replacement for each task scope in the industry as it may need specialised skills or expertise. Therefore, this study has created awareness of the construction employers and society on reducing TI of employees by understanding and identifying the stressors and effective strategies to be developed. Reducing the TI of employees in the construction industry is important to remain competitive and achieve the highest level of employees satisfaction. The results of the study is one step forward on the way to achieving the goals.

5.4 Research Limitations

During the progress of conducting the research, some limitations were found in obtaining the information to fulfil the research's objectives. The major problem is explained as follows:

- i. Time constraints in the data collection process may limit the individuals who have access to the survey and they were unwilling to put a good effort into responding to the survey. More sample size can be obtained if more time is allocated.
- ii. Accessibility limitation in the study only access to the white-collar such as Management level, Site Personnel, Quantity Surveyor, Finance and Human Resources Division, Consultant and others who worked in the construction industry rather than blue-collar worker. The targeted respondents can be extended to different company site personal such as G1 contractors to G7 contractors.
- iii. Cross-sectional design in this study may have limitations in identifying OS, TI and current company implementation of retention and stress management strategies. This is because the data is collected at a certain period. Thus, this may not be representative for those employees for such a long period in future.
- iv. Narrow span of the study refers to this study that mainly focuses on the relationship between OS and TI which is the effective retention and stress management strategies. The study should be conducted in a more comprehensive way to test the retention and stress management strategies and respondents' demographic by conducting an in-depth investigation, e.g. semi structured interviews. This helps to provide a critical solution or more accurate findings to reduce the TI for certain groups of respondents by testing their designation, working experience, and other demographic.

5.5 Research Recommendations

After the research has been completed, there are several recommendations provided for future research. The recommendations are:

i. The sample size in future research should be increased to generate a more accurate result for the construction industry. Larger sample size is to ensure that the sample is well represented by the construction practitioners in Malaysia and the results of the research can be generalised to the whole Malaysian construction industry. In contrast, small sample size will increase the difficulty of identifying the correlations between the variables. Thus, the data collection should be conducted equally from different groups of respondents to obtain the perception of OS towards TI in the construction industry. In other words, a large sample size allows a wider perspective of the OS in the construction industry.

ii. A mixed mode method or triangulation method research design should be employed to incorporate the qualitative and quantitative research methods in future studies provided sufficient time is given. Triangulations methods have equally good quantitative data methods and qualitative data methods in which they decrease the biases that may come from any single method. Triangulation consists of a case study, interview findings and questionnaire survey which may improve the reliability of the study. To reflect the real situation in the construction industry, the triangulation method should be implemented to understand the nature of the construction industry which will enhance the research to another level.

iii. Future researchers are highly recommended to conduct more research on the either physical or phycological health of employees in the construction industry to fill the gap in the industry due to the limited studies reported in this area. The future research can focus on the retention and stress management particular in construction industry which might help to figure out more effective strategies for solving the high turnover issue in the industry.

REFERENCES

- Adnan Enshassi and Eman Al.Swaity, 2014. Key stressors leading to construction professionals' stress in the Gaza Strip, Palestine. *Journal of Construction in Developing Countries*, 19(1), pp.53–79.
- Ahmad Faisal Mahdi, Mohammad Zaid Mohd Zin, Mohd Roslan Mohd Nor, Ahamad Asmadi Sakat and Abang Sulaiman Abang Naim, 2012. The relationship between job satisfaction and turnover intention. *American Journal of Applied Sciences*, 9(9), pp.1518-1526.
- Akgunduz, Y., 2015. The influence of self-esteem and role stress on job performance in hotel businesses. *International Journal of Contemporary Hospitality Management*, 27(6).
- Akhilesh, G., 2022. Central Limit Theorem (CLT). [online] Available at: <[https://www.investopedia.com/terms/c/central_limit_theorem.asp#:~:text=Key%20Takeaways-,The%20central%20limit%20theorem%20\(CLT\)%20states%20that%20the%20distribution%20of,for%20the%20CLT%20to%20hold.](https://www.investopedia.com/terms/c/central_limit_theorem.asp#:~:text=Key%20Takeaways-,The%20central%20limit%20theorem%20(CLT)%20states%20that%20the%20distribution%20of,for%20the%20CLT%20to%20hold.)> [Accessed 6 March 2022]
- Alex, H.H.N., Woo, W.N., Lim, K.Y. and Wong, C.H., 2019. Factors affecting the staff turnover intention: A case study of a Malaysian steel manufacturing company. *INTI Journal*.
- Ali Mohammad Mosadeghrad, 2013. Occupational stress and turnover intention: Implications for nursing management. *International Journal of Health Policy and Management*, 1(2), pp.169–176.
- Ali Mohammad Mosadeghrad, 2014. Occupational stress in its consequences. *Leadership in Health Services*, 27(3), pp.224–239.
- Amir Firdaus, 2018. *2017 Malaysia salary employment outlook*. [online] Available at: <<https://www.scribd.com/document/373695119/2017-Malaysia-Salary-Employment-Outlook>> [Accessed 1 August 2021]
- Anderson, E.S., Coffey, S.B. and Byerly, T.R., 2002. Formal organizational initiatives and informal workplace practices: Links to work-family conflict and job-related outcomes. *Journal of Management*, 28, pp.787.
- Arijanto, A., Marlita, D., Suroso, A. and Purnomo, R., 2020. How is the effect of job insecurity, work stress, and the work environment on turnover intention: A case study at the company of supplier security system in Indonesia. *Advances in Economics, Business and Management Research*, 120, pp.114-119.
- Ayodele, O.A., Chang-Richards, A. and González, V., 2020. Factors affecting workforce turnover in the construction sector: A systematic review. *Journal of Construction Engineering and Management*, 146(2).

Ayodele, O.A., Chang-Richards, Y. and González, V.A., 2021. A framework for addressing construction labour turnover in New Zealand. *Engineering, Construction and Architectural Management*.

Bashir Ahmad, Mohammad Shahid, Zill-E- Huma and Sajjad Haider, 2012. Turnover intention: An HRM issue in textile sector. *Interdisciplinary Journal of Contemporary Research in Business*, 3(12), pp.125.

Beatrice, 2019. Financial issues biggest cause of divorce in Malaysia. *New Straits Times*, 25 May.

Bebe, I. A., 2016. *Employee turnover intention in the U. S. fast food industry*. PhD. Walden University.

Bell, A.S., Rajendran, D. and Theiler, S., 2012. Job stress, wellbeing, work-life balance and work-life conflict among Australian academics. *Electronic Journal of Applied Psychology*, 8(1), pp.25–37.

Better Health Channel, n.d. Work-related Stress. [online] Available at: <<https://www.betterhealth.vic.gov.au/health/healthyliving/work-related-stress>> [Accessed 9 April 2022]

Bilau, A.A., Ajagbe, M.A., Sholanke, A.B. and Sani, T.A., 2015. Impact of employee turnover in small and medium construction firms: A literature review. *International Journal of Engineering Research & Technology (IJERT)*, 4(2).

Bureau of Labor Statistic, 2011a. *Employee Benefits Survey*. [online] Available at: <<http://www.bls.gov/ncs/ebs/benefits/2010/ownership/private/table01a.htm>> [Accessed 29 July 2021]

Bureau of Labor Statistics, 2011b. *US Department of Labor*. [pdf] Available at: <http://www.bls.gov/news.release/archives/osh_10212010.pdf> [Accessed 29 July 2021].

Campbell, F., 2006. Occupational stress in the construction industry. *Chartered Institute of Building (CIOB)*, pp.1–16.

Carbery, R., Garavan, T.N., O'Brien, F. and McDonnell, J., 2003. Predicting hotel managers' turnover cognitions. *Journal of Managerial Psychology*, 18(7), pp.649-679.

Chae, J., Hwang, S., Seo, W. and Kang, Y., 2021. Relationship between rework of engineering drawing tasks and stress level measured from physiological signals. *Automation in Construction*, 124.

Chamini, H.G.S. and Randeni, R.K.D., 2016. Examine the relationship between organizational factors and employee turnover in apparel industry in Sri Lanka. *Journal of Business Studies*, 3(1).

- Chaudhary, P. and Lodhwal, R.K., 2017. An analytical study of organizational role stress (ORS) in employees of nationalized banks: A case of Allahabad Bank. *Journal of Management Development*, 36(5), pp.671–680.
- Chen, M.F., Lin, C.P. and Lien, G.Y., 2011. Modelling job stress as a mediating role in predicting turnover intention. *The Service Industries Journal*, 31(8), pp.1327–1345.
- Chiang, F.F.T., Birtch, T.A. and Kwan, H.K., 2010. The moderating roles of job control and work-life balance practices on employee stress in the hotel and catering industry. *International Journal of Hospitality Management*, 29, pp.25–32.
- Chih, Y.-Y., Kiazad, K., Zhou, L., Capezio, A., Li, M. and D. Restubog, S.L., 2016. Investigating employee turnover in the construction industry: A psychological contract perspective. *Journal of Construction Engineering and Management*, 142(6).
- Concordia St. Paul, n.d. Work stress: causes, symptoms, and solutions. [online] Available at: < <https://online.csp.edu/resources/article/work-stress/>>
- Cooper, D.R. and Schindler, P.S., 2014. *Business research methods*. 12th Edition. New York.
- Craig, S., n.d. *Data Collection*. [online] Available at: < <https://www.techtarget.com/searchcio/definition/data-collection>> [Accessed 30 March 2022]
- Creswell, J.W. and Creswell, J.D., 2014. *Research design (qualitative, quantitative and mixed methods approach)*. 5th Edition. London.
- Darina, L., 2020. *19+ Employee Turnover Statistics to Be Aware of in 2021*. [online] Available at: <<https://leftronic.com/blog/employee-turnover-statistics/>> [Accessed 29 July 2021]
- Dias, L.P., 2012. *Beginning Management of Human Resources*. pp.182-559.
- Dodanwala, T.C. and Santoso, D.S., 2021. The mediating role of job stress on the relationship between job satisfaction facets and turnover intention of the construction professionals. *Engineering, Construction and Architectural Management*.
- Edwards, J., 1992. A cybernetic theory of stress and coping, and well-being in Organizations. *Academy of Management Review*, 17(2), pp.238–274.
- Emiroglu, B.D., Akova, O. and Tanriverdi, H., 2015. The relationship between turnover intention and demographic factors in hotel businesses: A study at five star hotels in Istanbul. *Procedia - Social and Behavioral Sciences*, 207, pp.385–397.

Enshassi, A., El-Rayyes, Y. and Alkilani, S., 2015. Job stress, job burnout and safety performance in the Palestinian construction industry. *Journal of Financial Management of Property and Construction*, 20(2), pp.170-187.

Fadilah Puteh and Hidayati Arshad, 2015. Determinants of turnover intention among employees. *Journal of Administrative Science*, 12(2), pp.1–15.

Fukui, S., Rollins, A.L. and Salyers, M.P., 2020. Characteristics and job stressors associated with turnover and turnover intention among community mental health providers. *Psychiatric Services in Advance*, 71(3), pp.289–292.

Hales, D., 2010. *An introduction to triangulation*. UNAIDS.

Hang-Yue, N., Foley, S. and Loi, R., 2005. Work role stressors and turnover intentions: A study of professional clergy in Hong Kong. *The International Journal of Human Resource Management*, 16(11), pp.2133–2146.

Hee, C.H.S. and Ling, F.Y.Y., 2011. Strategies for reducing employee turnover and increasing retention rates of quantity surveyors. *Construction Management and Economics*, 29(10), pp.1059–1072.

Hirschmann, R., 2021. *Number of people employed in the construction industry in Malaysia from 2015 to 2020*. [online] Available at: <<https://www.statista.com/statistics/809686/annual-employment-in-the-construction-industry-malaysia/>> [Accessed 29 July 2021]

Huang, I.C., Lin, H.C. and Chuang, C.H., 2006. Constructing factors related to worker retention. *International Journal of Manpower*, 27(5), pp.491–508.

Huffman, A.H. and Olson, K.J., 2016. Gender differences in perceptions of resources and turnover intentions of work-linked couples in masculine occupations. *Stress and Health*, 33(4), pp.309–321.

Inayat Ullah Shinwari, Dr. Muhammad Imran Wazir and Henna Gul Nisar, 2020. Determinants of stress in management of construction projects in Pakistan. *Iqra Journal of Business and Management (IJBM)*, 4(2).

Insights, 2020. *What is Research Instrument*. [online] Available at: <<https://www.editage.com/insights/what-is-a-research-instrument>> [Accessed 30 March 2022]

Jebelli, H., Hwang, S. and Lee, S.H., 2018. EEG-based workers' stress recognition at construction sites. *Automation in Construction*, 93, pp.315-324.

Jebens, E., Medbø, J.I., Knutsen, O., Mamen, A. and Veiersted, K.B., 2014. Association between perceived present working conditions and demands versus attitude to early retirement among construction workers. *National Institute of Occupational Health*, 48, pp.217–228.

Junaidi, A., Sasono, E., Wanuri, W. and Emiyati, D.W., 2020. The effect of overtime, job stress, and workload on turnover intention. *Management Science Letters*, 10(16), pp.3873–3878.

Karatepe, O.M., 2013. The effects of work overload and work-family conflict on job embeddedness and job performance: The mediation of emotional exhaustion. *International Journal of Contemporary Hospitality Management*, 25(4), pp.614–634.

Karatepe, O.M. and Baddar, L., 2006. An empirical study of the selected consequences of frontline employees' work-family conflict and family-work conflict. *Tourism Management*, 27(5), pp.1017–1028.

Kashif, M., Braganca, E., Awang, Z. and Run, E.C.D., 2017. You abuse but I will stay: The combined effects of job stress, customer abuse, and emotional intelligence on employee turnover. *Journal of Management Development*.

Kim, J., and P. Philips. 2012. "Determinants of quits and dismissals on a long-lasting unionized industrial construction project." *Journal of Construction Engineering and Management*. 138 (5): 661–669. [https://doi.org/10.1061/\(ASCE\)CO.1943-7862.0000451](https://doi.org/10.1061/(ASCE)CO.1943-7862.0000451).

LaerdStatistic, n.d.A. *Friedman Test in SPSS Statistics*. [online] Available at: <<https://statistics.laerd.com/spss-tutorials/friedman-test-using-spss-statistics.php>> [Accessed 31 April 2022]

LaerdStatistic, n.d.B. *Kruskal-Wallis H Test in SPSS Statistics*. [online] Available at: < <https://statistics.laerd.com/spss-tutorials/friedman-test-using-spss-statistics.php>> [Accessed 31 April 2022]

Leung, M., Chan, I.Y.S. and Cooper, C.L., 2015. *Stress management in the construction industry*. [e-book] United Kingdom: John Wiley & Sons, Ltd Registered. Available at: Wiley <<https://www.wiley.com/en-gb/Stress+Management+in+the+Construction+Industry-p-9781118456415>> [Accessed 1 August 2021]

Leung, M., Chan, I.Y.S. and Yu, J., 2012. Preventing construction worker injury incidents through the management of personal stress and organizational stressors. *Accident Analysis and Prevention*, 48, pp.156–166.

Leung, M., Chan, Y., Chong, A. and Sham, J.F.-C., 2008a. Developing structural integrated stressor–stress models for clients' and contractors' cost engineers. *Journal of Construction Engineering and Management*, 134, pp.635–643.

Leung, M., Chan, Y.-S. and Olomolaiye, P., 2008b. Impact of stress on the performance of construction project managers. *Journal of Construction Engineering and Management*, 134(8), pp.644–652.

Leung, M., Chan, Y.-S. and Yu, J., 2009. Integrated model for the stressors and stresses of construction project managers in Hong Kong. *Journal of Construction Engineering and Management*, 135(2), pp.126–134.

Leung, M., Chan, Y.-S. and Yuen, K.-W., 2010. Impacts of stressors and stress on the injury incidents of construction workers in Hong Kong. *Journal of Construction Engineering and Management*, 136(10), pp.1093–1103.

Leung, M., Ng, S.T., Skitmore, M. and Cheung, S.O., 2005. Critical stressors influencing construction estimators in Hong Kong. *Construction Management and Economics*, 23(1), pp.33–44.

Leung, M.Y., Skitmore, M. and Chan, Y.S., 2007. Subjective and objective stress in construction cost estimation. *Construction Management and Economics*, 25(10), pp.1063–1075.

Lingard, H., 2004. Work and family sources of burnout in the Australian Engineering Profession: Comparison of respondents in dual- and single-earner couples, parents, and nonparents. *Journal of Construction Engineering and Management*, 130(2), pp.290–298.

Liu, B., Wang, Q., Wu, G., Zheng, J. and Li, L., 2020. How family-supportive supervisor affect Chinese construction workers' work-family conflict and turnover intention: investigating the moderating role of work and family identity salience. *Construction Management and Economics*, 38(9), pp.807–823.

Lu, C.S. and Kuo, S.Y., 2016. The effect of job stress on self-reported safety behaviour in container terminal operations: The moderating role of emotional intelligence. *Transportation Research Part F: Traffic Psychology and Behaviour*, 37, pp.10–26.

Lu, Y., Hu, X.M., Huang, X.L., Zhuang, X.D., Guo, P., Feng, L.F., Hu, W., Chen, L., Zou, H. and Hao, Y.T., 2017. The relationship between job satisfaction, work stress, work-family conflict, and turnover intention among physicians in Guangdong, China: A cross-sectional study. *BMJ Open*, 7(5), pp.1–12.

Mahadi, N., Woo, N.M.F., Baskaran, S. and Yaakop, A.Y., 2020. Determinant factors for employee retention: Should I stay. *International Journal of Academic Research in Business and School Sciences*, 10(4), pp.201-213.

Manyura, A. K. (2012, October). *Perceived Factors Affecting Employee Retention At Kenya Commercial Bank Limited Head Quarters (Partially Fulfillment of Master's Thesis)*. University of Nairobi, Kenya.

Mitchel, T.R., 2007. An alternative approach: The unfolding model of voluntary employee turnover. *Academy of Management Review*, 12, pp.51-89.

Mitchell, T.R., Holtom, B.C., Lee, T.W., Sablinski, C.J. and Erez, M., 2001. Why people stay: job embeddedness using job embeddedness to predict voluntary turnover. *The Academy of Management Journal*, 44(6), pp.1102–1121.

Moehanah, A.I., 2015. *Job stress, quality of work life, job satisfaction and turnover intention among executive level employees of Intel Technology Sdn. Bhd.* PhD. Universiti Utara Malaysia.

Morello, A., Issa, R.R.A. and Franz, B., 2018. Exploratory study of recruitment and retention of women in the construction industry. *Journal of Professional Issues in Engineering Education and Practice*, 144(2), pp.1–10.

Muhammad Ghayyur and Waseef Jamal, 2013. Work-family conflicts: A case of employees' turnover intention. *International Journal of Social Science and Humanity*, 2(3), pp.168–174.

Muhammad Irshad and Fahad Afridi, 2015. Factor affecting employees retention: Evidence from literature. *Abasyn Journal of Social Science*, 4(2).

Muhammad Javed, Muhammad Arsalan Khan, Muhammad Yasir, Suhaib Aamir and Ahmed, K., 2014. Effect of role conflict, work life balance and job stress on turnover intention: Evidence from Pakistan. *Journal of Basic Applied Scientific Research*, 4(3), pp.125–133.

Muhammad Rashid Badar, 2011. Factors causing stress and impact on job performance: A case study of banks of Bahawalpur, Pakistan. *European Journal of Business and Management*, 3(12).

Muhammad Rizwan, Muhammad Ali Raza, Muhammad Abdul Mateen, Faisal Tehseen, Muhammad Shahaid Farooq, Amajad Javed and Sharjeel Javed, 2014. Investigating the causes of job stress: A study on banking sector of Bahawalpur, Pakistan. *International Journal of Learning and Development*, 4(2).

Nair, S., Lim, Y.M. and Aik, N.C., 2016. Internal push factors and external pull factors and their relationships with lecturers' turnover intention. *International Journal of Business and Management*, 11(12), pp.110.

Naoum, S.G., Herrero, C., Egbu, C. and Fong, D., 2018. Integrated model for the stressors, stress, stress-coping behaviour of construction project managers in the UK. *International Journal of Managing Projects in Business*, 11(3), pp.761–782.

Natalie, B., 2021. What is Sampling in Research - Definition, Methods & Importance. [online] Available at: < <https://study.com/academy/lesson/what-is-sampling-in-research-definition-methods-importance.html> > [Accessed 30 March 2022]

Ngamkroekjoti, C., Ounprechavanit, P., & Kijboonchoo, T., 2012. Determinant factors of turnover intention: A case study of air conditioning company in Bangkok, Thailand. *International Conference on Trade, Tourism and Management. Bangkok: Planetary Scientific Research Centre*, pp.21-22.

Nohe, C. and Sonntag, K., 2014. Work-family conflict, social support, and turnover intentions: A longitudinal study. *Journal of Vocational Behavior*, 85(1), pp.1–12.

Nor Siah Jaharuddin and Liyana Nadia Zainol, 2019. The impact of work-Life balance on job engagement and turnover intention. *The South East Asian Journal of Management*, 13(1).

Nwaogu, J.M. and Chan, A.P.C., 2021. Work-related stress, psychophysiological strain, and recovery among on-site construction personnel. *Automation in Construction*, 125.

Pallant, J., 2001. SPSS survival manual – a step by step guide to data analysis using SPSS for windows (Version 10). Buckingham: Open University Press.

Park, H.Y., Christie, R.L. and Sype, G.E., 2014. Organizational commitment and turnover intention in union and non-union firms. *SAGE Open*, 4(1).

Phang, O.T. and Teoh, B.K., 2021. Factors affecting the turnover intention among employees in Penang manufacturing industry. *Annals of Human Resource Management Research*, 1(1), pp.29–40.

Phayoonpun, T., 2015. *Organizational justice, role stressors, job satisfaction and turnover intention among IT professioners in Thailand's ICT Industry*. PhD. Universiti Utara Malaysia.

Priyashantha, K.G., 2019. Work-life conflict with turnover intention: An analysis of the relationships work-life conflict with turnover intention: An analysis of the relationships. *Ruhuna University Journal*, 1(1), pp.240–266.

Public Employees Federation Health and Safety Department, 2012. *Occupational stress*. [online] Available at: <www.pef.org/health-and-safety%0AFunded> [Accessed 31 July 2021]

Quarles, R., 2007. An examination of promotion opportunities and evaluation criteria as mechanisms for affecting internal auditor commitment, job satisfaction and turnover intention. *Journal of Managerial Issues*, 6(2), p.176-194.

Ram. B.S., 2019. *Survey: Malaysian employees are overworked, sleep deprived, unhealthy*. New Straits Times, [online] 15 November. Available at: <<https://www.nst.com.my/news/nation/2019/11/539026/survey-malaysian-employees-are-overworked-sleep-deprived-unhealthy>> [Accessed 1 August 2021]

- Rathore, A. and Singh, M., 2020. Determinants of turnover intentions: A conceptual review. *Journal of Engineering Sciences*, 11(1), pp.601–605.
- Rodell, J.B. and Judge, T.A., 2009. Can ‘good’ stressors spark ‘bad’ behaviors? The mediating role of emotions in links of challenge and hindrance stressors with citizenship and counterproductive behaviors. *Journal of Applied Psychology*, 94(6), pp.1438–1451.
- Rojas, E.M., 2013. Identifying, recruiting, and retaining quality field supervisors and project managers in the electrical construction industry. *Journal of Management in Engineering*, 29(4), pp.424–434.
- Rose, M., 2003. Good deal, bad deal? Job satisfaction in occupations. *Work, Employment and Society*, 17(3), pp.503–530.
- Saif ur Rehman, Muhammad Aslam Khan, Hasan Afzal, Waheed Akhter and Imran Ali, 2010. Stress in bankers life: Demands-control model as predictors of employees activity participation. *African Journal of Business Management*, 4(9), pp.1679–1690.
- Sandhya, K., & Kumar, D. P. (2014). Employee retention-A strategic tool for organisational growth and sustaining competitiveness. *Journal of Strategic Human Resource Management*, 3(3), 1-5. Retrieved from <https://www.jhrm.eu>
- Sang, K.J.C., Ison, S.G. and Dainty, A.R.J., 2009. The job satisfaction of UK architects and relationships with work-life balance and turnover intentions”, *Engineering Construction and Architectural Management*, Vol. 16 No. 3, pp. 288-300, doi: 10.1108/09699980910951681.
- Saunders, M., Lewis, P. and Thornhill, A., 2016. *Research design (qualitative, quantitative and mixed methods approach)*. 7th ed. London.
- Scott, D., 2011. *Survey of Compensation Policies and Practices*. [online] Available at: <<http://www.worldatwork.org/waw/research/html/comppol03.html>> [Accessed 29 July 2021]
- Sekaran, U. and Bougie, R., 2016. *Research method for business*. 7th ed. United Kingdom.
- Senaratne, S. and Rasagopalasingam, V., 2016. The causes and effects of work stress in construction project managers: the case in Sri Lanka. *International Journal of Construction Management*, 17(1), pp.65–75.
- Sharma, J. and Devi, A., 2011. Role stress among employees: An empirical study of commercial banks. *Gurukul Business Review (GBR)*, 7, pp.53–61.
- Sharma, N. and Gedeon, T., 2012. Objective measures, sensors and computational techniques for stress recognition and classification: A survey. *Computer Methods and Programs in Biomedicine*, 108(3), pp.1287–1301.

Sharma, S. and Singh, J., 2016. Identification of sources of job stress: A study of bank marketing executives. *Journal of Organization and Human Behaviour*, 5(2).

Sidhu, A.K., Singh, H., Viridi, S.S. and Kumar, R., 2020. Job stress and its impact on health of employees: a study among officers and supervisors. *Journal of Management Development*, 39(2), pp.125–144.

Silva, N.D., Samanmali, R. and Silva, H.L.D., 2017. Managing occupational stress. *Journal of Engineering, Design and Technology*, 15(4), pp.488-504.

SinChew Daily, 2021. Construction sector short of 1m workers, labor cost up 30%. *MYsinchew*, [online] 14 April. Available at: <https://www.sinchew.com.my/content/content_2459516.html> [Accessed 7 July 2021]

Singh, A.P. and Dubey, A.K., 2011. Role of stress and locus of control in job satisfaction among middle managers. *The IUP Journal of Organizational Behavior*, X(1), pp.42.

Siti Hawa Mohd Kasmuri, Zulhabri Ismail, Rumaizah Mohd Nordin and Norfashiha Hashim, 2020. A systematic review of employee turnover antecedents in the construction industry. *Environment-Behaviour Proceedings Journal*, 5(13), pp.65.

Sungoh, S.M., 2021. Stress management during the COVID-19 pandemic. *Mizoram University Journal of Humanities and Social Sciences*, 8(1).

Smith, C., Daskalaki, M., Elger, T. and Brown, D., 2004. Labour turnover and management retention strategies in new manufacturing plants. *International Journal of Human Resource Management*, 15(2), pp.371–396.

Smith, J.L. and Quality, J.S., 2019. *12 Reasons Employees Leave Organizations*. [online] Available at: <<https://www.peoriamagazines.com/ibi/2009/dec/12-reasons-employees-leave-organizations>> [Assessed 13 July 2017]

Suong, H.T.T., 2020. Impacts of job stress and dissatisfaction on turnover intention: A critical analysis of logistics industry - evidence from Vietnam. *International Journal of Economics and Business Administration*, 8(4), pp.914–929.

Thomas, J., 2015. Study on causes and effects of employee turnover in construction industry. *International Journal of Science and Research*, 4(5).

Tijani, B., Jin, X. and Osei-kyei, R., 2021. A systematic review of mental stressors in the construction industry. *International Journal of Building Pathology and Adaptation*, 39(2), pp.433–460.

Tongchaiprasit, P. and Ariyabuddhiphongs, V., 2016. Creativity and turnover intention among hotel chefs: The mediating effects of job satisfaction and job stress. *International Journal of Hospitality Management*, 55, pp.33–40.

Sekaran, U. and Bougie, R., 2016. *Research Method for Business: A Skill-Building Approach*. 7. United Kingdom: John Wiley & Son Ltd.

Tyagi, A. and Dhar, R.L., 2014. “Factors affecting health of the police officials: mediating role of jobstress”, *Policing*, Vol. 37 No. 3, pp. 649-664.

Ugural, M. and Giritli, H., 2021. Three-way interaction model for turnover intention of construction professionals: Some evidence from Turkey. *Journal of Construction Engineering and Management*, 147(4).

Ugural, M.N., Giritli, H. and Urbanski, M., 2020. Determinants of the turnover intention of construction professionals: A mediation analysis. *Sustainability*, 12, pp.954.

Usman Bashir and Muhhamad Ismail Ramay, 2010. Impact of stress on employees job performance: A study on banking sector of Pakistan. *International Journal of Marketing Studies*, 2(1), pp.122–126.

Vandenberghe, C., Panaccio, A., Bentein, K., Mignonac, K. and Roussel, P., 2011. Predicting marital happiness and stability from newlywed interactions published by: National Council on family relations predicting marital, happiness and stability from newlywed interactions. *Journal of Organizational Behavior*, 32, pp.652–671.

Van der Molen, H.F. and Hoonakker, P.L.T., 2000. Work stress in the construction industry: Causes and measures. *Human Factors and Ergonomics Association*, pp.651–654.

Vanishree, P., 2014. Impact of role ambiguity, role conflict and role overload on job stress in small and medium scale industries. *Research Journal of Management Sciences Res. J. Management Sci*, 3(1), pp.2319–1171.

Vaughan, B., n.d. Better ways of working: Flexible working [pdf] Available at: <https://constructingexcellence.org.uk/wp-content/uploads/2015/01/Flexible-Working_final.pdf> [Accessed 10 April 2022]

Vuleta, B., 2021. 30 troubling employee retention statistics. [online] Available at: <<https://legaljobs.io/blog/employee-retention-statistics>> [Assessed 13 July 2020]

Wang, E.S.T., 2014. The effects of relationship bonds on emotional exhaustion and turnover intentions in frontline employees. *Journal of Services Marketing*, 28(4), pp.319–330.

Waspodo, A.A., Handayani, N.C. and Paramita, W., 2013. Effect of job satisfaction and work stress on turnover intention on employees of PT. Unitex Bogor. *Research Journal of Indonesian Science Management (JRMSI)*, 4(1), pp.97-115.

Wocke, A., and M. Heymann. 2012. "Impact of demographic variables on voluntary labor turnover in South Africa." *International Journal of Human Resource and Management*. 23 (16): 3479–3494. <https://doi.org/10.1080/09585192.2011.639028>.

Yang, C.L. and Carayon, P., 1995. Effect of job demands and social support on worker stress: A study of VDT users. *Behaviour and Information Technology*, 14(1), pp.32–40.

Yang, J., Bently, J.R., Treadway, D.C., Brouer, R.L. and Wallace, A., 2016. The role of affective commitment and political skill in the work interfering with family (WIF) conflict–voluntary turnover relationship. *International Journal of Human Resource Management*, 29(3), pp.595–613.

Yu, H., Lee, L., Popa, I. and Madera, J.M., 2021. Should I leave this industry? The role of stress and negative emotions in response to an industry negative work event. *International Journal of Hospitality Management* 94.

Yukongdi, V. and Shrestha, P., 2020. The influence of affective commitment, job satisfaction and job stress on turnover intention: A study of Nepalese bank employees. *Review of Integrative Business and Economic Research*, 9(1), pp.88–98.

Zhang, G. and Lee, G., 2010. The moderation effects of perceptions of organizational politics on the relationship between work stress and turnover intention: An empirical study about civilian in skeleton government of China. *iBusiness*, 2, pp.268–273.

APPENDICES

APPENDIX A: Questionnaire Survey

A Study on Critical Factors of Occupational Stress Toward Job Turnover Intention in Malaysia Construction Industry

Dear Sir/Madam,

Greetings,

I am Kong Chi Yan, a final year undergraduate student from Bachelor of Science (Hons) Quantity Surveying at Universiti Tunku Abdul Rahman (UTAR). I am conducting a study for my final year project entitled "A Study on Critical Factors of Occupational Stress Toward Job Turnover Intention in Malaysia Construction Industry".

The aim of the study is to examine the impact of occupational stress on turnover intention among employees in the Malaysian construction industry. The aim is achieved through the following objectives:

1. To identify the stressors of occupational stress in the construction industry.
2. To investigate the relationship between the occupational stressor and turnover intention in the construction industry.
3. To develop retention strategies and stress management strategies in the construction industry.

I would like to invite you to participate in this study. Your responses will be kept strictly PRIVATE, CONFIDENTIAL and strictly used for academic purposes only. It would take around 5 to 10 minutes to complete this survey.

Once again, thanks for your participation. If you have any enquiries, please do not hesitate to contact me at assyciakong@lutar.my.

Yours faithfully,
Kong Chi Yan.

*Required

Participant's Consent *

I have been notified and that I hereby understood consented and agreed.

Section A: Demographic Information

Email

Gender

- Male
- Female

Age

- 18-24
- 25-34
- 35-44
- 45-54
- 55 or above

Marital Status

- Single
- In a relationship
- Married
- Divorced/Widowed

Highest Educational Attainment

- Pre-University (Matriculation, STPM, Foundation, Diploma)
- Bachelor
- Postgraduate (Master, PhD)

Which type of organisation you are working in the construction industry?

- Developer
- Contractor
- Consultant
- Supplier/Specialist/Subcontractor

Employment Status

- Full time permanent employee
- Full time temporary employee
- Part-time permanent employee
- Part-time temporary employee

Which of the following best described your current position in your company?

- Director
- Project Coordinator/Manager
- Project Engineer
- Site Supervisor/Site Foremen
- Quantity Surveyor
- Safety Officer
- Supplier/Sales Engineer
- Accountant/Admin
- Architect/Designer
- Engineer
- Others

Which is your household income classification?

- B40 (Income range below RM4,849)
- M40 (Income range between RM4,850 to RM10,959)
- T20 (Income range between RM10,960 to 15,039)

How long have you worked with your current organization?

- Currently unemployed
- Within 1 year
- 1-3 years
- 4-6 years
- 7-9 years
- 10 years or above

Do you experience any of the followings below?

	Not at all	Not Often	Neutral	Often	Very Often
Muscular Tension					
Headaches					
Turnover intention					
Sleeping Difficulties					
Irritability					
Anxiety					
Depression					
A drop in work performance					
An increase in sick days and absenteeism					

Section B : To identify the stressors of occupational stress in the construction industry.

To what extent you agree with followings:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am forced by the digital devices to work with very tight schedules.					
I get conflicting information from two or more people when I am completing a task.					
I receive conflict requests from two or more people during work.					
I have to deal with and satisfy two or more groups who operate differently.					
Sometimes I need to break the rules or policy to carry out my job.					
My job requires too many demands on my time.					
I don't have much time for myself every day.					
I don't ever seem to have time for family.					
I have not enough time for communication with my partner/family.					
I don't have complaining from anyone since I am single.					

My salary and incentives are lower than my expectations.					
My salary is not match with my workload that I handle.					
I am forced to do more work than I can handle which lead to long working hours.					
I always have to work overtime so that the things can done on time.					
My education level do not match the requirements and skills needed for my job demand.					
My home environment is not comfortable to conduct Work From Home.					
I lives with my family and I do not have own working space to perform my job.					
My working environment does not provide an adequate space for me to focus on my task.					
The noise from my working environment brings impact on my working performance.					
I do not have adequate light and temperature in my workplace.					

Section C : Relationship between Occupational Stressors and Turnover Intention

How likely the following occupational stressors intend you to leave your current company?

	Not at all	Not Often	Neutral	Often	Very Often
Work Overload					
Role Conflict					
Role Ambiguity					
Work-life Balance					
Work-Family Conflict					
Marital Status					
Pay Level					
Working Hours					
Educational Level					
Work Environment					
Home Environment					

Section D: Retention and Stress Management Strategies

How do you rate yourself in the followings:

	Not at all likely	Not likely	Neutral	Likely	Extremely likely
I feel fair and satisfied and of my current pay level by company.					
I am familiar with the current pay rate and know how it is calculated.					
I am happy with the compensation package provided by the company.					
I encourage the implementation of mentoring programme in the company.					
I feel appreciated if the company promote internal recruitment.					
I am willingly participating in team building workshop which promote by the company.					
I feel that adequate sleep and small rest after meal or long meeting is important.					
I love to work under ambient and dedicated working environment.					

I appreciate if the company often organise stress management workshop					
I am happy with the training and workshop provided by the company.					
I am comfortable with the flexible working hours.					
I appreciate to work under an agile organisational policy provided by the company.					

Do you agree the following employee's retention strategies and stress management help in reducing the Turnover Intention?

	Not at all likely	Not likely	Neutral	Likely	Extremely likely
Improve fairness of pay level					
Increase transparency of pay rate					
Provide compensation package					
Implement mentoring programme					
Promote internal recruitment					
Promote team building workshop					
Have adequate sleep					
Have a good working environment					
Implement stress management workshop					

Provide training and workshop					
Provide flexible working hours					
Change organizational policy					

How do you rate your current company implements the followings in reducing the Turnover Intention?

	Not at all likely	Not likely	Neutral	Likely	Extremely likely
Improve fairness of pay level					
Increase transparency of pay rate					
Provide compensation package					
Implement mentoring programme					
Promote internal recruitment					
Promote team building workshop					
Have adequate sleep					
Have a good working environment					
Implement stress management workshop					
Provide training and workshop					
Provide flexible working hours					
Change organizational policy					