MEDIATING EFFECT OF SUBCONTRACTOR BULLYING ON FACTORS INFLUENCING INTENTION TO QUIT

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MEDIATING EFFECT OF SUBCONTRACTOR BULLYING ON FACTORS INFLUENCING INTENTION TO QUIT

by

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<td>AVE</td>
<td>Average variance extracted</td>
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<tr>
<td>CB-SEM</td>
<td>Co-variance Based Structured Equation Modeling</td>
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<td>CIDB</td>
<td>Construction Industry Development Board</td>
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<tr>
<td>CR</td>
<td>Composite reliability</td>
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<tr>
<td>F2</td>
<td>Cross validated redundancy</td>
</tr>
<tr>
<td>GoF</td>
<td>Goodness of fit</td>
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<td>H2</td>
<td>Cross validated communality</td>
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<td>M&amp;E</td>
<td>Mechanical and Electrical</td>
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<td>$p$</td>
<td>Path coefficient</td>
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<td>PC Sum</td>
<td>Prime cost sum</td>
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<td>POS</td>
<td>Perceived organisational support</td>
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<td>PTSD</td>
<td>Post-traumatic Stress Disorder</td>
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<td>PV Sum</td>
<td>Provisional sum</td>
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<td>Predictive relevance</td>
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<td>SEM</td>
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<td>Variance accounted for</td>
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PEMBULIAN DI KALANGAN SUBKONTRAKTOR SEBAGAI PENGANTARA PADA FAKTOR-FAKTOR YANG MEMPENGARUHI NIAT UNTUK BERHENTI

ABSTRAK

Buli di tempat kerja semakin dikenal pasti sebagai satu masalah serius. Menyedari masalah ini, banyak kajian telah dilakukan. Walau bagaimanapun, kajian-kajian tersebut hanya tertumpu pada bidang dan industri tertentu sahaja. Hanya beberapa kajian yang menumpukan kepada buli di projek pembinaan. Namun begitu, penyelidikan mengenai buli di projek pembinaan masih terhad terutamanya dari perspektif subkontraktor. Terdapat tiga objektif dalam kajian ini. Pertama, untuk mengkaji hubungan antara faktor membuli (kepimpinan kontraktor utama, organisasi kerja dan jenis pekerjaan, dan budaya pembinaan) dan buli dalam kalangan subkontraktor (buli berasaskan kerja dan buli berasaskan fizikal) di projek pembinaan. Kedua, untuk menganalisis hubungan faktor membuli (kepimpinan kontraktor utama, organisasi kerja dan jenis kerja dan budaya pembinaan) dan buli dalam kalangan subkontraktor (buli berasaskan kerja dan buli berasaskan fizikal) terhadap niat subkontraktor untuk berhenti dari projek pembinaan. Ketiga, untuk menyiiasat hubungan pengantara buli dalam subkontraktor (buli berasaskan kerja dan buli yang berasakan fizikal) dan faktor buli (kepimpinan kontraktor utama, organisasi kerja dan jenis pekerjaan dan budaya pembinaan) dengan niat untuk berhenti. Tinjauan soal selidik telah dilaksanakan pada kontraktor G6 dan G7 (n = 210) di Semenanjung Malaysia. Untuk analisis data, Partial Least Square – Structural Equation Modeling (PLS-SEM) telah dipilih dengan menggunakan perisian Smart PLS. Hasil kajian menunjukkan terdapat hubungan yang signifikan di antara...
kepimpinan kontraktor utama, organisasi projek dan reka bentuk pekerjaan dan budaya pembinaan dengan buli berasaskan kerja. Semua faktor buli subkontraktor menunjukkan hubungan yang signifikan dengan buli berteraskan fizikal, kecuali untuk organisasi projek dan jenis pekerjaan. Penyelidikan ini juga mendapati hanya buli berasaskan fizikal yang didapati berkait rapat dengan niat untuk berhenti oleh subkontraktor. Untuk kesan pengantaraan pula, hanya buli berasaskan fizikal yang mempunyai kesan mediasi dalam hubungan budaya pembinaan dan niat untuk berhenti.
MEDIATING EFFECT OF SUBCONTRACTOR BULLYING ON FACTORS INFLUENCING INTENTION TO QUIT

ABSTRACT

Workplace bullying is gradually being identified as a serious problem in the work environment. Acknowledging this problem, a number of studies has been conducted to overcome this problem. However, the previous studies were focussing on different fields and industries. Only a few studies were focussing on workplace bullying in a construction project. However, studies on workplace bullying in construction projects remain scarce, particularly from the subcontractors’ perspectives. There are three objectives in this study. First, to examine the relationship of bullying factors (main contractors’ leadership, work organisation and job design and construction culture) and bullying among the subcontractors (work-based bullying and physical-based bullying) in construction projects. Second, to analyse the relationship between bullying factors (main contractors’ leadership, work organisation and work design and construction culture) and bullying among the subcontractors (work-based bullying and physical-based bullying) towards the subcontractors’ intention to quit from the construction projects. Third, to examine the relationship of bullying mediation among the subcontractors (work-based bullying and physical-based bullying) and bullying factors (main contractor leadership, work organisation and job design and construction culture) and the intention to quit. A questionnaire survey was administered to collect data among the contractors G6 and G7 (n=210) across Peninsular Malaysia. For the data analysis, Partial Least Squares – Structural Equation Modelling (PLS-SEM) was used by using the Smart PLS software. The results of the study show that there is a significant relationship
between the main contractors’ leadership, work organisation and job design and construction culture to the work-based bullying. Similarly, all subcontractors’ bullying factors showed significant relationship to the physical-based bullying, except for work organisation and job design. This study also found that only physical-based bullying was found to be significantly associated with the intention to quit. For mediating effect, only the physical-based bullying has a mediating effect in the relationship between the construction culture and intention to quit.
CHAPTER 1

INTRODUCTION

1.1 Background of the Research

The very first official study pertaining to workplace bullying encounters was undertaken by Leymann (1990). He gathered the concept of bullying through a number of case studies amongst nurses who had committed or tried to commit suicide due to unfortunate events that befell upon them at their workplace (Zapf & Einarsen, 2005). This concept of workplace bullying later evolved through time and has been classified into three genres: work-based bullying, personal-based bullying, and physical intimidating bullying. Ever since, vast studies pertaining to workplace bullying have been carried out across the globe and varied industries, for instance, healthcare industry (Khalib & Ngan, 2006; Hoosen & Callaghan, 2004; Merllie & Paoli, 2001), hospitality and tourism (Hoel & Cooper, 2000; Hoel, 2003; Liu, 2014; Ariza-Montez et al., 2017), and higher learning institutions (Keashly & Neuman, 2010; Kircher, Stilwell, Talbot, & Chesborough, 2011). Such substantial studies have probed into various aspects of workplace bullying. Many researchers have focused on the types of bullying (Bartlett & Bartlett, 2011; Akella, 2016), factors of workplace bullying (Hauge, Skogstad & Einarsen, 2007), impacts on victims and organisations (van Schalkwyk, Els & Rothmann., 2011; Djurkovic, McCormack & Casimir, 2008), as well as various correlations related to workplace bullying inclusive of essential variables such as role stressors, stress, and social climate (Baillien & De Witte, 2009; Hoel & Cooper, 2000).
Recent times have witnessed the expansion of studies concerning workplace bullying, particularly the impacts of bullying, such as burnout, intention to quit (Laschinger & Fida, 2014), job insecurity (Glambek, Matthiesen, Hetland & Einarsen, 2014), job satisfaction (Trépanier, Fernet & Austin, 2015), and job productivity (Samnani & Singh, 2014). As such, many studies have constructed models and frameworks to further depict the notion of workplace bullying, for example, studies on factors that elaborate the antecedents of workplace bullying (Hoel & Salin, 2003), and workplace bullying that leads to the intention to quit (Djurkovic, McCormack & Casimir, 2004).

The construction arena is heavily based on projects; some on temporary basis, while others with a definite ending period (Turner, 2003). In temporary scenarios, professionals from different companies work together as an organisational setting to meet construction objectives. Hence, one can relate a construction project to a workplace for these groups of diverse professionals at a certain period of stipulated time. These parties normally consist of the main contractors, subcontractors, suppliers, consultants, and the owner of the project (Khan & Burn, 2013), wherein each has a major determinant role in determining the success of the project (Salleh, 2009). Each construction project is composed of two stages: pre-contract and post-contract. The pre-contract stage is when the client begins to realise his project, while the post-contract stage is when the construction project is awarded to the main contractor. Prior to that, the main contractor has the right to start work and at this stage, a subcontractor can be appointed for assistance at the construction site.

Ideally, the relationship between the main contractor and the subcontractor begins when the construction project is awarded to the subcontractor and work is
executed until completion (Zwick & Miller, 2004). Nevertheless, this particular relationship has its ups and downs; strengths and drawbacks (Chong, 2006). The subcontractor and the main contractor often have differing opinions and views regarding construction-related aspects. From the start, subcontractors would always suggest to stick to the lowest price (Reeves, 2002). In many cases, subcontractors have always insisted on reducing the price for the work due to the greed of the main contractor in gaining high profits (Zwick & Miller, 2004). As a result, subcontractors are often left with small percentages in profit margins (Wong, Teo & Cheung, 2010). In fact, a number of cases have highlighted the unjust side of the subcontractors. Based on an article published in The Telegraph entitled ‘Construction Giants Bullying Small Businesses’ (2012), a number of small subcontractors complained about the dismal practices of main contractors towards them. The survey findings indicated that 97% of 250 subcontracting firms had reported unfair treatments from main contractors, while only 5% received their payment within the stipulated date. In a worst-case scenario, the subcontractor even failed to pay wages to the employees and general workers, which halted the execution of the project. Unfortunately, this scenario appears to be a normal phenomenon practiced in Malaysia (Sunday Star, 2010).

Apart from financial matters, some other issues have also been raised related to the relationship between the main contractor and subcontractors. One refers to conflicting clauses found in the contracts. Instances of such conflicting clauses in subcontracts are typically associated to flow through, payment, indemnity, additional insurance, no damage for delay, partial lien waiver, and termination clauses (Thomas, 2014; Thomas & Flynn, 2011; Uher & Brand, 2008). In addition to those,
subcontractors would often directly proceed with the job before signing the actual contract, with a mere and simple issuance of ‘letter of intent’ by the main contractor (Thomas, 2014; Uher & Brand, 2008; Hidzir, Jaafar & Dahalan, 2015). If the subcontractor fails to comply with the clause stipulated in the contract, he would bear the risk of late payments, unfair compensation or non-payment of monthly interim payments, and even worse, being blacklisted from future projects with the same main contractors. Thus, the subcontractor does not have the power to refuse or to decline the direction set by the main contractor in matters related to construction and ultimately, the main contractors are bound to take advantage of their weaknesses (Arditi & Chotibghongs, 2005; Uher & Brand, 2008; Hidzir et al., 2015).

Additionally, the nature of the construction project can also be a ground for bullying to occur. One common example is the nature of working for long hours in a construction project. Sutherland & Davidson (1993) mentioned that most construction employees (including subcontractors) are forced to work for long hours to meet deadlines and handle excessive workloads. Gunning & Cooke (1996) found that construction employees are exposed to working with impossible deadlines, unrealistic demands from clients, lack of staff, working on multiple projects, and conflicts within the organization, and thus, suffer undue stress. Excessive workload causes stress and anxiety due to the intensive working hours within a limited time period (Cooper & Marshall, 1978). For instance, the United Kingdom (UK) construction team is always under increasing pressure from clients, both in the private and public sectors, to deliver projects faster, for better quality and lower cost (Egan, 1998; Carrillo, Ruikar & Fuller, 2013).
As for the case in Malaysia, a report published by Construction Industry Development Board (2017) showed that 229.0 billion of construction projects were awarded in 2016. It is a common practice in Malaysia that for each contract awarded; many subcontractors will be employed by the main contractor. A subcontractor is an individual hired by the main contractor to construct a part of the building works based on their expertise (Chamara, Waidyasekara & Mallawaarachchi, 2015). The use of subcontractors assists the main contractor in transferring risks, maximising quality, and ensuring a close relationship between parties, as well as reducing a contractor’s overheads, money dependence, and workforce (Sozen & Kucuk, 1999; Mohamed & Terek, 2014). Subcontractors are expected to complete their tasks according to the due date stipulated in the contract. It is important for them to develop a good work plan and to strictly adhere to the implementation of the work plan in order to catch up with the deadline (Lu, Shen & Yam, 2008).

1.2 Problem Statement

Unlike several prior studies pertaining to workplace bullying that suggest fixated and standard organisational setting (Hoosen & Callaghan, 2004; Khalib & Ngan, 2006; Merllie & Paoli, 2001, Hoel & Cooper, 2000; Keashly & Neuman, 2010; Ismail, 2009), the term ‘workplace bullying’ may be perceived differently within the construction organisation setting where the construction project is only a temporary organisation that involves various types of people/organisations with different roles. Interestingly, construction phases are very important as both contractors and subcontractors normally play a significant role in meeting project objectives within certain time frames (El-Karim, El-Nawawy & Abdel Alim, 2015). Therefore, a good relationship between the main contractor and the subcontractor is
essential to execute a project smoothly without any uprising issue (Kale & Arditi, 2001). Nevertheless, ample of evidence displays subcontractor bullying in construction projects. For instance, a delayed and non-payment by the main contractor to subcontractors forces them to take the blame if something unfortunate happens, work for extra hours to complete a construction project, troublesome clauses in the subcontract, and non-usage of subcontract in a project. Some case studies also showed evidence of verbal and hostile threats in construction project (White, 2006). Hence, in order to understand this problem, three main possible factors of occurrence have been identified: leadership style of the main contractor, work organisation and job design, as well as construction cultures.

In terms of main contractor leadership, numerous studies have proven the unjust treatment towards subcontractors. For example, Hinze & Tracey (1994) investigated 28 subcontractors, who claimed that they were treated unfairly as they had to accept the risk and take the responsibility for all bad things that happened during the construction. Most subcontractors are frightened to object as they dread losing the chance to secure the next tender with the same main contractor in the future (Kennedy, Morrison & Milne, 1997). According to Akintan and Morledge (2013), subcontractors are also blamed by the main contractor if any unfortunate event occurs on site. This is likely due to the claim by main contractors that it is the duty of the subcontractors to maintain safety at the construction site (Thomas, 2014). However, it must be known that these are shared duties between the main contractor and subcontractors.

In regard to work organisation and job design, the nature of construction projects themselves, which are constant and dynamic, plays an important role in
contributing to subcontractor bullying. Examples of bad work organisation and job design can be in terms of the lack of clear goals concerning the work, bad flow of information in workplace, lack of mutual conversation about work tasks, organisational constraints, lack of control over their work, and aggressive or unethical work environment (Hauge et al., 2007). In every construction stage, there will be many changes made based on client’s requirements towards the building design (Alinaitwe, Widen, Mwakali & Hansson, 2007). Due to this, a construction project is often confronted with uncertainties. This job ambiguity may lead subcontractors to feel burdened and vulnerable, which may later encourage the occurrence of bullying (Huang, Huang, Lin & Ku, 2008).

A negative construction culture is also a factor to subcontractor bullying. The culture of a construction project is widely known as the industry of the three Ds: dull, dirty, and dangerous. Thus, it is expected that the prevalence of bullying in a construction project is high. Dainty, Bagilhole & Neale (2000) mentioned that most construction team players always find themselves in an extremely hostile environment. A hostile environment refers to multiple work sites issues that may include safety and discrimination amongst its workers (White, 2006). Furthermore, Transparency International (2005) described the construction industry as the most deceitful industry across nations. Fails Management Institute (FMI) (2004) stated that a construction project is a perfect setting for ethical dilemmas, with its low-price mentality, intense competition, and paper-thin margins.

Due to the issues mentioned above, it is expected that subcontractors may develop the intention to quit their workplace and the project altogether. The intention to quit is a voluntary decision made by employees to leave their organisation
(Appollis, 2010). Vilnius (2008) asserted that the construction industry is characterised by its constant increase of turnover rate. This was agreed by Pitt (2014) who cited that 6.6% of subcontractors did have intention to quit the construction industry. A few past studies had evaluated the relationship between workplace bullying and the intention to quit in an organisational setting (van Schalkwyk et al., 2011; Djurkovic et al., 2008; Nishii & Mayer, 2009). In the aspect of construction projects, many studies have looked into the intention to quit with other job stressors, except workplace bullying (Bowen, Cattell, Distiller & Edwards, 2008; Huang, Yang & Ou, 2007; Sun, 2011). Thus, the question arises if a relationship exists between bullying and intention to quit within this construction organisational setting.

Within the context of Malaysia, studies concerning workplace bullying are in scarcity. Studies carried out by local researchers appear to be more fixated on discovering the prevalence of workplace bullying in other industries, such as health care (Khalib & Ngan, 2006; Yuzana, Dempster & Stevenson, 2014), banking (Thamarakshan, 2015), as well as public and private services (Ismail, 2009; Nor Azimah & Anizan, 2012; Al Bir & Hassan, 2014; Omar, Mokhtar & Hamzah, 2015). For example, Azizi, Tan, Goh, Noordin, Yusof, Shahrin & Su haila (2012) discussed the impact of workplace bullying on work performance, while Aisan (2011) investigated organisational factors amidst Malaysian public services.

Their study outcomes signified a high prevalence towards bullying at workplaces in Malaysia. Nonetheless, researches on workplace bullying in construction projects, particularly from the stance of subcontractors, seem inadequate for both Malaysia and the international contexts. As for the international context, most studies related to workplace bullying within the construction industry placed
their focus on the predominance of bullying (Loper, 2001; Loosemore & Chau, 2002; McCormack, Djurkovic & Casimir, 2013) and preventive measures (McKay, 2015). The Census and Statistic Department of Hong Kong (2004) reported that about 55,318 workers had informed that they were not paid by the subcontractors and main contractors. Similar situations occur in Malaysian construction projects, wherein subcontractors do not receive payments for their work (Sunday Star, 2010). Therefore, with the abovementioned issues of ‘bullying’ within the construction industry, this research developed a model by examining the factors of bullying occurrences in construction projects from the stance of subcontractors with the hope that this study can serve as guidance to subcontractors in knowing their rights and altogether eliminate unjust treatments within the industry.

1.3 Research Questions

Based on the issues discussed above, a total of eight research questions have been identified in this study, namely:

**R1:** Do the factors of bullying (main contractor leadership, work organisation and job design, and construction culture) have positive relationships with subcontractor bullying (work-based bullying and physical intimidating bullying) in construction projects?

**R2:** Does subcontractor bullying (work-based bullying and physical intimidating bullying) have positive relationship with subcontractor’s intention to quit in construction projects?
R3: Does subcontractor bullying (work-based bullying and physical intimidating bullying) play a mediating role in the relationships between factors of bullying (main contractor leadership, work organisation and job design, and construction culture) and the intention to quit?

1.4 Research Objectives

This research outlines a total of eight objectives, as listed below:

1. To examine the relationship between factors of bullying (main contractor leadership, work organisation and job design, and construction culture) and subcontractor bullying (work-based bullying and physical intimidating bullying) in construction projects.

2. To analyse the relationships between factors of bullying (main contractor leadership, work organisation and job design, and construction culture) and subcontractor bullying (work-based bullying and physical intimidating bullying) towards subcontractor’s intention to quit construction projects.

3. To investigate the mediating role of subcontractor bullying (work-based bullying and physical intimidating bullying) for relationships between factors of bullying (main contractor leadership, work organisation and job design, and construction culture) and the intention to quit.
1.5 Significance of this Research

The concept of workplace bullying has been explored in varied industries by placing focus on standard workplace organisation settings. This study examined the perspective of work organisation based on the viewpoints of subcontractors. In Malaysia, about 80% to 90% of project implementations are executed by subcontractors. As such, numerous issues have surfaced concerning bullying in construction projects. By looking into their problems, this research significantly contributes to the construction industry. Upon determining the factors related to subcontractor bullying in construction projects, this study is able to enlighten better environment on site, as well as better performance of construction projects.

This study examined the relationship between workplace bullying and the intention to quit. Hauge et al. (2007) mentioned that workplace bullying resulted in approximately 1% increase in the intention to quit. Even though the percentage is low, the figure may soar in the upcoming years. Furthermore, high percentage of turnover rate reflects the bad reputation of a company (Sinniah & Mohammed Kamil, 2017). Besides, a consultancy report highlighted 6% of involuntary turnover and 13% of voluntary turnover recorded amongst Malaysia workers, which appears to be the second highest in the South-East Asia (Hewitt, 2017). Previous studies have focused on the relationship between workplace bullying and the intention to quit with potential mediators (Hoel, Einarsen, & Cooper, 2003). The studies mainly concentrated on the standard organisation setting. However, none has directly assessed workplace bullying with the intention to quit, particularly from the perspective of subcontractors.
1.6 Scope of the Research

The scope of this research had been limited to the perspective of G6 and G7 contractors in the Malaysian construction industry. G6 and G7 contractors were chosen because they represent conglomerates with projects worth exceeding RM 10 million. This research was conducted across Peninsular Malaysia.

1.7 Definitions of Key Terms

The list of definition of key terms adopted in this research is as defined by previous scholars who investigated the subject matter in the related construction field of work. However, in some cases, an operation definition is used by the researcher with a specific objective to ensure that accurate definitions are applied within the context of the research.

*Workplace bullying:* Harassing, offending, socially excluding someone, or negatively affecting someone’s work. In order for the label bullying (or mobbing) to be applied to a particular activity, interaction or process it has to occur repeatedly and regularly (e.g. weekly) and over a period of time (e.g. about six months) (Einarsen, Hoel, Zapf, & Cooper, 2003, p. 15).

*Target:* A person or a particular group of people that something is directed at, or that something is intended for (Cambridge University Press, 2018). In this research context, a target is a person being bullied.
**Perpetrator:** The person who carries out a harmful, illegal, or immoral act (Cambridge University Press, 2018). In this research context, a perpetrator is a person who commits the act of bullying.

**Construction project:** A temporary multi-organisation that comprises of different project participants who are its peripheral employees (Fellows & Liu, 2008).

**Subcontractor:** An individual hired by the main contractor to construct any part of building works based on his skill in the area (Chamara et al., 2015).

**Subcontractor bullying:** Intentional and recurrent actions that occur repeatedly over an extended period of time by the main contractor/client against a subcontractor. It can be in the form of verbal abuse, or behaviour that degrades, threatens, and/or disrupts the subcontractor’s work productivity or status.

**Main contractor leadership:** The ability of the main contractor to lead his construction workers or underlings in a construction site.

**Work organisation and job design:** A clear definition of job scope in a construction project and the requirements/methods to complete a set of job tasks.

**Construction culture:** The characteristics of the construction industry (Ankrah, Proverbs & Debrah, 2009).
**Intention to quit:** The level to which an individual considers leaving the relationship with the current community or employer (Kim, Price, Muller & Watson, 1996).

### 1.8 Research Methodology

This research employed the deductive approach to address the research objectives and the research questions. Deductive research is frequently applied in quantitative survey. Hence, this research adopted the quantitative survey method through the use of questionnaires. As such, a questionnaire was developed from the literature and other related established questionnaires, which consisted of four categories: demographic, factors of occurrence, types of subcontractor bullying, and the intention to quit. A population survey was conducted amongst G6 and G7 contractors across Peninsular Malaysia. The collected data were analysed by using the Statistical Packages for Social Sciences (SPSS) and Partial Least Square – Square Equation Modelling (PLS-SEM) method. SPSS was used for basic statistical analysis to determine frequencies, mean values, outliers, and T-test analysis, while PLS-SEM was applied to assess measurement model and structural model. A comprehensive discussion on the research methodology is specified in Chapter Four.

### 1.9 Overview of the Chapters

Chapter One provides a general introduction of the research by presenting the background research, the issues brought to the research, as well as its aims and objectives. It also provides the significance of the research, the scope of the research, its research methodology, and an outline of the chapters.
Chapter Two presents a comprehensive review of the existing literature regarding the topic studied; workplace bullying, from a wide range of disciplines. Its purpose is to assess how bullying was studied in the literature, as well as how it suits the context of construction industry.

Chapter Three focuses on the literature review pertaining to the construction industry. It covers the definition of the construction industry, all related details, and its first impression. It further examines subcontractors and the issues related to bullying. The findings from the literature review aid in developing the conceptual framework of subcontractor bullying within the construction industry.

Chapter Four elaborates the methodology employed in this research. This chapter includes a depiction of the research methods, the design of the questionnaires, sampling frame, and selection of the respondents. This chapter provides the necessary information regarding data collection, processing, and analyses.

Chapter Five presents the results and the analysis of the findings based on the qualitative approach, as outlined in Chapter Four.

Chapter Six discusses the final conclusions drawn from the findings presented in Chapter Five regarding subcontractor bullying within the construction industry. This chapter also includes the study limitations and several recommendations for future studies.
1.10 Summary of the Chapter

Overall, this chapter presents an overview on why, what, and how this research had been conducted. The next chapters, Chapters Two and Three, depict the literature review concerning workplace bullying and construction projects. The literature review is essential for developing the framework model of subcontractor bullying in construction projects.
CHAPTER 2
WORKPLACE BULLYING

2.1 Introduction

The literature review performed in this chapter identifies the meaning of workplace bullying as perceived by a wide range of disciplines. The chapter begins with an introduction to the ecological system theory that serves as an important role in studying workplace bullying as a whole concept. Later, an extensive review of literature pertaining to the earlier concept of workplace bullying, its related definitions and dimensions, the types of workplace bullying, antecedents or factors of occurrence of workplace bullying, and the impact of workplace bullying is presented. Next, the second part of this chapter generally describes the occurrence of workplace bullying associated to the construction industry.

2.2 Ecological System Theory

Initially, the ecological system theory (Bronfenbrenner, 1979) was developed to provide a framework for human development. This theory highlights that human development occurs within a series of interconnected systems that coexists between each other. Five basic systems are embedded in the ecological theory, namely, microsystem, mesosystem, exosystem, macrosystem, and chronosystem. Table 2.1 presents the summary of systems proposed by Brofenbrenner.
Table 2.1 Summary of Ecological System Theory

<table>
<thead>
<tr>
<th>System</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsystem</td>
<td>The immediate contexts where individual participates and direct contact occurs between them</td>
</tr>
<tr>
<td>Meso system</td>
<td>Influences between members of the microsystems, e.g. school and family relationships</td>
</tr>
<tr>
<td>Exosystem</td>
<td>External influences on the individual from systems that is not directly related to the microsystem, e.g. policy and legislation</td>
</tr>
<tr>
<td>Macrosystem</td>
<td>Larger cultural and social influences to the microsystem, e.g. social and economic status</td>
</tr>
<tr>
<td>Chronosystem</td>
<td>Changes in all systems across time</td>
</tr>
</tbody>
</table>

Source: Brofenbrenner (1979)

At the microsystem level, Brofenbrenner (2002) describes microsystem as the central counterparts in the human development. It is a positive relationship that is influenced by family and peers. Rogoff (2003) believed that the influences in this microsystem level possess the greatest impact upon human development, even though other strong interactions by other levels can still affect the central counterparts. As for this level, it is important to investigate the target and the perpetrator of workplace bullying as the central part of the circle. Under this frame, the personality of both the target and the perpetrator should be studied in order to determine their characters that may or may not induce the occurrence of bullying at workplace. The discussion of the target and the perpetrator is further elaborated in Section 2.6.1 of this chapter.

The second level; mesosystem, describes the layer that is linked between the microsystems (Paquette & Ryan, 2001). Mesosystem consists of social relationship between participants of the system. In the case of this research, the mesosystem deals
with the relationship between the target and the perpetrator at the workplace. In relation to workplace bullying, this setting can be seen under the organisational context, where it can happen amongst supervisor-supervisee, manager-employee, and employer-employee.

The third level refers to exosystem. Bronfenbrenner (1979) called this the setting transition as it provides the relations and the processes that take place between two or more settings containing the developing child. Berk (2000) described the exosystem as a larger social system that is not directly related to the child in the microsystem. However, this structure in this system will directly affect the child’s development. Galinsky (1999) mentioned that exosystem can work in both positive and negative ways. A good implementation of it empowers the development of the child, while negative implementation degrades the child. As for this research, the exosystem level in workplace bullying can be related in the organisation of the workplace. For example, poor work organization reflects bad policies or negative leadership by the manager or employers. These problems are not directly under the power of the target or the perpetrator, but the implementation of this might exert an impact, i.e. workplace bullying to occur. Section 2.6.2 specifically depicts this subject matter.

Fourth, the macrosystem refers to “a societal blueprint for a particular culture, subculture, or other broader social context” (Harkonen, 2007, p. 12). Berk (2000) mentioned that a macrosystem is constituted of cultural standards, customs, and rules that serve as an outer layer of the child. A macrosystem resembles a flowing authority throughout the interactions of all systems (Belgrave & Brevard, 2015). In this case, a good macrosystem provides positive impact upon microsystem
and vice versa. At this level, the culture of an organisation may play an important role in workplace bullying.

The last system in the ecological system theory is chronosystem. Chronosystem is the progression or stream of development of the external systems that occurs in a timely manner. The chronosystem models cover either a short or long period of time (Bronfenbrenner 1989, 201-202).

Many early childhood researchers have integrated the ecological system theory into their studies. For instance, some focused on community violence and child maltreatment (Chiccheti & Lynch, 1993), childhood education (Penn, 2005), obesity among children (Oplainski, 2006), social resilience among children (Tidball & Krasny, 2011) and early child development (Krishnan, 2010). Within the bullying context, Hong & Esplage (2012) used ecological system theory to study the factors and the outcomes of peer bullying among school children. In their study, the ecological system theory was employed to investigate the factors and the outcomes of peer bullying in various systems among the children.

Although the ecological system theory has been used widely in early childhood researches, not many have been used to study adults. In fact, only two social studies have adapted the ecological system theory for management studies; job satisfaction, home satisfaction, and spousal support for dual-earner families (Kulik & Rayyan, 2006), as well as corporate social responsibility (Musgrave & Woodward, 2016). As for the workplace bullying context, Johnson (2011) adopted the ecological system theory to study workplace bullying among nurses. The study concluded that work
environment within the healthcare industries is in an interconnected series and plays a huge role in inducing bullying at every level of the system.

Workplace bullying is a nested problem as it does not happen in isolation. Ideally, there will be many contributing factors of occurrence and outcomes within the context of workplace bullying in this interconnected relationship. Peterson (2002) suggested that workplace bullying occurs in a combination of personal characteristic and organisational characteristics. Thus, factors of occurrence and outcomes of workplace bullying can be determined from the ecological perspective. This is agreed by Johnson (2011), who suggested that ecological system theory can be used as guidance in formulating questions for an empirical research associated to bullying. Therefore, every element at each of these system levels may serve as factors of occurrence and outcomes of bullying.

2.3 The History Concept of Bullying

Within the research field, the initial concept of bullying was introduced by Burk (1897). Only after a long gap, Heinemann (1972) reintroduced the concept of bullying (which he termed as mobbing) into the research field. Heinemann (1972) referred bullying as a definite type of aggression among high school students in Scandinavia. He specifically viewed bullying as violent behaviour projected by a group of people as perpetrator towards one single victim, or target.

Olweus (1978) later found that bullying does not always happen in a group of people, but also as an individual perpetrator. His research further explored a new concept of bullying, in which he studied the trait of facial expression and other forms
of indirect behaviour of the perpetrators. This discovery served that bullying does not only happen in the form of physical threats, but also in psychological and verbal threats towards the targets, and purposely made by one or more individuals.

Later, studies on bullying have been expanded and more traits have been discovered to add up to the concept of bullying. For instance, gossiping and spreading rumours (Bjorkqvist, Lagerspetz & Kaukiainen, 1992), indirect bullying (social exclusions or ostracism) (Bjorkqvist, 1994), unkind gestures and facial expressions (Olweus, 1999), and the modern type of bullying called cyber bullying (Hinduja & Patchin, 2010).

This concept of bullying was later adopted to signify a similar type of negative behaviour among adults at workplace and termed as workplace bullying. The research related to workplace bullying was initially carried out by a Swedish therapist named Heinz Leymann (1990). To date, many researches about workplace bullying have been conducted across the globe to investigate the prevalence of workplace bullying in their countries (US Workplace Bullying Survey: September 2007; Ministry of Health and Welfare in Canada, 2013; Ministry of Health, Labour and Welfare in Japan, 2013). Such studies were conducted across various fields, such as healthcare industries (Khalib & Ngan, 2006; Hoosen & Callaghan, 2004; Merllie & Paoli, 2001), hospitality and tourism Hoel & Cooper, 2000; Liu, 2014; Ariza-Montez et al., 2017), and higher learning education (Keashly & Neuman, 2010; Kircher et al., 2011). Many researchers also have contributed to different sets of knowledge that are particularly linked with workplace bullying, for instance, the studies on organisational antecedents of workplace bullying Tambur & Vadi, 2012;
Hoel & Salin, 2003; Azizi et al., 2012) and outcomes of workplace bullying (Hauge, Skogstad & Einarsen, 2010; Einarsen, Hoel, Zapf & Cooper, 2003).

In Malaysia, several studies have been conducted in various sectors of workplace. For example, in medical-based profession, Ruth, Samsiah, Hamidah & Santhna (2009) found that 3.7% of the nursing staffs were bullied every month with the average of 1.2% being bullied every day. Yuzana et al., (2014) described that almost 50% of employees in the healthcare industry were exposed to bullying at their workplace. In the research combining public and private sectors, Al bir & Hassan (2014) described that 39% of employees experienced negative behaviour at their workplace. Meanwhile, Omar et al. (2015) revealed a high percentage of workplace bullying occurrence in the public sector agency. Their study indicated more than 80% of public sector employees were exposed to workplace bullying in a weekly or daily basis for duration of six months.

From these high percentages, bullying does occur at Malaysian workplaces and the escalating percentages are rather alarming. Although studies related to workplace bullying seem to gain attention by researchers in Malaysia, not all industries are involved, except for the healthcare industry and the public sector. Furthermore, certain industries perceive different kind of bullying, when compared to the given definition of bullying. As such, the next section peels off what constitutes workplace bullying by understanding the very conception of workplace bullying through its definition.
2.4 Workplace Bullying and its Dimensions

There is no exact one definition of workplace bullying that fits all scenarios. Various researchers and non-practitioners describe workplace bullying differently based on their respectful contexts of their fields (Koo, 2007). Even in an organisation, the acceptance of what is bullying is dissimilar among individuals. According to Batur & Wistrom (2012), an employer and an employee may not share the same idea or mutual understanding regarding workplace bullying. Thus, it is crucial to apprehend the main criteria of workplace bullying in deciding the definition of workplace bullying.

Overall, there have been numerous discussions on the diverse definitions of workplace bullying. Table 2.2 lists the definitions made by past scholars. From these definitions, workplace bullying can be characterised into four main dimensions (Cowie, Jennifer, Neto, Angula, Peteira, Barrio & Ananiadou, 2000):

1) negative acts in nature

2) the frequency and the duration of negative acts

3) the negative impact to the target

4) imbalance power between the perpetrator and target
### Table 2.2 Definitions by Scholars and Its Dimension of Workplace Bullying

<table>
<thead>
<tr>
<th>Source</th>
<th>Definition</th>
<th>Negative Nature</th>
<th>Frequency and Duration</th>
<th>Reaction by the Target</th>
<th>Imbalance of Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leymann (1990)</td>
<td>‘Hostile and unethical communication that is directed in a systematic way by one or more persons, mainly towards one targeted individual who, due to bullying, is pushed into a helpless and defenceless position.’</td>
<td>√</td>
<td></td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>The Swedish National Board of</td>
<td>‘A recurrent reprehensible or distinctly negative actions which are directed against individual employees in an offensive manner and can result in those employees being placed outside the workplace community.’</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupational Health and Safety (1994)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Einarsen (1999)</td>
<td>‘The repeated actions and practices (of a perpetrator) that are directed to one or more workers, which are unwanted by the victim, which may be done deliberately, or unconsciously, but clearly cause humiliation, offense, distress, may interfere with job performance, and/or cause an unpleasant working environment.’</td>
<td>√</td>
<td></td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>Namie &amp; Namie (2003)</td>
<td>‘The deliberate, hurtful and repeated mistreatment of a target by a bully that is driven by the bully’s desire to control the target.’</td>
<td>√</td>
<td></td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>Source</td>
<td>Definition</td>
<td>Negative Nature</td>
<td>Frequency and Duration</td>
<td>Reaction by the Target</td>
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<tr>
<td>Rayner, Hoel &amp; Cooper (2002)</td>
<td>‘A situation where one or several individuals persistently over period of time perceive themselves to be on the receiving end of negative actions from one or several person, in situation where the target of bullying has difficulty defending him or herself against this action. We will not refer to one-off accident as a bullying.’</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Einarsen et al., (2003)</td>
<td>‘Bullying at work means harassing, offending, socially excluding someone or negatively affecting someone’s work tasks. In order for the label bullying (or mobbing) to be applied to a particular activity, interaction or process it has to occur repeatedly and regularly (e.g. weekly) and over a period of time (e.g. about six months). Bullying is an escalated process in the course of which the person confronted ends up in an inferior position and becomes the target of systematic negative social acts.’</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Salin (2003)</td>
<td>‘A repeated and persistent negative acts towards one or more individual(s), which involve a perceived power imbalance and create a hostile work environment.’</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>
Table 2.2 Definitions by Scholars and Its Dimension of Workplace Bullying (Cont’d)

<table>
<thead>
<tr>
<th>Source</th>
<th>Definition</th>
<th>Negative Nature</th>
<th>Frequency and Duration</th>
<th>Reaction by the Target</th>
<th>Imbalance of Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Namie (2003)</td>
<td>‘Status blind interpersonal hostility that is deliberate, repeated, and sufficiently severe to harm the targeted person’s health or economic status and is driven by the perpetrator’s need to control another individual, often undermining legitimate business interests in the process.’</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Mayhew, McCarthy, Chappell, Quinlan, Barker &amp; Sheehan (2004)</td>
<td>‘The behaviour of a single perpetrator against one or more entities. Conversely, mobbing is commonly used to “describe bullying incidents with multiple perpetrators (e.g. mobbers).’</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quebec Commission des Normes du Travail (2006)</td>
<td>‘Any vexatious behaviour in the form of repeated and hostile or unwanted conduct, verbal comments, actions or gestures that affect an employee’s dignity or psychological or physical integrity and that results in a harmful work environment for the employee.’</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>
Table 2.2 Definitions by Scholars and Its Dimension of Workplace Bullying (Cont’d)

<table>
<thead>
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<th>Imbalance of Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agervold (2007)</td>
<td>‘A social interaction in which the sender uses verbal and/or non-verbal communication regularly, weekly and for a period of at least six months, that is characterised by negative and aggressive elements directed toward the personality and self-esteem of the receiver’, and on the other, of how “a person perceives or feels that he is being bullied when he . . . experiences such verbal and non-verbal communication as intentionally negative and as constituting a threat to his self-esteem and personality.’</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>
2.4.1 Negative acts in nature

Many researchers have pointed out that negative nature of the acts or behaviours must be proven in defining the act of workplace bullying (Leymann, 1990; Einarsen et al., 2003; Salin 2003; Agervold, 2007). Likewise, the same criteria can be used in many legal definitions of bullying. For example, the anti-bullying law implemented by the Swedish National Board of Occupational Safety and Health defines workplace bullying as “recurring or clearly negative actions that are directed against employees in aggressive manner...” ((The Swedish National Board of Occupational Health and Safety, 1994, p. 17). Subsequently, the law adopted by North America also emphasizes the similar criteria as it defines harassment as “any frequent aggravating behaviour and intimidating in the form of unwanted conduct, verbal remarks, actions or gestures that distress the employee's dignity or psychological or physical integrity and results in a destructive work environment...” (Quebec Commission, 2006, p. 1). These definitions, either legal or non-legal, show that in order to pinpoint a bullying case, the actions made by the perpetrator towards the target must be negative in nature.

Parzefall & Salin (2010) mentioned that negative acts of bullying can range from subtle to explicit behaviours. A number of bullying categories have been listed by researchers to differentiate these negative acts, for instance, Hoel & Cooper (2000) grouped negative acts into four main categories: work-based bullying (negative behaviour that focuses on the quality and effort of work), personal bullying (aimed directly to the person and includes behaviours of humiliating, as well as socially but excluding nature), managerial bullying (covers the negative behaviour at
the managerial level), and physical intimidating bullying (behaviours of an intimidating nature like threat of violence, shoving or pushing, and shouting or rage). Einarsen & Hoel (2001) discerned negative acts into three categories: work-based bullying, personal bullying, and physical intimidating bullying. The typology developed by Einarsen & Hoel (2001) seemingly focused on the result of bullying the target. Hutchinson, Vickers, Wilkes & Jackson (2005) differentiated the acts into three classifications: personal attack (where isolation, intimidation, and degradation are used to attack the identity and self-concept of the target), erosion of professional competence and reputation (damages professional identity and limits career opportunities), and attack to work roles and tasks (obstructing work or making work difficult, including denial of due process and economic sanctions). On the other hand, Hoel & Vartia (2018) classified workplace bullying into different forms such as cyber bullying and gender based bullying.

As for this research, the categories developed by Einarsen & Hoel (2001) had been employed as the guideline of negative acts to determine the nature of bullying within the construction industry. This is because; the typology generated by Einarsen & Hoel (2001) is more general and has a wide spectrum of negative acts, when compared to other types of classifications that are often vague or intercede between each other. This makes the acts of negative difficult for differentiation. For instance, in the typology developed by Hoel & Cooper (2000), managerial bullying can also be classified under work-based bullying. Meanwhile, the professional competence and reputation aspects in the typology built by Hutchinson et al., (2010) are too narrow to suit this research. Thus, the categorisation made by Einarsen & Hoel (2001) appears
to be the most suitable in shaping the flow of this research. Further elaboration of these three categories is presented in Section 2.5 of this chapter.

2.4.2 The frequency and duration of the negative acts

Many researchers agree that repetition and the duration of negative acts serve as the definition of workplace bullying (Lutgen-Sandvik, Tracy & Alberts, 2007; Namie, 2003). However, there are different views on the frequency and the duration that are needed to define workplace bullying. Several researchers suggest that workplace bullying can occur without any regular behaviour and in a single threatening act (Adams, 1997; Randall, 1997). Hoel & Cooper (2001) corresponded to this view and pointed out special occasions where bullying may be established by one-off incident. This is noted in cases of severe harassment where the effect may remain for a long time as it may trigger past memories regarding incidents related to the target of workplace bullying.

However, Einarsen (2000) disagreed with this notion and highlighted that the frequency and duration of bullying experience are important in time lining a workplace bullying. He added that negative behaviour can be classified as workplace bullying if only it is performed continuously within a certain length of duration. Frequency of actions is needed to draw a line between the concept of workplace bullying and merely a one-off incident (Rayner et al., 2002). Likewise, duration is essential to distinguish a workplace bullying from workplace conflict. Some researchers, such as Rayner et al. (2002), Einarsen et al. (2003), Salin (2003), Namie (2003), and Agervold (2007) specifically stated these characteristics in their definitions of workplace bullying. For instance, Agervold (2007) suggested the
frequency of workplace bullying must occur weekly and the duration should be at a minimum of six months. Similarly, Einarsen et al., (2003) agreed that one single incident cannot be considered as bullying. In some case studies, the target of workplace bullying has been reported to experience bullying at daily basis throughout their working life (Lutgen-Sandvik et al., 2007; Namie, 2003).

2.4.3 The negative impact to the target

Behaviour is considered as bullying when the negative acts result in a negative consequence to the target, either physical or psychological wellbeing (Saunders, Huynh & Goodman-Delahunty, 2007). Einarsen, Raknes, Matthiesen & Hellesøy (1994) argued that the target’s perception of such behaviour is important in determining workplace bullying. Leymann (1996) asserted that there is no bullying if there is no negative outcome to the target. Einarsen (1999, p. 16) also explicitly claimed the following, “...clearly cause humiliation and distress that can affect job performance and cause hostile environment of a workplace...” in his definition of workplace bullying. Similarly, Agervold (2007) mentioned that the target should experience negative verbal and non-verbal interactions that cause a threat to his/her self-confidence and characteristics.

This negative impact towards target dimension has also been used by non-researcher practitioners in private sector organisations. For instance, Work Safe Victoria (2015, p. 1) specified a negative outcome of workplace bullying as “…possess a threat to health and safety to the employee’s wellbeing.” Quebec Commission (2006, p. 1) stated “…that disturb an employee's self-esteem or
psychological or physical integrity.” These definitions precisely focus on the outcome of workplace bullying.

2.4.4 The imbalance of power between the perpetrator and target

Another dimension of workplace bullying is the imbalance of power between the perpetrator and the target (Leymann, 1990; Einarsen et al., 2003; Salin, 2003; Namie, 2003). Einarsen et al., (2003) refers the imbalance of power in this context is where the target finds “himself in a lower position and becomes the victim of workplace bullying.” (p. 15). Einarsen & Skogstad (1996, p. 187) defined “to be target of workplace bullying, he must also feel weakness in defending himself in the actual situation.”

Normally, the imbalance of power is associated with the formal power structure in the organisation where the bullying occurs. According to Aquino (2000), this negative behaviour usually derives from one in a superior position towards the lower rank staff. It is usually associated with the downwards vertical mistreatment where it may include mistreatment that occurs between manager and subordinate, subordinate and manager, as well as between client and employees (Tepper, 2007; Fox & Stallworth, 2005). However, Hoel & Cooper (2000) argued that this imbalance of power can be of both formal and informal power structures, such as the varied levels of knowledge or experience, social acquaintances, network organisational connections or other situational/contextual factors Verdasca, 2011). In this scenario, two seemingly equal power employees can gradually escalate and leave the other one vulnerable. Researches also indicate that powerful employees can
become the perpetrator, while powerless employees become the targets of workplace bullying (Baillien, Neyens, De Witte & De Cuyper, 2009; Salin, 2003).

In line with these definitions, this research presents the definition of subcontractor bullying as an intended and repeated negative actions performed by the main contractor against a subcontractor. It can be in the form of verbal abuse, or any behaviour that degrades, threatens, and disrupts the subcontractor’s work productivity or status on site.

As such, four dimensions need to be measured to identify if an act is of bullying, namely, negative nature, frequency and duration, negative impact on the target, and imbalance power between the perpetrator and the target. These dimensions are important and must be proven to ensure that an act is indeed bullying or merely responsibilities of the employees that need to be carried out in a situation that requires them to do so, such as rushing for deadlines or when the manager advices or corrects their subordinate due to mistakes in their work.

Although not all the four dimensions are specifically defined in one definition, all researchers agree that bullying is a negative act performed by a perpetrator to a target. Most researchers insist that there must be imbalance of power between the perpetrator and the target. This is because; when there is imbalance of power, one party with power will try to assert the power into the party with less power. Thus, through these definitions, one single act of bullying can be represented based on its type. The next subsection discusses this topic area.
2.5 The Type of Workplace Bullying

Following the typology proposed by Einarsen & Hoel (2001), this study classified workplace bullying into three categories: i) Work-based bullying; ii) Personal-based bullying; and iii) Physical intimidating bullying. The next subsections review the literature on each of these types.

2.5.1 Work-based bullying

Work-based bullying occurs when the target is being bullied in relation to their job scope. Einarsen & Raknes (1997) defined work-based bullying as work-based actions that hinder the target to perform a task or to involve in taking some/all their responsibilities at workplace. Gonzalez (2012) stated that work-based bullying usually comes in negative behaviours of a psychological nature and appears more subtle than the other types of workplace bullying.

This is due to the difficulty of differentiating between an act of bullying and just a work-related act. Based on the definition given by Einarsen & Raknes (1997) and Gonzalez (2012), work-based bullying should have a negative connotation to the act and also how it would result and disturb the work performance of the target. In enhancing the understanding of work-based bullying, researchers have listed some examples related to such type of bullying (see Table 2.2).
Table 2.3 Instances of work-based bullying

<table>
<thead>
<tr>
<th>Researcher</th>
<th>Example of bullying</th>
</tr>
</thead>
</table>
| Baillien, De Cuyper, & De Witte (2011) | Excessive workloads  
 |                             | Excessive monitoring of work/ supervision  
 |                             | Criticism of work  
 |                             | Forcing to work in long extra hours without leave/ vacation  
 |                             | Making staffs accept short-term contracts  
 |                             | Renounce a permanent staff to save cost  
| Tambur & Vadi (2012)        | Giving impossible tasks  
 |                             | Impossible deadlines  
 |                             | Unmanageable workloads  
 |                             | Supplying someone with ambiguous information  
 |                             | Threats about job security  
 |                             | Scapegoating  
| Kelly (2006)                | Lower rate of salary and wages than a standard wage  
| Rayner, Hoel & Cooper (2001) | Not giving someone crucial information  
|                             | Not supporting well-earned promotions  

Source: Various authors

The work-based bullying has a high prevalence than the other two types of categories. This happens in various settings of workplace that target different demographic of employees. For example, McCormack, Djurkovic & Casimir (2014) reported that healthcare trainees were subjected to a range of work-based and personal-based forms of bullying behaviours than physical intimidating bullying. Giorgi, Arenas & Leon-Perez (2011) also showed that employees from the public sector appeared to be more exposed to work-based bullying behaviours than those from the private sector. Notelaers, Vermunt, Baillien, Einarsen & De Witte (2011)
discovered that employees of younger age (25 – 34 years old) were 1.5 times more likely to face work-based bullying than those within the age range of 35 – 44 years old.

Work-based bullying normally occurs in a negative work environment. Douglas (2001) mentioned that work-based bullying happens commonly in the hierarchy style of management. In this type of management style, managers always think that they have the ‘right’ to bully their co-workers. This is likely due to heavy workload shortage with limited staff. This makes the target of work-based bullying forced to accept excessive work or project at any one time. If this happens frequently, the challenge of the work then becomes a burden that leads to other psychological consequences to the target.

2.5.2 Personal-based bullying

Personal-based bullying is an act that is primarily aimed towards the personal subject of the target. It involves an individual and takes a clearer form by displaying the negative behaviours of the perpetrator towards the target (Gonzales, 2012). Salin (2015) claimed that personal-based bullying can ingest more by throwing insulting comments about a person, his attitudes, and to the extent of the target’s political or religious convictions. Rayner & Hoel (1997) classified personal-based workplace bullying into the four following categories: threat to professional status, threat to personal standing, isolation, and destabilisation. Table 2.4 describes each category of personal-based bullying (Rayner & Hoel, 1997):
Table 2.4 Examples of personal-based bullying

<table>
<thead>
<tr>
<th>Type</th>
<th>Example of bullying</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threat to professional status</td>
<td>Ridicule opinion, humiliate the professional status in a public and accusation in relation to the work efforts</td>
</tr>
<tr>
<td>Threat to personal standing</td>
<td>Name-calling, insults to personal characters, intimidation, and degrading in reference to age, racial or ethnicity</td>
</tr>
<tr>
<td>Isolation</td>
<td>Preventing access to job prospects, physical or social isolation, and withholding of information</td>
</tr>
<tr>
<td>Destabilisation</td>
<td>Fail to acknowledge, give pointless tasks, removal of responsibility, repeated reminders of mistakes, and setting up to fail</td>
</tr>
</tbody>
</table>

Source: Rayner & Hoel (1997)

Normally, the occurrence of personal-based bullying is lesser than work-based bullying (Salin, 2003; Hoel & Giga, 2006; Bashir, 2011). The reason of such situation is perhaps due to accidental bullying, where the perpetrator is “really unaware of the consequence of his or her actions to others…” (Namie & Namie, 2003, p.17). However, if the perpetrator is confronted, he or she would immediately retreat and apologise for any harm that has been done. Giorgi et al., (2011) found that employees from private sectors were more exposed to personal-based bullying than those from the public sector.

2.5.3 Physical intimidating bullying

Physical intimidating bullying is behaviour that involves physically aspect of the target. It happens when there is a frequent act of intense anger that results in threats, physical fights, vandalism, rape, and arson. Power et al., (2013) mentioned that physical intimidating bullying is less acceptable than work-related bullying and it is probably a less common type of workplace bullying. However, some cases have
shown high prevalence of physical intimidating bullying. For instance, Rutherford & Rissel (2004) suggested that physical intimidating bullying is common in the health sector organisation. The common physical intimidating bullying is from clients in the form of verbal abuse, intimidating behaviour, and physically aggressive behaviour.

Additionally, physical intimidating bullying is a type of bullying for which targets have legal protection (Collyer, Johnson, de Mesquita, Palazzo, & Jordan, 2010). For instance, the Netherlands’ Working Conditions Act 1994 has been enforced to ensure that employees are protected from sexual harassment, psychological hostility, and violence at workplace. The decree covers many types of negative behaviour, such as sexual harassment, mobbing/bullying, racism, and aggression from clients, patients and public. Similarly, the legislation in Belgium covers their employees from violence, moral harassment (bullying), and sexual harassment at workplace. The law outlines employers’ obligations to provide a series of preventive measures to diminish the possibility of workplace violence. These include the physical organisation of the working environment, creating an appropriate support to the victim, the availability of a counsellor on prevention, quick and impartial investigation of reported cases of workplace violence, provision of information and training, and the responsibility of the management at all levels to prevent stress. Although Malaysia do not have laws that deal specifically with workplace bullying, an employee who suffers from violent act by the employer may terminate his contract of service without notice under Section 14 (3) of Employee Act of Malaysia.

In relation to the scenario in Malaysia, a study conducted by Ruth et al. (2009) among nurses in Malaysian Medical Centre found that 44.4% of the respondents
experienced physical violence. However, according to a survey performed by International Labour Organisation (ILO), workplace violence in Malaysia has not yet reached a danger situation. Yeen (2002) also posited that victims of workplace bullying in Malaysia may not sustain physical pain, but more to suffering in a subtle way; psychologically. This is agreed by Omar et al. (2015), who found only a small percentage of physical intimidating bullying in their study on the prevalence of workplace bullying in a public sector organisation.

In a classic point of view, studies on the type of bullying derived from these three traditional perspectives: work-based bullying, personal-based bullying, and physical intimidating bullying. However, in recent studies, workplace bullying is viewed from another perspective: inter-group bullying, which is discussed in detail in the next subsection.

2.6 Inter-group Bullying

Workplace bullying has mainly been conceptualised and explored as an individual issue (Olweus, 1991) or interpersonal phenomenon (Einarsen et al., 2003) and organisational issue. However, in some cases, workplace bullying can be beyond the organisation setting. Ariza-montes, Muniz, Montero-Simo & Araque-Padilla (2013) contended that bullying may arise due to the context where the organisation operates. Inter-group bullying is a study on bullying on two different group dynamics originating from the external of an organisation.

Ramsay, Troth, & Branch (2011) mentioned that in-group context is often disregarded by scholars despite the fact that organisations typically consist of
formally created groups with assigned tasks and specific responsibilities (e.g., functional or project teams) and informal groups. Table 2.5 shows the different group focuses that have been studied by various scholars.

Table 2.5 Different group focus of inter-group bullying studies

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status hierarchy</td>
<td>Branch, Ramsay, Barker &amp; Sheehan (2007); Soylu &amp; Sheehy-Skeffington (2015)</td>
</tr>
<tr>
<td>Occupational group</td>
<td>Hoel, Cooper &amp; Faragher (2001); Rayner et al. (2002); Ortega, Hogh, Pejtersen, Feveile &amp; Olsen (2009); Alterman, Luckhaupt, Dalhamer, Ward &amp; Calvert (2013); Ariza-montes et al. (2013)</td>
</tr>
<tr>
<td>Social identity</td>
<td>Napier &amp; Gershenfeld (2004); Fox &amp; Stallworth (2005); Lewis &amp; Gunn (2007); Soylu &amp; Sheehy-Skeffington (2015)</td>
</tr>
<tr>
<td>Gender role</td>
<td>Hoel et al. (2001); Salin &amp; Hoel (2013); Zapf, Escartin, Einarsen, Hoel &amp; Vartia (2011).</td>
</tr>
</tbody>
</table>

Source: Various authors

A status hierarchy concerns on the differences of status that may have created an imbalance of power between two or more groups. The target of bullying under status hierarchy usually comes from a member of the low-status group group (Soylu & Sheehy-Skeffington, 2015). In addition, status hierarchy can be found in a situation of ‘vertical bullying’ in the work environment. Vertical bullying tends to happen between managers and employees, supervisor and supervisee, as well as senior and junior employees (Hoel et al., 2001). However, Branch et al. (2007) argued that bullying can occur in ‘upwards bullying’, where a manager is bullied by the employees due to their informal power that may counteract the formal
organisation status of the manager. In this situation, an employee with a higher and influential background will supersede the management power held by the manager.

Occupational groups deal with different types of group occupations (Arizamontes et al., 2013). For instance, certain occupational group reported a higher prevalence rate of bullying amongst teachers (Smith, Cowie, Olafsson & Liefooghe, 2002), restaurant employees (Mathisen, Einarsen & Mykletun, 2008) and university professionals (Zapf, Knorz & Kulla, 1996; McKay, Arnold, Fratzl & Thomas, 2008). Similarly, blue-collar workers (Ortega, Hogh, Pejtersen & Olsen, 2009) and social services workers (Alterman, Luckhaupt, Dalhamer, Ward & Calvert, 2013) displayed high incidences of bullying that other professions.

Social identity focuses on the social aspect of the target that may induce bullying to occur in an organisation, for instance, due to racial/ethnic lines (Fox & Stallworth, 2005; Lewis & Gunn, 2007) and gender role (Salin & Hoel, 2013). Social identity issues tend to focus on minorities and inequalities of the social construct of the target. For instance, the composition of the workgroup may affect both majority and minority members differently. A study by Lewis & Gunn (2007) indicated that a high number of minorities in ethnicity in organisation reported higher bullying case. Furthermore, Ely & Thomas (2001) in revealed that racial and ethnic minorities agreed to feel underappreciated and excluded at the workplace due to their ethnicity.

As for gender role, Salin & Hoel (2013) described workplace bullying as a gendered phenomenon. They claimed that men and women are brought up with different expectations, thus influencing what is seen as “appropriate” ways to show and respond to aggressiveness and what kind of behaviour is likely to be accepted.
Many studies also indicate a higher risk for women at the workplace (Zapf et al., 2011). Salin (2015) claimed that the ratio of gender groups and the way the occupation is gender-typed contribute to bullying. For example, being a man in a female-dominated work environment, such as nursing or childcare profession (Eriksen & Einarsen, 2004; Lindroth & Leymann, 1993) and vice versa, being a woman in a male-dominated work environment, such as the police force (Nuutinen, Kauppinen & Kandolin, 1999). However, Salin’s (2015) new founded results showed that working on tasks dominated by the other gender was a significant risk to men alone. However, it is still possible that women in these work tasks to experience higher risks than men do for the same work.

Therefore, the idea of inter-group bullying can be observed in the construction project as it has many parties that work together within the same duration of time to undertake a project. The characteristics and the practices of many professionals on construction project are elaborated in Chapter Three.

2.7  Factor of Workplace Bullying

The literature pertaining to the factors or antecedents of bullying depicts two main categories: personal and organisational characteristics. Peterson (2002) suggested that workplace bullying usually occurs with a combination of personal and organisational characteristics. Brodsky (1976) claimed that an aggressive conduct might be natural in one’s characteristic, but a bad organisation may trigger point to turn the aggressive personality into workplace bullying. Thus, the following sections discuss these two main perspectives.
2.7.1 Personal characteristic

Personal factor of workplace bullying is often connected with the personality traits of the target and the perpetrator (Hansen, Hogh, Persson, Karlson, Garde & Ørbæk, 2006; Seigne, Coyne, Randall & Parker, 2007). Einarsen (2000) mentioned that there are certain characteristics or personality traits, which are common among the targets in inviting the perpetrator to commit workplace bullying. It was found that target who possesses higher levels of negative affect may contribute to workplace bullying because they appear to be more vulnerable and a perfect candidate to the potential perpetrators (Coyne, Seigne & Randall, 2000; Aquino & Lamertz, 2004; Glaso, Matthiesen, Nielsen, & Einarsen, 2007). A negative affect is described as a propensity of the target to have negative emotions, such as sadness, fear, and anxiety (Watson & Clark, 1984). With the same notch, an employee with low self-esteem can be a potential target of workplace bullying (Einarsen et al., 1994; Matthiesen & Einarsen, 2001). This is because; they appear to be helpless and easy to be bullied, when compared to those with high self-esteem. Furthermore, their lack of confidence makes them hesitate to fight back when bullying occurs.

Through the development of these related studies, several researchers found another personality trait of the target that may contribute to workplace bullying, which is higher level of neuroticism and extraversion (Carlo, Morris, George, Maria & de Guzman, 2005). Neuroticism is a personality trait illustrated by emotional unsteadiness, desolation, resentment, nervousness, guilt, and frustration (Seel, 2012). Glaso et al., (2007) found that targets of workplace bullying may also have lower level of introversion. Usually, when an employee has low-level introversion, he/she is likely to be passive and not retaliate to bullying behaviours, thus a perfect trait to
the potential perpetrators (Goldberg, 1990). Employees with low-level of agreeableness may become the target of workplace bullying because of their refusal to agree with others. Employees with low-level of conscientiousness may be viewed by others to not be noticed and recognized when bullying occurs. Thus, most researchers concluded that personality traits, such as negative effects, agreeableness, conscientiousness ((Skarlicki, Folger & Tesluk, 1999; Douglas & Martinko, 2001; Salgado, 2002), low self-esteem, disability, physical weakness, shyness and anxious personality, lack of friends, and social rejection (Coyne, Seigne & Randall, 1999; Monks & Smith, 2000) are the reasons for the occurrence of workplace bullying.

The personal factor of workplace bullying can be caused by the perpetrators’ side of personality as well. This could be due to high-level of stress that may derive from terrible workload, deadlines, and busy work environment ((Appelberg, Romanov, Honlasalo & Koskenvuo, 1994; Einarsen, Raknes & Matthiesen (1994); Hoel & Cooper, 2000). Hence, some are pressured to be ill-mannered, insensitive, and develop personal conflicts towards their co-workers (Pearson, Anderson & Porath, 2000). The perpetrators may also exert Machiavellianism, a trait that manipulates other to perform unnecessary tasks (Bennett & Robinson, 2000). The trait of Machiavellianism has been linked with manipulative leadership tactics. According to Kessler, Bandeiii, Spector, Borman, Nelson & Penny (2010), a person with Machiavellianism trait will manipulate others when it is required for one to do so. In this regard, a perpetrator with Machiavellianism trait will try to manipulate his colleagues or employees to do his work. Einarsen (1999) suggested the concepts of dispute-related and predatory bullying to explain the onset of two distinct types of bullying. While dispute-related bullying is preceded by a highly escalated
interpersonal conflict and evolves out of an interpersonal dispute, ‘predatory bullying’ refers to cases where the victim has personally done nothing provocative that may reasonably justify the behaviour of the ‘predator’. In the latter case, someone is abusing his power or the target is a victim of scapegoating process within a group. In the latter case, a target may be attacked because he or she belongs to a certain out-group, for instance by being the first woman in a local police force, or the target may be bullied as an easy target of frustration and stress caused by other factors. Examples of predatory bullying are exposure to a highly aggressive leadership style, being singled out as a scapegoat, and the acting-out-of prejudice.

These studies show that anyone can be a target of bullying regardless of their characteristics. For instance, someone with low-level of extraversion can be bullied because he keeps the negative behaviour to himself and at the same time, someone with an extroverted and high self-esteem can be bullied too because colleagues might dislike him due to his overt personality. In turn, he might be socially ostracised by colleagues at the workplace. These are in line with a statement made by Einarsen (2000, p. 389): “the issue of personality traits in relation to workplace bullying is a debatable, especially as far as the victim is concerned and the position on personality traits as antecedents of workplace bullying has been seriously questioned.”

Studies related to the perpetrator’s characteristics are in scarcity. However, many researchers agreed that the characteristics of perpetrators are usually negative, manipulative, and ill-mannered. Some researchers pointed out that a perpetrator of bully does not really realise that they are bullying others, but as a result of the
organisational factors that made them to do so. The next subsection discusses the organisational factors of bullying.

2.7.2 Organisational Factor

Salin (2003) listed three factors in relation to organisational of workplace bullying; i) leadership; ii) work organisation and job design; and iii) organisation and social climate.

2.7.2.1 Leadership

Leadership is defined as ‘a relationship in which one person guides, manages and supervises others in the implementation of a mutual task’ (Saqib et al., 2015, p. 87). For one organisation to be in optimal success, a good and effective leadership is needed (Kotterman, 2006). Trevino & Brown (2005) suggested that a good leadership is important because a leader who engages in unethical behaviour will create a negative environment to its employees. This is agreed by several studies that posited that a destructive style of leadership can contribute to workplace bullying (Einarsen, Aasland, & Skogstad, 2007). Examples of destructive leadership behaviour are autocratic, tyrannical leadership, and laissez-faire leadership (Einarsen et al., 2007; Skogstad, Einarsen, Torsheim, Aasland, & Hetland, 2007; Hauge et al., 2007; Hoel, Glaso, Hetland, Cooper & Einarsen, 2010).

Autocratic style of management is said to make the workplace prone to bullying. This is due to the imbalance of power that exists in the organisation (Hoel & Cooper, 2000; O’Moore, 2000). This can be explained in the case where the
targets are bullied by their supervisors or their upper management leader (Hoel &
Cooper, 2000; O’Moore, 2000; Cortina et al., 2001). Salin (2001) obtained positive
results between hierarchical statuses of employees, where only a small percentage of
the managers reported experiences of bullying (2%), while 17.5% of small ranking
officers had experienced bullying over the previous year. This style of management
is also called as ‘para-military’ style and it portrays a highly authoritarian leadership
style that is characterised by ranking and strong importance on obedience. According
to Sekerka (2014), the autocratic management style encourages the act of bullying at
the workplace.

Conversely, Tsuno & Kawakami (2015) argued that minimal intervention or
laissez-faire leadership also can promote workplace bullying. A cross-sectional study
by the Norwegian workforce disclosed a laissez-faire leadership as one of the
strongest predictors of bullying (Hauge et al., 2007). This type of leadership
encourages bullying among colleagues because the upper management abandons
their responsibility and does not intervene in when bullying is reported at the
workplace (Hoel et al., 2010). Keashly (2010) posited that some supervisors turn into
perpetrator of workplace bullying under this type of leadership. Furthermore, if
supervisor ignores and fails to recognise and interfere in workplace bullying, it can
deliver the idea to the employees that bullying is acceptable in the organisation
(Skogstad et al., 2007). Keashly (2010) argues that when a leader fails to prevent
bullying in the organisation, or when they do not stop it, the target of workplace
bullying views the organisation’s response as abusive behaviour. In the end, the
target is abused by the perpetrator and the organisation (Keashly, 2010). Keashly
(1998) emphasised when organisation does nothing about the bullying behaviour, they are deemed to be involved in workplace bullying by conspiring with the bully.

### 2.7.2.2 Work organisation and job design

Work organisation and job design is a task or how the whole job is organised within the work atmosphere. A poor work organisation and job design is one possible organisational factor behind workplace bullying. Bad work organisation and job design refer to lack of clear work objectives, bad flow of information, absence of related discussion about job tasks, organisational limitations, lack of control over own work, and aggressive or immoral work environment (Hauge et al., 2007). Established work groups that experienced high levels of task conflict and low communication openness were more vulnerable to bullying (Ayoko, Callan & Hartel, 2003).

Tsuno & Kamakami (2015) mentioned that bad work organisation and job design promote roles of ambiguity and conflict that result in workplace bullying. Role ambiguity and role conflict have long been correlated with workplace bullying. Targets of workplace bullying are probable to report extreme levels of role ambiguity, role conflict, as well as discernment of inconsistent expectations, goals, and demands (Hauge, Skogstad & Einersen, 2009).

### 2.7.2.3 Organisational culture and social climate

Organisational culture refers to established beliefs or values that effect the attitude and behaviour of an employee in an organisation (Tsai, 2011). An idealistic positive workplace must be a workplace that practices good organisational culture
and social climate. A good organisational culture expresses the understanding of goals, freedom of activities, and changes in organisation; while social climate suggests interactive connections, expressive, and assisting each other. Low and negative organisational culture, as well as poor social climate at workplace, encourages the incidence of workplace bullying (Agervold, 2009).

Qureshi, Amran & Khalid (2014) mentioned that one of the reasons why one engages in workplace bullying is due to the encouragement of ill behaviours by the organisation itself. According to Lutgen-Sandvik & McDermott (2008), some organisations enable workplace bullying by forming an internal incentive system that supports rivalry between their employees. For instance, the employees are cheered to strive against one another to achieve any work-related goals. In an effort to discredit a co-worker, the perpetrator may tattletale, sabotage work, or condemn the ideas of the target (Lutgen-Sandvik & McDermott, 2008). This type of organisation is not concerned about honesty and fairness, but stresses on revenues and fiscal gains ((Salin & Hoel, 2011; Samnani & Singh, 2014). This type of organisation is termed as a toxic organisation.

Appelbaum, Iaconi & Matousek (2007) mentioned that a toxic organisation shows a history of bad performance, poor decision-making, low levels of employees’ job satisfaction, and pressure beyond average workload issues. This ill condition of organisations contributes to increasing workplace bullying (Batur & Wistrom, 2012). This type of organisation is always linked with laissez-faire leadership (Lutgen-Sandvik & McDermott, 2008), because when the bullying behaviour is ignored by the leader, it becomes part of the organisational culture as the employee tries to imitate the bullying behaviour (Tepper, Duffy, Henle & Lambert, 2006). An
organisation that encourages informality and casual behaviour can invite workplace bullying among its employees. This is because; it is hard for the employees to differentiate what is considered as ‘appropriate’ and ‘professional’ behaviour (Pearson et al., 2000). Furthermore, the employees might misunderstand that organisation accepts negative behaviour if there is no anti-bullying policy and no punishment to the perpetrator of workplace bullying (Monks & Smith, 2000).

A study by Lynch (2004) reveals that the social climate of an organisation is connected with the gender structure of the organisation. For instance, men sense an aggressive environment when most employees are men, while women find the environment hostile when most employees are women. Salin (2003) asserted that bullying occurs in a chaotic and competitive work setting. O’Moore, Seigne, McGuire & Smith (1998) found that workplace bullying victims always suffer in a nerve-wracking and aggressive work setting, while Vartia (1996) claimed that organisational environment factors that promote workplace bullying are always linked to negative work climate.

According to Neuman & Baron (1998), some organisations commemorate the appearance of toughness, where they rely on heavy jokes and banter as part of their norms and cultures. However, such kind of jokes and humours can effortlessly go wrong and turn into bullying when the target, for some reason, cannot retaliate or tolerate the jokes. This type of organisational culture may happen in tough culture industries, such as construction industry or other blue-collar industries (Jones, 2008).

Overall, two main factors can lead to workplace bullying: personality of the target and perpetrator, as well as organisational factors. These factors can serve as a
process and are related to each other. It normally starts with the personality of the target and later the negative surrounding of organisation that allows such behaviour to encourage bullying. Without either of this one, it is tough for bullying to happen in an organisation. The personality of target is not enough in creating a situation for bullying at the workplace, as it must be combined with organisational factors. A good organisation will not encourage workplace bullying and would try to prevent it from recurring. Thus, organisational factor is an important aspect in studying the reason why workplace bullying happens. Workplace bullying is an organisational problem that will lead to many effects to the organisation and also to the target.

2.8 The Impact of Workplace Bullying

Researchers have agreed that workplace bullying can result in negative consequences to the target of workplace bullying and the organisation (Hoel et al., 2003; Mikkelsen & Einarsen, 2002).

2.8.1 Individuals

An individual who is exposed to workplace bullying might experience several negative impacts to himself/herself and it may become a major cause of suicide (Sofield & Salmond, 2003; Hutchison et al., 2005). Studies show targets of workplace bullying suffered from psychomatic symptoms, such as anxiety, depression, fearfulness, loss of self-confidence, chronic exhaustion, insomnia, self-hatred, and physical illness (stomachache, headache, and backache) (Randle 2003; Hoel & Cooper, 2000). In a similar vein, workplace bullying can also cause post-traumatic stress disorder (PTSD) in the target (Mikkelsen & Einarsen, 2002;
Matthiesen & Einarsen, 2004; Lutgen-Sandvik et al., 2007; Einarsen, Hoel & Notelaers, 2009). PTSD refers to signs of stress that emerge after a traumatic event. Verkuil, Atasayi & Molendijk (2015) investigated workplace bullying in a Finnish university and found that most respondents demonstrated symptoms of PTSD as a direct result of exposure to bullying. These symptoms are anxiety, assertiveness, insomnia, lethargy, and sociophobia (Verkuil et al., 2015). Similarly, a study by Einarsen, Matthiesen & Mikkelsen (1999) found that 75% of workplace bullying victims suffered symptoms of PTSD, while 65% of the victims still continued to suffer from PTSD although the bullying has ceased.

Aside from psychological symptoms, victims also tend to experience job dissatisfaction. Job dissatisfaction occurs when an employee feels unsatisfied with his/her job and lack of motivation to work, which can lead to poor service or performance, destructive rumours, theft and sabotage of equipment, intention to quit, and absenteeism Knights & Kennedy, 2005; Mikkelsen & Einarsen, 2002). These can affect the overall performance of the individual and also to the organisation (Appelbaum et al., 2007). A research by Quine (2001) signified target of workplace bullying reported a significantly low-level of job satisfaction and intention to quit.

2.8.2 Organisation

Workplace bullying is not only harmful to individual employees, but also costs loss to the organisation. According to Namie & Namie (2003), the more often the bullying cases occur in an organisation, the higher the consequences that the organisation would need to bear. Keashly & Jagatic (2003) mentioned that workplace bullying has negative consequences to an organisation’s profitability and goal due to
decreasing employee competency, unsafe and hostile work environment, high rate of absenteeism, demoralized employees, as well as increased employee’s compensation, claims, and civil action. Studies have shown that many organisations in the United States have to suffer billions of dollars losses each year due to workplace bullying (Sypher, 2004).

A study conducted by Johnston (2010) in the United Kingdom showed that more than 80% of bullied employees left their jobs immediately, which then costed the organisations an estimated of $180 million in lost productivity every year. Similarly, a report released by Workplace Bullying Institute (2010) suggested bullied employees would quit their jobs (30%) and those who witness bullying would leave the organisation (20%). Namie (2003) also reported that almost 70% of bullied employees left their organisations. This resignation leads to indirect consequences to the organisation’s financial wellbeing. This is because; when one quits the job, there should be some additional costs related to recruiting, hiring, and training new staff.

Heames & Harvey (2006) emphasized that organisations that suffer from workplace bullying will have to endure a direct consequence of tarnished professional reputation. Even though there is no solid indication on how workplace bullying is connected to declining sales for an organisation, it is evident that an organisation perhaps will develop a bad reputation for accepting workplace bullies and this will indirectly give an impact to the sales. This is particularly accurate if the organisation relies heavily on public consumption in order to survive.

In some circumstances, employers have been found liable for workplace bullying that occurs in their organisations. For instance, many employers have paid
compensations to their employees due to workplace bullying. Numerous severe cases of workplace bullying have forced employers to settle for a price of millions of dollars as reimbursement to employees. Upton (2010) mentioned that an organisation does not only have to suffer from loss of production time, but also pay for legal costs (Upton, 2010). Consequently, it is in an organisation’s best interests to preserve a bullying-free work environment rather than having to interfere or intercede during an established pattern of bullying.

2.9 Intention to Quit

Bester (2012) mentioned that intention to quit is not properly defined in the research arena because it tends to be a self-explanatory definition based on the respective individual. However, most definitions seem to emphasise on two elements: willingness of one to leave the organisation or their psychological detachment with the organisations, which then leads to the actual quitting. For example, Lacity, Lyer & Rudramuniyaiah (2008, p. 228), defined intention to quit as “the extent to which an employee plans to leave the organisation”. In a similar vein, Matz, Woo & Kim (2014) defined intention to quit as the conscious and intentional wilfulness and tenacity to leave an organisation. March & Simon (1958) defined intention to quit as a desirability to change from a position to another position. Kim et al. (1996) defined intention to quit as the level to which an individual considers leaving the relationship with the current community. The definition outlined by Kim et al. (1996) had been selected for this research as it highlights the relationship between two entities that goes beyond the organisational context. Kim et al. (1996)’s definition also shows the motivation for one to cut ties and express detachment between the said individual and the current situation. This definition can be applied
in this research context as it defined intention to quit as the willingness of the subcontractor to consider leaving the construction project.

Johnsrud & Rosser (2002) asserted that the study regarding the actual turnover behaviour is challenging because the left employees are difficult to trace and usually the response rate is low. An empirical study by Bluedorn (1982) displayed that intention to quit is highly correlated with the actual turnover behaviour. Thus, the study on intention to quit can be considered as an alternative for the actual turnover behaviour. Consequently, many scholars have concluded that intention to quit is the best predictor of actual turnover behaviour (Cohen & Golan, 2007). Table 2.6 presents the factors of intention to quit based on three main variables: internal factors (job satisfaction and organisation commitments), and external factors.

Table 2.6 Studies on intention to quit

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sources</th>
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<tbody>
<tr>
<td>External factors</td>
<td>Mobley, Griffeth, Hand &amp; Meglino, 1979</td>
</tr>
<tr>
<td>Organisation commitment</td>
<td>Guntur, Haerani &amp; Hassan (2012); Lee, Bunpitcha &amp; Ratanawadee (2011)</td>
</tr>
</tbody>
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Source: Various Authors

Many scholars have found the links between job satisfaction and intention to quit (Mobley et al., 1978; Tett & Meyer, 1993; Mohamed et al., 2006). Job satisfaction can be described based on several elements: satisfaction with management; satisfaction with the work team relationships; and satisfaction with work rewards (Purani & Sahadev, 2008). Studies show that job dissatisfaction
increases the intention to quit among employees (Alam & Mohammed, 2009; Mazerolle, Bruening, Casa, Burton & Heest, 2006). Mobley et al. (1978) developed a theory and noted four major steps before an actual turnover: 1) job dissatisfaction leads to the individual thinking of quitting, 2) intention to search for alternatives, 3) intention to quit, and 4) eventual turnover. This theory suggests that a dissatisfied individual will think to quit his/her job, start weighing in any possible alternatives, seek another job, and lastly, decide if he/she wants to stay or leave. However, Lee & Mitchell (1994) argued that not all individuals will have to go through each of these steps before making their decision to quit.

Many studies on the intention to quit have been conducted by investigating the intention to quit with organisational commitment (Tett & Meyer, 1993; Yasmin, & Marzuki, 2015). Mathieu & Zajac (1990) reported that organisational commitment has a negative relationship with intention to quit, which shows as organisational commitment increases, intention to quit decreases. Their study also implied that an employee who is committed to an organisation is more likely to stay. According to Meyer and Allen (1991), organisational commitment consists of three elements: affective, continuance, and normative. Affective commitment is an emotional attachment of the employee with the organisation, in which he remains loyal to the organisation. Continuance commitment is when an employee has to stay with the organisation because he will have to bear cost if he quits. Lastly, the normative commitment is when an employee takes the responsibility to stay with the organisation. Many studies reported that the affective commitment displayed the strongest relationship with the intention to quit (Meyer & Allen, 1997; Vandenberghe & Tremblay, 2008; Wasti, 2003). For continuance commitment, its
relationship with intention to quit is negatively-related (Meyer, Stanley, Herscovitch & Topolnytsky, 2002; Yasmin & Marzuki, 2015). Meanwhile, normative commitment is positively related to intention to quit.

The external factors may also increase the intention to quit of an individual. For example, it could be due to economy downturn and unemployment rates (Mobley et al., 1979). An organisation that fails to deliver growth of job opportunity to their employees will push the employees to actively search for alternative jobs (Mano-Negrin & Tzafrir, 2004). This case, an employer will use monetary incentive to prevent turnover (Jo, 2008), but if the reason is not highly influenced by money, a non-monetary incentive, such as work-life balance and recognition awards, could be used to make the employees to remain in the organisation. This shows that both the culture and climate of an organisation is important to prevent turnover rate. This is because; each organisational climate is designated as its own set of characteristics that are inclined to influence the behaviour of employees in the organisation (Liou & Cheng, 2010). Thus, a bad and negative organisational behaviour, such as workplace bullying, will definitely encourage the intention to quit among the employees. In line with the objective of this research, the next sub-section discusses the literature pertaining to workplace bullying and intention to quit.

2.9.1 Workplace bullying and Intention to Quit

It has been reported that employees involved in workplace bullying either have greater intentions to quit (Quine, 2001) and give a notice to quit (Liefooghe, 2003) or actually quit their jobs (Rayner, 1999). Fewer studies have assessed the correlation between workplace bullying and intention to quit van Schalkwyk, Du Toit, Bothma
Simons (2008) directly examined workplace bullying in nursing and found that 31% of the respondents reported incidents of being bullied and bullying is an important factor in predicting one’s intention to quit. Similarly, Glambeck et al., (2014) in their study on workplace bullying as an antecedent to intention to quit showed significant results of workplace bullying for both variables. Hauge et al., (2007) posited that workplace bullying resulted in an approximately 1% increment towards intention to quit.

Some researchers studied the mediator effect or the moderators for the relationship between workplace bullying and intention to quit (Quine, 1999; Djurkovic et al. 2008; Salaheih, 2015). A study showed that some factors, such as the personality of the target, perceived organisational support (POS), and job stressors can become a mediator for the relationship between workplace bullying and intention to quit (Djurkovic et al., 2008; Salaieh, 2015). For instance, Matthiesen & Einarsen (2004) mentioned a vulnerable personality of the target increases workplace bullying, which then increases the intention to quit the organisation.

Djurkovic et al, (2008) further assessed the correlation between workplace bullying and intention to quit with a moderating variable, POS. The POS is a representation of how employees feel about their employer based on how they are treated. The findings showed a significant relationship between workplace bullying and intention to quit with lower level of POS as a moderating variable. This means that satisfied employees will decrease his/her intention to quit and conversely, a dissatisfied employee will increase his/her intention to quit. This notion supports the results retrieved by Tett & Meyer (1993), who stated that the intention to quit is
usually a common step of an employee after feeling dissatisfied with their job or workplace.

2.10 Workplace Bullying in Construction

According to Mathisen et al., (2008), workers at the construction site are exposed to risk of workplace bullying due to its environment that is lack of hierarchical power and status. However, the literature lacks studies pertaining to bullying at the construction. The first study that linked an act of bullying with construction is a study carried out by Loper (2001). The findings evidenced harassment and discrimination among construction workers in Hong Kong. However, Loper’s study only focused on the ethnicity aspect of the harassment. Similarly, a research by Loosemore & Chau (2002) suggested the existence of racial discrimination among site workers in Australia.

Incolink (2011) reported that nearly one third of all interns in the construction industry experienced workplace bullying. The common types of workplace bullying in construction industry involve coercion, verbal abuse (teasing and name-calling), physical and mental aggravation, and damage to one’s personal property. According to McCormack et al. (2013), ample evidences showed that construction apprentices were subjected to bullying. The study also identified the type of bullying that occurred among the construction apprentices: work-related bullying where the respondents were not given payments for a month and poor break/meal times. Besides, the respondents were also subjected to the breach of physical health and safety, verbal abuse, and personal harassment.
Concerning bullying from the stance of the subcontractors, James Hurley, in his article entitled ‘Construction Giants Bullying Small Businesses’ in Telegraph (2012), reported a number of small subcontractors complained about the dismal practices of main contractor towards them. The study outcomes showed that 97% of 250 subcontracting firms reported to have unfair treatment by the main contractor, while only 5% received their payments within the stipulated date. Conventionally, the main contractors have been trained in the industry to think that ‘beating up’ subcontractors is the way business should be done.

2.11 Summary

In this chapter, a variety of workplace bullying definitions has been gathered for deeper understanding on this topic. It is important to understand what it really means by bullying since one may misunderstand some strict managerial actions with bullying. There are some criteria as laid by researchers to classify if one’s behaviour is an act of bullying or otherwise: i) negative nature of the behaviour; ii) the reaction of the target towards such behaviour; iii) the frequency of such behaviour; iv) the duration of the experience; and v) total imbalance of power between the perpetrator and the target. This chapter also provides sufficient information about the factors and consequences of workplace bullying to the target and organisations. There are two main factors of workplace bullying: personal and organisational characteristics. Lastly, an overview of literature work on bullying in construction is presented. The next chapter ventures comprehensively on the subject of construction project. With this clearer view of workplace bullying and construction project, a conceptual model of subcontractor bullying is developed in Chapter Three to achieve the aim of this study.
CHAPTER 3
SUBCONTRACTOR BULLYING IN CONSTRUCTION PROJECT

3.1 Introduction

Chapter three consists of a literature review surrounding subcontractors’ involvement in construction projects. This chapter begins with the definition of a construction project and its characteristics. This chapter then discusses the parties involved in construction projects and will later focus on subcontractors. In this subsection, the issue of subcontractor bullying is reviewed.

It is essential to understand how construction projects work as they have practices that are different from those of other industries or fields. The findings of the literature review in this chapter will help in developing the conceptual framework of the subcontractor bullying model in construction projects. This conceptual framework is based on the literature review and the application of construction practices in the construction industry.

3.2 What is a Construction Project?

There are various definitions that describe the characteristics of a construction project. It can be defined as a new building, structure or any alteration to a building (Thuvander, Femenias, Norling MjöRnell & Meiling, 2012). In broader terms, it can be defined as the physical activity that is carried out in a construction project and involves a number of parties such as developers, contractors, architects and engineers.
Concerning the categories of construction work, Afipuddin (2005) grouped construction work into three main types: the focus on building work, heavy engineering work and industrial work. The Construction Industry Development Board (CIDB) defined the types of construction into four categories: residential buildings, non-residential buildings, civil engineering and special trade sectors. This study focused on the first type of construction that was defined by Afipuddin (2005); namely, building construction work. The significance of this type of construction work is due to building work being the most common type of construction work in Malaysia (CIDB, 2016).

A project alone can be defined as “a mixture of organisational resources grouped together to build something that did not formerly exist and will deliver an implementation competency in the design and execution of organisational plans” (Cleland & Ireland, 2004, p. 4). According to Dhanuskodi (2010), a construction project can be any structure, plant, process, system, software, replacement, refurbishing, renewal or removal of an existing construction regardless of their sizes. There are also several elements such as time, objectives and budget that typically need to be considered in a project (Bowen, Hall, Edwards, Pearl & Cattell, 2002).

Finally, a construction project is ‘a work plan of activities to be carried out properly, using the resources limited by client requests and specifications and can be completed within the planned period’ (Afipuddin, 2005, p. 29). Similarly, the main objective of a construction project is to complete the building work in a given period and budget, as well as within the agreed quality specifications (Azmy, 2012). These three primary objectives (i.e. completion on or before the agreed date, completion
within the cost budget and meeting the required quality standards) are more than often, interrelated (Bowen et al., 2002).

3.3 Characteristics of Construction Projects

Construction projects significantly differ from projects of other industries (Hughes & Murdoch, 2001). In general, a construction project can be viewed in terms of its five main characteristics: uniqueness, temporary in nature, immobility, durability and high level of human interaction. The following characters will be applied under the construction culture under section 3.10 that will deal with subcontractor bullying in general.

3.3.1 Uniqueness

A construction project is unique in nature because there are no two projects that are ever exactly alike (Enshassi, Al-Hallaq and Mohamed, 2006). According to Ashworth (2008), every construction site has its own individual and peculiar characteristics (i.e. location, shape, size, topography, etc.). Each building of a construction project is personalized to suit its environment, prearranged to execute its particular purposes and designed to echo the owner’s personal favourites and preferences (Khan & Burn, 2013). Furthermore, the variation of construction sites and the possibilities for creative design create each construction project as a fresh and novel experience. It is like contractors who set up their own ‘factory’ on site and custom build each component (Oyegoke, 2006). This can lead to greater risks for people working on a project due to the learning curve associated with new work.
activities and the ever changing workplace relationships (Loosemore, Dainty & Lingard, 2003).

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3.3.2 Temporary in Nature

A construction project is also temporary in nature. As such, the basis of the projects is where there should be a contextual process from start to completion (Maaninen-Olsson & Mullern, 2009). Construction projects are remarkable in their mobility. Construction firms and workers transport from one site to another, one area to another and one owner to another. Different from the industrial industry where products are completed in a factory, construction firms and workers in the construction project make the owner’s product (house, hospital, shopping complex,
road, highway, bridge, etc.) on the site specified by the owner (Manning & Messner, 2008). This demands the employment of a mobile workforce capable of moving from one project location to the next.

The factors discussed above pose many potential problems for construction workers. Some examples include longer workdays, more expenses due to travel and issues managing the balance between work and personal life since their families may not be as mobile. Similar issues will also occur within projects since the arrangement of construction project teams routinely changes throughout different project phases and involves many individuals from many organisations, skills and locations (Myers, 2005).

### 3.3.3 Immobility

The production of a building usually takes place on the construction site. Due to the size of the finished product, the transportation from a manufacturing factory to the final destination is not possible. Thus, construction products are generally immobile; all materials are generally compiled and constructed on-site (Loosemore et al., 2003). In contrast, products from the manufacturing industry are produced in manufacturing facilities in a permanent location and are afterwards transported to the point of consumption. For instance, cars or refrigerators may be shipped to the retailer or customer.
3.3.4 Durability

In addition to the immobility and uniqueness of the construction project, durability is also a distinctive characteristic of the construction project. As a necessity, products of construction must work over a lengthy lifecycle ranging from 10 to 100 years, depending on the purpose. The lifecycle can also be prolonged through maintenance, repair, modification and renovation. Likewise, goods such as cars, computers or electrical appliances have a shorter lifecycle, ranging up to 10–15 years for regular machines varying depending on the maintenance effort of the owner and some equipment becoming outdated after several years.

3.3.5 High Level of Human Interaction

Loosemore (2014) stated that the key characteristics of construction projects is their high level of human interactions. At every stage of a project’s life cycle, individuals with various skills form a cooperative team to accomplish specific goals within the time, cost and quality constraints. Human interactions across the life cycle of a project provide the necessary dynamic that drives the production process.

According to Cornick (1999), construction projects have always dealt with the relationship between teams, tasks, individuals and leadership. Usually, each of these parties posits a strong interest to the project. It is clear that any large project will affect the parties involved in several ways. Prabakhar (2008) mentioned that the most successful project is the one that satisfies all parties. In the next sub-topic, the respected parties and their roles in construction projects will be discussed in detail.
3.4 Parties Involved in Construction Projects

Teams of a construction project are groups of varied parties brought together for a specific objective regarding a construction project (Emmit & Gorse, 2007). It is important for project teams to be structured properly during the project’s initiation process because the success of the project will depend on them (Rosli, 2007). It is appropriate to say that teamwork is important in the construction project and it is the groundwork of successful construction projects (Uher & Loosemore, 2004). The parties involved in construction projects serve their own roles and credibility in ensuring the success of the projects. These parties are usually the client and consultants typically comprised of architects, quantity surveyors, engineers, the main contractor and the subcontractors.

3.4.1 The Client

A project is not able to start without a client initiating it. Usually, the client is the owner who possesses ownership or has the authority to develop a land or building. They can be the owner/occupier, a developer, public or private entities (Abdul Rashid, 2002). Clients can be sorted into two groups: public sector clients and private sector clients.

Public sector clients are usually the government or local authorities that provide an infrastructure project to locals, such as new public buildings (i.e. hospitals or schools). In the UK-based construction industry, 40% of the construction projects were by the government (Royal Institute of British Architects, 2012). Similarly, in Malaysia, the largest single owner and developer of construction projects is likely to
be the government. This is particularly so in the case of infrastructure projects (Abdul Rashid, 2002).

Private sector clients usually consist of individuals who require assistance with the construction, alteration or maintenance of their private properties. Private sector clients also consist of commercial owners who need to undertake construction to aid their business processes or the production of products.

3.4.2 Consultants

Consultants are professionals responsible for the specifications, plans, drawings and costs related to a construction project. The consultant works on behalf of the client and performs as the client’s agent in the preparation, issuance and supervision of tender documents. Generally, in a construction project, there are several consultants who work together in fulfilling the project objectives. They are the architect, engineer and quantity surveyor.

3.4.2.1 Architect

In the pre-construction phase, the role of an architect is to define the appropriate arrangement of space within the building, its shape, forms, type of construction and resources to be used in the construction project. The architect prepares the design, acquires the planning permission and building regulation approval from the local authority, compiles the detailed drawings/specifications and helps the client by giving advice concerning the appointment of the main contractor (Hussin & Omran, 2009). The architect may also be involved in the appointment of
other consultants (Uher & Loosemore, 2004; Abdul Rashid, 2002). Meanwhile, in the construction phase, the roles of the architect are to inspect the work done by the main contractor and to ensure that the main contractor complies with the contract. They may also issue instructions and certificates to the main contractor (Ashworth, 2008).

### 3.4.2.2 Engineer

A wide range of various types of engineers are engaged in construction projects according to the demands and environment of the project (Abdul Rashid, 2002). For instance, in civil engineering projects, the design and supervision are commenced by the civil engineer. A civil engineer works in a branch of civil engineering concerned with engineering structures and the examination of the structural capability of buildings. While the mechanical and electrical engineers offer services in buildings that include lighting, plumbing, energy supplies, telephones, information technology systems, fire protection, etc. Without these facilities, the building is merely a shell providing little more than the traditional function of shelter (Ashworth, 2008). Engineers are responsible for setting out the work, also for the measurements, records and quality control procedures. They also prepare and monitor detailed work programs and coordinate the flow of drawings and other information (Calvert, Bailey & Coles, 1995).

### 3.4.2.3 Quantity Surveyor

Quantity surveyors are the consultants responsible for the cost planning, measurement and valuation of work in progress (Hughes & Murdoch, 2001). Usually, during the pre-construction stage, a quantity surveyor will work as a cost
consultant. They will provide an initial cost and costs throughout the project’s lifespan (Ashworth, 2008; Abdul Rashid, 2002). They also prepare the tender and contract documents on behalf of the client. They provide help to the project manager in giving consulting suggestions on the procurement methods for the main contractor, preparing tender documentation, receiving/analysing tenders, preparing the tender report for the client and providing recommendations for approval. During the construction stage, quantity surveyors prepare reports or claims related to the work done for interim payments. They also assist in the project management for contract-related matters (Uher & Loosemore, 2004).

3.4.3 Main Contractor

Main contractors are described as those who “employ all the necessary skills and provide materials, plants and equipment in order to build what they have designed” (Hughes & Murdoch, 2001). They are involved in the managerial, commercial, scientific and technical aspects of a building (Abdul Rashid, 2002). They are accountable for supervising the construction process on-site. This includes planning and programming of the work tasks, costing, and making sure that the standard and quality meet the expectations stipulated in the contract. Their skills warrant that the project is able to meet all the requirements set out by the client. The main contractor is assisted by the subcontractor and supplier, who have either been employed by the main contractor themselves or nominated by the client.
3.4.4 Subcontractor

The subcontractor is the individual hired by the main contractor to carry out part of the building work according to the subcontractor’s skills in the area. In some cases, the term subcontractor also covers the supplier, material supplier and service supplier (Bemelmans, Vordijik & Vos, 2012). As previously stated, the main contractors depend on subcontractors to ensure good quality building construction. Theoretically, the main contractor will have a contract with the subcontractor (Mbachu, 2008). Typically, the conditions of the contract for subcontractors consist of the subcontractor doing the work, submitting or lodging claims and being paid later (Thomas, 2014). Subcontractors must finish their tasks within the due date specified in the contract. They must develop a work plan and strictly follow the execution of the work plan in order to complete within the stipulated time agreed in the contract. Work must be constructed according to work drawings and specifications detailed in the contract (Dainty, Briscoe & Millett, 2001).

There are numerous types of subcontractors involved in a construction project. Their categories vary according to the nature of the contract, as well as their skills and performance (Hussin, 2006). However, there are two main types of subcontractors in construction projects, namely domestic subcontractors and nominated subcontractors (Yik, Lai, Chan & Yiu, 2006).

A domestic subcontractor is appointed and engaged directly by the main contractor to perform a particular job such as bricklaying, roofing, ground work, plumbing, electrical design work and plastering (Samuel, 2009). Usually, the agreement between a domestic subcontractor and main contractor is not as detailed
as the agreement between the main contractor and the client (Thomas, 2014). Thus, it is important for the main contractor to make sure that domestic subcontractors follow the terms and conditions of their agreements since their responsibilities are under his supervision.

A nominated subcontractor is a subcontractor selected by the client to conduct certain features of the work (Hussin, 2006). They are employed based on the provisional (PV) sum or prime cost (PC) sum included in the bills of quantities (BQs). The nominated subcontractor enters a contract with the main contractor, and yet, there may be a collateral warranty between the nominated subcontractor and the client. The main contractor has no duty to perform work that is intended to be done by a nominated subcontractor. However, the main contractor may still object to the nominated subcontractor if he has a valid reason. Generally, the nominated subcontractor is a subcontractor who performs mechanical and electrical works.

Figure 3.1 (see p. 73) shows the contractual relationship between the client, main contractor and subcontractors. The relationship between the client and main contractor is governed by a contract. In some cases, the client may also be nominated as a subcontractor to work under the main contractor; hence, the term nominated subcontractor. There are subcontractors who are appointed by the main contractor called domestic subcontractors. The main contractor may also appoint labourers or a supplier to supply materials and workers. The relationship between the main contractor and subcontractors will further be discussed in the next sub-topic.
Figure 3.1 The typical pattern of contractual relationships

Source: Lewis, Cheetham & Carter (1992)

3.5 The Relationship Between Main Contractors and Subcontractors

The relationship of the main contractor and subcontractors starts when they seal a contract between each other (Mbachu, 2008). In a traditional contract, the
Responsibility of main contractor is to construct a project based on the contract documentation within the required cost and time budgets and the specified standards (Atout, 2008). The role of main contractor lies generally in managing and planning the construction work on site (Abdul Rashid, 2002). Atout (2008) mentioned that the main contractor should be experienced so that he can delegate responsibilities on site, especially in-between subcontractors. This is because a main contractor cannot conceivably handle all project-related tasks, and it is common for him to sublet his works to subcontractors. Thus, a main contractor is accountable for coordinating all subcontractors under him and for ensuring that the work of subcontractors meets the requirements of the main contract and subcontract agreements (Tan, Xue & Cheung, 2017).

Subcontractors have been called the 'brokers of construction services' due to their 7% to 90% involvement in constructions projects in the United States (Thomas, 2014). A subcontractor possesses a different set of skills and specialties (Akintan & Morledge, 2013). The role of subcontractor is to complete their tasks, which coincides with the due date given in the contract. They must develop a work plan and strictly adhere to the implementation of the work plan in order to catch up with the time given. Work must be carried out accordingly to the project, working drawings and specifications as stated in the contract documents (Dainty et al., 2001). During interim meetings, a main contractor will assess and supervise their work so the work can progress smoothly throughout the construction process (Thomas, 2014).

Kale & Arditi (2001) mentioned that the quality of the relationship between the main contractor and subcontractors is important to ensure the successfultness of a project’s outcome. Lu et al. (2008) agreed by stating that the effectiveness of a
construction project is evaluated through the cooperation and teamwork on the
collection site. Conversely, they are expected to have a good relationship with
each other and it is safe to say that the main contractor and subcontractor are
dependent upon each other. A main contractor needs subcontractors to do the work
on site while subcontractors need the work to stay in the industry (Akintan &
Morledge, 2013).

T Tan et al. (2017) specifically mentioned that there are three types of
relationships between the main contractor and subcontractors existing in construction
practices. These are long-term business relationships, short-term business
relationships and hostile-dependent relationships. A long-term business relationship
is with a company of established subcontractors that lasts for more than 10 years.
Normally, this type of relationship shows good performance records that benefit both
parties (Eom, Kim & Jang, 2015). A short-term business relationship is a one-off
business relationship that deals with specialised subcontractors that are only needed
when the contract requires it (Chiang, 2009). Lastly, a hostile-dependent relationship
is one that mainly focuses on self-gain and interest (Chalker, Loosemore, Thomson
& Hartmann, 2016). Several scholars had concluded that the hostile-dependent
relationship is usually tensed and argumentative (Manu, Ankrah, Chinyi & Proverbs,
2015; Tam & Hadikusumo, 2015).

The focus of this research is on the hostile-dependent relationship between the
main contractor and subcontractor. A hostile-dependent relationship usually starts
with a wrong foot, on behalf of the main contractor’s part. Arditi & Chotibongs
(2005) stated that the relationship between main contractor and subcontractor will
provide many advantages to the main contractor instead of mutual advantages. The
main reason as to why main contractors choose to hire subcontractors is to reduce their overhead and operating costs (Sozen & Kucuk, 1999). This relationship also helps the main contractor to get skilled labour to complete the work efficiently and economically. Hatmoko & Scott (2010) further concurred by stating that this helps construction projects reduce project delays by 45%. Other than that, main contractor also focused on maximising their profit margin (Tommelein & Ballard, 1998; Dainty et al., 2001). They select subcontractors on the basis of the lowest price and squeeze them tight on price, leaving them struggling to survive (Akintan & Morledge, 2013). This practice is not supposed to happen as Atout (2008) suggested that the main contractor shall select subcontractors based on their ability to meet main contract’s requirements such as the type of work, project duration and quality and previous work performance.

Other than that, Cartlidge (2017) later stated that the reason the subcontractors are selected is to transfer risks from the main contractor to the subcontractors. However, Gould (n.d.) in his legal perspective, mentioned that the main contractor still remains liable in the response clauses exercised in the main contract. He further reasoned that the use of subcontractors is to reduce the workload on the main contractor and that such risk transfers can be settled in the contract (if any) between the main contractor and subcontractor. Kadefors (2004) asserted that there should be a balance in the distribution of project risks between the main contractors and subcontractors in order to create trust between them. Kadefors (2004) affirmed that by sharing risks, they will view the construction project as a “collective enterprise” and this will strengthen the chance of improving the project’s outcome.
These are some of the examples that have tarnished the ideal relationship between main contractor and subcontractor. Although it is good to create a harmonious environment for the betterment of the construction process, it is still hard to maintain the good relationship between parties, especially when they have many issues to begin with. To some extent, these issues will create a negative act that can be classified as an act of bullying done by the main contractor to subcontractor. Conversely, the next section will discuss the types of subcontractor bullying that are present in the hostile-dependent relationship between main contractor and subcontractor.

3.6 Types of Subcontractor Bullying

The previous sub-topic discusses the ideal relationship between the main contractor and subcontractor. However, such ideal relationships may be portrayed differently on-site (Akintan & Morledge, 2013; Fah, 2006; Arditi & Chotibongs, 2005). According to Fah (2006), the relationship between the main contractor and the subcontractor is not always in good terms. This is likely because they often have clashes and different views on certain matters, thus causing their relationship to turn sour (Tommelein & Ballard, 1998). This tainted relationship between the two parties may cause subcontractors to have doubts about the sincerity of the main contractor’s collaboration in the supply chain (Dainty et al., 2001). As such, the remaining relationships, particularly between subcontractors and main contractors, may be damaged with mistrust and scepticism. For example, they may believe that they are purely being used by the main contractor to improve his financial flow, so they just let him endure the unpredictability of the construction business (Tommelein &
Ballard, 1998). Below are some of the issues raised relating to subcontractor bullying in the industry.

### 3.6.1 Late Payment or No Payment

Payment has always been the main issue between the main contractor and subcontractors (Arditi & Chotibghongs, 2005; Azmy, 2012). Subcontractors are often the victims in this situation. Payment may be delayed, unfair, not paid directly or not paid at all. Usually such issues begin with the main contractor delaying the down payment for work done by the subcontractor. The payment for work done by subcontractors is usually delayed in that it is given the following month, leaving the subcontractor with insufficient funds generated for that month.

Arditi and Chotibghongs (2005) pointed out that the main contractor often withholds payment for work done due to the lack of money rounds. This is likely a ‘business’ strategy by the main contractor regarding subcontractors (Arditi & Chotibghongs, 2005). Research shows that main contractors do postpone payment to subcontractors in order to recover their financial flow, especially when payments from clients are late and/or incomplete (Akintan & Morledge, 2013). Dishonest main contractors may take benefit from smaller subcontractors by suspending or deducting payment without good reason (Uher & Brand, 2008). This is because in the occasion of any fault or incomplete work on site, the retention of funds can be used to further run the construction project.

According to an article in The Telegraph entitled ‘Construction Giants Bullying Small Businesses’ (2012), a number of small subcontractors complained
about the dismal practices of main contractors. From the survey they conducted, the results showed that 97% of 250 subcontracting firms reported unfair treatment by main contractors, and only 5% reported receiving payment within the stipulated date. Due to such practices, subcontractors face a financial situation that may contribute to a cut in insurance coverage on-site because they cannot afford to renew their insurance (Russell & Radtke, 1991). To make matters worse, subcontractors may not even be able to pay wages to their employees and workers. According to the Census and Statistic Department (2004), in the last 3 years, about 55,318 workers reported not being paid by subcontractors and main contractors. This amounts to 18,440 employees per year, or around 25% of the 72,956 that make up the average number of employees in the base year of this 3-year period.

Akintan & Morledge (2013) stated in their research that subcontractors still need main contractors due to their small size and large number in the industry. This creates room for rivalry amongst subcontractors where only the fittest survive (Matthews & Howell, 2005). Dainty et al. (2001), as well as Tommelein and Ballard (1998) agreed with this, stating that main contractors are mainly concerned with exploiting their profit margins. They appoint subcontractors on the basis of the lowest price at tender stages and not according to the best skills owned by subcontractors. They also squeeze the subcontractor tight on price and leave them struggling to survive.

3.6.2 Safety Issues

One of the issues faced by subcontractors in construction projects is safety (Arditi & Chotibhongs, 2005; Wong, 2009). Since subcontractors are the ones who
do the job on-site, they are the ones with a higher risk for injury. However, they often have limited knowledge on safety management. According to Rowlison (1998), safety management is poor in construction projects and most of the time, safety is not one of their main priorities. Having huge power and authority on site, main contractors are in the best position to confirm that the construction site is harmless for all workers. Main contractors should also outline group norms or cultivate a work culture where workers have a positive attitude towards safety concepts and the right behaviour on-site to ensure their own safety (Langford, Rowlinson & Sawacha, 2000).

3.6.3 ‘Scapegoating’ or Blame Culture

The blame culture between main contractors and subcontractors is severe that it continually erodes confidence in the relationships between them. According to Akintan & Morledge (2013), subcontractors are always targeted for blame by main contractors whenever any unfortunate event happens on-site. Dainty et al. (2001) further agreed by mentioning that main contractors have a trend to hand over massive project risks onto subcontractors who typically consist of small and medium size enterprises (SMEs) with tiny or no capacity to tolerate such risks. This likely happens due to the duties and roles of the subcontractor (Toole, 2002; Langford et al., 2000).

However, it must also be noted that these duties are shared between main contractors and subcontractors. The main contractor should act as the head of the project on-site. Being in such a position of authority, they also have the highest responsibility towards preserving a decent and harmless construction site for their
workers (Hurley, 2012). Chamara et al., (2015) suggested that the main contractor should develop a sense of self-awareness in the subcontractor concerning the importance of safety in the construction site. Engineers and architects are correspondingly accountable in the event of construction site misfortunes. Construction sites must be cautiously managed to avoid any catastrophes that claim the lives of workers. The blame should not solely be put on the shoulders of subcontractors.

The issues raised in the previous discussion are examples of the types of bullying subcontractors face in the construction project. This is based on the review made in Chapter Two which highlighted the antecedents of workplace bullying. An adaptation of these ideas is presented in section 3.8. The next topic will discuss some of the factors relating to why such issues arise.

### 3.7 Factors Relating to the Occurrence of Subcontractor Bullying in Construction Projects

In Chapter Two’s literature review, it was identified that there are three organisational antecedents of workplace bullying. These are (i) leadership, (ii) work organisation and job design and (iii) the culture of the organisation. This research adopted these factors to fit the context of subcontractor bullying in construction projects. As such, the three factors discussed in this section are: (i) main contractor leadership, (ii) work organisation and work design and (iii) construction industry culture.
3.7.1 Main Contractor Leadership

In a construction site, the main contractor is the leader of the site and is responsible for leading and supervising the work activity (Tan et al., 2017). A construction project requires management and effective leadership (Gharehbaghi & McManus, 2003). The management team in a construction site is usually the project manager or superintendent who works on behalf of the main contractor. Generally, a project manager deals with the client, other project-related consultants, field staff and subcontractors. However, it should be noted that there has been very little research conducted with regard to the main contractors and leadership.

Jung & Mills (2012), in their study of leadership styles among contractors, indicated that project managers and superintendents use autocratic leadership styles in construction projects. This style of leadership is mainly employed in construction projects and is due, in particular, to the hierarchical structure of such projects (Hagberg, 2006). According to Lynch (2011), there is an imbalance of power between main contractors and subcontractors. For instance, it has been claimed that main contractors abuse their leadership by way of spurious reductions of payment, set-offs and counter-claims against subcontractors for the sole purpose of increasing their own profit margins (Lynch, 2011). Uher and Brand (2008) and Thomas (2014) argued that this occurs due to bias clauses in construction contract agreements. For example, the ‘pay when paid’ or ‘pay if paid’ clauses in contracts are what subcontractors are forced to follow if they wish to keep their jobs.

Another negative issue that subcontractors face is the use of troublesome contract terms/clauses in sub-contract agreements. Agreements between main
contractors and subcontractors are different from those made between clients and main contractors. More often than not, the clauses in agreements are drafted by the main contractor himself and may primarily favour the main contractor at the expense of the subcontractor (Thomas, 2014). In practice, subcontractors often start doing the job directly before signing the actual contract with merely a ‘letter of intent’ issued by the main contractor (Thomas, 2014; Sharifah & Zulhabri, 2015). The examples of troublesome clauses in subcontracts are usually flow through, payment, indemnity, additionally insured, no damage for delay, partial lien waiver and termination clauses (Thomas, 2014; Thomas & Flynn, 2011; Uher & Brand, 2008).

Dainty et al. (2001) mentioned that if the subcontractor does not comply with the clauses in the contract, they have to endure the possibility of late payments, unfair reimbursement or non-payment of monthly interim payments. To the same extent, subcontractors may be terminated if there is failure on their behalf. Main contractors use this approach to discharge themselves from any responsibility on behalf of subcontractors. Subcontractors do not have the power to reject main contractors in the construction process as they do not have the influence to bargain the prices given. Ultimately, main contractors take benefit of their weakness.

### 3.7.2 Work Organisation and Job Design

Work organisation and job design are defined as components of job scope in a construction project, and the requirements/ methods to complete their job tasks. Meanwhile, a bad work organisation and job design suggest otherwise. In the study on a standard organisational setting, Tsuno & Kamakami (2015) implied that role ambiguities and conflict rooted from a bad work organisation may induce a bullying
in a workplace. In this situation, an employee who lacks the clear objective of their work and are uncertain with their work information may be a perfect target for bullying (Hauge et al., 2007). Similarly, the same case can happen in the construction organisational setting where it is highly concerned with ambiguities and uncertainties. The difference between uncertainty and ambiguity lies in the absence of clear knowledge and information in the ambiguity (Schrader et al., 1993). The ambiguity can lead to the reaction of uncertainty. Construction project team has to work with project scheduling, risk management, contingency planning with limited information where the environment is at fast pace (Pich et al., 2002). Construction projects are active and often have some degree of uncertainty caused by changes in client requirements, design, laws or regulations by the government (Love et al, 2002). These can cause a project’s scope and task objectives to become unclear, thus resulting in bullying.

Since it is natural for construction projects to have a lot of uncertainties, they often face more risks than other projects (Wang & Liu, 2004). One single construction project can be over long periods of time and may include complicated processes within it. Furthermore, with the complexities and the uniqueness of construction project, familiarity with the work may induce a larger risk in a construction project (Hassim, Jaafar & Sazalli, 2009). These risks are usually defined by varied results of the uncertainty in the final cost, duration and quality of the project (Boothroyd & Emmet, 1998). Failure to deal with this will result in undesirable effects to the respected party. Thus, a risk management and allocation is needed between the construction team players so that the risk can be shared or distributed between the parties. However, risk management is not always
straightforward. Smith, Merna & Jobling (2009) mentioned that there are two main reasons of risk management: to avoid downside risk and to exploit opportunities. Dainty et al. (2001) mentioned that main contractors have a tendency to transfer massive risks to subcontractors. These subcontractors typically comprise of small and medium size enterprises (SMEs) with little ability to bear the risks. Main contractors might also shift the risk onto subcontractors in the event of something unfortunate occurring during construction (Akintan & Morledge, 2013). For these reasons, subcontractors tend to distrust the main contractors and remain sceptical about the authenticity of calls to work in the next project.

Alinaitwe et al. (2007) also indicated that most construction projects are interrupted due to uncertainties occurred on site (e.g inadequate drawing and specification). This issue tends to occur in the project where the design stage is overlapped with the construction stage. Also, this might increase a role ambiguity and role conflict to the subcontractor. Usually, a description of role and responsibilities of construction team players are usually dictated under the contract (Georg & Tryggestad, 2009). Each of these construction players (e.g. architects, engineers, quantity surveyors and main contractors) understand their roles, both in contractual and cultural form. However, Gray & Flanagan (1989) argued that most of the subcontractors do not have an adequate time as they are being burdened by the main contractor to estimate the price and start the work. Thus, even though the construction contracts are assumed to clarify the rights and expectations, most of the subcontractors do not read them properly (Kabiri, Hughes & Schewebber, 2012). Additionally, most of the subcontractors regularly start doing the job directly before signing the actual contract (Thomas, 2014; Sharifah & Zulhabri, 2015). Huang et al.
(2007) also mentioned that unclear drawings provided by the main contractor serve to be one of the contributors to the occurrence of disputes or problems between subcontractors and main contractors. With these issues, it is normal for subcontractors to develop a sense of dissatisfaction towards main contractors under such circumstances (Al-Hammad Assaf & Al-Shihah, 1992; Dainty et al., 2001).

3.7.3 Construction Culture

According to Ankrah et al. (2009), the culture in the construction industry is considered to be about the characteristics of the industry. There are several issues related to the construction culture, namely, extra working hours, work pressure and anxiety, tough culture and high level human interactions. Although these issues are the special characteristics of the construction project, they can also be the potential causes behind subcontractor bullying. Sutherland & Davidson (1993) pointed out that the construction team players are generally forced to work long hours and handle excessive workloads in order to meet deadlines. Gunning & Cooke (1996) found that construction employees often have to work with impossible deadlines, meet unrealistic demands from clients and suffer from a lack of staff. Lingard, Francis & Turner (2010) agreed by stating that extra working hours are normal in the Australian construction industry and they are needed to finish an urgent deadline. However, there are situations where the workers are not paid for their overtime. Ogura (2007) asserted that the construction industry is one of the industries with a high percentage of unpaid overtime (34.8 hours). In some cases, working hours is classified as overtime and paid based on a penalty rate but the penalty rate only applies to waged workers and not the managerial team (Lingard et al., 2010). All these factors cause them to suffer undue stress, and sometimes stress may induce a bullying act to occur.
Capel (2016) mentioned that excessive workload triggers pressure and anxiety due to intense work within a limited time. A construction project team is always under accumulative pressure from clients to deliver projects faster with better quality and lower cost. McCabe (2007) mentioned that construction projects are constructed much faster in half time in relation to how they were constructed ten years ago. Unavoidably, this necessitates a large obligation from construction team players in the construction project. This often results in hazardous working practices, time-consuming hours of working and high levels of stress.

The construction industry is also associated with a macho culture characterised by arguments, conflicts and crises (Bagilhole, Dainty & Neale, 2000). A macho culture is a culture that is dominated by male (Barthorpe, Duncan & Miller, 1999). Transparency International (2005) defined the construction industry as the most deceitful industry on a universal scale. Professor Michael Romans, the former president of the Chartered Institute of Building (2006), confirmed this observation and noted that the construction industry overtly adopts hostile language and behaviour. According to Alterman et al., (2013), the prevalence of workplace bullying is high due to a hostile environment. Workers and employees in this kind of environment are often on the receiving end of unpleasant name-calling, constant yelling, threats and verbal abuse. As a result, most construction team members often find themselves in an extremely hostile environment. Another point is that men dominate in both trade and managerial positions in the construction industry. The reliance on primarily male employment contributes to the stereotypical masculine culture where hostility and aggressiveness are accepted as the norm (Dainty et al., 2000).
A high level of human interactions can be a factor for subcontractor bullying. When there are many parties involved in one project, there will be many ideas and different roles to expect in each team player. Thus, a dispute and conflict between the construction team player is inevitable (Diekmann, Girard & Abdul-Hadi, 1994; Skyes, 1996). Carmicheal (2002) identified the main causes of construction disputes that are usually caused by the client, designer and contractor. Without exception, disputes, misunderstandings and communication dynamics will arise (Elziny, Mohamedian, Ibrahim & Fattah, 2016). The conflict will then lead to stereotyping and characteristic of low friendliness, mistrust and low respect between the team player. Zack (2001) mentioned it is a difficult task to maintain a cooperative environment in the construction project. As mentioned by Verma (1998), a dispute among construction team players is usually due to the inter-personal conflicts from their dissimilarities in work ethics, styles, egos, and personalities of the team players.

Similarly, in the study of inter-group bullying discussed in Chapter Two, these differences between the construction team player may encourage bullying to happen because each group will have their own ‘social identity’ created by their professional entities. Ankrah et al. (2009) observed that groupings exist within construction projects in the form of professional stereotypes or allegiances. Members of a team player separate themselves from others due to the misconception about their professional directions. Thus, it becomes hard to trust one another. Cox, Ireland & Towsend (2009) argued that differences in opinion between construction team players are not necessary because they are actually a group of individuals who pursue the same mission and economic self-interests. Therefore, it is important for the construction team player to establish a good relationship and cooperation (Gardiner
& Simmons, 1998). It is also important for the project team to establish an effective dispute resolution when dispute arises, so that the harmonious environment between different parties of the construction project can be maintained.

3.8 Intention to Quit of the Subcontractor

Pitt (2014) mentioned that there was a 6.6% subcontractor’s turnover rate in construction projects previously. Despite this percentage rate, there are still no studies on the intentions behind subcontractors quitting in construction projects or what the contributing factors behind such a percentage are. Some studies were done concerning particular construction team members in construction projects. These studies were concerned with the relationship between job satisfaction and the intention to quit. Most of these studies found a negative relationship between these two factors. According to Shore & Martin (1989), high job satisfaction among construction professionals resulted in high levels of commitment to employers. Huang et al. (2007) reported that construction professionals are more likely to have lower job satisfaction due to their stressful job environment. Lingard et al. (2010) studied the relationship between job dissatisfaction and the intention to quit among construction workers. Their findings revealed that dissatisfaction with work may push construction workers to quit their jobs. Sun (2011) also examined the relationship between job satisfaction and the intention to quit among construction engineers. His study obtained results that are similar to those found by Lingard et al. (2010). His study also concluded that the overall cost resulting from construction engineer turnover is very high, and it emphasised that construction companies should take precautions to avoid this problem. Some of the main reasons that caused
construction engineers to quit were payment, promotion dissatisfaction and lack of affective commitment.

3.9 Gaps in the Literature

After reviewing the literature in relation to workplace bullying and issues faced by subcontractors in construction projects, five main gaps were identified. As illustrated in Figure 3.2, the first gap is that, a little is known about bullying in construction. Some research has been carried out, but most studies had only focused on the racial aspect of harassment of workers on-site (Loper, 2001; Loosemore & Chau, 2002). The latest research on workplace bullying in the construction industry is still in the exploratory stage (McCormack et al., 2013; McKay, 2015).
The majority of these studies had focused on workers on-site and they did not include the perspective of subcontractors in the organisational setting. There is also scarcity in the research of organisational settings in relation to workplace bullying, despite the fact that bullying is prone to exist in the construction industry. With the exception of the research conducted by Tambur & Vadi (2012), most previous studies had focused on the personal aspect of the target and not on the organisational aspect.

This research intends to extend the knowledge concerning workplace bullying by investigating the factors that contribute to subcontractor bullying in organisational contexts. There is also the lack of research that focuses on the intentions behind quitting among construction personnel. This research intends to fill this gap and demonstrates that subcontractor intentions to quit are an outcome of subcontractor bullying.

Almost all studies on workplace bullying were conducted in western countries. This research intends to investigate workplace bullying in Malaysia, a non-western country. Results of earlier studies were based on western data and, therefore, may not be relevant to Malaysian work culture. A comprehensive literature review failed to locate any studies on the factors and outcomes of subcontractor bullying in the Malaysian setting. This research proposes to deliver new results that reveal about the non-western values and expands on the standard of workplace bullying in construction. This research is conducted with a goal to fill the gaps shown in Figure 3.2 and it seeks to make a significant contribution to the literature in this subject. The above discussion has led to the development of the conceptual framework of this research, as illustrated in Figure 3.4.
3.10 Subcontractor Bullying in the Ecological System Theory’s Perspective

Figure 3.3 Application of Ecological System Theory in Subcontractor Bullying. Adopted and modified from Johnson (2011)

Figure 3.3 shows the application of the Ecological System Theory in subcontractor bullying. As mentioned in Chapter Two, there are five systems included in the ecological system theory, namely, the microsystem, mesosystem, exosystem, macrosystem and chronosystem.

Microsystem level is the immediate contexts where an individual participates and direct contact occurs between them. The main subject in this research is the subcontractors and main contractors, where they are central to the system. Almost 80-90% of a subcontractor’s work generally consists in a construction project. This
shows that a subcontractor plays a big role in ensuring the smooth running of a construction project. In the Malaysian construction setting, a contractor can either become a main contractor or subcontractor in a construction project.

Mesosystem is the influences between members of the microsystem. At the mesosystem level, the relationship between main contractors and subcontractors in construction projects is established. Main contractors and subcontractors seal an agreement to undertake certain works in a construction project. The role of the subcontractor is to assist the main contractor in a construction stage by carrying out a part of building works according to their skills and expertise. According to the contract, the responsibility of the subcontractor is to finish their work within the stipulated date with the agreed quality. The role of the main contractor is the leader on site. Their role is to supervise the construction process by planning, programming the work task, costing and making sure that the quality of the building is meeting the standard set in the main contract. The relationship of the subcontractor and main contractor is supposed to be mutual because they are inter-dependent upon each other. Unfortunately, the relationship between the main contractor and the subcontractor is not always on good terms (Chong, 2006). The subcontractor and main contractor often clash and have different views on certain things. This tainted relationship between the two parties may cause subcontractors to have doubts about the sincerity of the main contractor’s collaboration in the supply chain (Dainty et al., 2001). As such, remaining relationships, particularly between subcontractors and main contractors, may be damaged with mistrust and scepticism. A subcontractor bullying typically consists of two types: work-based bullying and physical intimidating bullying. The example of work-based bullying is late or delayed
payments by the main contractor to subcontractor (Thomas, 2014), biased subcontract agreement (Thomas, 2014), safety issues in a construction site Arditi & Chotibhongs, 2005; Wong, 2009), scape-goating and the blame by the main contractor on the subcontractor (Akintan & Morledge, 2013). For physical intimidating bullying, Incolink (2011) reported that nearly one third of all interns in the construction industry experienced workplace bullying. The common type of physical intimidating bullying in the construction industry involves coercion, verbal abuse like teasing and name-calling, physical and mental aggravation and damage to a person’s personal property. McCormack et al. (2013) mentioned that the respondent is also subjected to the violation of physical health and safety, verbal abuse and personal harassment.

Exosystem is the external influences on the individual from systems that are not directly related to the microsystem. At the exosystem level, it consists of the main contractor leadership and work organisation and job design. This model also focuses on the main contractor’s management in construction sites as opposed to the model developed by Hoel & Salin (2003) which specifically dealt with the organisational setting of workplace bullying. A main contractor’s leadership represents the factor of occurrence of subcontractor bullying. In a standard organisational setting, studies on workplace bullying have often been linked with an abuse of power in an organisation (Einarsen et al., 1994). Typically, in the construction organisation context, this abuse of power can be seen in the relationship between the main contractor and subcontractor. According to Ng, Tang & Palaneeswaran, (2009) in construction projects, main contractors are often driven by profit. To succeed in acquiring profit, main contractors enforce certain conditions by
using their negotiating power on the subcontractor. There are some cases where main contractors bankroll a construction project based on overdue payments to subcontractors (Mason, 2010). In some cases, subcontractors have to pay in advance for materials, equipment, power plants and workers sent to the construction site (Ng et al., 2009). Subcontractors are also burdened by their payment period (Arditi, Koksal & Kale, 2000). They often have to accept these conditions because if they refuse, they will lose their jobs (Dainty et al., 2001).

For work organisation and job design, instances of bad work organisation and job design are the lack of well-defined work goals, poor flow of information to the employees, lack of mutual conversations regarding work tasks, organisational issues, lack of control over their job and an argumentative or unethical work setting (Hauge et al., 2007; Vartia, 1996). Similarly, since construction projects are active, they are often confronted with uncertainty caused by modifications in client requirements, design, laws and regulations. Construction projects are always adversely affected by uncertainty in the form of an unclear job scope and task objectives. According to Alinaitwe et al. (2007), most construction projects are disturbed by incomplete specification of the drawings. Unclear drawings provided by the main contractor may also result in disagreements or it might complicate the relationship between main contractors and subcontractor (Huang et al., 2007). Thus, subcontractors will develop dissatisfaction towards main contractors under these circumstances (Al-Hammad et al., 1992). Furthermore, the unique character of the construction project also plays an important role in inducing role ambiguity to the construction team player. This is because there are no two projects that are ever exactly alike (Enshassi et al., 2006). According to Ashworth (2008), every construction site has its own individual and
peculiar characteristics (i.e. location, shape, size, topography, etc.). Each building of a construction project is personalized to suit its environment, prearranged to execute its particular purposes and designed to echo the owner’s personal favourites and preferences (Khan & Burn, 2013). Furthermore, the variation of construction sites and the possibilities for creative design create each construction project as a fresh and novel experience.

Macrosystem is larger cultural and social influences to the microsystem. A construction culture is represented at a macrosystem level. There are six issues relating to the construction culture which are extra working hours, work pressure and anxiety, tough culture and high level human interactions. Sutherland & Davidson (1993) mentioned that construction team players are generally forced to work in extra-long hours to meet deadlines. Capel (2016) also mentioned that excessive workload triggers the pressure and anxiety due to intense work within an inadequate time. Thus, construction team players are always under accumulative pressure from clients to deliver projects faster with better quality and lower cost. The construction industry is also associated with a macho culture characterised by arguments, conflicts and crises (Bagilhole et al., 2000). Lastly, a high level of human interactions can be a factor for subcontractor bullying to occur. In a construction project, there are diverse professionals involved such as clients, consultants like engineers, architects, quantity surveyors, main contractors and subcontractors. When there are many parties involved in one project, there will be many ideas and different roles to expect in each team player, which then leads to a dispute among team players (Diekmann et al., 1994; Skyes, 1996). The conflict will then lead to stereotyping and characteristics of low friendliness, mistrust and low respect between the team players. Furthermore,
their dispute is usually caused by their identity and professional pride as suggested by Verma (1998) whereby a cause of dispute in the construction project management is often due to the inter-personal conflicts from their differences in work ethics, styles and egos.

Chronosystem concerns with the changes in all systems across time. At this chronosystem level, the time ranges from the date of commencement until the date of completion of the construction project. Thus, this relationship is considered to be over when the project is handed over to the client.
Figure 3.4 The conceptual framework for subcontractor bullying

3.11 Conceptual Framework of Subcontractor Bullying

Figure 3.3 (see p. 95) illustrates the conceptual framework of subcontractor bullying. From the literature review made in Chapter Two, there are two main causes that lead to workplace bullying; organisational causes and personal causes. From these two causes, only the organisational factor of bullying was chosen to be adopted for this research as it is suitable for the construction project setting. This conceptual framework was developed based on the model of the organisational antecedents of workplace bullying by Hoel & Salin (2003), type of workplace bullying by Einarsen & Hoel (2001) and on the model of workplace bullying concerning the intention to quit by Djurkovic et al., (2004).

In the model of organisational antecedents of bullying, Hoel & Salin (2003) emphasised three antecedents to workplace bullying: leadership, work organisation and job design and organisational culture. A leadership style used in the organisation may induced bullying to occur. Einarsen et al. (2007) mentioned that a destructive leadership such as autocratic, tyranny is laissez-faire the main causes for bullying to happen. Secondly, a work organisation and job design also will contribute to bullying as it will create a role ambiguity and role conflict to the target. Hauge et al. (2009) found the extreme link between role ambiguity and role conflict with bullying. Lastly, a culture that promotes an act of bullying is the reason why bullying occurred. Appelbaum et al. (2007) termed this as toxic organisation because it allows bullying to occur and there is no act or punishment taken to solve it. Lutgen-sandvik & McDermott (2008) associated this culture with a laissez-faire leadership. Accordingly, this model of organisational antecedent by Hoel & Salin (2003) was
adopted in this study to fit the construction project context, addressing main contractor leadership, work organisation and job design and construction culture as factors of the occurrence of subcontractor bullying. Table 3.1 shows the changes made to the model of organisational antecedents by Hoel & Salin (2003).

Table 3.1 Adoption to the factors of bullying

<table>
<thead>
<tr>
<th>Organisational antecedents</th>
<th>Factor of subcontractor bullying</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>Main contractor leadership</td>
</tr>
<tr>
<td>Work organisation and job design</td>
<td>Work organisation and job design</td>
</tr>
<tr>
<td>Organisational culture and social climate</td>
<td>Construction culture</td>
</tr>
</tbody>
</table>


Generally, Zapf & Einarsen (2005) has been categorised workplace bullying into three main type which are personal-based bullying, work-based bullying and physical intimidating bullying. However, in this research, a personal-based bullying has been taken out from the framework. This is because personal-based bullying is not a fitting variable as this research focused on the aspect of bullying on behalf of the subcontractor organisation. A work-based bullying is a bullying acts that related with job scope of the target. Gonzalez (2012) usually comes with a subtle acts and concerns more on the psychological nature. A physical intimidating bullying is a bullying acts that involved physical and verbal. Power et al. (2013) mentioned physical intimidating bullying are less common to happen in workplace bullying due to the legal intervention by law.

Lastly, this framework also attempts to find link between subcontractor bullying with the subcontractor’s intention to quit. This notion is developed based on the result of 6.6% of subcontractor turnover rate in the construction industry.
previously (Pitt, 2014). The model workplace bullying and intention to quit by Djurkovic et al. (2004) is used in this research. Model by Djurkovic et al. (2004) proposed three variables that contributed to intention to quit: bullying, negative affect and physical symptoms. For this research, only the relationship of bullying and intention to quit will be assessed. Zapf & Gross (2001) suggested that quitting the organisation will be the eventual response of the target when they were bullied.

As discussed in Chapter One, this conceptual framework aims to address the gap in the literatures by investigating the factors and outcomes of subcontractor bullying. Even though there are many studies about workplace bullying to date until today, research about subcontractor bullying or construction bullying in general is still considered few in the field. Mathisen et al. (2008) suggested there is not enough studies that examining workplace bullying in the blue-collar perspective. Construction industry falls under blue-collar industry. Thus, it is interesting to investigate bullying in the construction perspective. Tambur & Vadi (2009) also said there is scarcity in the research of organizational setting in workplace bullying and more over to consider in the different setting of construction project. Furthermore, studies on subcontractor and their intention to quit is insufficient to find even though there is a significant studies that may have linked construction team player with intention to quit (Masri, 2009; Sang, Ison & Dainty, 2009) and this research also aims to discover the possible outcome of subcontractor bullying, in which, the intention to quit of the subcontractor.
3.12 Hypotheses

The conceptual framework comprises of three main hypotheses. The first set of hypotheses (H1ₐ, H1ₛ, H1₅, H1₆, H1₇, H1₈) tests the factors of occurrence of subcontractor bullying, while the second set (H2ₐ, H2₄) tests the relationship between subcontractor bullying and subcontractor intention to quit. Finally, the third set of hypotheses (H3ₐ, H3₄, H3₅, H3₆, H3₇, H3₈) proposes the mediating effect of subcontractor bullying in the positive relationship between the factors of occurrence and intention to quit. The details of the hypotheses laid out above are discussed in the next sub-chapter.

3.12.1 Factors of Bullying and Subcontractor Bullying

There are six hypotheses related to factors of occurrence and subcontractor bullying. Main contractor leadership represents the leadership of the main contractor in a construction site. The main contractor is responsible for supervising subcontractors’ work in a construction project. Einarsen et al. (1994) mentioned that workplace bullying has often been linked with abuse of power in an organisation. Similarly, there is an abuse of power that occurs in construction sites, particularly in the relationship between main contractors and subcontractors. Ng et al. (2009) pointed out that main contractors are often driven by profit. They misuse their power by encouraging malpractices, such as deferred payments to subcontractors, to increase their profit margins (Mason, 2010). In some cases, subcontractors are forced to pay for materials in advance and are asked for equipment and manpower to be sent to the construction site earlier than stipulated (Ng et al., 2009).
Furthermore, subcontractors are also burdened by their payment period (Arditi et al., 2000). They stated that they must accept these conditions in order to keep their jobs. An article in The Telegraph reported that 97% of 250 subcontracting firms received unfair treatment from main contractors and only 5% received payment within the stipulated date. The Census and Statistic Department (2004) reported that about 55,318 workers were not being paid by subcontractors and main contractors. That consists of about 18,440 employees per year, which is around 25% of the 72,956 employees that make up the average number of employees in the base year of this 3-year period.

Namie & Namie (2003) stated that common examples of workplace bullying include repeated hurtful remarks, physical harassment, manipulation, shoving, pushing, tripping, any uninvited/harmful physical contact, intimidation, threats and ganging up on workers. Alterman et al. (2013) reported that unpleasant name-calling, constant yelling, threats and verbal abuse is considered the norm in the construction setting. This is to say that bad leadership on behalf of main contractors and poor construction project management will contribute to the occurrence of subcontractor bullying. Built upon this, the following hypotheses are proposed:

\[ H1a \quad \text{There is a positive relationship between main contractor leadership and work-based bullying.} \]

\[ H1b \quad \text{There is a positive relationship between main contractor leadership and physical intimidating bullying} \]
Salin (2003) mentioned work organisation and job design as factors that contribute to the occurrence of workplace bullying. Examples of bad work organisation and job design are the absence of clear work goals, poor information flow, lack of mutual conversations about tasks, organisational constraints, lack of control over one’s own job and hostile or unethical work environments (Hauge et al., 2007; Vartia, 1996). The nature of construction projects is such that they are always active. In every stage of construction there are often many changes in client requirements and the overall design of the building (Alinaitwe et al., 2007). As a result, construction projects are often rife with uncertainties. This job ambiguity causes subcontractors to feel burdened and vulnerable. It may also facilitate the occurrence of bullying (Huang et al., 2008). As such, the following hypotheses are asserted:

\[ H1c \text{ There is a positive relationship between work organisation and job design and work-based bullying. } \]

\[ H1d \text{ There is a positive relationship between work organisation and job design and physical intimidating bullying. } \]

The poor and unhealthy culture in construction also represents a factor contributing to subcontractor bullying. An ideal, positive workplace must be one that practices good organisational culture with a positive social climate (Hoel & Salin, 2003). A good organisational culture demonstrates the understanding of goals, freedom to carry out activities and changes in the organisation, while a positive social climate indicates interpersonal relationships; team members knowing and helping each other. This suggests that the opposite end of the spectrum, a negative organisational culture and social climate, induces more incidences of bullying in the
workplace (Agervold, 2009; Einarsen et al., 1994; Hoel & Cooper, 2000; Coyne et al., 1999; Monks & Smith, 2000). Similarly, the culture in the construction project is widely known as the industry with the three Ds—dull, dirty and dangerous. In light of this, it is expected that the prevalence of bullying in the construction project setting will be high. Dainty et al., (2000) agreed with this notion stating that most construction team members find themselves in an extremely hostile environment. Transparency International (2005) also defined the construction industry as ‘the most fraudulent industry on a worldwide scale’. FMI (2004) stated that the construction industry is the perfect environment for ethical dilemmas, with its low-price mentality, fierce competition and paper-thin margins. The hypotheses built upon this are:

\[ \text{H1e} \quad \text{There is a positive relationship between construction culture and work-based bullying.} \]

\[ \text{H1f} \quad \text{There is a positive relationship between construction culture and physical intimidating bullying.} \]

### 3.12.2 Subcontractor Bullying and Intention to Quit

It was proven that many negative outcomes result from workplace bullying. One such possible outcome is an intention to quit (Hoel & Cooper, 2000; Rayner et al., 2002). According to Begley (1998), workplace bullying is the main reason behind victims quitting their jobs. Similarly, the various types of subcontractor bullying can be triggers that cause subcontractors to have the intention to quit. This is likely due to the stressful and dangerous nature of the construction industry.
In the past, there were several studies that linked the construction industry’s nature with employee intention to quit (Huang et al., 2007; Sun, 2011). These studies were concerned with job satisfaction and its influence on the intention to quit. Most of these studies found a negative relationship between these two factors. According to Shore & Martin (1989), high job satisfaction among construction professionals resulted in a high level of commitment to the employers. Huang et al. (2007) reported that construction professionals are more likely to have lower job satisfaction due to their stressful job environment. Romans (2006) mentioned that the construction project overtly adopts hostile language and behaviour which leads to a higher ratio of absenteeism (Vartia, 2001). Study on the standard organisational context shows that a negative environment will motivates employees to switch jobs/organisations (Djurkovic et al., 2004). This research believes that bullying against subcontractors is a likely reason for why they often seek to leave their jobs. Thus, this study proposes the following hypotheses:

**H2a** There is a positive relationship between work-based bullying and subcontractor intention to quit.

**H2b** There is a positive relationship between physical intimidating bullying and subcontractor intention to quit.

### 3.12.3 The Mediating Effect of Subcontractor Bullying

A variable is considered a mediator when it creates an indirect effect through which the focal independent variable is able to influence the criterion variable of interest. Consistent with the conceptual framework (Figure 3.4, p. 98), this research
theorises that subcontractor bullying may have a mediating role in the relationship between variables that make up the factors of the occurrence (main contractor leadership, work organisation and job design and construction culture) and the possible outcome variable (subcontractor intention to quit). Three mediation hypotheses were developed to test this proposition.

3.12.3.1 Main contractor leadership, Subcontractor Bullying and Intention to Quit

Many researches have focused on the relationship between leadership and intention to quit (Rad & Yarmohammadian, 2006; Ali, 2009; Hughes, Avey & Nixon, 2010). Results indicated that negative leadership has a significant impact on the intention to quit. For instance, Rizwan, Qader & Hafiz (2014) stated that employees who perceive high support from leadership and low pressure are more likely to stay longer in the organisation as opposed to employees who do not. Good main contractor leadership is essential for the smooth running of construction projects (Senam, Abdul Rashid, Sarkawi & Zaini, 2014). If this critical relationship between main contractors and subcontractors is abused, intention to quit among subcontractors is likely to rise. This posits the hypotheses listed below:

\[ H3a \text{ Work-based bullying mediates the relationship between main contractor leadership and intention to quit.} \]

\[ H3b \text{ Physical intimidating bullying mediates the relationship between main contractor leadership and intention to quit.} \]
3.12.3.2 Work Organisation and Job Design, Subcontractor Bullying and Intention to Quit

Poor work organisation and job design can be described as a lack of clear definitions regarding a construction project’s scope and requirements, as well as no clear methods set for completing job tasks. According to Helga (2015), the most common factors that lead to intention to quit is role overload and unclear job descriptions. This can be clearly seen in construction projects full of uncertainties that begin in the pre-construction and continue until completion (Huang et al., 2007). These uncertainties might lead to significant risks for people working on projects and often involve new work activities and ever-changing workplace relationships (Loosemore et al., 2003).

Poor work organisation and job design are expected in construction projects for many reasons. Some contributing factors are the diversity of team members on-site (Kabiri et al., 2012), the absence of clear work goals, poor information flow, lack of mutual conversation about tasks, organisational constraints, lack of control over one’s own job and a hostile or unethical work environment (Einarsen et al., 1994; Hauge et al., 2007; Vartia, 1996; Leymann, 1996). Hobfall (2001) found that poor work organisation is likely to cause employees to consider leaving the organisation. Therefore, the following hypotheses are proposed:

**$H_{3c}$ Work-based bullying mediates the relationship between work organisation and job design and intention to quit.**

**$H_{3d}$ Physical intimidating bullying mediates the relationship between work organisation and job design and intention to quit.**
3.12.3.3 Construction Culture, Subcontractor Bullying and Intention to Quit

Negative organisational culture may also result in a higher employee turnover rate (Meyer & Allen, 1991). This is likely due to employees being under stress and the lack of interest that results from a negative and hostile work environment. Pathak (2012) said that due to the negative culture of an organisation, employees may lose interest in their jobs, lose concern for the organisation or become less responsible as job satisfaction decreases. As job dissatisfaction and stress increase, more employees will wish to leave the organisation (Paille, 2011). Therefore, this research hypothesises that the negative culture in construction will increase subcontractor bullying, which will then increase the intention to quit in subcontractors:

\[ H3e \] Work-based bullying mediates the relationship between construction culture and intention to quit.

\[ H3f \] Physical intimidating bullying mediates the relationship between construction culture and intention to quit.

3.13 Summary

This chapter discussed the overall knowledge pertaining to construction projects and the unique characteristics that make the construction industry different from other industries. Several gaps of knowledge concerning construction and bullying have been identified, and the conceptual framework of the subcontractor model was completed. The next chapter provides a description of the methodology that was used in this research.
CHAPTER 4
METHODOLOGY AND INSTRUMENTS

4.1 Introduction

Chapter four is comprised of two major sections. The first section discusses the conceptual framework and the related hypotheses, while the second section depicts the description of the methodology employed in this research. This chapter includes the description of research methods, research design, and respondents. This chapter also provides information on data collection, processing, and analyses.

4.2 Research Process

The process employed for this research consisted of four main stages: research design, data collection, data analysis, and conclusion (see Figure 4.1).

Figure 4.1 Research process

Figure 4.1 illustrates the flow of this research. The process began with the research design. In this stage, background problems, issues, and objectives were identified, as listed in Chapter One. Next, a comprehensive review of the literature on workplace bullying and construction projects was developed and detailed in
Chapters Two and Three, respectively. The literature review further led to the identification of relevant theories that served as a platform in developing the theoretical framework for this research.

During data collection, careful attention was given to the process of developing the survey questionnaire. In the final stage of this phase, a pilot study was carried out to determine the reliability and the face validity of the survey. The results from this phase were used to make the necessary adjustments to the survey questionnaire. Once the survey questionnaire was revised and finalised, the finalised instrument was employed to collect data from the sample. The data were then analysed by adhering to two subsequent phases. First, preliminary data analysis was performed to purify the data and to obtain the overall view of the respondents. As for the second phase, structural equation modelling (SEM) was carried out.

The analysis of the data is explained in Chapter Five. The final stage involved the interpretation of findings and a discussion of their implications. Finally, Chapter Six discusses all these issues to provide clear explanation and detailed discussion of the findings. The researcher conferred with relevant theories and the literature.

4.3 Research Design

A research requires a strong approach of inquiry to provide the specific direction for data collection and data analysis. There are two possible modes of inquiry in social sciences, namely, inductive reasoning and deductive reasoning. First, inductive reasoning begins with observation and then it proceeds to seek a pattern, in which a tentative conclusion is drawn. Second, deductive reasoning begins
with a theory, several hypotheses, and observations, which finishes with analysis from the gathered data. Deductive reasoning moves from the general to the particular, while deductive reasoning focuses on testing and confirming hypotheses and theories.

Table 4.1 Comparison between inductive reasoning and deductive reasoning

<table>
<thead>
<tr>
<th></th>
<th>Inductive Reasoning</th>
<th>Deductive Reasoning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Premises</strong></td>
<td>Based on observation of specific cases</td>
<td>Stated as fact or general principles</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>Conclusion is more general than the information the premises provided. It is reached by generalising the premises’ information</td>
<td>Conclusion is more special than the information premises provided. It is reached directly by applying logical rules to the premises</td>
</tr>
<tr>
<td><strong>Validity</strong></td>
<td>If the premises are true, the conclusion is probably true</td>
<td>If the premises are true, the conclusion must be true</td>
</tr>
<tr>
<td><strong>Usage</strong></td>
<td>Used often in everyday’s life (fast and easy). Evidence is used instead of proved facts.</td>
<td>More difficult to use (mainly in logical problems). One needs facts which are definitely true</td>
</tr>
</tbody>
</table>

Source: Logical Appeals (n.d.)

Table 4.1 presents the comparisons between inductive reasoning and deductive reasoning. Inductive reasoning progresses from specific observation to broader generalisation and conclusion (Crossman, 2011). The field study becomes the primary source to develop research propositions and the literature review enhances this. On the contrary, the deductive reasoning approach starts with the premises of a general rule or proposition and then continues to a specific conclusion. If the original premise is true, then the conclusion must be true (College, 2008). In the deductive
reasoning approach, literature review plays an essential role in helping researchers to develop relevant hypotheses for the topic area in study.

There are two choices that can be used in research design method; qualitative and quantitative approaches. The qualitative approach investigates attitudes, behaviour, and experiences of the respondents in order to obtain an in-depth opinion from the respondents (Dawson, 2002). A qualitative approach is usually employed in studies where the objective of the research is to explore, interpret, or obtain deeper understanding of a particular issue (Greenhalgh & Taylor, 1997). On the other hand, the quantitative approach usually starts with a statement and then refining or abandoning some of them for other statements that are stronger. Many quantitative researches begin by testing a theory (Phillips & Burbules, 2000).

This research adopted the quantitative approach with deductive reasoning to address the research objectives outlined in Chapter One. According to Gray (2009), the quantitative approach tends to use deductive reasoning in the research, mainly because deductive reasoning proposes priori questions and hypotheses from the review of existing literature. Similarly, this research focused on investigating and validating the truth that arises from the existing theories and prior studies outcomes. Primarily, the main focus of this research is to test the relationships between three main variables: factors of occurrence of subcontractor bullying (main contractor leadership, work organisation and job design, as well as construction culture), subcontractor bullying (work-based bullying and physical intimidating bullying), and the intention to quit.
In order to achieve the objectives of this study, the literature was reviewed to generate 11 hypotheses, which had been tested via survey. The survey outcomes were analysed by employing statistical techniques and presented as numerical data to test the four hypotheses. Creswell (2009) indicated that research designs that examine relationships are best evaluated using the quantitative survey design study. There are three basic types of questionnaires: close-ended, open-ended, and a combination of both (Dawson, 2002).

Babbie (2012) further stated that the quantitative method is often used to investigate the relationships and the differences between two or more variables. The quantitative method is employed to address the research hypotheses that require numerical representations of variables. Furthermore, the use of quantitative approach in workplace bullying studies is commonly accepted. Many studies had examined workplace bullying by applying the quantitative method (see Bentley et al., 2012; Öcel & Aydin, 2012; Djurkovic et al., 2008; Cowie et al., 2000). Among these studies, Einarsen & Hoel (2001) developed the Negative Acts Questionnaire-Revised (NZQ-R) approach. This seems to be the most established quantitative method in the workplace bullying field of study and has been applied by several researchers.

4.4 The Survey Method

In this research, the survey method was employed to collect data by using the questionnaire instrument. The survey method refers to the assortment from a relatively big sample of individuals from a pre-determined population, and followed by the assortment of a relatively small amount of data from individuals. The researcher used the knowledge from the sample of individuals to make some
interpretation about the wider population (Kelley, Clark, Brown, & Sitzia, 2003). This method is appropriate for researches who handle a huge sample size (Johnson, 2011). A survey is fast, economical, and can be efficiently managed (Kelley et al., 2003). The decision to use this method was also based on the fact that the subject of research (workplace bullying) can be perceived as sensitive or emotional. Another advantage is that it is possible to keep a survey completely anonymous. Respondents, hence, would feel more comfortable revealing honest information through anonymous surveys as opposed to other methods (Bryman & Bell, 2007).

4.5 Survey Questionnaire Development

Several strategies are required to create and to structure a survey questionnaire (Frazer & Lawley, 2000). First, it is essential to keep the formulation of questions simple and clear to avoid misinterpretation. One strategy is to start by asking short and simple questions at the beginning of the survey and end with more complex and sensitive questions (Bryman & Bell, 2007). Second, an introduction letter covering the purpose of the study should be included at the beginning of the survey (Saunders, Lewis & Thornhill, 2012). Later, a draft of the questionnaire is reported to a number of professionals in the field to detect any possible problem. This approach is used with the purpose to remove any uncertainty or unclear wording from the questionnaire. This method assists in refining the validity and reliability aspects of the questionnaire (Frazer & Lawley, 2000). This strategy was implemented in this research and the questionnaire was devised with ‘easy-to-follow’ instructions so as to increase the response rate (Babbie, 2012; Sanchez, 1992), apart from minimising measurement error (Sanchez, 1992).
4.5.1 Item Generation

This research questionnaire used in this research refers to Negative Acts Questionnaire (NAQ-R) developed by Einarsen & Hoel (2001), intention to quit measurement by Mobley et al., (1978), and self-constructed questions to look into the factors of subcontractor bullying. A total of 48 items with 6 demographic questions had been developed for this study. Table 4.2 presents the list of the number and the sources of items employed to measure each construct. The details of the items in the measurement are discussed in the next subsection.

Table 4.2 Total scale of items used to measure each construct

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dimensions</th>
<th>Number of Items</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographic</strong></td>
<td></td>
<td>6</td>
<td>Einarsen &amp; Hoel (2001)</td>
</tr>
<tr>
<td><strong>Subcontractor Bullying</strong></td>
<td>Agreement</td>
<td>20</td>
<td>Einarsen &amp; Hoel (2001); Arditi and Chotibghongs (2005); Sutherland and Davidson (1993)</td>
</tr>
<tr>
<td>- Work based bullying</td>
<td>5 Likert scale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Physical bullying</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Factors of Occurrence</strong></td>
<td>Agreement</td>
<td>24</td>
<td>Thomas (2014); Bagilhole et al., (2000); Nguyen, Ogunlana &amp; Lan (2004); Alinaitwe et al. (2007).</td>
</tr>
<tr>
<td>- Main contractor leadership</td>
<td>5 Likert scale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Work organisation and job design</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Construction culture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Intention to quit</strong></td>
<td>Agreement</td>
<td>4</td>
<td>Mobley et al. (1978)</td>
</tr>
<tr>
<td></td>
<td>5 Likert scale</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.5.1.1 Workplace Bullying

The NAQ-R was used to measure subcontractor bullying in construction project. A Likert-type scale ranging from 1 (Never) to 5 (Daily) was applied. The NAQ-R was developed and validated by Drs Ståle Einarsen and Helge Hoel through a series of studies and interviews with victims of workplace bullying (Einarsen & Hoel, 2001). The original 29-item Norwegian version was culturally adapted into the English version. The response rate was reported to be 43% and the internal consistency reliability was listed at 0.92, as measured via Cronbach’s alpha (Einarsen & Hoel, 2001). This questionnaire has been widely used amongst scholars to measure workplace bullying in various fields and industries.

A total of 20 questions were employed to measure the prevalence of bullying among subcontractors in the industry. However, some items were discarded from the NAQ-R to suit the context of this study. For instance, person-related bullying was omitted due to its irrelevancy to this study. The researcher also added some items that may be the contributing factors to subcontractor bullying. The items are listed in Table 4.3.

Table 4.3 Items of subcontractor bullying

<table>
<thead>
<tr>
<th>Variable</th>
<th>Additional Items</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work-Based Bullying</td>
<td>Someone withheld information that affected my performance</td>
<td>Einarsen &amp; Hoel (2001)</td>
</tr>
<tr>
<td></td>
<td>I have been ordered to do work outside of my job scope</td>
<td>Einarsen &amp; Hoel (2001)</td>
</tr>
<tr>
<td></td>
<td>My opinions and views have been ignored</td>
<td>Einarsen &amp; Hoel (2001)</td>
</tr>
<tr>
<td></td>
<td>My work has been monitored</td>
<td>Einarsen &amp; Hoel (2001)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>excessively</td>
<td></td>
</tr>
<tr>
<td>A claim that I am entitled to was ignored</td>
<td>Arditi and Chotibghongs (2005)</td>
<td></td>
</tr>
<tr>
<td>Someone attempted to find fault with my work</td>
<td>Einarsen &amp; Hoel (2001)</td>
<td></td>
</tr>
<tr>
<td>Someone transferred a huge project risk to me</td>
<td>Arditi and Chotibghongs (2005)</td>
<td></td>
</tr>
<tr>
<td>I have been exposed to unmanageable work</td>
<td>Einarsen &amp; Hoel (2001)</td>
<td></td>
</tr>
<tr>
<td>I have been humiliated or ridiculed in connection with my work</td>
<td>Einarsen &amp; Hoel (2001)</td>
<td></td>
</tr>
<tr>
<td>I have been given tasks with unreasonable or impossible goals or deadlines</td>
<td>Einarsen &amp; Hoel (2001)</td>
<td></td>
</tr>
<tr>
<td>I have experienced not being paid for work I have done</td>
<td>Arditi and Chotibghongs (2005)</td>
<td></td>
</tr>
<tr>
<td>I have been blamed for something unfortunate happening on-site even when it was not my fault</td>
<td>Arditi and Chotibghongs (2005)</td>
<td></td>
</tr>
<tr>
<td>I have been forced to work long hours to meet deadlines</td>
<td>Einarsen &amp; Hoel (2001)</td>
<td></td>
</tr>
<tr>
<td>I have handled excessive workloads</td>
<td>Einarsen &amp; Hoel (2001)</td>
<td></td>
</tr>
<tr>
<td>I received unfair payment for my work</td>
<td>Sutherland and Davidson (1993)</td>
<td></td>
</tr>
<tr>
<td>Payment for work I have done has been delayed</td>
<td>Sutherland and Davidson (1993)</td>
<td></td>
</tr>
<tr>
<td><strong>Physical Intimidating Bullying</strong></td>
<td>I experienced intimidating behaviour such as finger-pointing, violation of personal space, shoving or having my way blocked</td>
<td>Einarsen &amp; Hoel (2001)</td>
</tr>
<tr>
<td>I received threats of violence or physical abuse</td>
<td>Einarsen &amp; Hoel (2001)</td>
<td></td>
</tr>
<tr>
<td>I received insulting messages, telephone calls or emails</td>
<td>Einarsen &amp; Hoel (2001)</td>
<td></td>
</tr>
<tr>
<td>I received threats that make my life difficult</td>
<td>Einarsen &amp; Hoel (2001)</td>
<td></td>
</tr>
</tbody>
</table>
4.5.1.2 **Factors of Occurrence of Subcontractor in the Construction Project**

**Item Scale**

The second instrument was developed based on the literature review elaborated in Chapters Two and Three. This instrument was used to measure the factors of subcontractor bullying in the industry. Three constructs were embedded in the factor of occurrence of subcontractor bullying: main contractor leadership, work organisation and job design and culture. Hence, a five-point Likert scale that ranged from 1 (Totally Disagree) to 5 (Totally Agree) was applied for the respondents to stay focused on the questionnaire. A three-point Likert scale is too small, while a seven-point scale has too many choices. In addition, most of the prior studies used the five-point Likert scale due to ease in comparing the findings (Dillman, Smyth, & Christian, 2009).

The main contractor leadership construct is composed of two dimensions with 16 items. The dimensions are contract agreements and leadership style. Main contractor is the leader of the site and is responsible for leading and supervising the work activity (Tan et al., 2017). However, the literature indicates imbalance of power between main contractors and subcontractors due to contract arguments (Lynch, 2011). Jung & Mills (2012), in their study of leadership styles among contractors, indicated that project managers and superintendents use autocratic leadership styles in construction projects. Table 4.4 presents the measurement items for main contractor leadership.
Table 4.4 Measurement items for main contractor leadership

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Items</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contract Argueuments</strong></td>
<td>Contractor works out agreements with me before I start work</td>
<td>Thomas (2014)</td>
</tr>
<tr>
<td></td>
<td>The terms of the contract are mainly drafted by the contractor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The contractor provides me enough time to read the agreement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The contractor gives me a chance to negotiate the contract</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The subcontract agreement is biased</td>
<td></td>
</tr>
<tr>
<td><strong>Leadership Style</strong></td>
<td>The contractor does not understand my work-related problems and needs</td>
<td>Bagilhole et al., (2000)</td>
</tr>
<tr>
<td></td>
<td>The contractor does not use his power to help me overcome problems on-site</td>
<td>Nguyen et al. (2004)</td>
</tr>
<tr>
<td></td>
<td>There is a lack of responsibility from the main contractor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>There is a lack of help from the contractor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>There is poor site management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The time estimates for work/tasks are irrelevant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The project team is incompetent</td>
<td></td>
</tr>
<tr>
<td></td>
<td>There is inadequate project management assistance on-site</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Contractors do not share up-to-date project information with me</td>
<td></td>
</tr>
<tr>
<td></td>
<td>There is a lack of standard procedures for when unfortunate incidents occur</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The contractor does not establish a proper communication channel</td>
<td></td>
</tr>
</tbody>
</table>

As for work organisation and job design, only one dimension focused on the uncertainties of construction project. The literature suggests that an employee who lacks clear objective of his work and uncertain with his work information may be a
perfect target for bullying (Hauge et al., 2007). Alinaitwe et al. (2007) mentioned that communication of information of knowledge is poor. A construction team player has to work with project scheduling, risk management, and contingency planning with limited information, in which the environment is in fast pace (Pich, Loch & Meyer, 2002). Construction projects are active and often have some degree of uncertainties caused by changes in client requirements, design, and laws or regulations imposed by the government (Love, Holt, Shen, Li & Irani, 2002). These can cause a project scope and the task objectives to become unclear, thus resulting in bullying. Table 4.5 displays the measurement items for work organisation and job design.

Table 4.5 Measurement items for work organisation and job design

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Items</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncertainties of Work</td>
<td>The communication of information between the main contractor and subcontractors is poor</td>
<td>Alinaitwe et al. (2007)</td>
</tr>
<tr>
<td></td>
<td>We have unclear work and task objectives on-site</td>
<td>Nguyen et al. (2004)</td>
</tr>
<tr>
<td></td>
<td>There is poor planning and scheduling during the pre-stage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Variation orders (VOs) by the main contractor/client are excessive</td>
<td></td>
</tr>
</tbody>
</table>

As for construction culture, only one dimension focused on the negative culture of construction industry. The literature implies several issues related to construction culture, namely, extra working hours, work pressure and anxiety, tough
culture, and high-level human interactions. Sutherland & Davidson (1993) mentioned that construction team players are generally forced to work for long hours and handle excessive workloads in order to meet deadlines. Besides, the construction industry has always been connected with a macho culture characterised by arguments, conflicts, and crises (Bagilhole et al., 2000). Since many parties are involved in one project, many ideas and varied roles are expected in each team player, which can lead to disputes among the team players (Diekmann et al., 1994; Skyes, 1996). Table 4.6 shows the measurement items for construction culture.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Items</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative Culture of Construction Industry</td>
<td>It is normal to work extra hours on construction projects</td>
<td>Sutherland &amp; Davidson (1993)</td>
</tr>
<tr>
<td></td>
<td>The construction industry is a hostile environment where subcontractor bullying is prevalent</td>
<td>Bagilhole et al., (2000)</td>
</tr>
<tr>
<td></td>
<td>The construction industry celebrates the appearance of toughness such that heavy jokes and banter are a part of the ‘culture’</td>
<td></td>
</tr>
<tr>
<td></td>
<td>There is an excessive number of subcontractors on-site making it difficult to work properly</td>
<td></td>
</tr>
</tbody>
</table>
4.5.1.3 Intention to Quit

The third instrument was adapted from the tool developed by Mobley et al. (1978). This instrument was used to measure the intention to quit. Mobley et al., (1978) theorised that a dissatisfied individual would consider quitting his job, and then, begin weighing in any possible alternatives by seeking other jobs and eventually would quit the job. Under this measurement, three items developed by Mobley et al., (1978) for the theory of intention to quit had been employed in this study. The five-point Likert-scale ranging from 1 (Totally Disagree) to 5 (Totally Agree) was applied. Table 4.7 presents the measurement items for intention to quit.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intention to quit</td>
<td>I often think about quitting this project</td>
</tr>
<tr>
<td></td>
<td>I am actively looking for another project</td>
</tr>
<tr>
<td></td>
<td>As soon as I can find a better job, I’ll leave this one</td>
</tr>
</tbody>
</table>

4.5.2 Questionnaire

In this research, the questionnaire instrument was used for data collection. Questionnaires were generated to conform to the aim, the purpose, and the objectives of this research, as outlined in Chapter One of this research. The overall question design was grounded on the literature review and objectives. It also adopted a pattern similar to that of questions from past researches within this field.
The questionnaire consisted of four sections. The first section contained respondent demographic questions, while the rest of the sections covered items related to the constructs. It was anticipated that each respondent would require about 30 minutes to complete the questionnaire. The following is a detailed discussion of each section. Basically, the questionnaire was comprised of the following four sections:

**Section A:** This section consisted of demographic questions asking about the background of the respondent.

**Section B:** This section contained 20 items that asked about the types of subcontractor bullying that the respondent may have experienced. These questions aimed at identifying the types of subcontractor bullying faced in the construction industry.

**Section C:** This section comprised of 24 items concerning factors that might cause subcontractor bullying. The objective of this section was to identify the possible factors that might have contributed to subcontractor bullying.

**Section D:** This section had 4 items concerning the respondents’ intentions to leave their jobs when faced with bullying. The objective of this section was to determine the relationship between subcontractor bullying and the intention to quit.

A cover letter depicting the purpose of the study and the researcher’s contact information were included on the front page of the instrument. A cover letter is crucial as the respondents would provide honest answers in the attempt to help realise the study objectives, apart from improving the response rate (Saunders et al., 2012). A cover letter was tailored by incorporating the signature of the researcher.
and an appeal to the respondents by emphasising the importance of their participation in this research, along with the assurance of anonymity.

4.5.1 Translation Process

As mentioned earlier, this research used a validated quantitative measurement that was derived from prior studies. All measurements used were mostly written in English language and have been verified in mostly western countries. Since this research focused on subcontractors in Malaysia, where the target group consisted of non-English speakers, the questionnaire had to go through a translation process. This process was essential to minimise any possible discrepancy caused by cultural and language dissimilarities (Kim & Han, 2004).

Generally, a direct translation of an instrument from one language to another does not warrant the content similarity of the translated scale (Sechrest, Fay & Zaidi, 1972). Thus, most scholars agree that back-translation of an instrument is vital for its validation and use in a cross-cultural study (John, Hirsch, Reiber, & Dworkin, 2006; Jones, Lee, Pillips, Zhang & Jaceldo, 2001). Back-translation is a process where the translated language version is translated back into the source language version in order to validate the translation made on the research instrument (Shigenobu, 2007). A method termed ‘decentring’ can increase the quality of the translated instrument (Brislin, 1970). As such, this research employed both the back-translation and decentring approaches to increase the translation similarity of the questionnaire from English language to the Malay language.
Two bilingual translators proficient in both English and Malay languages were involved in the translation process. The first translator translated from the source language (English) to the target language (Malay). Another translator who was not familiar with the measurements used in the questionnaire served as the back translator and translated the Malay version back to the English version.

Upon completion, the Malay Language version was reviewed by two construction professionals in Malaysia. These professionals were asked to mark the items, words or phrases that sounded strange or were not commonly used by members of their peer group. At this stage, the decentring process was employed. Necessary adjustments were made to both the English and Malay versions until the final Malay version was produced. Finally, a pilot test on the final Malay version of the questionnaire was carried out to confirm that the questionnaire had reached a satisfactory level of reliability with regard to conceptual and measurement equivalence (Sin, Cheung & Lee, 1999).

4.6 Sampling Frame

The sample selected for this research was drawn from the Construction Industry Development Board (CIDB) directory for contractor companies. The directory was published by CIDB and serves as an official authoritative publication in Malaysia. All local contractors are required to register under the CIDB. The CIDB Directory Board also provides a list of contractors in Malaysia from Grade 1 until Grade 7 (see Table 4.8). The categories reflect the size of the firms with G1 being the smallest and G7 being the largest.
Table 4.8 Contractor’s grade classification according to CIDB

<table>
<thead>
<tr>
<th>Grade</th>
<th>Tendering Capacity</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1</td>
<td>Not exceeding RM 200,000</td>
<td>Small</td>
</tr>
<tr>
<td>G2</td>
<td>Not exceeding RM 500,000</td>
<td>Small</td>
</tr>
<tr>
<td>G3</td>
<td>Not exceeding RM 1 million</td>
<td>Medium</td>
</tr>
<tr>
<td>G4</td>
<td>Not exceeding RM 3 million</td>
<td>Medium</td>
</tr>
<tr>
<td>G5</td>
<td>Not exceeding RM 5 million</td>
<td>Medium</td>
</tr>
<tr>
<td>G6</td>
<td>Not exceeding RM 10 million</td>
<td>Large</td>
</tr>
<tr>
<td>G7</td>
<td>No limit</td>
<td>Large</td>
</tr>
</tbody>
</table>

Source: Construction Industry Malaysian Planning (2016)

Firms are categorised based on the tendering capacity or the project cost range they are qualified to participate in. They are also categorised based on the minimum capital available, the organisation of resources, and the level of experience. The database from this directory provides background information on contractor companies, including addresses, telephone numbers, fax numbers, e-mail addresses, and respective construction work performed.

Even though the CIDB board provided detailed information regarding contractors under their directory, unfortunately, there was no official directory for subcontractors in Malaysia. This made it difficult to find accurate statistics for the total number of subcontractors in Malaysia. Furthermore, in terms of operation (especially when there is low demand for construction) and for the sake of business survivability, the main contractor tends to operate as a subcontractor as well (Mustafa Kamal, Haron, Ulang & Baharum, 2012). Recent statistics showed a decline in the number of construction projects since year 2015, and this situation might have driven contractors to undertake subcontractor work in order to maintain growth and profit for their companies (Quarterly Construction Statistics of Malaysia,
For these reasons, using contractors as respondents had been considered as valid.

Alternatively, in order to ensure that the right respondents were selected, the researcher included a question at the beginning of the questionnaire inquiring if the contractors had been involved in any subcontracting work in previous construction projects. Based on the answer to this particular question, the researcher automatically classified those that answered ‘yes’ as subcontractors, while those that answered ‘no’ as invalid for this study.

In this research, the target population was G6 and G7 contractors who had carried out subcontracting work in Peninsular Malaysia. Originally, the target population was focused on G1 and G2 contractors. However, after conducting a pilot test (refer to Section 4.7), the results showed unexpected findings that pushed the researcher to change the target to G6 and G7 contractors. Besides, it is common for lower grade contractors to work independently and have no proper address or contract number. Hence, it would be difficult to collect data from G1-G5 contractors.

On the other hand, G6 and G7 contractors are believed to be experts with both knowledge and vast experience in their field (Mustafa Kamal et al., 2012). The CIDB also has issued a directive measure for all G7 contractors to be certified to ISO 9001 so as to improve their performances to a higher level. Furthermore, the minimum criteria for registration of contractors vary according to grade: G6 and G7 are required to have one diploma holder and one-degree holder, while the other grades required less than that. Hence, a lower grade contractor would have the difficulty in
understanding the questionnaire due to the complexity and the technicality of the questionnaire survey. The chance for low response rate may high or if they choose to answer, the data could be inaccurate.

Table 4.9 Contractor’s Registration Criteria According to the CIDB Grade

<table>
<thead>
<tr>
<th>Grade</th>
<th>Registration Fees</th>
<th>Paid-up Capital</th>
<th>Minimum Personnel Resources Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1</td>
<td>RM 20.00</td>
<td>RM 5000.00</td>
<td>Course certificate/ experience</td>
</tr>
<tr>
<td>G2</td>
<td>RM 80.00</td>
<td>RM 25 000.00</td>
<td>Course certificate/ experience</td>
</tr>
<tr>
<td>G3</td>
<td>RM 150.00</td>
<td>RM 50 000.00</td>
<td>Course certificate/ experience</td>
</tr>
<tr>
<td>G4</td>
<td>RM 350.00</td>
<td>RM 150 000.00</td>
<td>One group B</td>
</tr>
<tr>
<td>G5</td>
<td>RM 700.00</td>
<td>RM 250 000.00</td>
<td>One group A or one group B</td>
</tr>
<tr>
<td>G6</td>
<td>RM 1000.00</td>
<td>RM 500 000.00</td>
<td>One group A and one group B (one must have 3 years experience)</td>
</tr>
<tr>
<td>G7</td>
<td>RM 1400.00</td>
<td>RM 750 000.00</td>
<td>One group A and one group B (both must have 5 years experience) or two group A (one must have 5 years experience)</td>
</tr>
</tbody>
</table>

Note: Group A is a degree holder in construction related fields and Group B is a diploma holder in construction related fields or other degree holder with experience in construction works.

Source: CIDB (2002)

Those with grade G7 were among the highest number of contractors after G1, G2, and G3. Although G1 and G2 contractors displayed the highest in number, they appeared to provide insignificant results from the pilot test. The reason for recording the highest number of G1 and G2 contractors could be due variation of registration fees based on their grades. A G1 contractor G1 has the lowest registration fee, while G7 has the highest registration fee. This explains the higher number of G1, G2, and
G3 contractors, when compared to those from other grades. Even with the highest fee for registration, the number of G7 contractors appeared to be higher than those from G4 and G5. Since a large number in the population of contractors is retained, a generalised conclusion from the selected respondents can be made.

Table 4.10 Population of contractors according to states in Malaysia

<table>
<thead>
<tr>
<th>States</th>
<th>G1</th>
<th>G2</th>
<th>G3</th>
<th>G4</th>
<th>G5</th>
<th>G6</th>
<th>G7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perlis</td>
<td>844</td>
<td>217</td>
<td>56</td>
<td>18</td>
<td>22</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>Kedah</td>
<td>2045</td>
<td>906</td>
<td>424</td>
<td>146</td>
<td>137</td>
<td>59</td>
<td>213</td>
</tr>
<tr>
<td>Pulau Pinang</td>
<td>1441</td>
<td>718</td>
<td>965</td>
<td>247</td>
<td>286</td>
<td>115</td>
<td>480</td>
</tr>
<tr>
<td>Perak</td>
<td>2593</td>
<td>1150</td>
<td>643</td>
<td>225</td>
<td>242</td>
<td>85</td>
<td>224</td>
</tr>
<tr>
<td>Kuala Lumpur</td>
<td>1569</td>
<td>946</td>
<td>2237</td>
<td>772</td>
<td>1455</td>
<td>427</td>
<td>2012</td>
</tr>
<tr>
<td>Selangor</td>
<td>4076</td>
<td>2706</td>
<td>3204</td>
<td>1034</td>
<td>1550</td>
<td>414</td>
<td>1898</td>
</tr>
<tr>
<td>Negeri Sembilan</td>
<td>1816</td>
<td>922</td>
<td>469</td>
<td>151</td>
<td>174</td>
<td>47</td>
<td>135</td>
</tr>
<tr>
<td>Melaka</td>
<td>1073</td>
<td>587</td>
<td>418</td>
<td>134</td>
<td>167</td>
<td>48</td>
<td>164</td>
</tr>
<tr>
<td>Johor</td>
<td>2948</td>
<td>2174</td>
<td>1514</td>
<td>419</td>
<td>478</td>
<td>145</td>
<td>542</td>
</tr>
<tr>
<td>Kelantan</td>
<td>1998</td>
<td>1311</td>
<td>268</td>
<td>115</td>
<td>95</td>
<td>61</td>
<td>161</td>
</tr>
<tr>
<td>Terengganu</td>
<td>2303</td>
<td>969</td>
<td>311</td>
<td>187</td>
<td>188</td>
<td>82</td>
<td>213</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>21862</strong></td>
<td><strong>12389</strong></td>
<td><strong>10453</strong></td>
<td><strong>3430</strong></td>
<td><strong>4772</strong></td>
<td><strong>1483</strong></td>
<td><strong>6042</strong></td>
</tr>
</tbody>
</table>

Source: CIDB Website (2016)

According to CIDB, there were 7525 active contractors of grades G6 and G7 in Peninsular Malaysia that represented the study population. The unit of analysis for this research referred to the higher management levels of contractor companies from G6 or G7 contractors who had performed subcontracting work. These included owners, directors or project managers of the respective company. These contractors
can be parked in various categories of work (e.g. building work, civil work, mechanical and electrical, and trade). This is due to the nature of work for subcontractors with a wide range of specialties and skills.

In this research, the respondents were selected by using the simple random sampling method. “In simple random sampling, the researcher selects participants…. for the sample so that any individual has an equal probability of being selected from the population” (Creswell, 2009, p. 147). The reason behind using the simple random sampling method was to choose respondents who were representative of the population (Sekaran, 2003). This is because; a requirement of sound empirical research involves obtaining results from the study sample that are generalizable to the background population.

Bartlett, Kotrlik & Higgins (2001) provided a matrix of sample sizes based on population size, margin of error, and alpha value (see Table 4.11). In their study, they contended three items to consider in determining a suitable sample size for a research, which are: the primary variables of measurement, the alpha level, and the margin of error. In this research, continuous variables were primarily used in the survey questionnaire. These variables were embedded in sections B, C, and D where subcontractor bullying, factors of occurrence, and intention to quit had been measured (see Appendix A). Second, even though an alpha level of .05 is considered acceptable for most social science research, an alpha level of .01 is used in cases where decisions based on findings are critical or when the population is represented by large samples (Bartlett et al., 2001). Since the aim of this research is to develop a model for subcontractor bullying in the construction industry, an alpha value of .01 was selected to ensure sufficient data for this research. Lastly, the general rule
regarding the acceptable margin of error in social research suggests that for continuous data, a 3% margin of error is acceptable. Therefore, for the purpose of this research, the researcher chose a small margin of error (3%, or .03). For continuous data, using a margin of error of 3% and an alpha value of .01, the sample size for a population of 6294 G6 and G7 contractor firms in Malaysia should be 209 contractor firms (see Table 4.11).

Table 4.11 Table for determining the minimum returned sample size for a given population size for continuous and categorical data

<table>
<thead>
<tr>
<th>Population size</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Continuous data</td>
</tr>
<tr>
<td></td>
<td>(margin of error= .03)</td>
</tr>
<tr>
<td></td>
<td>alpha=.10</td>
</tr>
<tr>
<td></td>
<td>$t= 1.65$</td>
</tr>
<tr>
<td>100</td>
<td>46</td>
</tr>
<tr>
<td>200</td>
<td>59</td>
</tr>
<tr>
<td>300</td>
<td>65</td>
</tr>
<tr>
<td>400</td>
<td>69</td>
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<tr>
<td>600</td>
<td>73</td>
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<td>700</td>
<td>75</td>
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<td>800</td>
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<td>900</td>
<td>76</td>
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<tr>
<td>1000</td>
<td>77</td>
</tr>
<tr>
<td>1500</td>
<td>79</td>
</tr>
<tr>
<td>2000</td>
<td>83</td>
</tr>
<tr>
<td>4000</td>
<td>83</td>
</tr>
<tr>
<td>6000</td>
<td>83</td>
</tr>
<tr>
<td>8000</td>
<td>83</td>
</tr>
<tr>
<td>10000</td>
<td>83</td>
</tr>
</tbody>
</table>

Source: Bartlett et al., (2001)
4.7 Pilot Study

The pilot study was primarily conducted to identify the reliability and validity aspects of the questionnaire. According to Oppenheim (1992), content validity “establishes if the items or questions are a well-balanced sample of the content domain to be measured” (p. 162). In precise, ensuring content validity means making sure that the questions adequately cover the essence of the concept being measured. The content validation process allowed the researcher to verify that the questions asked are aligned with the present industry practices. Sekaran & Bougie (2010) explained that this can be achieved by expert review of an instrument. Following this suggestion, five respondents were involved in content validation for this pilot study. This step resulted in rewording and rephrasing of some questions, as well as other minor alterations. Adhering to the expert recommendations, the instrument was amended before it was administered for the pilot study.

4.7.1 Discussion of Pilot Study Results

The pilot study conducted in this research consisted of two phases. In the first phase, the target respondents of the questionnaire were G1 and G2 contractors listed under the CIDB Directory. Since the directory of subcontractors was unavailable in Malaysia, G1 and G2 contractors were chosen because they were in the lowest grade category of contractors in CIDB, and could represent subcontractors. The job value they can undertake in one project is within the RM 500,000 range and below, which is normally equivalent to subcontractor works in construction projects. Theoretically, the lowest part in the organisational pyramid chain is the most likely to get bullied.
(Salin, 2001). Twelve members of the G1 and G2 contractor groups were selected to be interviewed in the first phase of the pilot study.

Nevertheless, the outcomes of this pilot study displayed insignificant results to the study as all the respondents showed no bullying activities in their field of work. One respondent mentioned that this is likely to happen due to their nature involvement that is only work for a small project (not exceeding RM 200,000 and RM 500,000 for G1 and G2 contractors, respectively). Furthermore, most of the G1 and G2 contractors were unfamiliar with the construction terms and construction contracts. Some respondents even mentioned that they did not require a proper contract with the main contractor while doing the job. There are some regulatory arrangements for contractors to adhere to in obtaining CIDB license to procure a construction job. These regulatory arrangements are level of knowledge, number of qualified technical personnel, years of experience, and construction skills certificates. Thus, these G1 and G2 contractors usually lack on these arrangements in comparison to G7 contractors. According to Rothwell & Zegveld (1982), a small organisation is always challenged due to its characteristic of the limited number of staffing and capabilities, lack of time and resources, low cash flow, as well as lack of expertise and skills. Hence, G1 and G2 contractors were considered as unsuitable to become the target respondents for this research.

After discussing with both supervisors, the target respondents were shifted to G7 contractors listed under the CIDB directory, mainly because G7 contractors reflect huge conglomerates that undertake projects worth more than RM 10 million, hence having a number of subcontracting work in the project to assist the main contractor. Furthermore, a G7 contractor company possesses adequate knowledge in
construction projects, when compared to those G1 and G2 (Hanif, 2011). Thus, five respondents were chosen for the pilot study. The respondents derived from the higher management levels of the contractor companies; either the owner or the director or any position of higher management levels of the subcontractor companies (i.e. project manager).

As a result, the findings obtained from the G7 contractors differed from those retrieved from G1 and G2 and there was agreement to bullying act. The time taken to answer the questions was between 15 and 20 minutes. Based on the comments provided by the respondents in the pilot study, several weaknesses of the questionnaire were identified. The details of commentaries made by the respondents are listed in the following:

1. The written instruction for every question should be provided on the top of each page.

2. The researcher identified some unclear or ambiguous questions, which were looked into as the respondents pondered a little longer and enquired more about the questions. Hence, the respondents were asked to give their opinions on that. Some terms were also included in the questionnaire to ease comprehension of the questions. For example, the term ‘contractor’ used in Section B was replaced with ‘main contractor’ as subcontractor has a positive relationship with the main contractor. Apart from that, in question three of Section C, the respondent pointed that ‘as soon as I can find a better job, I’ll leave this one’ as somewhat unsuitable in construction project as subcontractors are bound to contracts.
3. A respondent suggested to move Section D (background of the respondents) to Section A.

The reliability of the measures was assessed based on Cronbach alpha coefficient. Churchill & Peter (1984) stated that reliability should be the first measure in assessing the quality of the instrument. Generally, the lower acceptance limit of Cronbach’s alpha is between 0.60 and 0.70 (Hair, Black, Babin, & Anderson, 2010). As for pilot testing, Gliner & Morgan (2000) suggested the Cronbach’s alpha reliability coefficient of 0.64 or higher for self-developed instrument.

For the pilot test, the researcher anticipated a minimum alpha level of .64 (Gliner & Morgan, 2000), but the result of the pilot test was .679. Following the reliability test, the convergent and discriminant validity tests should be conducted using confirmatory factor analysis. Nonetheless, these assessments were impractical due to the small sample size. Hence, the assessment for validity was conducted after the final data collection.

4.8 Data Collection

The questionnaire was distributed in two stages; through mail (e.g. by post or email) and delivery-and-collection method (e.g. conferences and seminar). In the first stage of data collection, the post or email method was employed. Contractors were randomly chosen from the CIDB Directory Board throughout the nation. First, the researcher personally called the contractors to confirm if they have previously worked as subcontractors. If their answers were affirmative, they were asked if they
were willing to participate in this research. They were also enquired if they preferred to receive the questionnaire via hard copy posted to their office or through email that contained a link to the questionnaire attached. The email served as an alternative to the contractors because it is faster and easily accessible than post mail. This method of delivery was also preferred by the contractors due to their nature of work who were always not in the office, but at the construction site.

Distribution of questionnaires was administered from August 2016 until January 2017. A total of 350 sets of questionnaires were sent to the selected respondents. A duration of three months was given to respondents since they often cited lack of time or a “too busy schedule” when asked to complete the questionnaire. Later, the researcher called to the contractors’ offices to remind them about the questionnaire within the three-month period. During this stage, 108 respondents submitted their questionnaires. From 108 respondents, only 32 firms returned the questionnaire within the time frame given. The other respondents replied either in the last minute or later, but the researcher continued to accept their submission because that is the norm in construction management studies.

Table 4.12 Descriptive Statistics

<table>
<thead>
<tr>
<th>Description</th>
<th>Mailing</th>
<th>Hand-carry</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaire distributed</td>
<td>350</td>
<td>150</td>
<td>500</td>
</tr>
<tr>
<td>Questionnaire returned with response</td>
<td>108</td>
<td>102</td>
<td></td>
</tr>
<tr>
<td>Questionnaire returned without complete response</td>
<td></td>
<td>48</td>
<td></td>
</tr>
<tr>
<td><strong>Final usable questionnaire</strong></td>
<td>108</td>
<td>102</td>
<td>210</td>
</tr>
<tr>
<td>Early response (first three months)</td>
<td>32</td>
<td>102</td>
<td></td>
</tr>
<tr>
<td>Late response (after three months)</td>
<td>76</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>108</td>
<td>102</td>
<td>210</td>
</tr>
</tbody>
</table>
In the second stage, a part of the research data were retrieved from seminars and training courses held by CIDB Holdings. Since its establishment, many training courses and seminars have been held in annual basis. Around 60 seminars and training courses were planned for year 2016 in order to assist the key players (mainly contractors) in the construction industry. The cost of each training course was calculated based on the firms and their specialisation. Such seminars and training courses are mainly attended by contractors registered under the CIDB as it serves as an official authority in Malaysia’s construction industry.

Although numerous seminars were held by CIDB Holdings for year 2016, the researcher only attended seminars as suggested by the assistant director of CIDB to collect data suitable for this field of study. Table 4.13 presents the seminars attended and the number of respondents gathered.

Table 4.13 Number of respondents and seminars attended

<table>
<thead>
<tr>
<th>Seminars</th>
<th>No. of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seminar on Quality Management in the Construction Industry 2016</td>
<td>51</td>
</tr>
<tr>
<td>Penyelenggaraan Bangunan Mekanikal dan Elektrikal</td>
<td>26</td>
</tr>
<tr>
<td>Effective Maintenance, Repair and Avoiding Building Defects</td>
<td>25</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>102</strong></td>
</tr>
</tbody>
</table>

In order to identify contractors from the seminar participants, the researcher was given permission and time by the organiser to approach the participants during break hours. The participants were enquired if they have worked as subcontractors
and if they answered ‘yes’, then the survey questionnaire was handed to them to complete. All the selected respondents were given 30 minutes to complete the survey. During this stage, 150 questionnaires were returned. However, after a final screening, only 102 questionnaires were deemed suitable for this research.

In total, 500 questionnaires were distributed to respondents from June 2016 until January 2017. From these, only 210 questionnaires were returned to the researcher. This meant that the response rate of this research was 42%. Low response rates are normal in the workplace bullying field of study due to the sensitive nature of the topic (Carter, Thompson, Crampton, Morrow, Burford, Gray & Illing, 2013; Djurkovic et al., 2008; Björkqvist, Osterman, & Hjelt-Back, 1994). Furthermore, in the construction management field, this response rate is appropriate and acceptable (Takim, Akintoye, & Kelly, 2004). This is also in line with past studies in the Malaysian construction industry, where there was difficulty gaining access to companies (Ofori & Chan, 2001; Adnan & Morledge, 2003). The response rate is, therefore, adequate for analysis in this research.

4.9 Data Analysis

Data analysis refers to the process in which data are reviewed with the intention to extract useful information and develop research conclusions. Data are collected and analysed to answer questions, to test hypotheses, and to disprove theories (Ader & Mellenbergh, 2008). There are several approaches and techniques for analysing data in response to the specific nature or field of a research. In this research, two main stages of data analysis had been involved. The first stage was the preliminary analysis, while the second was SEM.
According to Fellows and Liu (2015), the first thing to do in data analysis is to examine the raw data collected in order to find emerging patterns within them. The preliminary processes conducted to this end were editing data, handling blank responses, coding data, categorising data, creating data files, and carrying out some statistical calculations. The purpose of these processes was to ensure data consistency and to allow the outcomes to be significantly interpreted later on.

The data gathered from the questionnaires were analysed by using IBM Statistical Packages for Social Science (SPSS) version 24. According to Zikmund (2003), SPSS is extensively used by researchers as a tool for data analysis. In this research, the software was also engaged to screen data for coding, to detect outliers so as to prevent inaccuracies in future analysis. In generating the whole summary of the data collected, this software package was used to calculate frequencies, mean values, and standard deviations, as well as to execute t-test for early and late response tests.

In the second stage, SEM was employed to test the hypotheses put forth in the previous chapter. According to Kline (2005), the SEM method has become one of the most common tools in academic research and it is especially useful in behavioural and social science fields. SEM is used in many forms of models to demonstrate the correlations among the observed variables. It has similar basic goal and quantitatively tests the theoretical model hypothesised by the researcher (Schumacker & Lomax, 2010). The literature also authorises that SEM is the distinguished method of multivariate data analysis (Hershberger, 2003). SEM is used to test hypothesised relationships between factors and allows for a complete investigation of all hypothesised relationships. It concurrently incorporates
relationships among multiple dependent variables in a research (Byrne, 2006). There are two types of SEM: co-variance based structured equation modelling (CB-SEM), and variance-based SEM called Partial Least Square (PLS). For the purpose of this study, PLS-SEM was selected.

4.10 Partial Least Square

Partial Least Square is a latent variable modelling method to expand the described variance of the endogenous latent constructs (Hui & Wold, 1982). PLS is a well-known modelling technique used to estimate path models where it combines factor analysis with linear regression (Hair et al., 2010). PLS-SEM is used in data analysis because (1) it uses less requirements in relation to sample size than other methods; (2) it does not necessitate normally-distributed input data; and (3) it can be used in complicated structural equation models with big numbers of constructs (Hair et al., 2010). PLS is suitable for theory development and prediction in exploratory analysis (Barroso, Carrion & Roldan, 2010). This research employed a Smart PLS regression modelling software for testing relationships in the hypotheses. PLS is widely used in empirical research and suits the nature of this study. This is because this research intended to develop the model of subcontractor bullying by predicting the relationship between factors of occurrence, subcontractor bullying and subcontractor intention to quit.

4.10.1 Assessment of the Measurement Model

There are two types of measurement models in PLS-SEM: reflective models and formative models. A reflective model is where the direction of causality is from
the construct to the indicator. Hulland (1999) stated that reflective indicators are highly correlated to each other. A formative model, on the other hand, is where the direction of causality is from the indicator to the construct. Formative indicators usually have positive, negative and zero correlations to each other. This research used the first type of measurement model, which was reflective first order and reflective second order.

4.10.1.1 The Reflective Measurement Model

There are five items to check when assessing a reflective measurement model. They are: internal consistency reliability, construct validity, convergent validity and discriminant validity.

*Internal consistency reliability (CR):* Internal consistency reliability is measured by composite reliability (CR). CR does not assume equal indicator loading and ranges from 0 to 1 (Hair, Hult, Ringle, & Sarstedt, 2014). Hair et al., (2010) recommended a cut-off point of 0.7 or higher for CR in order to indicate internal consistency between items and for the sake of reliability (Gefen, Straub, & Boudreau, 2000).

*Construct Validity:* The measurement model will provides indicator reliability after running the PLS-SEM algorithm. This indicator reliability will come in terms of loadings. Gefen et al., (2000) suggested the indicator's outer loadings should be exceeding 0.70. Indicators with an outer loading between 0.40 and 0.70 should be considered for elimination only if deletion leads to an increase in composite reliability (CR) and if the average variance extracted (AVE) is over the suggested threshold value.
**Convergent Validity:** Convergent validity is the amount of measure of two constructs that should correlate positively with each other. Convergent validity is calculated through outer loadings and average variance extracted (AVE) (Barroso et al., 2010). Hair et al., (2010) suggested that AVE should be at 0.5 or exceeding 0.50 to indicate convergent validity as significance.

**Discriminant validity:** Discriminant validity is defined as the dissimilarity in the measurement of different constructs. It is the degree of measure of two different constructs that are truly distinct from one another. According to Fornell & Larcker (1981), “discriminant validity is established if a latent variable’s AVE is larger than the common variances (squared correlations) of this latent variable with any other of the model’s constructs.” (p. 46). Hair et al., (2014) suggested the use of AVE’s square root value for comparing the corresponding correlation values of variables. This is because the SEM variance method is sensitive and tends to overestimate indicators/item loading (Hui & Wold, 1982; Lohmöller, 1989). Discriminant validity can also be measured through cross-loadings. Hair et al., (2010) recommended that the limit values for loading should be 0.5 to be significant.

### 4.10.2 Assessment of the Structural Model

A model validity is calculated using four assessment methods; namely, path coefficients, explained variance (R2), effect size (f2) and predictive relevance (Q2 and Q2 effect size) (Urbach & Ahlemann, 2010). However, Hair et al., (2014) pointed out that the collinearity assessment should be performed first.

**Path coefficient (p):** The path coefficient signifies the hypothesised relationships between the construct and has a standardised value between -1 and +1.
Estimated path coefficients close to +1 represent a strong positive relationship, and values closer to -1 signify a strong negative relationship (Hair et al., 2010). The path coefficient p is represented by t-values and are generated using a bootstrapping procedure in SmartPLS. Hair et al., (2010) stated that the cut-off value is selected based on the p-value where the following applies: *p<0.05 (critical t value=1.645) and **p<0.01 (critical t-value=2.326). In other words, if t-values are greater than 1.645* (p<0.05) or t-values are greater than 2.326** (p<0.01), this indicates that the hypothesis is supported.

**Explained variances, R2 (coefficient of determination):** There are some guidelines to consider regarding the value of the R square. Chin (1998) mentioned that the R2 values are assessed based on three values; namely, substantial (0.67), moderate (0.33) and (0.19) weak. Falk & Miller (1992) suggested that R2 values be equal to or greater than 0.10 in order for the explained variance of a particular endogenous construct be deemed adequate. While Cohen, Cohen, West & Aiken (2003) stated R2 is considered small if R2 ranges between 0.02-0.12; medium 0.13-0.25 and large, 0.26 and above.

**Effect size, f2:** The effect size can be measured by assessing the changes in R2 values when a specific exogenous construct is omitted during the evaluation of R2 values of all exogenous constructs. Hair et al., (2014) provided guidelines and cut-off points when assessing the effect size. These points are considered small (0.02), medium (0.15) and large (0.35).

**Predictive Relevance Q2:** Q2 is important for measuring how perceived values are reproduced by the model. It is assessed by either Cross Validated Communality (H2) or Cross Validated Redundancy (F2). H2 is where the missing values of the
manifest data are estimated using latent variable scores and factor loadings. F2 is where the score of the latent endogenous variables are estimated using the scores of the latent exogenous variables and the weights in the measurement model. Chin (1998) stated that if Q2 is greater than 0, this means the structural mode has predictive relevance. If Q2 is less than 0, the model lacks predictive relevance. Likewise, H2 and F2 should be greater than the threshold of 0 (Fornell & Cha, 1993). Hair, Ringle, & Sarstedt, (2011) stated that the effect size of Q2 values of 0.02, 0.15 and 0.35 are considered small, medium and large, respectively.

**4.10.3 Mediator Analysis**

The mediator is a generative instrument where the principal independent variable is able to influence the dependent variable of interest (Baron & Kenny, 1986). Mediation is best performed in the case of a strong relation between predictor and criterion variables. Mediation occurs when independent variables cause a mediator which later causes a dependant variable; provided there is significant association between the independent variable and the dependent variable (MacKinnon, Lockwood, & Williams, 2004).

Hair et al., (2014) stated that the purpose of mediation is to explain why a relationship between exogenous and endogenous constructs happens when the researcher is not sure why such a relationship exists (Hair et al., 2014). The mediator in this research is subcontractor bullying, the independent variable is factors of occurrence (e.g. main contractor leadership, work organisation and construction culture) and the dependant variable is intention to quit.
Baron & Kenny (1986) proposed that a sequences of regression models should be done to examine the mediation effect; specifically, regression of the mediator on the independent variable, regression of the dependent variable on the independent variable and regression of the dependent variable on both the independent variable and the mediator. However, Hayes (2009) argued that SEM has the analysis capabilities that would allow researchers to examine the mediation effect. In mediator effect assessment, the indirect effect is significant at $p<0.05$ if $t$-value $>1.960$, and $p<0.01$ if $t$ value$>2.576$ for the two-tailed test (Coakes, 2013).

Hair et al., (2014) suggested that researchers should follow Preacher & Hayes (2004) and Preacher & Hayes (2008)’s method. Their method uses a bootstrapping technique for the sampling distribution of the indirect effect; this works for simple and multiple mediation models. A bootstrapping technique is a non-parametric method to effect-size estimation and hypothesis testing that makes no assumption about the shape of the variable’s distribution or the sampling distribution of the statistics. It can be employed in a small sample sizes with more certainty. Thus, this method suited the SmartPLS method. This method also shows higher levels of statistical power compared to the Sobel test, a method introduced by Baron & Kenny (1986).

In the final mediator effect assessment, variance accounted for (VAF) is determined. VAF is the amount of the indirect effect relative to the total effect. Hair et al., (2014) proposed that a value of more than 80% is to be considered as full mediation, whereby, 20% to 80% is to be considered as partial mediation and no mediation takes place if the VAF is less than 20%.
4.11 Summary

This chapter presents several methodological issues relevant to this research. This research comprised of three main phases in the process, as illustrated in Figure 4.1. A substantial literature review was used to discover unresolved problems and gaps in the research area, as well as the appropriate methods to address these issues.

Based on the information initially gathered, a single instrument survey that only used questionnaire was conducted for three months. In order to guarantee the reliability of the instrument, the questionnaire was piloted thoroughly over two phases. Sophisticated data analysis procedures were employed in this research and they helped in the development of the model. The next chapter discusses the descriptive analysis and the results of data analysis.
CHAPTER 5
ANALYSIS AND RESULTS

5.1 Introduction

This chapter reports on the analysis of data collected from respondents who completed and returned the survey questionnaire. It starts with description and background of the respondents is discussed. Next, it explains the data collected and the preparation undertaken prior to the data analysis. In here, procedures used to purify the data are described. Result of t-test to assess whether the means of two groups are statistically different are described.

Next, the measurement model of this research is assessed. An result form internal consistency reliability, construct reliability, convergent validity and discriminant validity are presented. Further, a report on the structural model to test the hypotheses developed in chapter four is examined. Results of path coefficients, explained variance (R2), effect size (f2) and predicative relevance (Q2 and Q2 effect size) are presented in the next subsection. Next, result of mediation effect are been presented and the summary for all hypotheses are reported in a table form. Finally, a short chapter summary concludes this chapter.

5.2 Profiles of Respondent

The analysis of the respondent’s demographic should be helping in generating the confidence towards the credibility of the data collected. It was therefore considered necessary to first illustrate the characteristics of the samples prior to
performing the main data analysis. According to Egemen & Mohamed (2006), a background study on general characteristics of the respondents are vital before interpreting the research findings. The analyses conducted will ensure a good spread of personal experience in the sample, a considerable knowledge of the activities associated with construction among the respondents and the respondents are noteworthy (Takim & Adnan, 2009). Table 5.1 indicates the profiles of the respondents in terms of their age, academic background, years of experience, contractor’s grade and class according to CIDB, year of contractor’s firm and category (See Appendix B).

Table 5.1 Respondent’s Demographic Profile

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 - 30 years old</td>
<td>31</td>
<td>14.8</td>
</tr>
<tr>
<td>31 - 40 years old</td>
<td>66</td>
<td>31.4</td>
</tr>
<tr>
<td>41 - 50 years old</td>
<td>74</td>
<td>35.2</td>
</tr>
<tr>
<td>More than 51 years old</td>
<td>39</td>
<td>18.6</td>
</tr>
<tr>
<td><strong>Academic Background</strong></td>
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<td></td>
</tr>
<tr>
<td>Diploma</td>
<td>45</td>
<td>21.4</td>
</tr>
<tr>
<td>Bachelor Degree</td>
<td>163</td>
<td>77.6</td>
</tr>
<tr>
<td>Master/ PhD</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Years of experience</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 - 4 years</td>
<td>24</td>
<td>11.4</td>
</tr>
<tr>
<td>5 - 10 years</td>
<td>47</td>
<td>22.4</td>
</tr>
<tr>
<td>11 - 16 years</td>
<td>75</td>
<td>35.7</td>
</tr>
<tr>
<td>17 - 22 years</td>
<td>55</td>
<td>26.2</td>
</tr>
<tr>
<td>More than 23 years</td>
<td>9</td>
<td>4.3</td>
</tr>
<tr>
<td><strong>Grade or class of registration</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 6</td>
<td>84</td>
<td>40.0</td>
</tr>
<tr>
<td>Grade 7</td>
<td>126</td>
<td>60.0</td>
</tr>
<tr>
<td><strong>Age of the firm</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 - 4 years</td>
<td>16</td>
<td>7.6</td>
</tr>
<tr>
<td>5 - 10 years</td>
<td>54</td>
<td>25.7</td>
</tr>
</tbody>
</table>
From the preliminary study, the respondents are largely from the age of 41 – 50 years old (35.2%) and 31 – 40 years old (31.4%). With respect to contractor qualifications, 77.6% of the respondents have a bachelor degree, followed by those with a diploma at 21.4% and those with a master/ PhD at 1.0%. The majority of the respondents have higher qualifications. This is important to ensure that the responses received were from appropriate sources.

Most of the respondents who participated in the survey had more than 10 years working experience with construction projects. The majority of the respondent had 11 to 16 years experience (35.7%), followed by respondent who had 17 – 22 years of experience (26.2%) and 4.3% of the respondents had more than 23 years of experience in construction industry. This shows that most of the respondent were highly experienced individuals who had worked in construction projects for more than ten years. Therefore, this profile confirms the considerable experience on which the responses to this survey were based on.

Majority of the respondent are from G7 contractor (60%) while others are from G6 contractor (40%). Furthermore, 38.1% of the respondents have worked in 11 – 16 years of experience of firm, followed by 27.1% for 17 – 22 years old firm and 25.2% for more 5 – 10 years old firm. This shows that most of these firms are well
established and would most likely to have a higher experience on the construction project.

The largest group of the respondent are from building contractors (48.6%), followed by mechanical and electrical (M&E) contractors (28.1%) and only 1.0% of contractors were involved in trade.

5.3 Preliminary Data Analysis

After finishing with the data collection stage, a preliminary data analysis is conducted to confirm that the data was interpreted into a form that was suitable for analysis and capable of being deduced into important results (Sekaran, 2003). Main problems with preliminary analysis are the precision of data input, missing data observations, outliers, and distribution-related issues like normality, skewness and kurtosis, etc. (Hair, Anderson, Tatham, & Black, 1998). The basic steps involved in this stage are data editing, data coding and data screening.

5.3.1 Data editing and coding

The idea of data editing is to ensure the unity of the data collected. It also serves to control the quality of the collected data. It usually involves of examining the data collection forms in term of omissions, legibility and its consistency in classification (Zikmund, 1994). Following recommendation from Sekaran (2003), respondents who responded to minimum of 75 percent of the questionnaire are considered for sampling purposes in this research. At this step, none of the questionnaire were omitted.
Then, the raw data were manually entered into a data file in SPSS. There are two main techniques to exercise this process; pre-coding or post-coding (Malhotra, 2004). This research used the pre-coding method whereby all questionnaire items are pre-coded with numerical values. Table 5.2 summarises the scale items and their codes.

Table 5.2 Scale items and codes

<table>
<thead>
<tr>
<th>Latent Constructs</th>
<th>Scale Items</th>
<th>Item Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work-based Bullying</td>
<td>Withholding information</td>
<td>BW1</td>
</tr>
<tr>
<td></td>
<td>Work outside the jobscope</td>
<td>BW2</td>
</tr>
<tr>
<td></td>
<td>Ignore my opinion</td>
<td>BW3</td>
</tr>
<tr>
<td></td>
<td>Excessive monitoring</td>
<td>BW4</td>
</tr>
<tr>
<td></td>
<td>Work not acknowledged</td>
<td>BW5</td>
</tr>
<tr>
<td></td>
<td>Find fault in my work</td>
<td>BW6</td>
</tr>
<tr>
<td></td>
<td>Transfer enormous work</td>
<td>BW7</td>
</tr>
<tr>
<td></td>
<td>Given unimaginable task</td>
<td>BW8</td>
</tr>
<tr>
<td></td>
<td>Humiliated and ridiculed about work</td>
<td>BW9</td>
</tr>
<tr>
<td></td>
<td>Given work with unreasonable task</td>
<td>BW10</td>
</tr>
<tr>
<td></td>
<td>Not been paid</td>
<td>BW11</td>
</tr>
<tr>
<td></td>
<td>Blame if something unfortunate happened</td>
<td>BW12</td>
</tr>
<tr>
<td></td>
<td>Forced to work long hours</td>
<td>BW13</td>
</tr>
<tr>
<td></td>
<td>Excessive workload</td>
<td>BW14</td>
</tr>
<tr>
<td></td>
<td>Unfair payment</td>
<td>BW15</td>
</tr>
<tr>
<td></td>
<td>Delayed payment</td>
<td>BW16</td>
</tr>
<tr>
<td>Physical Intimidating Bullying</td>
<td>Intimidating behaviour</td>
<td>BP17</td>
</tr>
<tr>
<td></td>
<td>Threats of violence</td>
<td>BP18</td>
</tr>
<tr>
<td></td>
<td>Insulting messages</td>
<td>BP19</td>
</tr>
<tr>
<td></td>
<td>Threats of making life difficult</td>
<td>BP20</td>
</tr>
<tr>
<td>Main Contractor Leadership</td>
<td>Works out agreement</td>
<td>CM1</td>
</tr>
<tr>
<td></td>
<td>Agreement drafted only by main contractor</td>
<td>CM2</td>
</tr>
<tr>
<td></td>
<td>Not given enough time to read agreement</td>
<td>CM3</td>
</tr>
<tr>
<td></td>
<td>Not chance to negotiate about agreement</td>
<td>CM4</td>
</tr>
<tr>
<td></td>
<td>Bias in subcontracting agreement</td>
<td>CM5</td>
</tr>
<tr>
<td></td>
<td>Agreement not clear</td>
<td>CM6</td>
</tr>
<tr>
<td></td>
<td>MC not understanding problems</td>
<td>CM7</td>
</tr>
<tr>
<td></td>
<td>MC not use his power to help</td>
<td>CM8</td>
</tr>
<tr>
<td></td>
<td>MC not responsible for his job</td>
<td>CM9</td>
</tr>
<tr>
<td></td>
<td>Poor management skills</td>
<td>CM10</td>
</tr>
<tr>
<td></td>
<td>Time estimated is irrelevant</td>
<td>CM11</td>
</tr>
<tr>
<td></td>
<td>Poor project team</td>
<td>CM12</td>
</tr>
<tr>
<td></td>
<td>Project assistant is not enough</td>
<td>CM13</td>
</tr>
<tr>
<td>Work organisation and Job Design</td>
<td>Not sharing information</td>
<td>CM14</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-------------------------</td>
<td>------</td>
</tr>
<tr>
<td></td>
<td>Standard of procedure is not clear</td>
<td>CP15</td>
</tr>
<tr>
<td></td>
<td>Poor communication between main contractor and subcontractor</td>
<td>CP16</td>
</tr>
<tr>
<td></td>
<td>Unclear jobscope</td>
<td>CP17</td>
</tr>
<tr>
<td></td>
<td>Poor planning and scheduling</td>
<td>CP18</td>
</tr>
<tr>
<td></td>
<td>Many variation orders (V.O)</td>
<td>CP19</td>
</tr>
<tr>
<td>Construction Culture</td>
<td>Long working hours</td>
<td>CC20</td>
</tr>
<tr>
<td></td>
<td>Excessive number of parties</td>
<td>CC21</td>
</tr>
<tr>
<td></td>
<td>Dangerous working condition</td>
<td>CC22</td>
</tr>
<tr>
<td></td>
<td>Hostile environment</td>
<td>CC23</td>
</tr>
<tr>
<td>Intention to quit</td>
<td>To quit this industry</td>
<td>TQ1</td>
</tr>
<tr>
<td></td>
<td>Actively looking for a new project</td>
<td>TQ2</td>
</tr>
<tr>
<td></td>
<td>To quit this job</td>
<td>TQ3</td>
</tr>
<tr>
<td></td>
<td>To quit this project</td>
<td>TQ4</td>
</tr>
</tbody>
</table>

### 5.3.2 Data screening

A data screening was performed to make sure that data are accurately entered in the SPSS, free from outliers and to ensure that the distribution of variables are normal. Confirmation to normality is very critical as it is the assumption need to fulfil in applying SEM (Kline, 2005). Thus, the data file is assessed thoroughly. To ensure whether there was nothing wrong with the entered data, the whole data were calculated by the frequency descriptive test created with SPSS for each item in the questionnaire. The items were checked whether there are any values or answers which are out of defined range and values (in this research is between 1 to 5). After this evaluation, there was no incorrectly entered data.

In the case for missing data, the data frequencies table was created with SPSS and number of missing data cases were evaluated. In this research, there were four cases for missing data (BP17, BP18, BP19 and BP20). However, this missing data was not a serious problem. Instead of removing data and losing valuable information,
missing values were replaced with 999, as some researchers suggest (e.g., Hair et al., 1998). This led to a more complete data set for further analysis.

Outliers were recognized by using univariate (histograms, box-plots and standardised z score). Checking for outliers is essential because an outlier could affect the data normality which could then misrepresent the statistical results (Tabachnick & Fidell, 2001). On examining the outlier cases it was found that there was nothing unusual about the respondents other than their extreme scores. According to Dancey & Reidy (2004), this reason is acceptable for keeping the cases in the data set. The decision was made to sustain these respondents in the analysis.

Skewness and kurtosis test were employed to check the normal distribution of the data. Skewness is a measure of the symmetry of a distribution; kurtosis is a measure of the flatness of a distribution compared to a normal distribution (Hair et al., 1998). To check for normality is important for structural equation modelling (SEM) because its first assumption is a multivariate normal distribution (Hair et al., 1998). Multivariate normality concerns not only the distribution of individual items, but also the distribution of variable combinations (Hooley, Fahy, Cox, Beracs, Fonfara, & Snoj, 1999).

The general guideline is that variables disrupt normality if they have values greater than ±3.29 (West, Finch, & Curran, 1995). Of the 47 observed items, skewness values ranged from -0.567 to 1.866, and kurtosis values ranged from -1.019 to 3.314 (see Appendix C). Specifically, the 20 items of subcontractor bullying ranged from -0.559 to 1.866 for skewness and -0.931 to 3.314 for kurtosis. The 24 items for the factor of occurrence of subcontractor bullying ranged from -0.543 to 0.257 for skewness and -1.019 to 0.047 for kurtosis. The four items for intention to
quit construct ranged from -0.567 to 0.586 for skewness and -0.978 to -0.295 for kurtosis. Most of the 47 items is not exceeded ±3.29 except for BP20. Following this suggestion, BP20 was omitted in this stage to ensure the data is suitable.

5.4 T-test Analysis

5.4.1 Response rate

Table 5.3 Differences in the major variables by response rate

<table>
<thead>
<tr>
<th>Variables</th>
<th>Early Response (Mean)</th>
<th>Late Response (Mean)</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work-based bullying</td>
<td>3.1144</td>
<td>2.9956</td>
<td>1.150</td>
</tr>
<tr>
<td>Physical intimidating bullying</td>
<td>1.8134</td>
<td>1.7192</td>
<td>0.949</td>
</tr>
<tr>
<td>Main contractor leadership</td>
<td>2.8815</td>
<td>2.7583</td>
<td>1.232</td>
</tr>
<tr>
<td>Work organisation and job design</td>
<td>3.0373</td>
<td>2.8161</td>
<td>0.227</td>
</tr>
<tr>
<td>Construction culture</td>
<td>3.1418</td>
<td>3.1355</td>
<td>0.923</td>
</tr>
<tr>
<td>Intention to quit</td>
<td>2.4244</td>
<td>2.4033</td>
<td>0.924</td>
</tr>
</tbody>
</table>

An independent samples t-test was calculated to compare the response rate for early and late response. Table 5.3 shows the result of analysis of t-test of early and late response. In term of work-based bullying, the mean level for early response (m= 3.1144) are higher than mean for late response (m= 2.9956). There was no significant difference in the score for early and late response (t= 1.150). In term of physical intimidating bullying, the mean level for early response (m= 1.8134) are higher than mean for late response (m= 1.7192). There was no significant difference in the score for early and late response (t= 0.949).
In term of main contractor leadership, the mean level for early response (m= 2.8815) are higher than mean for late response (m= 2.7583). There was no significant difference in the score for early and late response (t= 1.232). In term of work organisation and job design, the mean level for early response (m= 3.0373) are higher than mean for late response (m= 2.8161). There was no significant difference in the score for early and late response (t= 0.227). In term of construction culture, the mean level for early response (m= 3.1418) are higher than mean for late response (m= 3.1355). There were no significant difference in the score for early and late response (t= 0.923).

In term of intention to quit, the mean level for early response (m= 2.4244) are higher than mean for late response (m= 2.4033). There was no significant difference in the score for early and late response (t= 0.924).

5.4.2 Post and Seminar

Table 5.4 Differences in the major variables by post and seminar

<table>
<thead>
<tr>
<th>Variables</th>
<th>Post (Mean)</th>
<th>Seminar (Mean)</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work-based bullying</td>
<td>2.907</td>
<td>2.735</td>
<td>1.053</td>
</tr>
<tr>
<td>Physical intimidating bullying</td>
<td>1.610</td>
<td>1.841</td>
<td>0.839</td>
</tr>
<tr>
<td>Main contractor leadership</td>
<td>2.918</td>
<td>2.682</td>
<td>1.801</td>
</tr>
<tr>
<td>Work organisation and job</td>
<td>3.101</td>
<td>2.956</td>
<td>0.206</td>
</tr>
<tr>
<td>design</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction culture</td>
<td>3.042</td>
<td>3.115</td>
<td>0.517</td>
</tr>
<tr>
<td>Intention to quit</td>
<td>2.284</td>
<td>2.213</td>
<td>0.818</td>
</tr>
</tbody>
</table>
An independent samples t-test was calculated to compare the questionnaire distributed through post and seminar. Table 5.4 shows the result of analysis of t-test of post and seminar method. In term of work-based bullying, the mean level for post method (m= 2.907) are higher than mean for seminar method (m= 2.735). There was no significant difference in the score for post and seminar method (t= 1.053). In term of physical intimidating bullying, the mean level for post method (m= 1.610) are higher than mean for seminar method (m= 1.741). There was no significant difference in the score for post and seminar method (t= 0.839).

In term of main contractor leadership, the mean level for post method (m= 2.918) are higher than mean for seminar method (m= 2.682). There was no significant difference in the score for post and seminar method (t= 1.801). In term of work organisation and job design, the mean level for post method (m= 3.101) are higher than mean for seminar method (m= 2.956). There was no significant difference in the score for post and seminar method (t= 0.206). In term of construction culture, the mean level for post method (m= 3.042) are lower than mean for seminar method (m= 3.115). There was no significant difference in the score for post and seminar method (t= 0.517).

In term of intention to quit, the mean level for post method (m= 2.284) are higher than mean for seminar method (m= 2.213). There was no significant difference in the score for post and seminar method (t= 0.818).

5.5  Common Method Variance

A common method variance is a systematic variance that can inflate or deflate a given relationship among variables. It presents when a single factor emerges from a
single factor affecting for most of the common variable in the data (Podsakoff & Organ, 1986). When collecting data from the individual contractors using a self-report questionnaire, the likelihood of common method variance is likely to occur. When a measurement error is high, there will resulting in miscalculated conclusions. Common method variance signifies the variance that is attribute to the measurement method rather than to the constructs the measures are supposed to represent. Common method variance is one of the major causes of measurement error and serves as a potential problem in behavioral research (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

Thus, Harman’s Single factor test was conducted to find whether the majority of the variance can be explained by a single factor and detect the issue of common method variance. The result revealed that when all 45 items were loaded into one general factor, the relevant single-factor represented only 23.44% of the total variance. Therefore, it shown that the developed measurement model was exempted to common method bias. Podsakoff et al., (2003) suggested that there will be an issue if a common factor explained more than 50% of the total variance. As shown in Appendix C, common method variance is not an issue in this research.

5.6 Goodness of Measurement Model

Two steps SEM method is adopted in this research to establish the goodness of model fit. The first step is to measure the measurement model for validity and reliability. The second step is to test the structural model for path coefficient significance and hypothesis testing (Hair et al., 2010).
Six (6) constructs were involved in the model used in this research. The constructs are main contractor leadership, work organisation and job design, construction culture, work-based bullying, physical intimidating bullying and intention to quit. These constructs are categorised as ‘reflective’, because the adopted measurement are highly correlated with one another. The main contractor leadership, work organisation and job design and construction culture are the first order factor in this research. While work-based bullying and physical intimidating bullying are the second order factors. To assess the measurement model of a reflective item loadings, an average variance extracted (AVE), composite reliability (CR) and discriminate validity are deployed (Hair et al., 2010).

5.6.1 Construct Validity and Reliability

A construct validity is the degree to which a set of measured variables actually represent the latent constructs that are designed to measure. Reliability is a degree of which a set of indicators of a latent construct is internally consistent, and it is inversely related to measurement error. Construct validity can be represented by convergent and discriminant validity, and reliability by composite reliability.

5.6.1.1 Convergent validity

Convergent validity is the amount to which indicators of several items of all constructs unites and distribute a high proportion of variance in common. Hair et al., (2010) mentioned a convergent validity can be calculated from the value average variance extracted (AVE). AVE is the amount of convergence between a set of items representing latent construct. To consider satisfactory for convergent validity, the value of AVE should be 0.5 or higher than that.
Whereas for outer loading measurement, Fornell & Larcker (1981) suggested the value should be more than 0.7. If it is between 0.4 and 0.7, items can be retained or removed as long as AVE reaches 0.5 threshold or cut-off values. If it is less than 0.4, the reflective items should be removed. This is to guarantee the measurement items are acceptable for convergent validity.

For the first time assessment, the AVE reported for all construct in the research are exceeding 0.5 except for main contractor leadership (0.369) and work-based bullying (0.322). According to Hair et al., (2010), the value for item loadings can range from 0.5 to 0.7 as long as AVE above 0.5. From the Quality Criteria Report, 17 low item loadings were removed until AVE above 0.5 achieved.

Thus in the final assessment, AVE for main contractor leadership increased from to 0.322 to 0.516 and AVE for work-based bullying also increased from 0.369 to 0.508. All AVEs for all 9 constructs after deletion were showed in Table 5.5. Subsequently all AVEs and item loadings are greater than the suggested cut-off value of 0.5, thus, there is no issue in the measurement model.
<table>
<thead>
<tr>
<th>Construct</th>
<th>Type</th>
<th>No of items</th>
<th>Items deleted</th>
<th>Item description</th>
<th>Outer loadings</th>
<th>AVE</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main contractor Leadership</td>
<td>Reflective</td>
<td>8</td>
<td>6</td>
<td>CM5, CM6, CM7, CM8, CM9, CM10, CM11, CM12</td>
<td>0.763, 0.726, 0.760, 0.669, 0.752, 0.701, 0.707, 0.663</td>
<td>0.516</td>
<td>0.895</td>
</tr>
<tr>
<td>Work organisation and Job Design</td>
<td>Reflective</td>
<td>4</td>
<td>1</td>
<td>CP15, CP16, CP17, CP18</td>
<td>0.637, 0.867, 0.875, 0.734</td>
<td>0.615</td>
<td>0.863</td>
</tr>
<tr>
<td>Construction Culture</td>
<td>Reflective</td>
<td>4</td>
<td>0</td>
<td>CC20, CC21, CC22, CC24</td>
<td>0.579, 0.736, 0.869, 0.699</td>
<td>0.530</td>
<td>0.816</td>
</tr>
<tr>
<td>Work-based Bullying</td>
<td>Reflective</td>
<td>6</td>
<td>10</td>
<td>BW5, BW10, BW13, BW14, BW15, BW16</td>
<td>0.682, 0.670, 0.753, 0.791, 0.745, 0.623</td>
<td>0.508</td>
<td>0.860</td>
</tr>
<tr>
<td>Physical Intimidating Bullying</td>
<td>Reflective</td>
<td>3</td>
<td>0</td>
<td>BP17, BP18, BP19</td>
<td>0.891, 0.704, 0.554</td>
<td>0.534</td>
<td>0.768</td>
</tr>
<tr>
<td>Intention to Quit</td>
<td>Reflective</td>
<td>3</td>
<td>0</td>
<td>TQ1, TQ3, TQ4</td>
<td>0.908, 0.849, 0.757</td>
<td>0.706</td>
<td>0.878</td>
</tr>
</tbody>
</table>

Note:
1. AVE = Average variance extracted; CR = composite reliability
Figure 5.1 Measurement model results – Outer loading, R square, t-value
Figure 5.1 shows a measurement model of this research. Result of outer loadings, R square and path coefficient has been described in this figure. The result has been transcribed in Table 5.5 for a readable analysis. In the factor of occurrence of subcontractor bullying, there are three constructs involved which are main contractor leadership, work organisation and job design and construction culture. In main contractor leadership construct, there are eight items has been retained and the outer loadings are in range from 0.663 to 0.763. For work organisation and job design, the outer loadings are in range from 0.637 to 0.875 for four items retained. While for construction culture, there four items remained and the outer loading indicated a range from 0.579 to 0.869. For subcontractor bullying, there are two constructs involved: work-based bullying and physical intimidating bullying. In work-based bullying, only six items remained and the outer loading shows a range from 0.623 to 0.791. For physical intimidating bullying, there three items in the range of 0.554 to 0.891. For intention to quit, three original items are remained with the range of outer loading from 0.757 to 0.908.

From these six constructs, there are eight path coefficient to determine if the theoretical hypotheses can be justified empirically. Figure 5.1 shows that t-value from main contractor leadership to work-based bullying is 0.369 and physical intimidating bullying is 0.229. For work organisation and job design, the t-value shows 0.197 and 0.07 to work-based bullying and physical intimidating bullying respectively. For construction culture, the t-value indicated 0.222 and 0.169 to work-based bullying and physical intimidating bullying. In the relationship between work-based bullying and intention to quit, the t-value is 0.099 while for physical intimidating bullying, the t-value is 0.220.
5.6.1.2 Discriminant validity

Discriminant validity signifies the amount of assumed construct is different from other constructs. Thus high discriminant validity provides evidence that a construct is unique and not a reflection of other constructs. Discriminant validity is established when two distinctly concepts are not interrelated with each other (Sekaran & Bougie, 2010). For PLS Analysis, discriminant validity can be calculated by the cross loadings and Fornell-Larcker criterion. To establish the discriminant validity, PLS algorithm technique is performed to produce item loadings and cross loadings. A discriminant validity is established when loading of a latent construct is higher that all remaining constructs. According to Fornell-Larcker (1981)’s criterion, the squared root of each construct AVEs should be higher than the correlation between the latent constructs. In Table 5.6, the results of Fornell-Larcker criterion shows all items have higher loading for each constructs than the cross loading in other constructs in the model. This results show there is a satisfactory discriminant validity of different constructs in this model.

Table 5.6 Discriminant validity of construct – Fornell-Larcker Criterion

<table>
<thead>
<tr>
<th></th>
<th>CC</th>
<th>TQ</th>
<th>CM</th>
<th>PB</th>
<th>CP</th>
<th>WB</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC</td>
<td>0.728</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TQ</td>
<td>0.154</td>
<td>0.841</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CM</td>
<td>0.404</td>
<td>0.289</td>
<td>0.719</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PB</td>
<td>0.285</td>
<td>0.255</td>
<td>0.337</td>
<td>0.731</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CP</td>
<td>0.328</td>
<td>0.325</td>
<td>0.555</td>
<td>0.254</td>
<td>0.784</td>
<td></td>
</tr>
<tr>
<td>WB</td>
<td>0.436</td>
<td>0.176</td>
<td>0.568</td>
<td>0.351</td>
<td>0.474</td>
<td>0.713</td>
</tr>
</tbody>
</table>

Note:
1. CC = Construction Culture; TQ = Intention to Quit; CM = Main Contractor Leadership; PB = Physical Intimidating Bullying; CP = Work organisation and Job Design; WB = Work-based Bullying
2. Notes: AVE = Average Variance Extracted; CR = Composite Reliability
aThe off-diagonal values are the correlations between latent variables and the diagonal are the square root of AVE.
After re-run of algorithm, the results of cross loading are presented in Table 5.7. Table 5.7 indicated values of all the indicators’ loading exceed the cut-off point of 0.5. This mean there is no issue of cross loadings as well.

Table 5.7 Discriminant Validity of construct – Cross Loading of all items

<table>
<thead>
<tr>
<th></th>
<th>CC</th>
<th>TQ</th>
<th>CM</th>
<th>BP</th>
<th>CP</th>
<th>BW</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP17</td>
<td>0.282</td>
<td>0.302</td>
<td>0.341</td>
<td>0.891</td>
<td>0.245</td>
<td>0.387</td>
</tr>
<tr>
<td>BP18</td>
<td>0.141</td>
<td>0.049</td>
<td>0.216</td>
<td>0.708</td>
<td>0.186</td>
<td>0.187</td>
</tr>
<tr>
<td>BP19</td>
<td>0.153</td>
<td>0.097</td>
<td>0.099</td>
<td>0.554</td>
<td>0.081</td>
<td>0.065</td>
</tr>
<tr>
<td>BW10</td>
<td>0.434</td>
<td>0.123</td>
<td>0.377</td>
<td>0.351</td>
<td>0.385</td>
<td>0.682</td>
</tr>
<tr>
<td>BW13</td>
<td>0.281</td>
<td>-0.056</td>
<td>0.399</td>
<td>0.218</td>
<td>0.302</td>
<td>0.067</td>
</tr>
<tr>
<td>BW14</td>
<td>0.295</td>
<td>-0.008</td>
<td>0.345</td>
<td>0.237</td>
<td>0.228</td>
<td>0.753</td>
</tr>
<tr>
<td>BW15</td>
<td>0.279</td>
<td>0.228</td>
<td>0.352</td>
<td>0.202</td>
<td>0.276</td>
<td>0.791</td>
</tr>
<tr>
<td>BW16</td>
<td>0.281</td>
<td>0.173</td>
<td>0.412</td>
<td>0.283</td>
<td>0.360</td>
<td>0.745</td>
</tr>
<tr>
<td>BW5</td>
<td>0.579</td>
<td>0.052</td>
<td>0.352</td>
<td>0.159</td>
<td>0.316</td>
<td>0.254</td>
</tr>
<tr>
<td>CC20</td>
<td>0.579</td>
<td>0.052</td>
<td>0.352</td>
<td>0.159</td>
<td>0.316</td>
<td>0.254</td>
</tr>
<tr>
<td>CC21</td>
<td>0.736</td>
<td>0.018</td>
<td>0.226</td>
<td>0.119</td>
<td>0.215</td>
<td>0.313</td>
</tr>
<tr>
<td>CC22</td>
<td>0.869</td>
<td>0.211</td>
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<td>0.375</td>
</tr>
<tr>
<td>CC24</td>
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<td>0.128</td>
<td>0.244</td>
<td>0.283</td>
<td>0.137</td>
<td>0.314</td>
</tr>
<tr>
<td>CM10</td>
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<td>0.129</td>
<td>0.701</td>
<td>0.205</td>
<td>0.308</td>
<td>0.338</td>
</tr>
<tr>
<td>CM11</td>
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<td>0.073</td>
<td>0.707</td>
<td>0.214</td>
<td>0.346</td>
<td>0.532</td>
</tr>
<tr>
<td>CM12</td>
<td>0.337</td>
<td>0.258</td>
<td>0.663</td>
<td>0.243</td>
<td>0.436</td>
<td>0.447</td>
</tr>
<tr>
<td>CM5</td>
<td>0.259</td>
<td>0.308</td>
<td>0.763</td>
<td>0.321</td>
<td>0.482</td>
<td>0.482</td>
</tr>
<tr>
<td>CM6</td>
<td>0.269</td>
<td>0.348</td>
<td>0.726</td>
<td>0.305</td>
<td>0.471</td>
<td>0.403</td>
</tr>
<tr>
<td>CM7</td>
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<td>0.760</td>
<td>0.240</td>
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<td>0.312</td>
</tr>
<tr>
<td>CM8</td>
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<td>0.669</td>
<td>0.150</td>
<td>0.326</td>
<td>0.290</td>
</tr>
<tr>
<td>CM9</td>
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<td>0.246</td>
<td>0.752</td>
<td>0.201</td>
<td>0.383</td>
<td>0.340</td>
</tr>
<tr>
<td>CP15</td>
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<td>0.111</td>
<td>0.448</td>
<td>0.108</td>
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</tr>
<tr>
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<tr>
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<td>0.281</td>
<td>0.455</td>
<td>0.206</td>
<td>0.875</td>
<td>0.383</td>
</tr>
<tr>
<td>CP18</td>
<td>0.109</td>
<td>0.344</td>
<td>0.356</td>
<td>0.311</td>
<td>0.734</td>
<td>0.316</td>
</tr>
<tr>
<td>TQ1</td>
<td>0.181</td>
<td>0.908</td>
<td>0.315</td>
<td>0.299</td>
<td>0.288</td>
<td>0.170</td>
</tr>
<tr>
<td>TQ3</td>
<td>0.111</td>
<td>0.349</td>
<td>0.208</td>
<td>0.165</td>
<td>0.286</td>
<td>0.156</td>
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<tr>
<td>TQ4</td>
<td>0.022</td>
<td>0.757</td>
<td>0.123</td>
<td>0.075</td>
<td>0.250</td>
<td>0.085</td>
</tr>
</tbody>
</table>

Note: CC = Construction Culture; TQ = Intention to Quit; CM = Main Contractor Leadership; PB = Physical Intimidating Bullying; CP = Work organisation and Job Design; WB = Work-based Bullying
5.6.1.3 Reliability Analysis

Composite reliability (CR) is measured to evaluate internal consistency reliability for PLS-SEM analysis. Gefen et al., (2000) mentioned for composite reliability to consider acceptable, the value should be 0.7 or higher. Thus it will signify an internal consistency for the measurement model (Gefen et al., 2000). Comparatively, composite reliability is considered more suitable criterion of reliability that the traditional Cronbach’s Alpha because composite reliability adopts all indicators are equally reliable and can be inflated by just increasing the number of items, even with the same degree of inter-correlations (Anderson & Gerbing, 1988).

In this study, the composite reliability values are above cut-off values of 0.7, signifying all six reflective constructs have high levels of internal consistency reliability as shown in Table 5.4 (p. 129).

5.6.1.4 Descriptive Statistics of the latent constructs

From the analysis, the means for all variables after deletion are above average 2.50 except for item BP17, BP18, BP19 and TQ4. Comparatively, the CM6 score is the highest score for variance with 1.538 and the lowest score is 0.423 (BP18). Table 5.8 depicts the descriptive analysis for all variables.

Table 5.8 Descriptive analysis (after deletion items)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Range</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std Dev</th>
<th>Variance</th>
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<td>5</td>
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<td>.920</td>
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<td>1</td>
<td>5</td>
<td>2.91</td>
<td>.898</td>
<td>.806</td>
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<td>1</td>
<td>5</td>
<td>3.21</td>
<td>.996</td>
<td>.992</td>
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<td>1</td>
<td>5</td>
<td>3.03</td>
<td>1.102</td>
<td>1.214</td>
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<tr>
<td>BW15</td>
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<td>1</td>
<td>5</td>
<td>2.93</td>
<td>1.115</td>
<td>1.244</td>
</tr>
<tr>
<td>BW16</td>
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<td>1</td>
<td>5</td>
<td>3.13</td>
<td>1.205</td>
<td>1.452</td>
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<td>4</td>
<td>1</td>
<td>5</td>
<td>2.01</td>
<td>1.091</td>
<td>1.191</td>
</tr>
<tr>
<td>BP18</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>1.48</td>
<td>.650</td>
<td>.423</td>
</tr>
<tr>
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<td>1</td>
<td>4</td>
<td>1.60</td>
<td>.714</td>
<td>.510</td>
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<td>1.538</td>
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<td>1.093</td>
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</tr>
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<td>2.83</td>
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<td>1.138</td>
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<tr>
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<td>5</td>
<td>3.09</td>
<td>1.024</td>
<td>1.049</td>
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<tr>
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<td>1.007</td>
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<td>1.017</td>
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<tr>
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<td>5</td>
<td>2.72</td>
<td>1.142</td>
<td>1.303</td>
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<td>1</td>
<td>5</td>
<td>2.80</td>
<td>1.155</td>
<td>1.335</td>
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<tr>
<td>CC20</td>
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<td>1</td>
<td>5</td>
<td>3.09</td>
<td>1.070</td>
<td>1.145</td>
</tr>
<tr>
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<td>1</td>
<td>5</td>
<td>3.07</td>
<td>1.053</td>
<td>1.110</td>
</tr>
<tr>
<td>CC22</td>
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<td>5</td>
<td>2.97</td>
<td>1.030</td>
<td>1.061</td>
</tr>
<tr>
<td>CC24</td>
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<td>1</td>
<td>5</td>
<td>2.99</td>
<td>1.128</td>
<td>1.273</td>
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<tr>
<td>TQ1</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>2.57</td>
<td>1.232</td>
<td>1.519</td>
</tr>
<tr>
<td>TQ3</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>2.50</td>
<td>1.142</td>
<td>1.304</td>
</tr>
<tr>
<td>TQ4</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>2.21</td>
<td>1.024</td>
<td>1.050</td>
</tr>
</tbody>
</table>

**Note:**

1. CC = Construction Culture; TQ = Intention to Quit; CM = Main Contractor Leadership; PB = Physical Intimidating Bullying; CP = Work organisation and Job Design; WB = Work-based Bullying

### 5.7 Assessment of Structural Model

There are two assessment of structural model which concerns with direct effect and mediation effect. Direct effect discusses on the relationship between factor of occurrence (e.g. main contractor leadership, work organisation and job design and construction culture) with subcontractor bullying (e.g. work-based bullying and physical intimidating bullying). Other direct effect is a subcontractor bullying and intention to quit. While mediating effect assess subcontractor bullying as a mediator between factor of occurrence and intention to quit.

#### 5.7.1 Direct effect

Structural models depict dependence relationships in the form of hypothesized model (Hair et al., 1998). The major aim is to test the proposed structural model and the hypothesized relationships between constructs by way of direct effect. A direct
effect is the positive relationship between an exogenous and endogenous variable in a PLS path model.

Duerto & Raposo (2010) revealed that there are two standards used to assess the structural model, which are: a) the descriptive power of the model (R2, coefficient of determination which measures the proportion of an endogenous construct’s variance that is explained by its predictor constructs); and b) the value and significance of the path coefficient which are the estimated path relationship to the standardised betas (which are the strength of the relationships between latent constructs) in a regression analysis.

For the first step, the R2 value for work-based bullying is 0.399 suggesting that 39.9% of the variance in work-based bullying were explained by main contractor leadership, work organisation and job design and construction culture. While the R2 value for physical intimidating bullying is 0.143 which suggesting that 14.3% of variance in physical intimidating bullying were explained by main contractor leadership, work organisation and job design and construction culture. For the first endogenous intention to quit is 0.073 suggesting that 7.3% of the variance in were explained by work-based bullying and physical intimidating bullying. These are shown in Figure 5.1 (p. 162).

If the R2 value is higher, then the construct was considered acceptable and can be explained by the exogenous latent variable in the structural model. High R2 values also signified the values of the constructs can be well predicted via PLS path model. According to Cohen et al. (2003), R2 is considered small if R2 ranges between small 0.02 - 0.12; medium 0.13 - 0.25 and large 0.26 and above. From the research findings, only R2 for work-based bullying were more than 0.26 (large)
while R2 for physical intimidating bullying and intention to quit were 0.143 (medium) and 0.073 (small) respectively. This shown that an intention to quit provides a small effect in the variance of the dependent variable.

Next is about the size of the path coefficient. This test is conducted to determine if the relationships between constructs are statistically significant. As a rule of thumb, path coefficient with standardised betas of a) above 0.2 are probably significant; b) below 0.1 are insignificant; and c) between 0.1 and 0.2 requires a significance testing. Accordingly, significance of path coefficient will determine if the theoretical hypotheses can be justified empirically.

Path coefficient is analysed in two steps in PLS Path Modeling. The first step is to conduct the iterative algorithm that separately solves out the blocks of the measurement model. Once satisfactory measurement is obtained, the second step is to the test the structural model validity and fit by determining the significant of path coefficient. According to Chin (1998), the path coefficient, $p$ should have range of between 0.20 to 0.3 along with measures that explain 50% or more variance is acceptable. The bootstrap resamples made up the number of sample drawn the bootstrapping procedure that must higher than the number of bootstrap cases (210 cases). Chin (1998) said a 5000 resamples is recommended of the regression coefficient. In bootstrapping, critical t-values can be generated to test the statistical significance of the path coefficient at *$p<0.10$ (t-value = 1.282), **$p<0.05$ (t-value = 1.645), ***$p<0.01$(t-value = 2.326) confidence level.

According to Greenwald, Gonzalez, Harris & Guthrie (1996), p values are a important common language translation for test statistic. It provides a measures of confidence in replicability of null hypothesis rejection. In hypothesis testing, this
study aims to obtain \( p \) values that is sufficiently small (viz less than significant level, a) to reject null hypotheses and support alternative research hypotheses. According to Hair et al., (2014), the commonly used \( t \)-critical values for a two tailed tests (non-directional) are greater that 2.57, 1.96 and 1.65 for significance level of 1%, 5% and 10% respectively (Hair et al., 2014).

There were eight hypotheses to be tested in this research. The first two tested the relationships of main contractor leadership with work-based bullying and physical intimidating bullying. The third and the fourth tested the relationships of work organisation and job design with work-based bullying and physical intimidating bullying. While the fifth and sixth tested the relationship between construction culture with work-based bullying and physical intimidating bullying. Lastly, the last two hypothesis tested the relationship of work-based bullying and physical bullying to intention to quit. Table 5.9 present the results of direct effect hypotheses in the study.

Table 5.9 Hypothesis testing for direct effect

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Relationship</th>
<th>Std beta</th>
<th>Std error</th>
<th>t-value</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a</td>
<td>CM → BW</td>
<td>0.369</td>
<td>0.063</td>
<td>5.896**</td>
<td>Supported</td>
</tr>
<tr>
<td>H1b</td>
<td>CM → BP</td>
<td>0.229</td>
<td>0.090</td>
<td>2.544**</td>
<td>Supported</td>
</tr>
<tr>
<td>H1c</td>
<td>CP → BW</td>
<td>0.197</td>
<td>0.060</td>
<td>3.259**</td>
<td>Supported</td>
</tr>
<tr>
<td>H1d</td>
<td>CP → BP</td>
<td>0.072</td>
<td>0.085</td>
<td>0.850</td>
<td>Not supported</td>
</tr>
<tr>
<td>H1e</td>
<td>CC → BW</td>
<td>0.222</td>
<td>0.066</td>
<td>3.371**</td>
<td>Supported</td>
</tr>
<tr>
<td>H1f</td>
<td>CC → BP</td>
<td>0.169</td>
<td>0.072</td>
<td>2.354**</td>
<td>Supported</td>
</tr>
<tr>
<td>H2a</td>
<td>BW → TQ</td>
<td>0.099</td>
<td>0.088</td>
<td>1.117</td>
<td>Not supported</td>
</tr>
<tr>
<td>H2b</td>
<td>BP → TQ</td>
<td>0.220</td>
<td>0.072</td>
<td>3.055**</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Note:
CC = Construction Culture; TQ = Intention to Quit; CM = Main Contractor Leadership; PB = Physical Intimidating Bullying; CP = Work organisation and Job Design; WB = Work-based Bullying
From the result, six hypotheses out of eight was supported (p > 0.05; t-value > 1.96): the path from main contractor leadership to work-based bullying, main contractor leadership to physical intimidating bullying (t=0.039), work organisation and work design with work-based bullying (t=0.430), construction culture with work-based bullying, construction culture with physical intimidating bullying (t=0.151) and work-based bullying and intention to quit are all directly related. However, there were two hypotheses were not supported which are work organisation and job design with physical intimidating bullying and work-based bullying with intention to quit.

5.7.2 Testing for mediating effect

A mediation effect is produced when a third construct interferes between two other interrelated constructs in the path model. Indirect effect signifies a relationship between exogenous and endogenous latent variable through a mediator. If ‘a’ is the relationship between exogenous latent variable and mediator variable, and ‘b’ is the relationship of the mediator and endogenous latent variable, the indirect effect is the reproduct of path a and path b. In this study hypothesis 3a, 3b, 3c, 3d, 3e, and 3f are concerned with mediating effects.

According to Zhao, Lynch & Chen (2010), PLS-SEM is capable to perform instantaneously reflective and formative construct in a structural model. For the analysis of mediating effect, the method of mediation effect for SEM with bootstrapping procedure in SmartPLS is applied here. This method is supported by Hayes (2009), Iacobucci, Saldanha & Deng (2007) and MacKinnon et al., (2004). They argued that PLS-SEM bootstrapping method is better than Baron & Kenny’s
(1986) framework for mediation analysis. The bootstrapping method was deliberated to provide a solution to the problem of small sample size in SEM (Esposito, Vinzi, Chin, Henseler & Wang, 2010). Bootstrapping handles the observed sample and signifies the population then creates a huge, pre-specified number of bootstrap samples. Following Zhao et al. (2010) there are three basic steps in calculating a mediating effect in PLS-SEM, which are:

1. To assess the direct effect of the exogenous variable on the endogenous variable, which should be significant if the mediator is not included. The results revealed that all direct paths are statistically significant.

2. To include the mediator variable in the PLS path model and assess the significance of the indirect path. The significance of each individual path is a necessary requirement for this condition. The indirect path can be calculated after running the bootstrapping procedure and if the indirect effect is found significant then mediator absorbs some of the direct path.

3. To find out the strength of mediation through an variance accounted for (VAF) value. Hair, Hult, Ringle, & Sarstedt (2013, p.224) classified a VAF value into three categories which are: 1) if $0 < \text{VAF} < 0.20$, then No Mediation; 2) if $0.20 < \text{VAF} < 0.80$, then Partial Mediation; and 3) if $\text{VAF} > 0.80$, then Full Mediation.
Figure 5.2 Work-based Bullying as Mediator

Table 5.10 Mediation Analysis: work-based bullying as mediator

<table>
<thead>
<tr>
<th>Variables</th>
<th>Path Coefficient</th>
<th>Indirect Effect</th>
<th>Standard Deviation</th>
<th>Total Effect</th>
<th>VAF Range</th>
<th>t-value</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
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<td>0.370</td>
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<td>Not Supported</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CP → BW</td>
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<td>0.009</td>
<td>0.020</td>
<td>0.271</td>
<td>3.38%</td>
<td>0.458</td>
<td>Not Supported</td>
</tr>
<tr>
<td>BW → TQ</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CC → BW</td>
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<td>0.18</td>
<td>56.60%</td>
<td>0.454</td>
<td>Not Supported</td>
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<tr>
<td>BW → TQ</td>
<td>-0.047</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Note:
1. CC = Construction Culture; TQ = Intention to Quit; CM = Main Contractor Leadership; PB = Physical Intimidating Bullying; CP = Work organisation and Job Design; WB = Work-based Bullying
Figure 5.3 Physical intimidating bullying as mediator

Table 5.11 Mediation Analysis: physical intimidating bullying as mediator

<table>
<thead>
<tr>
<th>Variables</th>
<th>Path Coefficient</th>
<th>Indirect Effect</th>
<th>Standard Deviation</th>
<th>Total Effect</th>
<th>VAF Range</th>
<th>t-value</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM → BP</td>
<td>0.212</td>
<td>0.024</td>
<td>0.020</td>
<td>0.151</td>
<td>16.12%</td>
<td>1.219</td>
<td>Not Supported</td>
</tr>
<tr>
<td>BP → TQ</td>
<td>0.115</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CP → BP</td>
<td>1.406</td>
<td>0.162</td>
<td>0.016</td>
<td>0.408</td>
<td>39.60%</td>
<td>10.11</td>
<td>Supported</td>
</tr>
<tr>
<td>BP → TQ</td>
<td>0.115</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CC → BP</td>
<td>1.86</td>
<td>0.021</td>
<td>0.018</td>
<td>0.020</td>
<td>95.53%</td>
<td>1.189</td>
<td>Not Supported</td>
</tr>
<tr>
<td>BP → TQ</td>
<td>0.115</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note:
1. CC = Construction Culture; TQ = Intention to Quit; CM = Main Contractor Leadership; PB = Physical Intimidating Bullying; CP = Work Organisation and Job Design; WB = Work-based Bullying
From Figure 5.2, it indicates that work-based bullying has no mediation effect in the relationship between main contractor leadership, work organisation and job design and construction culture with intention to quit. VAF value indicates 56.60% of the total effect of construction project and intention to quit. Hair et al. (2013) classified value of 20% to 80% can be classified as a partial mediation. However, there is no mediation effect of work-based bullying between construction culture and intention to quit. Therefore, all hypotheses H3a, H3c and H3e are not supported.

From Figure 5.3, it indicates that physical intimidating bullying is partially mediate the relationship between work organisation and job design with intention to quit. VAF value indicates that 39.60% of the total effect of work organisation and job design mediates to intention to quit. Even though not supported, VAF value for construction culture and intention to quit is high which is more than 80% as described by Hair et al., (2014). However, there is no mediation effect of physical intimidating bullying between main contractor leadership and construction culture with intention to quit. Therefore, only hypotheses H3d are supported while H3b and H3f are rejected.

5.8 Predictive relevance (Q2)

The non-parametric Stone-Geisser test of predictive relevance is a validity mediator to assess the model fit for the relationship between exogenous and endogenous constructs. This test can be performed by using blindfolding procedure in Smart PLS, namely, predictive relevance statistic of the cross validated redundancy and also cross validated communality. A predictive relevance is generated by producing the observed values by the model itself and its parameter.
estimates with the chosen omission distance, $d$ of any from 5 to 10 (Akter et al., 2011).

This research reports the Q2 through cross-validated redundancy extracted through blindfolding. The cross validated redundancy explains the capability of the model to predict the behavior and the relationship among variables thus; it demonstrates the quality of the model. Table 5.12 shows that, Q2 shows predictive ability of 0.163 for the work-based bullying, 0.059 for physical intimidating bullying and 0.032 for intention to quit. This possibly indicates that the model has a predictive relevance. Going by what Hair et al., (2013) suggested, if Q2>0 then the model has predictive capability.

Table 5.12 Summary of predictive relevance based on Q2 and R2

<table>
<thead>
<tr>
<th>Total</th>
<th>SSO</th>
<th>SSE</th>
<th>Q2</th>
<th>PR</th>
</tr>
</thead>
<tbody>
<tr>
<td>TQ</td>
<td>630.000</td>
<td>610.036</td>
<td>0.032</td>
<td>YES</td>
</tr>
<tr>
<td>BP</td>
<td>630.000</td>
<td>593.137</td>
<td>0.059</td>
<td>YES</td>
</tr>
<tr>
<td>BW</td>
<td>1260.000</td>
<td>1055.676</td>
<td>0.163</td>
<td>YES</td>
</tr>
</tbody>
</table>

However, Hair et al., (2011) mentioned it is imperative to assess the model’s Predictive ability in SmartPLS as Q2 does not only assess how values are assembled around the model but also assesses the factor estimates. This study reports the Q2 through cross-validated redundancy extracted through blindfolding. The cross validated redundancy explains the capability of the model to predict the behavior and the relationship among variables thus; it demonstrates the quality of the model. The table that followed displays the cross validated redundancy. In Table 5.13 that followed, the goodness of fit of the model was ascertained.
The Goodness of Fit are calculated as below:

\[
\text{GoF} = \sqrt{R^2 \times \text{Average of Communality}}
\]

\[
= \sqrt{0.1631 \times 0.568}
\]

\[
= \sqrt{0.0926}
\]

\[
= 0.3043
\]

Goodness of fit (GoF) is interpreted as the product of the geometric means of two different sets of values of R2 i.e. geometric mean of the average communality and the geometric mean of endogenous latent variables. It is shown in table 5.11 that the value of GoF obtained in this study is medium range value as suggested by Hair et al., (2013), a GoF values 0.1 = small; 0.25 = medium and 0.36 = large.

### 5.9 Summary of Hypothesis Testing

In total fourteen hypothesized relationships are tested in this research. For direct effects relationships, all results found supported except for the work-based
bullying and intention to quit. In relation with mediation effect, all results are not supported except for the relationship of physical intimidating bullying mediates the relationship between construction culture and intention to quit. Table 5.14 summarised the results in a table form for a clearer view. The propositions of these findings are discuss further in the next chapter.

Table 5.14 Summary of Results of Hypotheses Testing

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a</td>
<td>There is a positive relationship between main contractor leadership and work-based bullying</td>
</tr>
<tr>
<td>H1b</td>
<td>There is a positive relationship between main contractor leadership and physical intimidating bullying</td>
</tr>
<tr>
<td>H1c</td>
<td>There is a positive relationship between work organisation and job design and work-based bullying</td>
</tr>
<tr>
<td>H1d</td>
<td>There is a positive relationship between work organisation and job design and physical intimidating bullying</td>
</tr>
<tr>
<td>H1e</td>
<td>There is a positive relationship between construction culture and work-based bullying</td>
</tr>
<tr>
<td>H1f</td>
<td>There is a positive relationship between construction culture and physical intimidating bullying</td>
</tr>
<tr>
<td>H2a</td>
<td>There is a positive relationship between work-based bullying and intention to quit</td>
</tr>
<tr>
<td>H2b</td>
<td>There is a positive relationship between physical intimidating bullying and intention to quit</td>
</tr>
<tr>
<td>H3a</td>
<td>Work-based bullying mediates the relationship between bad main contractor leadership and intention to quit</td>
</tr>
<tr>
<td>H3b</td>
<td>Physical intimidating bullying mediates the relationship between bad main contractor leadership and intention to quit</td>
</tr>
<tr>
<td>H3c</td>
<td>Work-based bullying mediates the relationship between</td>
</tr>
</tbody>
</table>
work organisation and job design and intention to quit.

H3c  Physical intimidating bullying mediates the relationship between work organisation and job design and intention to quit.  Not Supported

H3e  Work-based bullying mediates the relationship between construction culture and intention to quit.  Not Supported

H3f  Physical intimidating bullying mediates the relationship between construction culture and intention to quit.  Supported

5.10 Summary

There are two phases of data analysis conducted in this research. The first phase was related with a preliminary analysis of the data. This process is vital in order to make sure that the data meet the basic assumptions before using PLS-SEM. Prior to preliminary analysis; results show all characteristics of the data collected met the normality and distributional assumptions before move to the second phase of data analysis.

In the second phase, the two phases of SEM were applied. The first phase assessed measurement model for validity and reliability. All variables show high estimated loadings on their corresponding latent variables. The construct reliability and AVE values both supported the reliability of the model. The critical ratio and standard error were used to assess convergent validity, and their values for each underlying construct indicated that the model had satisfactory convergent validity. Lastly, discriminant validity was examined using AVE and the squared correlations among the latent variables. The results also indicate that the measurement model had significant discriminant validity.
While in the second phase a structural model for path coefficient shows significance results and hypothesis testing were tested. All hypothesized relationships in both parts were analysed. In total, fourteen hypothesized relationships are tested in this research. The results are found to support seven of the hypotheses while the other six hypotheses (H1d, H2a, H3a, H3b, H3c, H3d and H3e) were rejected. Then, different indices were used to assess the overall model fit. The results provided satisfactory evidence of model fit.

The next chapter will reveal the discussions of the result acquired in this chapter in more detail. Chapter Six will attempt to provide a greater discussions of the finding to achieve the objectives of this research, examines the limitation of the study, make conclusions and recommendations for future research and the contribution to the theoretical and practical implication of this research.
CHAPTER 6
DISCUSSIONS, IMPLICATIONS AND CONCLUSION

6.1 Introduction

This chapter focuses on the findings derived in the previous chapter, the implications, as well as the conclusion of this research. It is divided into seven sections: The first section provides the research overview, followed by a discussion of the research findings. Section three examines the implications in terms of theoretical and managerial aspects gathered from this research. The limitation of this research is then presented in the fourth section. The suggestions of future research are provided in the next section. Finally, a brief conclusion ends this chapter.

6.2 Discussion of the Findings

Subcontractor bullying is generally comprised of work-based bullying and physical intimidating bullying. According to Einarsen and Raknes (1997), work-based bullying is work-related actions that make it difficult for the target to carry out their work, or it involves taking away some or all of their responsibilities; physical intimidating bullying is ‘a physical action that has been done from a perpetrator towards a target, which may or may not harm the target’. From the results, work-based bullying towards subcontractors showed a high occurrence rate compared to physical intimidating bullying. The findings presented in Table 5.8 (please refer to page 166) showed that the mean for work-based bullying is 2.91 to 3.31; while for physical intimidating bullying, it is only from 1.48 to 2.01 in the assessment of a 5-point Likert Scale. This result corresponds with studies made by several researchers.
who found that work-based bullying has a high prevalence rate compared to physical intimidating bullying (Hoel & Giga, 2006; Bashir, 2011; Power et al., 2013).

There are two main categories of relationships involved in this research: a positive relationship and a mediating effect relationship. For a positive relationship, this research examined the role of main contractor leadership, work organisation and job design and construction culture towards the occurrence of work-based bullying and physical intimidating bullying in a construction project. It also examined the relationship of work-based bullying and physical intimidating bullying to subcontractors’ intention to quit. For a mediating effect relationship, this research analysed subcontractor bullying (particularly, work-based bullying and physical intimidating bullying) as a mediator with factors of occurrence (main contractor leadership, work organisation and job design and construction culture) with the intention to quit. The following subsections present the findings of two direct relations and two mediating effects in this research. A summary of the results is provided in each subsection.

6.2.1 Factors of Subcontractor Bullying

The first objective of this research is to analyse the relationship of factors of bullying and subcontractor bullying in construction projects. There are three factors of subcontractor bullying: main contractor leadership, work organisation and job design and construction culture. On the other hand, there are two types of subcontractor bullying: work-based bullying and physical intimidating bullying. Six hypotheses were developed to test these two constructs and the summary of the results is described in Table 6.1.
Table 6.1 Hypotheses and summary of results for factors of subcontractor bullying

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main contractor leadership</strong></td>
<td></td>
</tr>
<tr>
<td>H1a</td>
<td>There is a positive relationship between main contractor leadership and work-based bullying.</td>
</tr>
<tr>
<td>H1b</td>
<td>There is a positive relationship between main contractor leadership and physical intimidating bullying.</td>
</tr>
<tr>
<td><strong>Work organisation and job design</strong></td>
<td></td>
</tr>
<tr>
<td>H1c</td>
<td>There is a positive relationship between work organisation and job design and work-based bullying.</td>
</tr>
<tr>
<td>H1d</td>
<td>There is a positive relationship between work organisation and job design and physical intimidating bullying.</td>
</tr>
<tr>
<td><strong>Construction culture</strong></td>
<td></td>
</tr>
<tr>
<td>H1e</td>
<td>There is a positive relationship between construction culture and work-based bullying.</td>
</tr>
<tr>
<td>H1f</td>
<td>There is a positive relationship between construction culture and physical intimidating bullying.</td>
</tr>
</tbody>
</table>

Based on the results, main contractor leadership, work organisation and job design and construction culture were found to be significantly associated with work-based bullying. Similarly, all factors were found to be significant, concerning physical intimidating bullying, except for work organisation and job design.

Firstly, the findings demonstrated that main contractor leadership plays a significant role in subcontractor bullying. This is in agreement with several studies in
the standard organisational setting in many industries which suggested that an autocratic style of leadership can contribute to workplace bullying Einarsen et al., 2007; Skogstad et al., 2007; Hoel et al., 2010). Hoel et al. (2010) observed similar results in their study on 5288 respondents in Great Britain and found that the strongest predictor of workplace bullying was an autocratic leadership. An autocratic leadership is where one takes full control of the management and they rarely allow their subordinates to participate in the decision-making (Hayes, 2000). Zapf et al. (1996) demonstrated that people who had less time for conflict resolution reported high incidences of being bullied. This type of style commonly occurs in the hierarchal structure of management (Douglas, 2001; Pilch & Turska, 2015).

A similar pattern was also found in the construction organisational setting where the style of leadership employed is also the hierarchical structure (Mincks & Johnston, 2004; Hagberg, 2006). Rowlinson, Ho & Yun (1993) found that the leadership style of construction managers is different during the pre-contract stage and post-contract stage. They mentioned further that a supportive leadership style is usually used in the pre-contract stage and will transform to autocratic leadership styles when construction starts. A supportive leadership is a leadership when the leader encourages an understanding environment while an autocratic leadership is when the leader tells others what to do and expect them to comply obediently. In the pre-contract stage, the main contractor is usually using a supportive leadership because in this phase it usually involves a negotiation between the main contractor and subcontractor. Meanwhile in the post-contract stage, when the contract has been awarded to the subcontractor, the main contractor will abuse his power towards the subcontractor. For example, according to Jung & Mills (2012), project managers and
superintendents tend to use autocratic leadership styles on site. This is because a project manager has the management authority to make fast decisions at the site (Leung, Chen & Yu., 2008). This statement is supported by the highest mean value given by the respondents. The items are the ‘subcontractor does not have chance to negotiate about the contract’ (m= 2.83, SD= 0.094), ‘lack of responsibility by contractor’ (m= 2.83, SD=1.068) and ‘inadequate project management assistance on site’ (m= 3.10, SD= 1.025). This autocratic style of leadership will also leave subcontractors with no right to voice their thoughts, even if they do not agree on certain things in a construction project. For instance, Akintan & Morledge (2013) reported that main contractors always try to place blame on subcontractors if something unfortunate happens on site. The same opinion was further agreed by Dainty et al., (2001) where they mentioned that main contractors always have the tendency to transfer enormous project risks on subcontractors. This act creates an imbalance of power between the main contractor and subcontractor, which will then induce the occurrence of subcontractor bullying in a construction project and which will later affect the performance of the construction project on site.

Furthermore, there is no standard form of contract for subcontracting work. However, there is an issuance of Model Terms of Construction Contract for Subcontract Work by CIDB in 2006. Syed Mohd. & Ismail (2015) mentioned that the model terms are drafted entirely in modern plain language which will be easier to be used in subcontracting words. Unfortunately, the implementation of the model terms has not been adopted by construction industry players. Habitually, subcontractors will often proceed doing the work with only a simple issue of ‘letter of intent by the main contractor’ (Thomas, 2014). This makes the subcontractor chained to a bias
agreement made between the main contractor and subcontractor prior to the work on-site. Thomas (2014) listed examples of troublesome clauses in subcontracting contracts, they include: payment clauses, indemnity, additional insurances, no damage for delay, partial lien waiver and termination.

In the worst case scenario, the main contractors may abuse their dominant position in the contractual chain to withhold monies of subcontractors (Lynch, 2011). This experience may tarnish the relationship between the main contractor and subcontractor. Zapf et al. (1996) had studied workplace bullying in the standard organisation setting and highlighted the important roles of the social environment to employees. Their findings suggested that the more social support supervisors gave, the less the targets reported of being shouted at, criticised, and receiving verbal threats. Consequently, a great leadership and social support from main contractors to subcontractors are essential in reducing the potential causes of bullying on site. A main contractor, as a leader in a construction project, should provide a healthy and positive leadership towards subcontractors in order to create a harmonious environment in the construction site.

Secondly, the results appear to be significant in the relationship between work organisation and job design with work-based bullying. A work organisation and job design are described as work arrangements and interpretation for a required task in one project. Thus, bad work organisation and job design involve any uncertainties in tasks within a workplace. A study in the standard organisation setting has found that workplace bullying is likely to occur through an environment where there is a lack of control over work tasks, role conflict and lack of work design (Einarsen, 1999). Vartia (1996) illustrated that poor information flow, lack of mutual conversations
about the tasks and goals of the work unit and insufficient possibilities do influence matters concerning the individual, which may promote bullying in one organisation. Similar results were found in the construction organisation setting, where matters are always aggravated by job or task ambiguities, unclear job scopes for subcontractors and vague clauses in contractual agreements. For instance, Alinaitwe et al. (2007) suggested that most construction projects are interrupted by incomplete specifications of the drawing. Unclear drawings provided by the main contractor may also contribute to arguments or problems between the subcontractor and the main contractor on site (Huang et al., 2008). Furthermore, factors and uncertainties such as the weather, site conditions, material delivery and equipment breakdown can influence the performance of subcontractors on site (Wang & Liu, 2004). This creates job or task ambiguities for the subcontractor, which may lead to the occurrence of subcontractor bullying in a construction project.

However, results have shown an insignificant relationship for work organisation and job design with physical intimidating bullying. This is reasonable since work organisation and job design are focused on the work and job scope of subcontractors. Items under this work organisation and job design were ‘standard procedure is not clear’, ‘unclear job scope’, ‘poor planning and scheduling’ and ‘many variation orders’. These items are clearly outside physical intimidating bullying which focuses more on the physical aspect of bullying. Items under physical intimidating bullying are ‘intimidating behaviour’, ‘threats of violence’, ‘insulting messages’ and ‘threats of making life difficult’. Compared to other constructs in the factors of subcontractor bullying occurrences (i.e. main contractor leadership and construction culture), work organisation and job design have drawn a clear line
between work and physical intimidating bullying. Any forces or threats outside the job scope can be clearly defined as forms of harassment to the worker. Additionally, physical intimidating bullying is one of the few types of bullying where targets have legal protection (Collyer et al., 2010). In many situations, work organisation and job design take place on site but not leading to the physical intimidating bullying.

Other than that, physical intimidating bullying is not common in Malaysia as workers are protected by the law. For example, employees who suffer from physical violence can terminate their contract of service without notice under Section 14 (3) of the Employment Act of Malaysia. Furthermore, if any violence had voluntarily caused hurt or injury to an employee, the offender would be subject for punishment under Section 323 of the Malaysian Penal Code. There is also guidance provided by the Department of Occupational Safety and Health for the prevention of stress and violence at the workplace. These two acts alone can serve as a reminder to employers or anyone that matters to not cause any physical injury to anyone. These acts defined a clear line of offence for bullying in comparison to work-based bullying, which is still ambiguous in its definition. The demographic results showed that 77% of respondents hold a bachelor degree in their academic background. Thus, it can be safe to conclude that they know their rights by law.

Regarding the insignificance in the results concerning physical intimidating bullying, the findings may have been influenced by the concept of the Asian culture which values kindness above all else. McDermott & O’Dell (2001) defined culture as a system of beliefs that is deeply rooted within a society, and is likely to be reflected in the behaviours of the people and the organisation in which they work. According to Erez (2000), it is undeniable that managers and employees in different cultures
bring to their workplace various sets of codes of behaviour and norms that are aligned with their own cultures. Malaysia is a multi-cultural country where Malays, Chinese and Indians form the main ethnic groups. These religious backgrounds such as Islam, Buddhism and Hinduism are expected to create a bequest of behaviours, attitudes and beliefs within organisations. Therefore, it is sensible to assume that religious backgrounds have a deep impact on the organisation’s management practices (Liu, 2014). Indeed, from the perspective of physical intimidating bullying, certain behaviours are prohibited in cultural and religious standpoints, like: ‘I received intimidating behaviour such as finger-pointing, invasion of personal space, shoving, blocking or barring the way’; ‘I received threats of violence or physical abuse’; ‘I received insulting messages, telephone calls, or emails’; and ‘I received threats of making my life difficult’.

Lastly, the results confirmed that the relationship of the construction culture will lead to subcontractor bullying. A construction project is often tied with a tough organisational culture and competition as workers often have to face rushed schedules which require moving to new places where the project can be completed. This is different compared to standard organisational companies who have permanent work environments and stable working conditions. This culture of working extra-long hours is considered as normal and common in the construction setting. In fact, the highest mean for items in work-based bullying is ‘I have been forced to work long hours to meet deadlines’. This confirms the results of a study by Gunning & Cooke (1996) where they found that construction employees are exposed to working with impossible deadlines, unrealistic demands from clients, lack of staff, working on multiple projects and having conflicts within the organisation; thus,
suffering undue stress. A study by Vindas et al. (2016) mentioned that changing too much environments can create prolonged stress in later life. A stressful life will make the working environment more prone to bullying. According to Alterman et al. (2013), the prevalence of workplace bullying is high due to its hostile environment. Workers or employees in this kind of environment tend to receive unpleasant name-calling, constant yelling, threatening or verbal abuse. Chartered Institute of Building, 2006). McCabe (2007) mentioned that in Australia, it was estimated that construction projects deliver in about half the time they used to ten years ago. The construction industry is also associated with a macho culture characterised by arguments, conflicts and crises (Bagilhole et al., 2000).

6.2.2 Subcontractor bullying as a mediator

Table 6.2 Hypotheses and summary of results for subcontractor bullying as a mediator

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>H3a  Work-based bullying mediates the relationship between main contractor leadership and the intention to quit.</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3b  Physical intimidating bullying mediates the relationship between main contractor leadership and the intention to quit.</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3c  Work-based bullying mediates the relationship between work organisation and job design and the intention to quit.</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3c  Physical intimidating bullying mediates the relationship between work organisation and job design and the intention to quit.</td>
<td>Not Supported</td>
</tr>
</tbody>
</table>
This research looks into three factors for the occurrence of subcontractor bullying and the intention to quit; with subcontractor bullying as a mediator. Table 6.2 presents a summary of the results of subcontractor bullying as a mediator between the factors of occurrence and the intention to quit. This research revealed that only one relationship is significant; namely, physical intimidating bullying mediates the relationship between construction culture and the intention to quit. The other five hypotheses failed to find a significant relationship between the variables.

Physical intimidating bullying proved to have a mediating effect between the construction culture and the intention to quit. This indicated that a negative construction culture will increase physical intimidating bullying, which then increases subcontractors’ intention to quit. This finding is consistent with a study by Meyer & Allen (1991) which found a direct significant relationship between negative cultures in the organisational setting towards the staff’s intention to quit. Previous studies also revealed that a workplace which promotes uncivil and hostile work cultures is conducive to acts of bullying (Samnani & Singh, 2013; Gardner, Bentley, Catley, Thomas, O’Driscoll, & Trenberth, 2013; Misawa, 2015; Salin, 2015). Consequently, workplace bullying will encourage employees’ intention to quit (Nishii & Mayer, 2009; van Schalkwyk et al., 2010). With regard to the construction organisational setting, the culture of construction has always been associated with negativity (Wang & Abdul Rahman, 2010). The construction industry is one that is
dominated by men, and has been known for its virile culture (Bagilhole et al., 2000). It promotes arguments, conflicts and crises for the employees involved in a construction project. Professor Michael Romans, a former president of the Chartered Institute of Building (2006), confirmed this observation and noted that the construction industry blatantly adopts hostile language and behaviour. Furthermore, a survey made by Incolink (2011) also showed that one third of all apprentices in the construction project have experienced intimidation, abuse (verbal, physical and mental) and harassment. O’Malley (2015) mentioned that there is a high percentage of turnover rate in construction personnel for the year 2014. Therefore, this research demonstrates that it is likely for an environment with this bold culture to induce the intention to quit within construction personnel when physical bullying occurs. This research further explains that subcontractors will have the intention to quit when there is a negative culture that leads to physical bullying. However, the mean result for physical bullying occurrences only ranged from 1.48 to 2.01 (see table 5.8, pg. 138). This result shows that the environment of construction projects is still in harmony where there is less physical bullying and intentions to quit among subcontractors.

Previous studies have proven that negative cultures of the construction industry may induce the intentions to quit among construction personnel. For instance, it is considered normal for construction professionals to be forced to work long and irregular hours in completing a construction project (Yip & Rowlinson, 2006). In fact, a construction industry is popularly termed as ‘the most fraudulent industry’ worldwide, providing the perfect environment for ethical dilemmas with its low-price mentality, fierce competition and paper-thin margins (FMI, 2004). Thus, this
negative culture of the construction industry has become a strong antecedent for the intention to quit (Barak, Nissly, & Levin, 2001). Contrariwise, this study failed to link the relationship of work-based bullying as a mediator between construction culture and intention to quit. Although construction culture is found to be positively significant towards work-based bullying, this research failed to find a positive relationship with the intention to quit. This research indicates that even work culture will increase the tendency for work-based bullying; however, this bullying will not increase subcontractors’ intention to quit. The reason behind this finding is perhaps due to the fact that subcontractors do not fully understand what constitutes bullying behaviour; they may consider bullying in a construction project as a typical or normal occurrence so they do not feel that they are being bullied. In a study in the organisational setting, Hershcovis, Reich, & Niven (2016) noticed that cultural variations in perceptions of workplace bullying are becoming more evident. According to their viewpoint, workers in a place where bullying has been normalised or even functions as a signal of acceptance, may make group members fail to recognise that negative acts of co-workers are acts of bullying. Similarly, in a construction organisational setting, for example, working extra hours can be considered necessary to meet the deadlines of the construction project. Time is of the essence in a construction project because delay in work progress can cause a significant disruption to the entire timeline. A subcontractor is likely to accept the need to work extra hours as the complete norm in a construction project. Therefore, they are not too pressured to the extent of having the intention to quit the industry, unlike for physical intimidating bullying which may be a big indicator for subcontractors to quit the project. Thus, this might explain why work-based bullying has no mediating relationship between construction culture and intention to quit.
Pilch & Turska (2015) discovered that a hierarchy-oriented organisation was positively related to workplace bullying. This supports the notion that workplace bullying occurs naturally in organisations with hierarchical and authoritative climates, with a central management style (Hutchinson, Wilkes, Vickers & Jackson, 2008), which then leads to the intention to quit (Djurkovic et al., 2004). However, this research failed to find a significant relationship in subcontractor bullying as a mediator in main contractor leadership and intention to quit. Although main contractor leadership was found to be significant in subcontractor bullying, the direct analysis failed to find a mediating effect of subcontractor bullying in the relationship between contractor leadership with the intention to quit.

Studies in an organisational setting suggested that bad work organisation and job design will increase the intention to quit. Bad work organisation and job design are always associated with ambiguity in the job task, unclear job scopes and task objectives (Vartia, 1996). Several researches exhibited ample evidence that employees working in stressful situations are likely to leave their jobs (Bickford, 2005; Giauque, 2016). The finding of the study supports the relationship between work organisation and subcontractor bullying, however, the finding of this research indicated that there is no mediating effect of subcontractor bullying between work organisation and job design with the intention to quit. The reason behind this contradicting finding can perhaps be due to demographic profiles; respondents had more than 10 years of working experience in a construction project. Most respondents had 11 to 16 years of experience (35.7%), followed by those who had 17-22 years of experience (26.2%) and those with more than 23 years of experience (4.3%) in the construction industry. Although construction projects have always been
aggravated by ambiguities and unclear job scopes, experienced construction personnel may not take that too hard so as to lead them to quit the project. Conversely, the findings may possibly be reversed if respondents were younger or inexperienced subcontractors. This research corresponds with a study made in the healthcare organisational setting where it was found that experienced nurses conveyed less intention to quit compared to younger nurses (Masum, Azad, Hoque, Beh, Wanke, & Arslan, 2012).

6.2.3 Subcontractor Bullying and the Intention to quit

Table 6.3 Hypotheses and summary of the results for subcontractor bullying and intention to quit

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>H2a</td>
<td>There is a positive relationship between work-based bullying and the intention to quit.</td>
</tr>
<tr>
<td>H2b</td>
<td>There is a positive relationship between physical intimidating bullying and the intention to quit.</td>
</tr>
</tbody>
</table>

Two hypotheses were developed to test the relationship of subcontractor bullying and intention to quit. The hypotheses, along with a summary of results are displayed in Table 6.3. Based on the results, physical intimidating bullying was found to be positive and significantly associated with the intention to quit. However, results from this research failed to support the hypothesis on the relationship between work-based bullying and the intention to quit.
Literature suggests that work-based bullying will result in the intention to quit (Neuman & Baron, 1998; Rayner & Cooper, 2006; Djurkovic et al., 2004). Mosadeghrad (2013) contended that the main reasons for employee dissatisfaction and leaving the job was increasing workloads and payments not signifying the hard work given. These two reasons have continuously been the leading issues in construction projects (Arditi & Chotibghongs, 2005; Azmy, 2012). Lingard et al. (2010) revealed that there is a high correlation between the hours of work and construction workers’ satisfaction of work that may push them to quit their job. However, this research obtains an insignificant result between work-based bullying and the intention to quit. Extra working hours is irrefutably the common practice in the construction industry due to the nature of construction, which is often rapid and unpredictable (Aitken & Crawford, 2007). Thus, it can be said that these are the norms in the construction industry. When it is a ‘norm’, construction workers may accept the act of bullying as part of the construction culture. In fact, work-based bullying is still classified as a grey area of bullying where it is hard to conjure what act can be classified as bullying and what cannot. Thus, this may explain why work-based bullying does not result in subcontractors’ intention to quit.

Another reason for the insignificant result concerning the relationship of work-based bullying and intention to quit is perhaps due to the survivability of subcontractor business in a construction project. Since 2014, statistics have shown a major decline in the number of construction projects and this situation may drive them to maintain their companies’ growth and profit (Quarterly Construction Statistics of Malaysia, 2016). Moreover, a subcontractor is bound by a contractual agreement with the main contractor. Accordingly, for subcontractors to abandon their
work on site is a big risk which may get them blacklisted from future projects with other main contractors. The Malaysian construction industry is a small industry where everyone knows everyone. A tarnished reputation for a subcontractor is bad advertisement for future endeavours in the industry. Thus, with these consequences in mind, subcontractors are driven to perform the job until completion without possessing the intention to quit.

On the other hand, the result in this research highlights that the exposure of physical intimidating bullying will lead to subcontractors’ intention to quit. This result is parallel with findings made by previous researchers (Dell, Gervis, & Rhind 2016; Burke, 2016). Porter & Steers (1973) stated that the intention to quit a job is a common thought and action among dissatisfied workers. As mentioned in previous subsections, physical intimidating bullying is an apparent cause of bullying where clear evidence is present if committed. According to the Industrial Relations Act 1957, a worker may end their service in the organisation if he or she is subjected to physical violence in a workplace. Accordingly, this may lead to subcontractors knowing their right is abused if they were physically bullied by main contractors. Most respondents in this research hold at least a Bachelor’s degree in their education background, where such rights under the law have been taught and briefed.
Figure 6.1 The final framework for subcontractor bullying
Figure 6.1 show the final framework model of subcontractor bullying in construction project. This research shows that all three of factors of bullying, namely, main contractor leadership, work organisation and job design and construction culture contributed to work-based bullying of subcontractor. However, a work-based bullying does not lead to the intention to quit of subcontractor in construction project. One of a possible reason of this is because a work-based bullying issues raise in construction project might be considered as a part of challenge of a construction industry. It might be regarded as a culture and norm in a construction project.

While in physical intimidating bullying, only main contractor leadership and construction culture have contributed to physical intimidating bullying. In this aspect, a physical intimidating bullying will lead to intention to quit of subcontractor in construction project. This research revealed also shows that only physical intimidating bullying mediates the relationship between construction culture and the intention to quit. The reason of this happened might be because of the self-awareness of the subcontractor in relation to physical intimidating bullying. Subcontractor might be well-informed on the legal implications and rights when physical intimidating activities involved in a construction project.

6.3 Significant Implication of the Research

The research findings have generated significant implications to the development of studies on workplace bullying in Malaysia. These implications can be viewed in the perspective of academia and construction industry practitioners, especially main contractor organisations.
6.3.1 Theoretical Implication

Initially, ecological system theory had focused on the development of children within five systems. This research further extends the application of the ecological system theory (Brofenbrenner, 1979). By applying this theory to this research, it found that subcontractor bullying occurred within the five systems, as follows: the subcontractor and main contractor (microsystem), the relationship between subcontractor and main contractor (mesosystem), main contractor leadership and project organisation and job design (exosystem), construction culture (macrosystem) and time (chronosystem). Subcontractor bullying takes place in this domain and the relationships within the microsystem (main contractor and subcontractor) are the most proximal and interactive ones, therefore, it exerts the strongest influence on subcontractor bullying. In the exosystem, the finding of this research depicts that main contractor leadership has a positive relationship with work-based bullying and physical intimidating bullying. However, project organisation and job design only have a positive relationship with work-based bullying. In the macrosystem, construction cultures were found to be significantly related to work-based bullying. In the chronosystem, time plays an important role. In this system, by applying Mobley et al. (1978)’s theory it implied that the three steps of the actual turnover rate show a positive relationship between physical intimidating bullying with intention to quit. This depicts that only physical intimidating bullying may cause subcontractors to have an intention to quit. It is believed that work-based bullying, over time, will create a misconception to the subcontractors by considering a work-based bullying as a culture of construction industry. Thus, they do not feel that they are being bullied and even if they did, they will feel they are not supposed to complain about it.
because it is the norm in the construction industry. This is what Bronfenbrenner's (1978) has described on what macrosystem is: an outer layer of the systems that will then create the final form in the development of human. Thus, if this problem is not solved, it is not possible for subcontractor bullying to be a culture of norm in a construction industry.

Existing studies on workplace bullying in construction organisational setting are rather inconclusive. Likewise, the relationship between main contractor leadership, work organisation and job design and construction is hardly examined in the study of subcontractor bullying in a construction project. The current research provides a theoretical meaning to introduce subcontractor bullying in the study of workplace bullying. Its finding also provides a relationship by linking main contractor leadership, work organisation and job design and construction culture with the subcontractor bullying towards the intention to leave among the subcontractors in the Malaysian construction projects.

Firstly, this research reveals that the main contractor leadership contributed towards subcontractor bullying in construction projects. From this main point of view, this research tries to find a link between leadership style of the main contractor and the non-usage of subcontracting agreement with the occurrence of subcontractor bullying in a construction project. The finding of this research suggests that subcontractor bullying is embedded in the autocratic leadership style of the main contractor. Other than that, a non-usage of subcontracting agreement in a construction project will allow a main contractor to misabuse his power in a construction project then it will result in subcontractor bullying.
Secondly, derived from the results, it can be argued that it is important to have a good work organisation and job design in a construction organisational project. The result of this research suggests that a poor work organisation and job design contribute to work-based bullying of subcontractors. One of the reasons why this happens is because there are a lot of uncertainties in the construction project. This can be seen in the nature of the work that is prone to the unknown issues like site conditions, weather or lack of information regarding the project.

Thirdly, construction cultures also play a big contributing factor to subcontractor bullying. The result of this research shows that a negative culture of the construction project may be detrimental to subcontractors. Attention should be paid to shaping a good and positive culture in a Malaysian construction project. A culture is a blueprint of a community (Espelage, 2014). Therefore, it is hard to eradicate the problems.

The next theoretical implication is the relationship of how workplace bullying can result in the intention to quit. Previously, fewer studies had assessed the relationship between workplace bullying and intention to quit (van Schalkwyk et al., 2010; Djurkovic et al., 2008; Nishii & Mayer, 2009). However, these researchers had examined the potential mediator or moderator impacts on the relationship between bullying and the intention to leave (Hoel et al., 2003). Research has shown that factors such as target characteristics, affective commitment and perceived organisational support mediate or moderate the relationship between bullying and the intention to quit (Djurkovic et al., 2008). None had directly assessed workplace bullying with the intention to quit, particularly in the subcontractor’s perspective. The result of this finding finds that only physical intimidating bullying leads to the
intention to quit. This research also depicts that although work-based bullying mostly occurs in construction projects the behaviour is surprisingly not pushing the subcontractors to quit the project. This result is different from other standard organisational settings that found that workplace bullying leads to the intention to quit. The reason why this situation happens is because subcontractors might view the work-based bullying as a normal practice on site and they will take it as challenge for them to carry on in the construction industry.

Furthermore, the workplace bullying literature is expanded through this research, which investigates workplace bullying within the organisational context in a non-western country; namely Malaysia. Research on workplace bullying is starting to acquire recognition in Malaysia. However, it can still be considered at its infancy stage where most studies focus on the prevalence of workplace bullying (Yuzana et al., 2014; Al Bir & Hassan, 2014; Omar et al., 2015). Although there are studies concerning organisational antecedents in the western world, it should not be presumed that findings derived from western data could be generalised to other regions, like Malaysia. Thus, this study can be considered as an expansion on organisational antecedent factors of workplace bullying in Malaysia.

Another contribution of this research is the development of a reliable and valid questionnaire instrument to measure the factors behind subcontractor bullying occurrences and workplace bullying. This research produces a questionnaire based on the literature to measure main contractor leadership, project organisation and job design and construction culture. This measurement is developed for the first time in this research to examine the validity and reliability of the questionnaire using the PLS-SEM technique. The questionnaire can be applied to measure the factors of
subcontractor bullying incidents in other countries. Therefore, the scale established to measure subcontractor bullying is another significant contribution to the theoretical implication of workplace bullying.

6.3.2 Managerial Implication

This research serves as a revelation for decision-makers on the issue of workplace bullying concerning construction projects in Malaysia. Therefore, it is expected that the results can serve as a stepping-stone towards a better work environment in construction projects. Confirming what was mentioned earlier, this study could be one of few research that deal with workplace bullying in Malaysia, and thus, it may be considered as a start for local researchers to explore working conditions in other industries as well; especially conditions that affect the physical, mental and psychological well-being of workers. The result of this research shows that the average means for work-based bullying and physical intimidating bullying are 2.98 and 1.70, respectively. Even though there are no previous studies on subcontractor bullying, it shows that bullying does occur in the construction industry. The implication of subcontractor bullying can be seen in terms of delayed projects, bad quality work and late payments that may affect the productivity of the construction industry.

With a better grasp of these factors of subcontractor bullying, CIDB as the main regulatory board may be in better positions to intervene. Our results suggest that CIDB should initiate regulations for main contractors to use a proper agreement in subcontract works to ensure a win-win situation between the two parties. Even though CIDB has tried to solve this problem by the issuance of Model Terms of
Construction Contract for Subcontract Work, there is no enforcement for the usage of the model term in Malaysian construction projects. Thus, from this research, CIDB should have enforced the contractor companies to use the model to have a fair share of contract and not be one-sided favours to the main contractor.

This research also finds several factors that may have contributed to subcontractor bullying in construction projects. The findings of this research disclose significant results of the factors of subcontractor bullying occurrences in Malaysian construction projects. The results indicate the importance of main contractor leadership on site, good work organisation and job design and positive construction culture for a successful environment during a construction project. By understanding these three factors attributed to workplace bullying, the construction organisation company (i.e. the contractor’s firm or on behalf of the client) may contribute and create an awareness of the acts of bullying in construction projects. The main contractor’s firm might do well by placing better policies or reinventing their leadership or style of management so that bullying is overcome, thereby lessening the burden on subcontractors in relation to their project environment.

6.4 Limitations of the Research

No study is without its limitations. Firstly, this research studies factors of occurrence and the outcome of subcontractor bullying. However, investigating all the factors of occurrence and outcome of the subcontractor bullying in one single research is not possible. This is because the subject matter of subcontractor bullying is still a new research and exploring all these factors and outcomes would require a combination of methods. For instance, this research employs a quantitative method to
validate the relationship between the factor of occurrence and subcontractor bullying and also the relationship between subcontractor bullying and the intention to quit. However, to identify other new possible factors may require a qualitative method to explore these factors as there is little knowledge on this aspect in the literature. Moreover, evaluating the outcomes of subcontractor bullying needs a time lag, hence it is not possible to examine the factors of occurrence and outcomes in one research. Therefore, this research only stresses on these three main factors of subcontractor bullying and one single outcome, which is the main limitation of this research.

Secondly, investigating a topic about bullying could be considered a sensitive issue and thus could raise the issue of bias to the respondents. For instance, the respondent might be more willing to report some types of bullying than others. They may have felt more comfortable reporting other’s involvement in bullying, rather than reporting their bullying. However, to overcome this issue, some preventive steps like reversed score item have been done to minimise the biasness.

Thirdly, it is important to note that this study is conducted only in Peninsular Malaysia. The results may not be applicable to other countries, especially in the west, which is relatively different in comparison with Malaysian construction projects. Thus, the result of this study does not reflect those construction organisations in other countries. However, the selected sample in this study is relatively a representative of typical construction firms in Malaysia.
6.5 Recommendations for Future Research

Based on the implications and limitations discussed above, several recommendations for future research are suggested:

1. This research only focuses on main contractor’s leadership, work organisation and job design and construction culture as factors of subcontractor bullying occurrences. The results confirm that bullying does exist in the industry; thus, research on any other factors should be considered in future research.

2. This research only uses work-based bullying and physical intimidating in the subcontractor bullying model. Another type of bullying can be studied to deliver insightful information to this model. Some studies have suggested that gender and racial factors play a role in workplace bullying within construction projects (Loper, 2001; Loosemore & Chau, 2002). Malaysia has many different ethnic groups (namely, Malay, Chinese and Indian); and the involvement of women in the industry is encouraging. These two constructs should be adapted in future studies concerning subcontractor bullying.

3. This research focuses on subcontractors’ intention to quit. Through the literature made regarding workplace bullying, there are many possible outcomes such as job satisfaction and work productivity. Therefore, other possible outcomes of subcontractor bullying should be considered in future research.
4. This research employs the quantitative method. Further explorations on the issue of subcontractor bullying will be interesting if explored using the qualitative method. The qualitative approach used for investigating the factors of subcontractor bullying may generate other interesting factors to add to this model.

5. The geographic location for this study is Malaysia. Future research could replicate this research to employ it in other geographic regions to study whether regional factors play a part in the results of this research. Simply replicating this research to different regions and comparing the results could deliver valuable knowledge about regional factors associated with workplace bullying.

6.6 Conclusion

This doctoral research presents a detailed investigation on the factors and impacts of subcontractor bullying in Malaysian construction projects. Although workplace bullying has been widely researched, most previous research had focused on different fields and industries Quine, 2002; Hoosen & Callaghan, 2004; Khalib & Ngan, 2006; Merllie & Paoli, 2001; Hoel & Cooper, 2000; Keashly & Neuman, 2010; Ismail, 2009). Only a few, with the exception of McCormack et al. (2013) and McKay (2015), had focused on workplace bullying in a construction project.

This doctoral research firstly identifies that work-based bullying is the common type of subcontractor bullying in construction projects. The low prevalence of physical intimidating bullying in construction projects may be attributed to legal
This research investigates the factors of subcontractor bullying in construction projects. The findings have confirmed that the main contractor leadership, work organisation and job design and construction culture do result in work-based bullying. Similarly, all factors of subcontractor bullying did increase physical intimidating bullying, except for work organisation and job design.

This research further analysed whether subcontractor bullying may lead to the intention to quit. This study was developed based on the previous result concerning 6.6% of subcontractor turnover rate in the construction industry (Pitt, 2014). According to the results, only physical intimidating bullying was found to be significantly associated with the intention to quit. However, results from this research failed to support the hypothesised relationship between work-based bullying and intention to quit. This finding is due to the perception of Malaysian subcontractors who view work-based bullying as the norm and accept the act of bullying to be part of the nature of work. Studies on workplace bullying in Malaysia are still considered new, thus, it is hard for Malaysian workers, in general, and subcontractors, in particular, to distinguish what bullying really is. Therefore, it is comprehensible that subcontractors who find work-based bullying as part of the culture in the hostile nature of the construction industry still choose to stay in a construction project.

This research also investigates the relationship of subcontractor bullying as mediator between the factors of subcontractor bullying and the intention to quit. However, only physical intimidating bullying has a mediating effect in the relationship between construction culture and intention to quit. The remaining
hypotheses failed to find the relationship between factors of occurrence and the intention to quit.

To conclude, by testing all the hypothesised relationships on a non-western country (Malaysia), this research has helped create a set of more comprehensive ideas of the factors of occurrence and impacts of subcontractor bullying in construction projects. This research provides a beneficial opening point in the investigation of subcontractor bullying. Besides adding new knowledge to the literature on workplace bullying, the findings are expected to help main contractor firms in effectively dealing with workplace bullying. Workplace bullying is a widespread problem which is costly to organisations, and can negatively affect personal well-being (Hoel et al., 2003; Mikkelsen & Einarsen, 2002). Therefore, understanding the factor of workplace bullying could be a valuable research area to venture into, in future.
REFERENCES


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APPENDIX A.1: Questionnaire (English Version)

12 December 2015

To whom it may concern,

Dear Mr/ Mrs

SUBCONTRACTOR BULLYING IN CONSTRUCTION INDUSTRY

With reference to the matter above, I, Nur ‘Izzati binti Hidzir (Matric No.: P/RD0020/14) am undertaking a research project on workplace bullying among subcontractor in Malaysia.

2. This research aims to develop a model of subcontractor bullying in construction industry by achieving these three objectives, which are as follows:

i. To identify the level of subcontractor bullying in construction industry

ii. To examine the factors of bullying of subcontractors

iii. To analyse the relationship between subcontractor bullying and the subcontractor’s intention to quit from the construction project

3. For your information, the responses to the survey will only be reported in aggregated form to protect the identity of respondents. Neither the researcher nor the University has a conflict of interest with the results.

4. To this end we kindly request that you complete the following questionnaire. It should take no longer than 30 minutes of your time. Your response is of the utmost importance to my research.

Thank you for your consideration. Your help is greatly appreciated.

Sincerely,

Nur ‘Izzati binti Hidzir
Universiti Sains Malaysia
Tel: 04-6533176/ 019-9141206
Fax: 04-6576523
SECTION A (RESPONDENT’S BACKGROUND)

RESPONDENT’S BACKGROUND

Kindly please tick in the right box.

Have you done and completed any subcontract works?

Yes

No

If you answer yes, Please proceed to next question.

1. How old are you?

☐ 20 – 30 years  ☐ 31 – 40 years  ☐ 41 – 50 years

☐ ears and above

2. What is the highest level of schooling you have completed?

☐ High school  ☐ Diploma  ☐ Degree

☐ Master/ PhD

3. Contractor class/ category:

☐ Grade 1  ☐ Grade 2  ☐ Grade 3

☐ Grade 4  ☐ Grade 5  ☐ Grade 6

☐ Grade 7

3. What is the age of your firm’s?

☐ 1 – 4 years  ☐ 5 – 10 years  ☐ 11 – 16 year

☐ 17 – 22 years  ☐ 23 years and above

5. Category:

☐ Services  ☐ Mechanical and Electrical

☐ Civil Engineering Construction  ☐ Building Construction

☐ Trade
6. Years of working experience in sub-construction works:

- 1 – 4 years
- 5 – 10 years
- 11 – 16 years
- 17 – 22 years
- 23 years and above

**SECTION B**

Subcontractor bullying is described as intentional repeated actions that occur frequently over an extended period of time by a person* against a subcontractor. It can be in the form of verbal abuse, behaviour that humiliates, threatens, and/or sabotages the subcontractor’s work productivity or status.

*A person is someone who has a contractual relationship with you in the construction project (e.g. main contractor and project owner/client).

Have you ever experienced the following situations in any projects you worked on? Please circle the number that best described your feeling for the following statements.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Very Often</td>
</tr>
</tbody>
</table>

Someone withholding information that affect my performance
- I have been ordered to do work outside of my job scope
- My opinions and views have been ignored
- My work have been monitored excessively
- I don’t get the credit I deserved for my work
- Someone has attempted to find fault with my work
- Someone has transferred huge project risk onto me
- I have been subjected to unmanageable work
- I have been humiliated or ridiculed in connection to my work
- I have been tasked with unreasonable or impossible targets or deadlines
I have experienced of not being paid for the I have done.
I have been blamed if something unfortunate happened on site even though it is not my fault.
I have been forced to work long hours to meet deadline.
I have handled excessive workloads.
I received an unfair payment for my construction work.
My payment for a work done has been delayed.
I have been subjected to intimidating behaviour such as finger-pointing, invasion of personal space, shoving, blocking or barring the way.
I have received threats of violence or physical abuse.
I have received insulting messages, telephone calls or emails.
I have received threats of making my life difficult.

SECTION C

Regarding the previous situation in Section A, why do you think such situation occurred in the construction project? Please circle the number that best described your agreement for the following statements.

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<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td>1</td>
<td>Totally Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Neutral</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Totally Disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</table>

Contractor works out the agreements with me before I started the work.
The agreement of the contract is mainly drafted by the contractor.
Contractor provides me enough time to read the agreement.
Contractor gives a chance for me to negotiate the contract.
There is bias in the subcontract agreement.
<p>| | | | | | |</p>
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<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Totally</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Totally Agree</td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Contractor does not understand my work problems and needs
Contractor does not use his power to help me overcome my problems on site
Lack of responsibility by the contractor
Lack of help by the contractor
Poor site management

The time estimated for particular works are irrelevant
Incompetent project team
Inadequate project management assistance on site
Contractors do not share up-to-date information about the project with me
Lack of standard procedure if something unfortunate happened
Contractor does not establish a proper communication channel

Communication of information between main contractor and subcontractor is poor
Unclear work and task objective on site
Poor planning and scheduling during the pre-stage
Variation orders (V.O) by the main contractor/client are excessive
Working hours in a construction project is long
Excessive number of parties on site makes it difficult to work
Working condition in a construction project is poor
Construction industry has a tough environment
SECTION D

Please circle the number that best described your feelings for the following statements. Have you experienced the following situations in any projects you have worked on?

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<tr>
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<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Totally Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Totally Agree</td>
</tr>
</tbody>
</table>

I often think about quitting this project

I am actively looking for another project
As soon as I can find a better job, I’ll leave this one

THANK YOU FOR YOUR TIME
APPENDIX A.2: Questionnaire (Malay Version)

12 December 2015

Kepada sesiapa yang berkenaan,

Tuan/Puan,

PEMBULIAN SUBKONTRAKTOR DALAM INDUSTRI PEMBINAAN


2. Tujuan penyelidikan ini adalah untuk membina satu model pembulian subkontraktor dalam industri pembinaan. Penyelidikan ini juga bertujuan untuk mencapai tiga objektif lain, iaitu:

i. Untuk mengenal pasti tahap buli dalam kalangan subkontraktor di Malaysia

ii. Untuk mengkaji faktor pembulian ke atas subkontraktor

iii. Untuk menganalisis hubung kait antara pembulian subkontraktor dengan niat subkontraktor untuk berhenti daripada projek pembinaan

3. Untuk pengetahuan anda, keputusan kaji selidik ini hanya akan dilaporkan dalam bentuk agregat untuk melindungi identiti responden. Baik penyelidik mahupun pihak Universiti tidak mempunyai konflik kepentingan dalam keputusan ini.


Terima kasih untuk pertimbangan anda. Bantuan anda amat dihargai.

Yang benar,

Nur ‘Izzati binti Hidzir

Universiti Sains Malaysia

Tel: 04-6533176/ 019-9141206

Fax: 04-6576523
BAHAGIAN A

LATAR BELAKANG RESPONDEN

Sila tandakan di kotak yang betul.

Pernahkah anda membuat kerja subkontrak?

Ya Tidak

Sekiranya jawapan anda ya, tolong jawab soalan soalan seterusnya.

1. Berapakah umur anda?

☐ 20 – 30 tahun ☐ 31 – 40 tahun ☐ 41 – 50 tahun

☐ 51 tahun ke atas

2. Apakah tahap pendidikan tertinggi anda?

☐ Sekolah Menengah ☐ Diploma ☐ Sarjana Muda

☐ Master/ Phd

3. Kelas kontraktor :

☐ Gred 1 ☐ Gred 2 ☐ Gred 3

☐ Gred 4 ☐ Gred 5 ☐ Gred 6

☐ Gred 7

4. Berapakah usia firma anda?

☐ 1 – 4 tahun ☐ 5 – 10 tahun ☐ 11 – 16 tahun

☐ 17 – 22 tahun ☐ 23 tahun ke atas

5. Kategori :

☐ Perkhidmatan ☐ Mekanikal dan Elektrikal

☐ Pembinaan Kejuteraan Awam ☐ Pembinaan Bangunan

☐ Perdagangan
6. Pengalaman bekerja dalam pekerjaan sub-pembinaan:

- [ ] 1 – 4 tahun
- [ ] 5 – 10 tahun
- [ ] 11 – 16 tahun
- [ ] 17 – 22 tahun
- [ ] 23 tahun ke atas

**BAHAGIAN B**

Pembulian subkontraktor merupakan tindakan berulang disengajakan yang kerap berlaku dalam tempoh masa yang panjang oleh seseorang * terhadap subkontraktor. Buli boleh berlaku dalam bentuk penderaan secara lisan, tingkah laku yang menghina, mengancam dan/ atau mensabotaj produktiviti kerja atau status subkontraktor.

* Seseorang itu ialah seorang yang mempunyai hubungan kontrak dengan subkontraktor dalam projek pembinaan (contohnya: kontraktor utama dan pemilik projek/ klien).

Adakah anda pernah mengalami situasi berikut dalam projek-projek anda? Sila bulatkan nombor yang menggambarkan perasaan anda untuk pernyataan-pernyataan berikut.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tidak pernah</td>
<td>Jarang-jarang</td>
<td>Kadang kala</td>
<td>Kerap</td>
<td>Sangat kerap</td>
</tr>
</tbody>
</table>

| Seseorang menyembunyikan maklumat yang memberi impak kepada prestasi saya | 1 | 2 | 3 | 4 | 5 |
| Saya telah diarahkan untuk melakukan kerja-kerja di luar skop tugas saya | 1 | 2 | 3 | 4 | 5 |
| Pendapat dan pandangan saya telah diabaikan | 1 | 2 | 3 | 4 | 5 |
| Kerja saya telah dipantau secara berlebihan | 1 | 2 | 3 | 4 | 5 |
| Saya tidak mendapat perakuan yang sepatutnya untuk hasil kerja saya | 1 | 2 | 3 | 4 | 5 |
| Seseorang cuba mencari kesalahan dalam kerja saya | 1 | 2 | 3 | 4 | 5 |
| Seseorang telah memindahkan risiko projek yang besar kepada saya | 1 | 2 | 3 | 4 | 5 |
| Saya telah diberikan kerja yang tidak dapat diuruskan | 1 | 2 | 3 | 4 | 5 |
| Saya telah dihina atau diejek berkaitan dengan kerja saya | 1 | 2 | 3 | 4 | 5 |
Saya diberikan tugas-tugas dengan sasaran atau tarikh akhir yang tidak munasabah atau mustahil
Saya pernah tidak dibayar untuk kerja-kerja yang telah saya lakukan
Saya dipersalahkan jika sesuatu kemalangan berlaku di tapak pembinaan walaupun bukan kesilapan saya
Saya terpaksa bekerja lebih masa untuk memenuhi tarikh akhir projek
Saya mengendalikan beban kerja yang berlebihan dari yang sepatutnya
Saya menerima bayaran yang tidak adil untuk kerja-kerja pembinaan saya
Pembayaran untuk kerja yang saya lakukan ditangguhkan
Saya terdedah kepada tingkah laku menakut-nakutkan seperti menunjuk jari, menolak, menyekat atau menghalang jalan
Saya menerima ugutan keganasan dan penderaan fizikal
Saya menerima mesej, panggilan telefon, atau email yang menghina saya
Saya menerima ugutan untuk membuat hidup saya sukar

BAHAGIAN C

Berdasarkan pernyataan di Bahagian A, pada pendapat anda, mengapakah keadaan sedemikian berlaku dalam projek pembinaan? Sila bulatkan nombor yang paling tepat menggambarkan persetujuan anda untuk pernyataan berikut.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sangat tidak setuju</td>
<td>Tidak setuju</td>
<td>Neutral</td>
<td>Setuju</td>
<td>Sangat setuju</td>
</tr>
</tbody>
</table>

Kontraktor berunding syarat perjanjian dengan saya terlebih dahulu sebelum memulakan kerja
Perjanjian kontrak dirangka kebanyakannya oleh kontraktor
Kontraktor memberi masa yang cukup untuk saya membaca syarat perjanjian
Kontraktor memberi peluang untuk saya berunding mengenai hal-hal kontrak

1 2 3 4 5

Terdapat perjanjian yang berat sebelah dalam subkontrak

1 2 3 4 5

Kontraktor tidak memahami masalah kerja dan keperluan saya

1 2 3 4 5

Kontraktor tidak menggunakan kuasanya untuk membantu saya mengatasi masalah di tapak pembinaan

1 2 3 4 5

Kontraktor kurang bertanggungjawab di dalam tugasnya

1 2 3 4 5

Kontraktor kurang membantu

1 2 3 4 5

Tahap pengurusan tapak kurang baik

Masa yang dianggarkan untuk kerja-kerja tertentu tidak relevan

1 2 3 4 5

Pasukan projek tidak cekap

1 2 3 4 5

Bantuan pengurusan projek tidak mencukupi di tapak pembinaan

1 2 3 4 5

Kontraktor tidak berkongsi maklumat terkini mengenai projek dengan saya

1 2 3 4 5

Kekurangan prosedur standard jika sesuatu kemalangan berlaku

1 2 3 4 5

Kontraktor tidak mewujudkan saluran komunikasi yang betul

1 2 3 4 5

Komunikasi maklumat antara kontraktor utama dan subkontraktor kurang baik

1 2 3 4 5

Kerja dan objektif tugas di tapak pembinaan tidak jelas

1 2 3 4 5

Perancangan dan penjadualan yang lemah semasa di peringkat pra-pembinaan

1 2 3 4 5

Terlalu banyak variation orders (V.O) daripada kontraktor utama/klien

1 2 3 4 5

Waktu kerja dalam sesuatu projek pembinaan adalah panjang

1 2 3 4 5

Terlalu banyak pihak di tapak pembinaan menyukarkannya kerja saya

1 2 3 4 5

Keadaan kerja di tapak pembinaan adalah kurang baik

1 2 3 4 5

Industri pembinaan mempunyai persekitaran yang sukar
BAHAGIAN D

Sila bulatkan nombor yang paling tepat menggambarkan perasaan anda untuk pernyataan berikut. Adakah anda mengalami situasi berikut dalam projek-projek yang lepas anda telah bekerja di?

<table>
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<th></th>
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<th>4</th>
<th>5</th>
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<td>Tidak setuju</td>
<td>Neutral</td>
<td>Setuju</td>
<td>Sangat setuju</td>
<td></td>
</tr>
</tbody>
</table>

Saya sering berfikir untuk berhenti daripada industri ini

Saya sentiasa giat mencari projek-projek baru

Sebaik sahaja saya dapat mencari projek yang lebih baik, saya akan meninggalkan projek ini

TERIMA KASIH
**APPENDIX B: Profiles of Respondents**

**B.1 – Age of the respondent**

<table>
<thead>
<tr>
<th>Age of the respondent</th>
<th>Frequency</th>
<th>Percent (%)</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 - 30 years old</td>
<td>31</td>
<td>14.8</td>
<td>14.8</td>
<td>14.8</td>
</tr>
<tr>
<td>31 - 40 years old</td>
<td>66</td>
<td>31.4</td>
<td>31.4</td>
<td>46.2</td>
</tr>
<tr>
<td>41 - 50 years old</td>
<td>74</td>
<td>35.2</td>
<td>35.2</td>
<td>81.4</td>
</tr>
<tr>
<td>&gt; 51 years old</td>
<td>39</td>
<td>18.6</td>
<td>18.6</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>210</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

**B.2 – Academic background**

<table>
<thead>
<tr>
<th>Academic background</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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</thead>
<tbody>
<tr>
<td>Diploma</td>
<td>45</td>
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<td>21.4</td>
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<td>Bachelor Degree</td>
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<td>77.6</td>
<td>99.0</td>
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<tr>
<td>Master/ PhD</td>
<td>2</td>
<td>1.0</td>
<td>1.0</td>
<td>100.0</td>
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<tr>
<td>Total</td>
<td>210</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

**B.3 – Years of experience**

<table>
<thead>
<tr>
<th>Years of experience</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 4 years</td>
<td>24</td>
<td>11.4</td>
<td>11.4</td>
<td>11.4</td>
</tr>
<tr>
<td>5 - 10 years</td>
<td>47</td>
<td>22.4</td>
<td>22.4</td>
<td>33.8</td>
</tr>
<tr>
<td>11 - 16 years</td>
<td>75</td>
<td>35.7</td>
<td>35.7</td>
<td>69.5</td>
</tr>
<tr>
<td>17 - 22 years</td>
<td>55</td>
<td>26.2</td>
<td>26.2</td>
<td>95.7</td>
</tr>
<tr>
<td>More than 23 years</td>
<td>9</td>
<td>4.3</td>
<td>4.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>210</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
B.4 – Grade or class registration

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>Grade 6</td>
<td>84</td>
<td>40.0</td>
<td>40.0</td>
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<tr>
<td></td>
<td>Grade 7</td>
<td>126</td>
<td>60.0</td>
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<td>210</td>
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</tbody>
</table>

B.5 – Age of the firms

<table>
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<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>1 - 4 years</td>
<td>16</td>
<td>17.6</td>
<td>17.6</td>
</tr>
<tr>
<td></td>
<td>5 - 10 years</td>
<td>53</td>
<td>25.2</td>
<td>32.9</td>
</tr>
<tr>
<td></td>
<td>11 - 16 years</td>
<td>80</td>
<td>38.1</td>
<td>71.0</td>
</tr>
<tr>
<td></td>
<td>17 - 22 years</td>
<td>56</td>
<td>27.1</td>
<td>98.1</td>
</tr>
<tr>
<td></td>
<td>More than 23 years</td>
<td>4</td>
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</tr>
<tr>
<td>Total</td>
<td>210</td>
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<td></td>
</tr>
</tbody>
</table>

B.6 – Category or nature of construction project

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>Mechanical and Electrical</td>
<td>59</td>
<td>28.1</td>
<td>28.1</td>
</tr>
<tr>
<td></td>
<td>Civil Engineering</td>
<td>48</td>
<td>22.9</td>
<td>51.0</td>
</tr>
<tr>
<td></td>
<td>Building Construction</td>
<td>102</td>
<td>48.6</td>
<td>99.5</td>
</tr>
<tr>
<td></td>
<td>Trade</td>
<td>1</td>
<td>0.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>210</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
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</table>
### APPENDIX C: Test of normality and descriptive statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Variance</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>BW1</td>
<td>207</td>
<td>5</td>
<td>1</td>
<td>5</td>
<td>2.59</td>
<td>.990</td>
<td>.990</td>
<td>.173</td>
<td>-.495</td>
</tr>
<tr>
<td>BW2</td>
<td>207</td>
<td>5</td>
<td>1</td>
<td>5</td>
<td>2.63</td>
<td>1.015</td>
<td>1.038</td>
<td>.027</td>
<td>-.492</td>
</tr>
<tr>
<td>BW3</td>
<td>207</td>
<td>5</td>
<td>1</td>
<td>5</td>
<td>2.63</td>
<td>.930</td>
<td>.864</td>
<td>-.083</td>
<td>-.702</td>
</tr>
<tr>
<td>BW4</td>
<td>207</td>
<td>5</td>
<td>1</td>
<td>5</td>
<td>2.74</td>
<td>.891</td>
<td>.800</td>
<td>-.180</td>
<td>-.367</td>
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<td>207</td>
<td>5</td>
<td>1</td>
<td>5</td>
<td>2.67</td>
<td>.954</td>
<td>.940</td>
<td>.193</td>
<td>-.737</td>
</tr>
<tr>
<td>BW6</td>
<td>207</td>
<td>5</td>
<td>1</td>
<td>5</td>
<td>2.75</td>
<td>1.020</td>
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<td>.012</td>
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<td>-.015</td>
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<td>5</td>
<td>2.18</td>
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<td>1.033</td>
<td>.337</td>
<td>-.700</td>
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<td>5</td>
<td>2.90</td>
<td>.898</td>
<td>.804</td>
<td>-.174</td>
<td>-.516</td>
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<td>5</td>
<td>2.86</td>
<td>.968</td>
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<td>5</td>
<td>3.14</td>
<td>1.207</td>
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LIST OF PUBLICATIONS

1- PUBLICATIONS


Jaafar, M., Othman, N. R., and Hidzir, N. I. (2015). The role of family on gender development of women construction entrepreneurs. Advances in Environmental, p. 120.


2- CONFERENCES
