STRESS AND SUPPORT IN THE NEW ZEALAND CONSTRUCTION INDUSTRY: A STUDY OF PROJECT SUPERVISORS AND MANAGERS

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Abstract

The impact that stress has in the lives of individuals is considerable. Although it is a common concept, it is often misunderstood by many individuals. Stress is the way in which an individual responds to a range of environmental stressors. Thus, interventions for stress have received an increasing amount of attention in management literature. A portion of this field that has received a considerably less amount of attention is the role of support as an intervention for stress in the construction industry. This study seeks to explore the impacts of support on stress in construction managers. The first phase of the study utilised a social cross-sectional questionnaire approach and the second half used a semi-structured interview. Participants were sought from the four different sectors within the industry, the quantitative study had 47 respondents and the qualitative study had 11 participants. It is important to note that although a quantitative approach was the original intention of this study, it is the qualitative findings that have contributed the most to the overall findings. The findings of this study, developed using thematic analysis methodology, are conveyed through a matrix which explores the different types of support at different levels during stressful events. The study has concluded that support at a team level is made up of all four types of support: emotional, tangible, informational and companionship. However, as the provider of the support becomes further removed from the individual, the type of support experienced moved towards an informational support focus.

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Chapter One: Introduction

The New Zealand construction industry is currently experiencing a period of high demand. The housing market has seen high growth levels due to range of reasons, from immigration and general population growth, to the desire to achieve the kiwi dream of home ownership (Thompson, 2017). The commercial sector in general has seen growth due to the fast paced development of the country's economy (MBIE, 2013). This has seen the whole industry enter into a building boom. The boom comes on the back of a long period of down turn where the industry faced a number of cost cutting measures. The combination of both has created the perfect storm. The industry is struggling to cope with the high levels of demand required from the marketplace with a work force that is under resourced (BRANZ, 2013; PricewaterhouseCoopers, 2016). The sector currently employs the equivalent of 180,000 full-time workers, with the need for 49,000 extra construction jobs expected by 2021 (Brannam, 2016). This has in effect created an environment that is producing a wide range of stressors especially for those in a position where they need to manage or supervise construction projects (BRANZ, 2013).

This wide range of stressors encountered by workers within the construction industry has been well documented (Leung, Chan, & Olomolaiye, 2008; Leung & Chan, 2011; Leung, Chan, & Chen, 2011; Leung, Chan, Chong, & Sham, 2008; Leung, Yee-Shan, & Yu, 2009). These include but are not limited to costs, time frames, resources and staffing difficulties (Leung, Chan, & Olomolaiye, 2008). The current building sector has many of the aforementioned stressors (BRANZ, 2013). Current studies in the sector have explored the different aspects of stress. They explore the different stressors that impact construction professionals in a variety of contexts (Bowen, Edwards, & Lingard, 2013; Enshassi & Al Swaity, 2015; Leung et al., 2009). Other research has focused on

stressors and the relationship they place on overall performance (Leung, Chan, & Olomolaiye, 2008) and safety performance (Enshassi, El-Rayyes, & Alkilani, 2015). Research has also explored the relationship between job stress, physiological stress and burnout (Leung et al., 2011). Further research has delved into work-life experiences (Lingard & Valerie, 2004) and work-life balance (Lingard, Brown, Bradley, Bailey, & Townsend, 2007). There has also been research into the impact of the individual and job characteristics on burnout (Lingard, 2003).

Despite a significant number of studies exploring the role of support in stress, these studies have not explored the construction industry in depth. This is because the construction industry has only recently started to receive greater attention, and as such there is still more to learn (Leung et al., 2011). Current studies have explored a number of aspects mainly through quantitative methods with only a few using qualitative methods (Leung et al., 2011). Lingard and Francis (2005) have investigated the relationship between supportive work environments and work and family conflict. Bowen and colleagues have delved into support factors and coping mechanisms within the industry (P. Bowen, D. J. Edwards, H. Lingard, & K. Cattell, 2014a, 2014b; Cattell, Bowen, & Edwards, 2016). Love, Edwards and Irani have investigated work-related stress and the relationship between job demands, control and social support on psychological well-being (Love, Edwards, & Irani, 2010). Leung and colleagues have explored the structural relationships between job stress, burnout, physiological stress and performance of construction project managers (2011).

Following in the footsteps of studies undertaken overseas into the implications of support for construction managers, this study here seeks to explore the concept of workplace support and its relationship with stress within the New Zealand context. Through two phases a number of aims were explored. Phase one of this research sought

to use a quantitative approach to delve further into the effects of workplace support on workplace stress for managers within the New Zealand context. As discussed further in the literature review, phase one investigated a range of hypotheses and a summary of these are outlined below.

H1-4: (H1) Perceived job stress, (H2) emotional exhaustion, (H3) depersonalization, and (H4) perceived lack of personal accomplishment will negatively affect (a) job satisfaction, (b) career attainment and (c) organisational commitment

H5-8: (H5) Perceived job stress, (H6) emotional exhaustion, (H7) depersonalization, and (H8) perceived lack of personal accomplishment will positively affect (a) perceived mobility, (b) workplace deviance and (c) turnover intention.

H9: Co-worker support will positively affect (a) perceived job stress, (b) emotional exhaustion, (c) depersonalization and (d) perceived lack of personal accomplishment.

H10: Supervisor support will positively affect (a) perceived job stress, (b) emotional exhaustion, (c) depersonalization and (d) perceived lack of personal accomplishment.

H11: POS will positively affect (a) perceived job stress, (b) emotional exhaustion, (c) depersonalization and (d) perceived lack of personal accomplishment.

H12: The industry will be considered busy.

H13: There will be a perceived skill shortage within the industry.

Phase Two of the study sought to understand the role of support for managers experiencing stress through a series of qualitative semi-structured interviews. The

qualitative phase explored the following question: How construction managers perceive and experience support during stressful events?

The structure for the following literature review is one that sets the stage for the formation of quantitative hypotheses. From there onwards, the structure explores both parts of the research in two phases, quantitative and then qualitative. It is important to note that although the quantitative research was the original intention of this study, it is the qualitative findings that have contributed the most to the overall findings. The findings of this research have led to the development of a matrix that shows the levels of support and the importance of the different types of support at each level.

Chapter **Two: Literature Review**

Stress, although a common concept, is often misunderstood. It is therefore important that for the purpose of this research an understanding of stress and the role it plays in the human experience is developed. Selye (1977) puts many of the misunderstandings of the concept of stress down its nature. Thus, the following section will provide a definition of stress, provide an understanding of the stressors, as well as the consequences and strains that occur from long term states of stress. With this foundation, the next section will explore the complex concept of social support as an intervening variable during states of stress. To do this, this section will explore the four different types of support that exist, as well as the levels of support that exist within the workplace. The last two sections will focus on developing the context within which this study took place and the justification this study has for exploring support and stress in this context.

2.1 Defining Stress

Stress affects everyone in different ways; it has an individualistic nature, what effects one person may not effect another (Blonna, 2012). It is not always negative and manageable amounts can support performance (Jones & Bright, 2001). The manifestation of psychological stress is the result of many different factors. These include but are not limited to an individual's personality type, their ability to be flexible, their understanding and use of avoidance and/or coping mechanisms, an individual's sleep and behaviour patterns, as well as their cognitive style, and how they learn (Patching & Best, 2014). What may be perceived as a stressor by one person may have no effect on another (Blonna, 2012). This is due to how that individual's subconscious filters the stressors and assesses them as either inconsequential or a threat (Patching &

Best, 2014). Given all of this, it is indeed understandable that there is vagueness and a level of ambiguity associated with the term.

There are a range of difficulties that are encountered when trying to define stress. There is a lack of agreement within the academic world as to a true definition of the term. Cooper and Dewe (2004) suggest that this is not a definitional crises but rather an absence of consensus in an area that is undergoing rapid expansion and has vague boundaries. One aspect of the discrepancy that exists is in the way in which the concept of stress is used. Stimulus-based models describe stress as an independent variable whereas response-based describe stress as a dependent variable (Cooper, Dewe, & O'Driscoll, 2001). Stimulus definitions of stress focus on the environment. It is an approach that assumes certain situations are normally stressful and does not allow for an individual's evaluation of an event (Lazarus & Folkman, 1984). On the other end of the scale, a response definition focuses on the state of stress and describing the characteristics of the response even when many indicators of such responses can be developed in non-stressful events (Lazarus & Folkman, 1984). Further still, there are models that imply a combination of both stimulus and response to stress (Cooper et al., 2001; Jones & Bright, 2001). Here the relationship between the stimulus and response is held as the key to the understanding of stress. Additionally another aspect to the broadness of the concept of stress is the wide-ranging application of the concept in different areas, whether medical, behavioural or socials science. Each area has its own perspective on stress and the accepted perspective that should be used as a guideline for investigation (Cooper & Dewe, 2004).

2.1.1 A Stress Model

The broad range of viewpoints on stress and its nature has played an important part in the development of many different models for understanding stress. These include but

are no means limited to the Stress Cycle Model (McGarth, 1979); the P-E Fit Approach (French, Caplan, & Van Harrison, 1982); the Job Demands-control Model (Karasek, 1979); the General Systems Approach (Cox & McKay, 1981); and the Cybernetic Model (Cummings & Cooper, 1979). A commonly used model for understanding stress is the one introduced by Clarke and Cooper (2004). This model is based on the relationship between the stimulus and the response. The individual assesses a threat or stressor and reacts. If the individual is unable to cope with the introduced stress element they experience stress. These authors put weight in the idea that stress is a very personal and individual symptom. Stress only occurs when an individual perceives the stressor negatively and displays inadequate coping methods.

Figure 1.0: The Cooper-Cummings Framework (Clarke & Cooper, 2004)
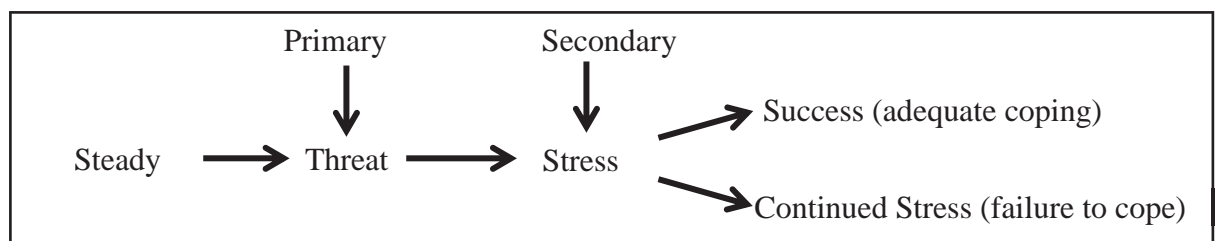
This model provides a clear definition of the concept of stress as referred to in this research. Stress is a response that is an essential part of life and it is not necessarily detrimental to the human experience (Selye, 1976). Stress is the way in which an individual responds to different environmental stressors. Stress development occurs in three stages.

The first stage is that of stressors. These are the variables under which individuals encounter stress. They consist of major life events, daily hassles, and chronic stressors (Holmes & Rahe, 1967). These responses are psychological and centre on an individual's cognitive appraisal of a situation (Lazarus & Folkman, 1984). The physiological response to stress is the way in which the body prepares itself to deal with

a threat; commonly known as the fight or flight response (Greenberg, 2006). Stress is, in essence, a catalyst for motivation.

The second stage is that of intervening variables. These are the variables that interact with the stressors and change how they are perceived by the individual encountering them (Lazarus & Folkman, 1984). These variables are wide ranging but are categorized by the individual's personality, their coping styles and strategies, as well as, the environmental factors that exist in any given situation, such as workplace support.

When the individual is unable to cope with a with an stressor, the individual enters into a stressed state where there is a perceived lack of balance between demands and the individual's ability to cope (Clark, 2002). It is here that the over exposure to these stressors causes harm to the individual (Leung, Chan, & Olomolaiye, 2008). This is the third stage of stress development, the effects of stress on the individual (Jones & Bright, 2001).

2.1.2 Stressors

Stressors are wide ranging and diverse. A stressor is an event that triggers a response. In the history of stress research, many different categories of stressors have been explored (Lazarus & Folkman, 1984). For the purpose of this study, the categories explored by Holmes and Rahe (1967) will be used to explain stressors. The first category was that of major life events. These are a distinct change in the individuals social or personal environment (Holmes & Rahe, 1967). Major life events include but are not limited to marriage, bereavement, illness and so many more both negative and positive. This concept was further developed to include the category of daily hassles. They are the features such as irritations, distresses and frustrations that characterise everyday interactions (Kanner, Coyne, Schaefer, & Lazarus, 1981). These can include arguments,

traffic or even minor positive experiences. Adding to the description is the element of chronic stressors (Jones & Bright, 2001). These capture the nature of many life experiences that are not covered by the categories above. Chronic stressors are the essence of many lifestyle factors such as heavy workloads, role ambiguity, low income and the like. Although these categories allow for the stressors to be conceptualised and measured they are by no means black and white. Many of the afore-mentioned ideas often fit into the grey areas that exist between the categories.

Literature shows that although there are many stressors outside the workplace that contribute to an individual's stress levels, the most frequent stressors are those that are work-related (Nakao, 2010). According to Bowen, Edwards and Lingard (2013), organizational stressors can appear in different forms. Cox, Griffiths and Randall (2003) describe these as the psychosocial hazards of the work place. They either stem from the content or the context of the work (Cox et al., 2003). The content of the work relates to the job content, workload or pace, work schedules and interpersonal relationship that exist (Cox et al., 2003). These are the quantitative demands; the time pressures and the volumes of work that impact on the individual. The stressors are created through the varying job demands that are placed on the individual and that individual's ability to control those demands (Bowen et al., 2013). The context of the work environment refers to the organisational culture and function, the individual's role in organisation, their career development, and the home-work relationship (Cox et al., 2003). These qualitative demands are the pressures of an individual's cognitive ability, as well as, the emotional requirements of the role. Stressors in the work place can also be physical or environmental (Bowen et al., 2013). Qualitative demands include those placed on the body in extreme conditions such as limited to extreme temperatures, heavy manual requirements or even uncomfortable conditions (Bowen et al., 2013).

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2.1.3 Stressors Specific to Construction Managers

The construction industry is a complex and demanding context. A study by Leung, Yee-Shana and Yu (2009) identified a range of stressors that were present for construction managers. These stressors were categorized into four groups. The first was that of task stressors. These related to the workload, role conflict and role ambiguity that occurs with daily work (Leung et al., 2009). The next group were the organisational stressors that stem from the organisation itself. They include organisation structure, an individual's career-development, as well as the presence of bureaucracy and hierarchical management structures (Leung et al., 2009). The third group focused on personal stressors in the construction industry. This group focused on the intrapersonal and interpersonal stressors that exist due to an individual's personal behaviour and their ability to communicate and engage in interpersonal relationships. The final group focuses on the physical stressors that exist, either onsite or the home environment. The former identifies the environmental factors such as physical conditions, excessive noise, extreme temperatures and inadequate light. The later involves the elements at home that can directly affect personal health and stress of construction workers (Chan, Leung, & Yuan, 2014). Of these construction workplace stressors, a study by Haynes and Love (2004) found that the highest ranking stressor was workload followed closely by both long working hours and conflict between home and work life.

2.1.4 Consequences and strains

According to Jones and Bright (2001), stress is becoming more prevalent within the western world despite relative prosperity and good health. The phenomenon of psychological distress can, from time to time, concern everybody (OECD, 2012). As alluded to earlier, stress has a wide range of consequences on the individual. This is one

reason why it is a phenomenon that has received a great deal of attention over the last 60 years (Cox & Griffiths, 2010; Patching & Best, 2014).

There are a range of consequences to long term states of stress which affect the well-being of the individual. These include health issues and an assortment of psychological states such as low morale and helplessness (Lazarus & Folkman, 1984). Cox, Griffiths and Houdmont (2006) explore how stress that stems from exposure to psycho-social hazards in the work place can, in their worst form, lead to injuries and impairments of clinical significance. Further, Grossi, Perski, Osika, and Savic (2015) highlight a number of articles that show that sick rates due to stress related psychological ill health have dramatically risen in Sweden since the 1990s. This pattern is reflected in OECD statistics which highlights psychological ill health as a main cause of absences in OECD countries (OECD, 2012, 2015).

Researchers have sought to study the impact that stress has on individuals, their communities, within organizations and to the economy in a range of contexts and conditions (Cooper & Dewe, 2004). Within the management field, researchers have focused their attention on objective stress and the harm caused by stressors, as well as the implementation of stress management programmes (Patching & Best, 2014). This is due to stress being recognized as a significant occupational hazard. It can impair work performance, psychological well-being and physical health (Maslach & Leiter, 2008). Here it is important to note that Houtman (2005) highlights that between different countries and even labour markets, patterns and trends tend to differ, so it is important to explore each context and the different factors involved.

The over exposure to stressors for prolonged periods of time is where burnout occurs (Charoensukmongkol, Moqbel, & Gutierrez-Wirsching, 2016). A meta-analysis

conducted by Halbesleben and Buckley (2004) highlighted the distinction between stress and burnout and the role stress plays as a precursor to burnout. It is the state of emotional and mental exhaustion that leads to energy depletion combined with a loss of commitment and motivation (Charoensukmongkol et al., 2016; Leung et al., 2011). Burnout is a syndrome that has been explored in many different contexts (Maslach & Leiter, 2008) and three key aspects have been identified. The first key aspect is that of emotional exhaustion (Grossi et al., 2015). This is characterised as a physical state in which the individual experiences emotional depletion. The second key aspect is that of Depersonalization (Salanova et al., 2005). This is the process of dehumanising interactions with others and the development of a negative, excessively callous detached attitude towards relationships (Grossi et al., 2015). The third key aspect is the perceived lack of personal accomplishment. Here the individual perceives a decline in their competence levels and their ability to achieve work related tasks (Grossi et al., 2015; Janssen, Schaufeli, & Houkes, 1999).

H1: Perceived job stress will negatively affect (a) job satisfaction, (b) career attainment and (c) organisational commitment

H2: Emotional exhaustion will negatively affect (a) job satisfaction, (b) career attainment and (c) organisational commitment

H3: Depersonalization will negatively affect (a) job satisfaction, (b) career attainment and (c) organisational commitment

H4: Perceived lack of personal accomplishment will negatively affect (a) job satisfaction, (b) career attainment and (c) organisational commitment

H5: Perceived job stress will positively affect (a) perceived mobility, (b) workplace deviance and (c) turnover intention.

H6: Emotional exhaustion will positively affect (a) perceived mobility, (b) workplace deviance and (c) turnover intention.

H7: Depersonalization will positively affect (a) perceived mobility, (b) workplace deviance and (c) turnover intention.

H8: Perceived lack of personal accomplishment will positively affect (a) perceived mobility, (b) workplace deviance and (c) turnover intention.

2.1.5 Interventions

Reducing the effects of stressors on individuals is an important element of the stress literature. A challenge that researchers have encountered is the tension between having adequate specificity as to help provide solutions and adequate generalizability so that the intervention can be applied to the wide range of organisational problems (Halbesleben & Buckley, 2004). Therefore, there has been wide spread exploration into the interventions that exist to assist individuals. These include primary preventions, secondary and tertiary interventions, as well as, insights into the mediating, moderating and direct effects on the stressor-strain relationships (Jones & Bright, 2001). Support is considered an intervention in all of the levels above (Clarke & Cooper, 2004).

Social support is an area that has been explored for its effects as a moderator in the relationship that occurs between the individual and the stressor (Jones & Bright, 2001). A moderator is something that is able to change the nature of the relationship by altering the strength and direction of the interaction (Jones & Bright, 2001). Moderators can act in two ways. They can either increase or decrease the effects from of the stressor-strain relationship. In the first case the moderator is referred to as the vulnerability and reactivity factors. In the second case, the moderator is referred to as a buffer (Jones & Bright, 2001).

An important variable is that of social support and the role it represents in stress management (Jawahar, Stone, & Kisamore, 2007). There have been a range of studies that have attempted to explain this factor in many different fields (Halbesleben & Buckley, 2004). These studies, at times, have had inconsistent findings about the association of support and its effect on stress and burnout (Charoensukmongkol et al., 2016). Although there is a lot of research exploring the role of support in stress, Sochos, Bowers and Kinman (2012) imply that the role of support is very occupation and role specific. Support in roles that involve high levels of cooperation can have positive effects, it acts as a buffer. Whereas support in roles that have high levels of competition can have negative effects (Sochos et al., 2012), it acts as a reactive factor. Therefore, there is a need to explore the role of support in stress for construction managers/supervisors because stress is a real problem in this industry.

2.2 Introduction to Support Literature

Every individual is unique and complex. It is therefore important to understand the underlying elements that make up an individual and their psychological wellbeing before delving further into the concept of support. Individuals seek to find worth and value in different aspects of their lives (Love et al., 2010). This desire is driven by a person's self-esteem. It is the force that drives their behaviours and moulds how they think and respond to themselves, others and the events in and around their lives (Crocker & Park, 2004). Work by Crocker and Park (2004) shows the importance of self-esteem as a predictor of an individual's wellbeing. If a person has positive beliefs about their abilities and who they are, there is a higher chance of them having successful outcomes in stressful events and the vice versa for those who have negative beliefs and therefore unsuccessful outcomes. This self-validation does not have to always come from the individual. It can come from the environment around them and this is where

the importance of social support lies. Social support is a method in which the individual gains self-validation through the existence or availability of people on who they can rely on. Social support, therefore, is an important part of the makeup of an individual's psychological wellbeing (Etzion, 1984).

Individuals do not tend to live in isolation. Around them there is generally a sphere of influence that is able to provide assistance or support (Morgan, 2002); this is what the term social support seeks to define. Social support is the perception of how the individual sees that they are cared for and the assistance they receive, whether this is a reality or not (Morgan, 2002). This support can come from many different sources including, but not limited to, friends, family, co-workers, employers and a range of organizations (Morgan, 2002).

2.2.1 Types of Support

Although it is important to note that there are many different ways in which social support has been defined (Cobb, 1976; Fernandes & Tewari, 2012; LaRocco, House, & French, 1980). In essence, there are four different types of social support.

The first is emotional support (Shavitt et al., 2016; Taylor, 2011; Thoits, 1982). That is, the empathy, concern, encouragement and acceptance a person receives from those around them. Emotional support is the idea that a bond between individuals is deeper and more meaningful than a casual acquaintanceship (Taylor, 2011). It is real, authentic relationships. An individual has emotional support when they are unconditionally accepted and cared for (Fehr, 2004). They feel safe to share their personal feelings without the fear of being judged (Fehr, 2004). In effect, the other person cares when the individual is emotionally distressed.

The second type is tangible support (Shavitt et al., 2016; Taylor, 2011; Thoits, 1982). This type of support comes in the form of tangible assistance, such as material goods, services, and financial assistance that an individual receives. It is the direct way in which others help the individual (Rees & Hardy, 2004). If an individual is given or has access to the correct resources in a given context, the chance of a successful outcome is greater (Taylor, 2011).

The third type of support is that of informational assistance (Fernandes & Tewari, 2012; LaRocco et al., 1980). The focus of this type is support that allows the individual to gain guidance and advice that allows them to overcome problems. Valuable information can be gained from interactions with other people (Rees & Hardy, 2004). Their experiences and advice can contain vast amounts of information that support individuals as they encounter problems or challenges in 'day to day' life (Taylor, 2011). In the work context, being able to ask for informational assistance can provide important technical information that the individual may not have gained without the assistance of others (Taylor, 2011).

The fourth type of social support is companionship support (LaRocco et al., 1980). This is where the individual gets a sense of belonging with the wider community. Belonging to a community is important, as the environment around the individual gives self-validation to an individual (Taylor, 2011). Companionship support is the engagement with others. This engagement gives the individual the chance to share life experiences and thus gain support in situations where support is needed (LaRocco et al., 1980).

For the purpose of this research, social support is therefore defined as the support provided to the individual that is intended to enrich their personal wellbeing through emotional concern, tangible support, informational assistance and companionship

(Michel, Mitchelson, Pichler, & Cullen, 2010). Social support is a complex concept. It can change and develop depending on its structural properties in the social network. This can depend on a range of different factors, the size, density and its interconnectivity of the network, as well as, the general stability, reliance and frequency of interactions with those who exist within it (Shavitt et al., 2016; Taylor, 2011; Thoits, 1982). Therefore, no one individual encounters social support in the same way.

2.2.2 Levels of Support

The different types of support can occur at different levels. The literature around workplace support focuses on three key levels explored below.

The first is co-worker support, the ability and willingness of co-workers and peers to provide aid to each other within the workplace. Co-workers are the people with whom individuals have the most interaction. They have a strong influence on performance of other employees. These relationships are often close and can be relied upon to provide support and help during times of need (Mengue & Boichuk, 2012).

  H9: *(a) Co-worker support will positively affect perceived job stress.*

   (b) Co-worker support will positively affect emotional exhaustion.

   (c) Co-worker support will positively affect depersonalization.

   (d) Co-worker support will positively affect perceived lack of personal

      accomplishment.

The second, supervisor support, is similar to co-worker support. Those in a supervisorial or management position are able to provide help, assistance and emotional support. Because of the direct relationship between supervisors and workers they are able to influence the attitudes and behaviours of their employees (Liaw, Chi, & Chuang, 2010).

They are able to allocate resources and therefore are able to play an important role in the work environment (Charoensukmongkol et al., 2016). However, research suggests that the difference between the two levels lies in the effects from the lack of support. Lack of support from the supervisor has a stronger link to negative psychological states than lack of co-worker support (Maslach, Schaufeli, & Leiter, 2001). The underlying justification for this comes from the link that supervisors have to the third level, the organisation. The actions of the supervisors can be perceived as a reflection of the organisations actions as a whole.

H10: (a) Supervisor support will positively affect perceived job stress.

(b) Supervisor support will positively affect emotional exhaustion.

(c) Supervisor support will positively affect depersonalization.

(d) Supervisor support will positively affect perceived lack of personal accomplishment.

The third is Perceived Organization Support (POS). This is the way in which employees assign humanlike characterises to the organisation such as the organisation cares or values (Eisenberger, Huntington, Hutchison, & Sowa, 1986). If a manager or a supervisor shows respect to an employee, that individual can see that respect as a reflection of the organisations values. The actions of the organisations agents, in this case the managers and supervisors, gives rise to the personification of organisation as an individual rather than just motivations of the individual agents themselves (Eisenberger et al., 1986). Therefore, any actions by these agents, regardless of whether they are positive or negative, can be seen to define whether or not the organization favours or disfavours an employee (Rhoades & Eisenberger, 2002).

H11: (a) POS will positively affect perceived job stress.

(b) POS will positively affect emotional exhaustion.

(c) POS will positively affect depersonalization.

(d) POS will positively affect perceived lack of personal accomplishment.

2.3 The New Zealand construction industry

The construction industry is an area which has been noted as highly stressful by Leung (2011). Research into stress and burnout amongst construction project managers (C-PMs) is lacking but is starting to receive greater attention (Leung et al., 2011). These studies are starting to explore the concept of stress and the factors that act as moderators, such as support. Much of the work in this industry has been largely based upon Hong Kong or Australian industries with a few case studies elsewhere (Enshassi et al., 2015; Leung et al., 2011; Lingard & Valerie, 2004; Love et al., 2010; Senaratne & Rasagopalasingam, 2016; Yip & Rowlinson, 2009).

The New Zealand construction industry employs the equivalent of 180,000 full-time (FTE) of people directly and 50,000 indirectly in construction-related services (PricewaterhouseCoopers, 2016). Curtis (2014) reported that the industry is characterised by small firms. 91% of the firms in the industry had 0-5 employees.

The construction sector is New Zealand's the fifth largest sector. It contributed 8% to the country's total GDP in 2015 (PricewaterhouseCoopers, 2016). The sector is one that encounters a great deal of change. It often goes through boom and bust cycles in which it experiences high and low levels of demand respectively (BRANZ, 2011). This means that there are often high levels of volatility. Experienced and skilled labour can easily be lost during low levels of the cycle (MBIE, 2013). Currently the industry as a whole is experiencing unprecedented levels of workload. The demand of the country's housing market and factors related to rebuilding after the recent earthquakes have meant the

industry has highlighted its concerns around capability to meet and sustain production during this boom cycle (MBIE, 2013). The industry is extremely busy and facing a number of pressures which flow on to the organisations within it (MBIE, 2013).

This industry has four sub-sectors: residential, commercial, construction services and heavy and civil engineering (MBIE, 2013; Worksafe, 2015). The first two sub-sectors are self-explanatory, however construction services include a wide range of occupations that are typically sub-contracted such as, plumbers, electricians, joiners and many more. The last sub-section refers to firms that specialise in larger infrastructure projects and upgrades (MBIE, 2013; PricewaterhouseCoopers, 2016).

H12: The industry will be considered busy.

H13: There will be a perceived skill shortage within the industry.

2.4 Justification for further research

Although there has been extensive research into stress and burnout (Cordes and Dougherty, 1993 as cited in Leung et al., 2011), there are still many areas that have not received as much attention as others. Professions where there is a strong focus on interpersonal relationships have received considerable attention such as: educators and medical practitioners (Yip & Rowlinson, 2009). Other occupational areas are slowly receiving attention (Shepherd, Tashchian, & Ridnour, 2011), however research focused in the construction industry is limited (Leung et al., 2011). There is limited research that has been undertaken into the different attributes of stress within the industry (Enshassi et al., 2015; Leung et al., 2011). These studies have not explored the whole industry nor have they included those at a supervisory level within their studies (Lingard & Francis, 2006), even though research shows the importance of the role played by the supervisor (Charoensukmongkol et al., 2016). This research seeks to extend this literature by

developing insight into the effects of social support on construction project management professionals in New Zealand. Current research into the construction industry internationally has concluded that support does have positive relationship in reducing stress (Lingard & Francis, 2006).

Management roles typically encounter high levels of occupational stress (Karasek, 1979). A manager's role within an organisation is often demanding, complex and highly varied (Haynes & Love, 2004). It is upon this justification that managers and supervisors of construction sites are the focus of this study.

Chapter Three: Methodology

3.1 Study Overview

This study used two different approaches in two different phases. The first phase explored quantitative methods to investigate a number of hypotheses. The second phase used qualitative methods to further explore the support and the role it plays in stressful events. The justification for the use of both methodologies lies with the number respondents of the first phase. The quantitative study had limited respondents, which was well below the amount needed to create meaningful findings that could have been used to make significant generalisations. Therefore, phase two used qualitative practices to explore the subject matter in more detail in an effort to find meaningful data. The following chapter describes the two phases of the study in detail, including the methods used and the ethical considerations.

3.1.1 Aim of Study

The aim of the study was to explore the impacts of support on stress in construction managers. This was done in two phases.

As discussed in the literature review, phase one investigated a range of hypotheses and a summary of these are outlined below.

H1-4: (H1) Perceived job stress, (H2) emotional exhaustion, (H3) depersonalization, and (H4) perceived lack of personal accomplishment will negatively affect (a) job satisfaction, (b) career attainment and (c) organisational commitment

H5-8: (H5) Perceived job stress, (H6) emotional exhaustion, (H7) depersonalization, and (H8) perceived lack of personal accomplishment will positively affect (a) perceived mobility, (b) workplace deviance and (c) turnover intention.

H9: Co-worker support will positively affect (a) perceived job stress, (b) emotional exhaustion, (c) depersonalization and (d) perceived lack of personal accomplishment.

H10: Supervisor support will positively affect (a) perceived job stress, (b) emotional exhaustion, (c) depersonalization and (d) perceived lack of personal accomplishment.

H11: POS will positively affect (a) perceived job stress, (b) emotional exhaustion, (c) depersonalization and (d) perceived lack of personal accomplishment.

H12: The industry will be considered busy.

H13: There will be a perceived skill shortage within the industry.

The qualitative phase explored the following question:

How construction managers perceive and experience support during stressful events?

3.1.2 Research Design

This research developed an approach that was consistent with the cross-sectional design method that is outlined by Bryman and Bell (2015). Managers and supervisors from the construction industry were invited to take part in a self-administered online survey that consisted of nine validated psychometric measures and the presentation of four short qualitative questions based on a critical incident approach (Flanagan, 1954). Although self-administered questionnaires do have a range of validity concerns such as inclusive of low response rates and a greater of risk of missing data, the method of data collection does allow for data collection to occur in a sphere of privacy and remove a range barriers which may stop potential participants from engaging with the research (Bryman & Bell, 2015).

The second part of this research used a semi-structured interview (Bryman & Bell, 2015). Although this approach was originally considered as an alternative study that could be undertaken if the cross-sectional survey had low response rates, it was later deemed to be necessary to develop this approach as the core of this study. This was because the methodology of the interviews allowed for an in-depth exploration of the way in which the managers and supervisors perceive workplace support in regards to the role it plays in stressful events. The data collection took place in two parts. One method followed quantitative methods and the other followed qualitative methods. Each is outlined separately below.

For the purpose of this study, construction managers and supervisors from all four areas within the New Zealand industry were sought as participants. New Zealand provides a unique opportunity for the industry to be explored as a whole. The industry is much smaller in New Zealand than in other countries where research is already being undertaken and therefore the focus can be on the industry as a whole, but rather as individual sub sectors or individual trade groups held within those subsector (Leung et al., 2011; Lingard & Valerie, 2004; Love et al., 2010; Yip & Rowlinson, 2009). Comparative to the New Zealand's 180,000 FTE, the Australian construction industry, where studies have already taken place, consists of approximately one million people (Australian Bureau of Statistics, 2012).

3.2 Phase One: Cross-sectional Survey

3.2.1 Participants

For this study purposeful sampling was used for data collection (Palinkas et al., 2015). As the targeted audience was relatively small it was necessary that potential participants were, where possible, directly identified and sought out. Initially, participants were

sought through the Master Builders Association and through The Contractor Magazine. However, due to low participant numbers extra participants were recruited through contact made with a wide range of businesses via email and by phone. Overall, 47 participants undertook the survey. The original aim of this research was to have approximately 100 to 200 respondents from all four areas within the industry: residential, commercial, construction services and heavy and civil engineering. This aim for the number of participants was in line with the studies conducted on the Australian construction industry conducted by Lingard and Francis (2005; 2004) and studies on the Hong Kong construction industry (Leung et al., 2011). These studies had between 170-280 participants and a respondent rate ranging from 47% to 21.6% respectively.

3.2.2 Method of data collection

For the first phase survey, the questions were developed using a range of validated psychometric scales. These scales provide reliability and validity across a field of research, namely stress and burnout, which is forever expanding and exploring different ideas. Each of the following scales, outlined below, has been used within the wider field of stress and burnout and is an accepted scale for measuring each different aspect. The survey also included a qualitative section which used a critical incident approach (Flanagan, 1954). These questions were originally included to provide a qualitative voice to the quantitative data. However, as they study progressed, this information was no longer necessary and therefore was not utilised. The survey took place between October 2016 and December 2016.

3.2.2.1 Demographics

Participants were asked to identify a limited amount of demographic information. Questions for this section of the survey were developed from several different sources. The ethnicity and educational questions were taken from the New Zealand Census

(Statistics NZ, 2013). The information collected was age, gender, marital status, ethnicity and highest qualification. This was in an effort to align research with existing data sets. The remaining questions in the demographic section were developed by the researcher and were collected through nominal measurements (Bryman & Bell, 2015). These questions consisted of the individual's project management qualifications, their industry sector and trade profession, level of responsibility, their job title and years of experience as well as the size of the company they work for. Two further questions were created to get an indication of industry busyness and the ability to find skilled workers. The full survey can be seen in the appendix.

3.2.2.2 MBI

The academic standard for measuring burnout is the Maslach Burnout Inventory (MBI). This scale was created by Maslach and Jackson (1981) to measure the syndrome of burnout amongst individuals in sectors focusing on interpersonal relationships. This scale consists of four sections. The first nine items focus on emotional exhaustion. The second section explores the degree of personal accomplishment through eight items. The third section gives insight into the level of depersonalization experienced in the role. This scale consists of five items. The remaining section examines the person's level of involvement and is an optional part of the scale. With that in mind, these three items were left out of this research. The scale is answered via a seven point Likert-type scale to measure the frequency of the occurrence. This measure had adequate reliability (α= .76) (Leung et al., 2011).

The use of this scale requires permission from the publisher. John Wiley and Sons gave the required permission to reproduce the scale on the 24th of August 2016, license number 3935211134102.

3.2.2.3 Organisational Support

Organisational support Stress was measured with six items by Eisenberger, Huntington, Hutchinson and Sowa (1986). . Questions followed the stem "My organization…" "takes pride in my accomplishments". It was coded 1=none, 5=a great deal. This measure had adequate reliability (α= .93) (Eisenberger et al., 1986).

3.2.2.4 Supervisor Support

Supervisor support was measured with two scales. The first was eight items by Lambert (2000). This scale included statements such as "My supervisor is concerned about me as a person" and "My supervisor is helpful to me when I have a family or personal emergency". It was coded 1=Not at all, 5=All of the time. The second was seven items by Thomas and Ganster (1995). Questions followed the stem "My Supervisor is concerned about me as a person". These were coded 1=to a very little extent, 5=to a very great extent. These scales were used together by Lingard and Francis (2006) to measure supervisor support when they explored supportive work environments.

3.2.2.5 Co-worker Support

Co-worker support was measured with two scales. The first was three items by Taylor and Bower (1972). It included statements such as "If I got into difficulties at work, I know my workmates would try and help me out" and "I can trust the people I work with to lend me a hand if I need it". It was coded 1= No, I strongly disagree, 5= Yes, I strongly agree. The second was three items by Cook and Wall (1980). It included statements such as "How friendly or easy to approach are the persons in your work group?" and "When you talk with persons in your work group to what extent do they pay attention to what you're saying?". It was coded 1=to a very little extent, 5=to a very great extent. Justification for the use of these two scales together comes from a study

undertaken Lingard and Francis (2006). They used these two scales together to measure co-worker support.

3.2.2.6 Job Stress

Job Stress was measured with seven items by Gmelch (1982 as cited in Leung, Chan, & Olomolaiye, 2008). It was coded 1=none, 5=a great deal. Questions followed the stem "Rate your ability in relation to your expected ability" followed by statements such as "Number of project deadlines". This measure had adequate reliability (α= .79) (Leung et al., 2011).

3.2.2.7 Job Satisfaction

Job Satisfaction was measured with three items by Brayfield and Rothe (1951). It included statements such as "I am enthusiastic about my work" and "I feel satisfied with my present job". It was coded 1=strongly disagree, 5=strongly agree.

3.2.2.8 Career Satisfaction

Career Satisfaction was measured with five items by Greenhaus, Parasuraman and Wormley (1990). It included statements such as "I am satisfied with the success I have made towards meeting my income goals" and "I am satisfied with the success I have made towards meeting my goals for advancement". It was coded 1=strongly disagree, 5=strongly agree. This measure had adequate reliability (α= .88) (Greenhaus et al., 1990).

3.2.2.9 Organisational Commitment

Organisational Commitment was measured with three items by Allen and Meyer (1990). It included statements such as "I really feel as if this organisation's problems are my own" and "This organisation has a great deal of personal meaning for me". It was

coded 1=strongly disagree, 5=strongly agree. This measure had adequate reliability (α= .87) (Allen & Meyer, 1990).

3.2.2.10 Turnover Intention

Turnover Intention was measured with two items by Kelloway, Gottlieb and Barham (1999). It included statements such as "I am thinking about leaving my organization" and "I am planning to look for a new job". It was coded 1=strongly disagree, 5=strongly agree. This measure had adequate reliability (α= .92 .93) (Kelloway et al., 1999).

3.2.2.11 Perceived Mobility

Perceived Mobility was measured with three items by Tepper (2000). It included statements such as "If I were to quit my job, I could find another job that is just as good" and "I would have no problem finding an acceptable job if I quit". It was coded 1=strongly disagree, 5=strongly agree.

3.2.2.12 Withdrawal Behaviour

Workplace deviance was measured with four items adapted from the scale by Eisenberger, Armeli, Rexwinkel, Lynch and Rhoades (2001). It included statements such as "I always begin work on time" and "My attendance at work is above the norm". It was coded 1=strongly disagree, 5=strongly agree.

3.2.2.13 Qualitative Questions

To provide a point of difference compared to other studies into support and stress within the construction industry, this study has included four qualitative questions that explored a stressful event that occurred within the participant's work lives. These questions were developed using a critical incident approach (Flanagan, 1954). The first question explores a stressful event. The three follow up questions ask the participants to explore that event in regards to the support provided in three different levels, co-worker,

supervisor, and the organisation. These three categories link to the cross-sectional survey and were intended to provide greater insight into the experiences of the participants. However, with the inclusion of phase two, this information was not used.

3.2.3 Method of data analysis

The quantitative data was analysed using SPSS 24. This allowed for each of the scales to be tested to ensure that they had an adequate level of reliability. Once the data had been tested, the data was able to be correlated to assess a range of independent variables against dependant ones.

3.3 Phase Two: Semi-structured Interview

3.3.1 Participants

Participants for the interviews were individuals who either identified themselves by providing their details through the survey or were construction professionals from the researcher's existing professional networks.

3.3.2 Method of data collection

For the second phase of the study, 11 semi-structured interviews were conducted which contained a range of open-ended questions. All interviews were recorded with the consent of the respondents. Where possible, the interviews were conducted face-to-face. Face-to-face interviews were preferred because they allow the interviewer to take advantage of social cues, such as body language. These can provide a lot of extra information. However, due to a range of factors, including participant's time, location and workplace pressures, most interviews took place over the phone (Bryman & Bell, 2015). Participants were identified through an opt-in process via the cross-section survey, through a request sent out by the Contractor Magazine and through personal contacts of the researcher. The criteria for participants was that the individual was

employed in a role (or believed themselves to be currently working in a role) as a construction project manager or supervisor. Interviews times ranged from 20 to 40 minutes. The interview structure is outlined in the appendix. The interviews took place between December 2016 and February 2017.

The questions were divided into four major sections. The first related to demographics, the second support, the third stress and the final section used a critical incident approach (Flanagan, 1954). Participants where asked in the second and third sections to describe what support and stress looks like to them within the industry. This involved them exploring support at different levels and their experiences with stress in the industry. The critical incident technique approach was for the last section of the interviews and is where the majority of the information came from to form the findings.

This section focused on asking the participants to provide an example of a stressful event. This became a stimulant that allowed the participants to delve into the different aspects of support they received during stressful events. This allowed for the exploration that could then be used to permit inferences and predictions to be made about the person in the situation (Flanagan, 1954). This approach was appropriate in this situation because it allowed participants to share their experiences of the event. This gave a snap shot into how the individual responded to the support available during their stressful event. This approach created the guiding questions that where asked during the interviews. In some cases, the flexibility of this approach to provide facilitation, allowed for the participants to direct the flow of information about their event. Participants were asked to explore an event in detail, which allowed for a degree of understanding around the event. Participants were asked to provide as much detail as possible and these included details such as the location, conditions and the activity that was taking place.

With this base, questions related to the role of co-workers, supervisors and the organisation where explored around the event.

3.3.2.1 The Support Matrix

As discussed in the literature review there are four types of support, namely emotional, tangible, informational and companionship and there are three key levels from which individuals can experience support in the workplace, namely co-worker, supervisor and organisational. These types and levels formed the initial framework that was used to code the data (see table 1.0 below). Since social support is comprised of multiple levels and types, it is a complex phenomenon. The framework allowed for these different elements to be compared with regards to their impact on individuals in different stressful events. It allowed for the exploration of which types of support are experienced at the different levels.

Table 1.0: The Proposed Support Matrix

	Peer-Support	Supervisor-Support	Organisation-Support
Emotional Support			
Tangible Support			
Informational Support			
Companionship Support			

3.3.3 Data Analysis

The process of analysing the data was done using a theoretical, deductive approach to thematic analysis (Braun & Clarke, 2006). With an essentialist epistemology, the data was used to interpret significant patterns within the research and explore their broader meanings and implications (Braun & Clarke, 2006). The information that was relevant to the framework was the primary focus of the data analysis; however, there was a degree of flexibility in remaining open to other types and levels of support that emerged.

Originally the framework consisted of the three levels. These levels of support were peer, supervisor and organisational. Within each of these levels, each element of social support was explored: emotional, tangible, informational and companionship. However, through a process of reviewing the framework, it became clear that these levels of support did not allow for a clear understanding of the data. This led to the peer support level being redeveloped to become team level support. This allowed for the inclusion of multiple aspects of the work environment such as co-workers, peers, and sub-contractors with whom construction workers work with very closely. The supervisor level became obsolete through the coding process. Overall, the businesses in New Zealand's building industry are small and this was reflected in the interviews. Many of those interviewed did not have a direct supervisor and therefore, this level was irrelevant. This level therefore was removed and was merged into the organisation level of support, as supervisor support is similar to this level of support. Finally, many of the ideas talked about explored support at an industry level, and so support at this level was included into the matrix. Table 2.0 shows the support matrix that was developed through the data analysis process.

One element that emerged from the data was the importance of the individual. Here the focus was not on the support that was provided to the individual but rather the importance of understanding how they perceived support. Many participants reflected on how they interacted with others and the environment. This lead to the development of the level labelled self-support. However, this level, which does offer interesting insight, did not fit into the structure of the support matrix in regards to the support types. This level will therefore be discussed separately to the overall model.

Table 2.0: The Support Matrix

	Team-Support	Organisation-Support	Industry-Support
Emotional Support			
Tangible Support			
Informational Support			
Companionship Support			

3.4 Ethical considerations

According to the Massey University (2015a) code of ethics, research must maintain the highest possible ethical standards. This research has fallen under the category of a low risk notification and, consistent with the Massey University guidelines, has not received

approval from the Human Ethics Committee, however did receive low risk ethics approval. Research is considered low risk provided that it does not exceed the nature of harm that is normally encountered in daily life (Massey University, 2015b). This project considered a range of ethical concerns and below is how each of them was addressed in a manner that ensured the least amount of harm to both the participants and the researcher. Consent was addressed through an introduction letter in the cross-sectional survey and verbally at the beginning of the semi-structured interviews. Anonymity and confidentially were both addressed through by removing identifying details and features and if necessary replacing details with pseudonyms. Questions in the survey were broad and generally applied to a range of working situations that decreased any social and cultural sensitivity that may unintentionally occur (Massey University, 2015a).

Stored data was anonymised where possible and stored on password-protected computers until such time as it is destroyed and any hard copies of the data were to be stored with my supervisors. The review process for this project has included talking to the researcher's supervisors, their co-workers, as well as, with members of the Healthy Work Group from Massey University. Professionals within the industry were consulted about possible ethical concerns. As a result, contact details for NZ Lifeline were provided in the introduction letter and at the end of the survey. NZ Lifeline provides a hotline which gives access to a range of mental health services available country wide.

Chapter Four: Results

4.1 Cross-section Survey Results

The cross-sectional survey had total of 47 respondents. The average age of these respondents was 42.3 years old (SD = 9.3), and male (95 per cent). There were a total of nine ethnic groups represented with the majority of those surveyed identifying as New Zealand European (75 per cent).

Of the participants, 50% identified themselves as being either owners or directors of firms in the industry. 39% of the participants stated that they were aligned with the building trade and 88.9% held some form of tertiary qualifications. The average length of experience within the construction industry at a supervisor level or above was 14.2 years (SD = 9.3). 46.5% of respondents were from SME, with the remaining 53.6% belonging to large companies.

72.3% of respondents indicated that they believed that the busyness of the overall industry was above average, with 14.9% stating it was slightly above average and the remaining 12.8% specified that it was average. No respondents believed that the industry was below average.

A total of 82.6 % of participants indicated that it was either difficult (47.8%) or extremely difficult (34.8%) to find skilled workers in the current industry environment. Only 17.4% stated that is was average (15.2%) to easy (2.2) to find those skilled workers.

4.1.1 Results

Table 1 shows the mean score for emotional exhaustion is 2.6 which is similar for depersonalization (M=2.0). These are all below the mid-point of 3.0 and this indicates

below average levels of emotional exhaustion and depersonalization. Further, personal accomplishment (M=4.5) and perceived job stress (M=4.4) are above the midpoint of 3.0 indicating above average levels of personal accomplishment and ability to cope with perceived job stress. Perceived organisation support had a mean score of 3.8 which is similar to both of the supervisor support scales 3.9 and 3.3 respectively. These showed above average levels of organisation support and perceived organisation support. Finally both co-worker scales had mean scores of 4.2 and 4.0 respectively, showing above average levels of co-worker support.

Table 1 also shows emotional exhaustion is significantly correlated with perceived organisation support (r= .524, p< .01), co-worker support (r= -.457, p< .01) (r= -.610, p< .01) and supervisor support (r= -.423, p< .05) (r= -0.371, p< .05).

4.1.1.1 Reflection and evolution of the research process

Due to the low sample size, using parametric statistics did not provide reliability and confidence in many of the results, and therefore many of the hypotheses could not be confirmed. For example, job stress did not correlate with POS, co-worker support, and supervisor support, as was expected from the literature. Therefore, further investigation using regression analysis could not be carried out. My transition from apprentice to acting site foreman during my Masters research gave me deeper insights into the relationship between stress and support, and the experiences of construction managers.

Reflecting on the research process to this point, I had learnt a lot about quantitative research and, in hindsight, could see some of the shortfalls of this quantitative approach (see Section 5.4). At this point in the research, I made the decision to carry out a qualitative phase consisting of semi-structured interviews. The reasons for this were two-fold. Firstly, while the quantitative research questions were appropriate to explore

the relationships between support and stress, a further qualitative study would generate understanding of how the different types and levels of support influence experiences of stress for construction managers. Secondly, the main aim of a Master's thesis is to gain an understanding of the research process. Therefore, conducting a qualitative phase allowed me to develop further skills in qualitative research. Therefore, the main contribution of this study will come from the qualitative results that are explored in the second half of this study.

Figure 2.0: Industry Distribution

Figure 2.0 shows that the participants for the survey were drawn from the entire industry, with each of the four sectors having representation. The majority of the participants identified themselves as apart of either the residential or commercial sectors.
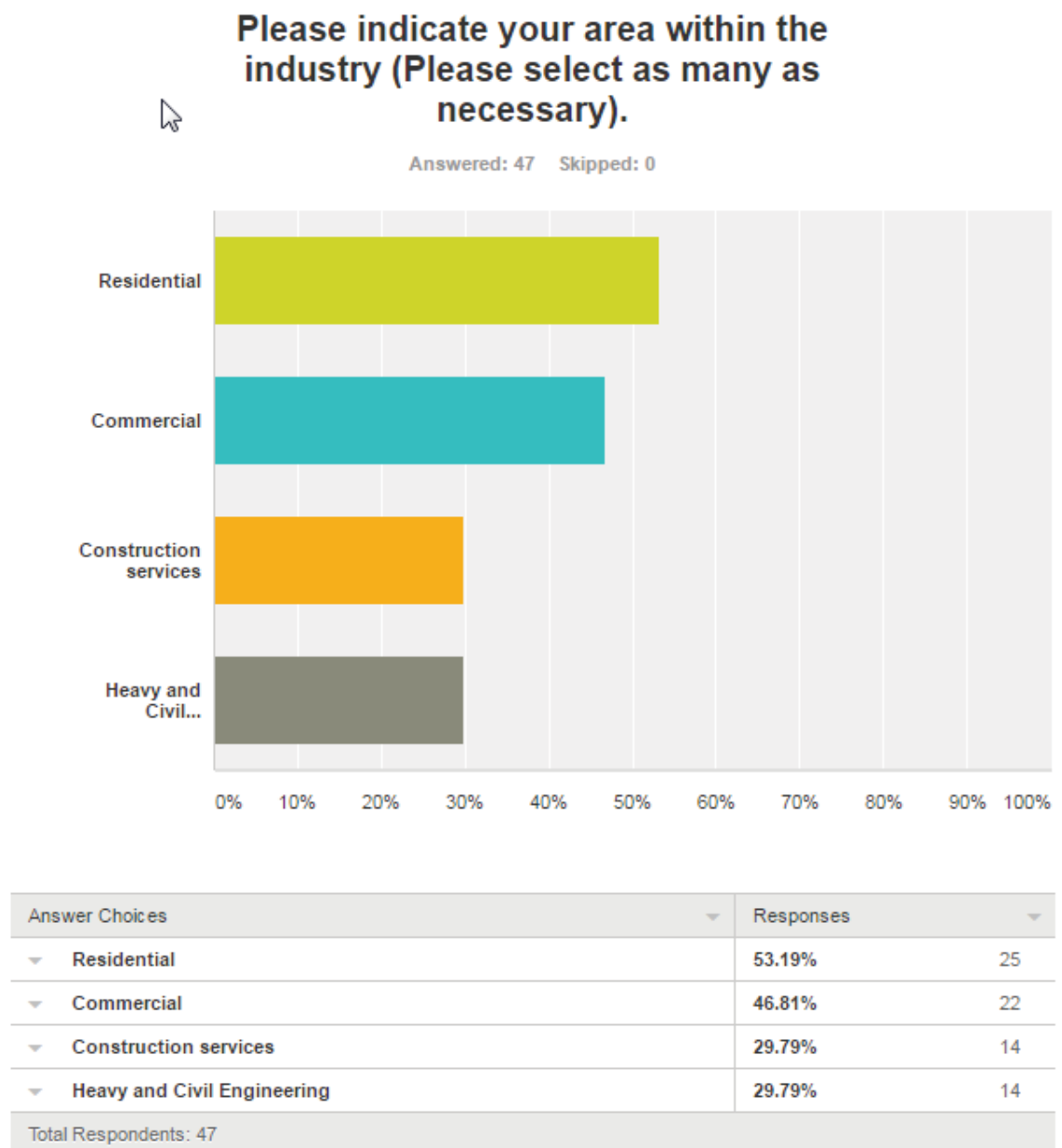

Please indicate your area within the industry (Please select as many as necessary).

Answered: 47   Skipped: 0

Answer Choices	Responses	
Residential	53.19%	25
Commercial	46.81%	22
Construction services	29.79%	14
Heavy and Civil Engineering	29.79%	14
Total Respondents: 47		

Figure 3.0: Level Responsibility Indicator

Figure 3.0 shows that the majority of participants were owners and directors of organisations, with a significant amount being in positions where they were managers.
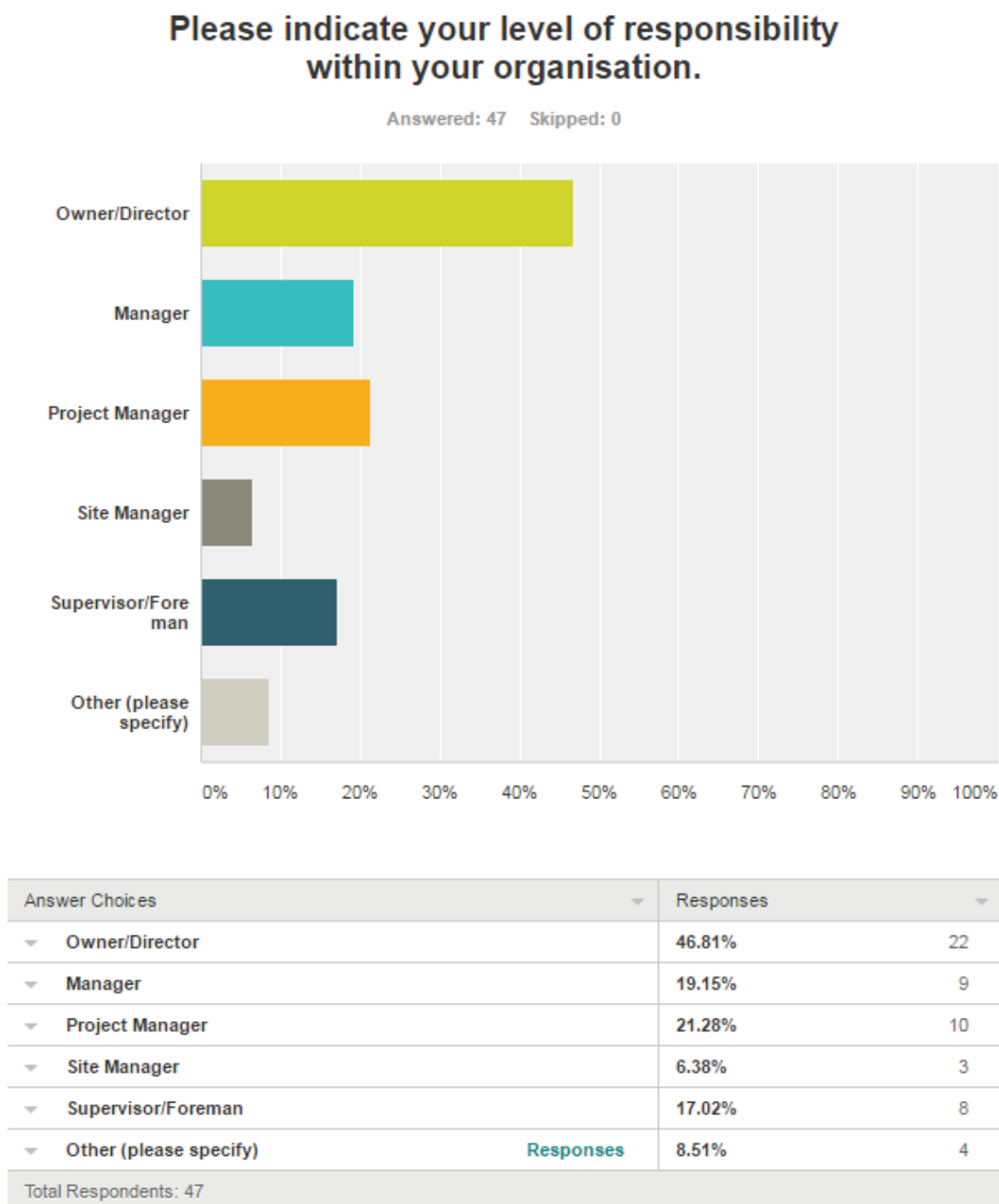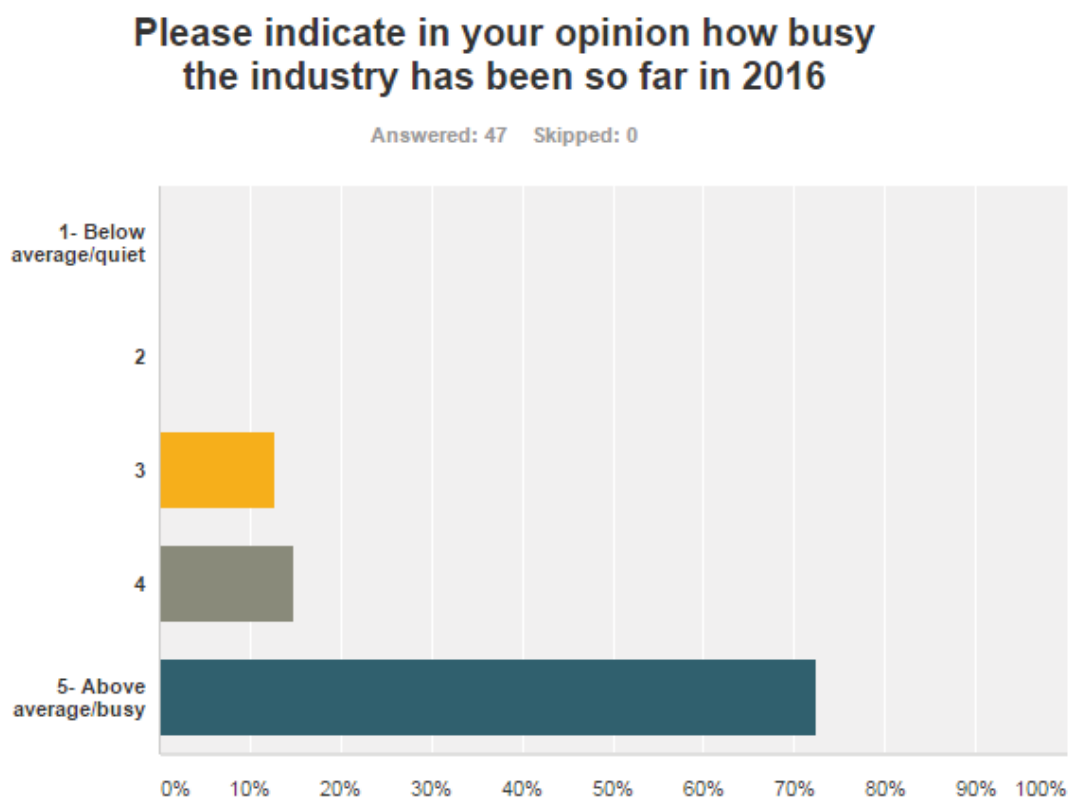
Please indicate your level of responsibility within your organisation.

Answered: 47   Skipped: 0

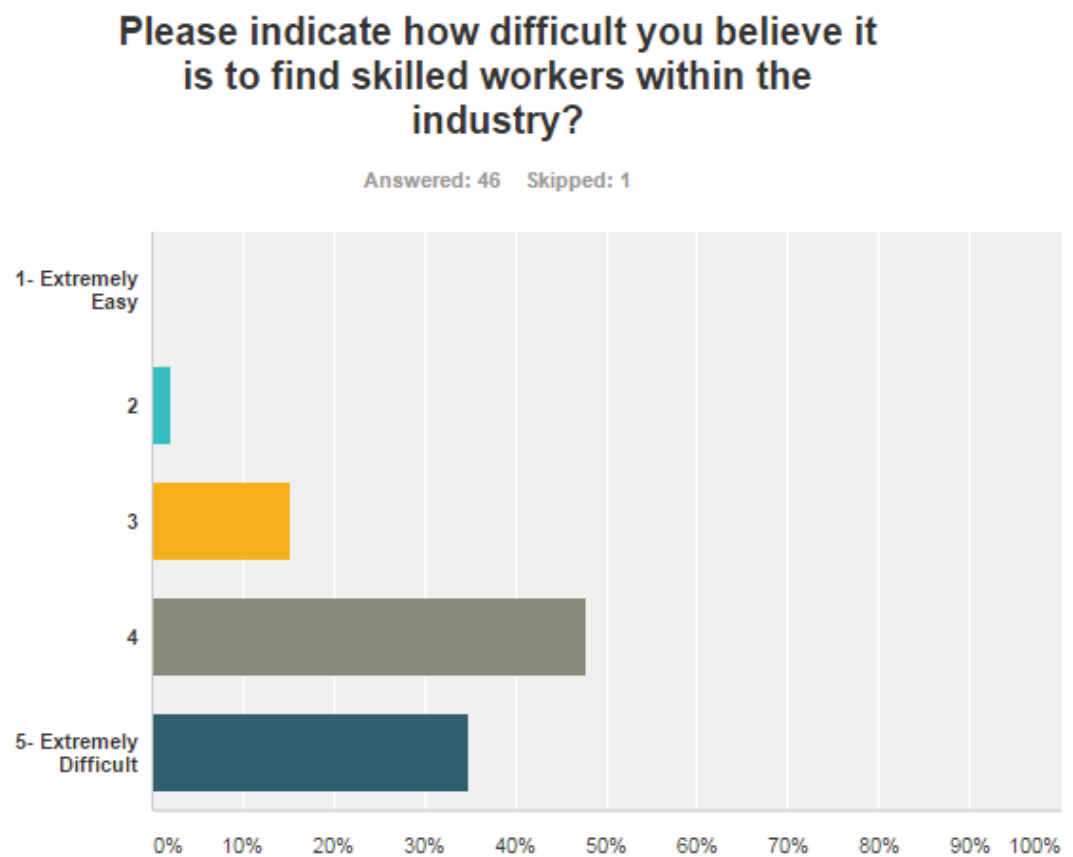| Answer Choices		Responses	
Owner/Director		46.81%	22
Manager		19.15%	9
Project Manager		21.28%	10
Site Manager		6.38%	3
Supervisor/Foreman		17.02%	8
Other (please specify)	Responses	8.51%	4
Total Respondents: 47			

Figure 4.0: Busyness Results

Figure 4.0 suggests that industry is very busy at the moment supporting hypothesis 12,

with 72% reporting that the industry busyness was above average.

Please indicate in your opinion how busy the industry has been so far in 2016

Answered: 47   Skipped: 0

Answer Choices	Responses	
1- Below average/quiet	0.00%	0
2	0.00%	0
3	12.77%	6
4	14.89%	7
5- Above average/busy	72.34%	34
Total		47

Figure 5.0: Skilled Worker Results

Figure 5.0 suggests that it is difficult to find skilled workers in the industry. 87% of the participants responded that it was either difficult or extremely difficult to find skilled workers within the industry. This supports hypothesis 13.

Please indicate how difficult you believe it is to find skilled workers within the industry?

Answered: 46   Skipped: 1

Answer Choices	Responses	
1- Extremely Easy	0.00%	0
2	2.17%	1
3	15.22%	7
4	47.83%	22
5- Extremely Difficult	34.78%	16
Total		46

Table 3.0: Correlations among Variables

Due to the lack of significant correlations between the dependant and independent variables, the regressions that were hypothesised where not undertaken.

Variables	M	SD	1	2	3	4	5	6	7	8	9
1. MBI_EE	2.59	0.83	--								
2. MBI_PA	4.53	0.77	-0.22	--							
3. MBI_D	2.04	0.82	0.45**	-0.07	--						
4. JOB_STRESS	4.40	0.50	-0.20	0.43*	0.23	--					
5. POS	3.85	0.82	-0.52**	0.19	-0.40**	0.10	--				
6. CO_SUPPORT1	4.29	0.70	-0.46**	0.19	-0.02	0.05	0.40*	--			
7. CO_SUPPORT2	4.07	0.73	-0.61**	0.15	-0.05	0.08	0.29	0.70**	--		
8. SUP_SUPPORT1	3.89	0.74	-0.42*	0.28	-0.25	0.12	0.50**	0.24	0.22	--	
9. SUP_SUPPORT2	3.33	0.61	-0.37*	0.24	-0.10	0.24	0.52**	0.40*	0.25	0.81**	--

N=47, *p<.05, **p<.01

MBI_EE - Emotional Exhaustion (Maslach & Jackson, 1981)
MBI_PA - Personal Accomplishment (Maslach & Jackson, 1981)
MBI_D - Depersonalization (Maslach & Jackson, 1981)
JOB_STRESS - Job Stress (Gmelch, 1982 as cited in Leung, Chan, & Olomolaiye, 2008)
POS - Perceived Organizational Support (Eisenberger et al., 1986)
CO_SUPPORT1 - (Cook and Wall, 1980, as cited in Cook et al., 1981)
CO_SUPPORT2- (Taylor and Bower, 1972, as cited in Cook et al., 1981)
SUP_SUPPORT1 - Supervisor Support (Lambert, 2000)
SUP_SUPPORT2 - Supervisor Support (Thomas & Ganster, 1995)

4.2 Semi-structured Interview Findings

11 construction managers participated in a semi-structured interview. 73% of the interviewees had more than 20 years' experience within the construction industry with same percent having over ten years' experience a supervisor level. 63% stated that they were either owners or directors of firms with the remainder being either supervisors or managers. All of the interviewees had either trade certifications or university training, with two having both. The majority (63%) managed between one and 20 projects with one participant managing over 100 projects in various stages of completion. 45% of the participants were managers from small firms ranging from zero to nineteen employees with the other 65% coming from companies with more than 20.

4.2.1 Overview of Stress Experiences

As with any context, there are a range of perceived stressors in the construction industry that combine to create stressful events. The literature gives an overview of these stressors and they include but are by no means limited to task stressors, organisational stressors, personal stressors and physical stressors (Leung et al., 2009). The interviews that took place highlighted the extent of many of the stressors within the industry and the degree to which stress is perceived within the industry. Participants reported a wide range of stressful situations within which stressors were identified. To ensure anonymity, these events are stated in broad terms with an element of vagueness.

Three participants described events in which there were onsite delays or problems. These events were based on task stressors. They included staff mistakes that caused damage to expensive materials and design elements that caused elements of the projects to be reconsidered or redesigned by engineers or architect. One participant described the emotional drain and fatigue that they experienced as a result of being a part of the

recovery process that related to the Canterbury earthquakes of 2011. This event explored personal stressors. One event explored organisation stressors relating to the difficult demands such as staffing issues. This event explored the disciplinary procedures that needed to take place around drug and alcohol incidents on construction sites. Two of the participants described events in which they felt isolated and undervalued in the workplace and how this had caused them stress. These events explored personal stressors. A participant identified an event in which they had encountered organisation stressors. This was an issue of financial liability with costs into the millions and the longitudinal nature of the legal process they went through to resolve that conflict. One participant described the personal stressors and anguish that was encountered as part of a work place safety investigation after a serious workplace accident on a construction site. The remaining two participants described events related to workplace demands and time management. These events related to task stressors that exist with small business and the difficulty of overcoming the demands that were being created due to a growing workload. Overall there was a wide range of experiences which allowed for the different types of support to be explored.

Table 4.0: Overview of Stressful Events

Type of Stressful Event	Number	Percentage
Onsite Delays -Task stressors	3	27%
Canterbury Earthquake -Personal Stressors	1	9%
Disciplinary Procedures	1	9%

-Organisational Stressors		
Workplace Isolation -Personal Stressors	2	18%
Financial Liability -Organisational Stressors	1	9%
WorkSafe Investigation -Personal Stressors	1	9%
Workplace Demands -Task Stressors	2	27%

4.2.2 Themes

The following section will explore the range of themes that arose through the interviews. As discussed previously (see section 3.3.3 – Data Analysis), analysis of the data followed a framework that allowed for the exploration of how construction managers experienced different types of support from different levels in the organisation and industry.

Although the original framework is still visible, the framework was shaped throughout the analysis process to reflect the experiences of participants. Table 5.0 represents the themes that emerged from the analysis and how many participants discussed each theme.

Table 5.0: Overview of Themes

Theme	No. of Participants
Individual	
Isolation	6
Personal Coping Methods	6
Team	
Team-level emotional support	9
Team-level tangible support	4
Team-level informational support	9
Team-level companionship support	9
Organisation	
Organisation-level emotional support	2
Organisation-level tangible support	3
Organisation-level informational support	3
Organisation-level companionship support	1
Industry	
Industry-level informational support	9

The first section is focused on the individual. Here the themes that emerged relate to how that individual interacts with their environment. It is important that this is the first focus because the individual's coping skills and personality play an important role in how they respond to environmental stressors.

4.2.2.1 Individual

As stated above, the individual plays a role in shaping the environment around them. Two individual-level themes emerged that influenced how construction managers perceive and experience support during stressful events: isolation and personal coping.

4.2.2.1.1 Theme #1 Isolation

Through the interviews it became clear that there was a theme of isolation. Six of the participants raised thoughts that related to the isolation that occurs through their work environments. Many of the work environments discussed highlighted the difficulties that managers and directors had with gaining support. That is not to say that there was no support rather that there was a perceived lack of support by the individual and that made participants feel isolated.

Isolation was experienced by constructions managers working in both small and large businesses, but in different ways. The participants came from both SME and large business with approximately 50 50 split between the two. Those who came from SME shared experiences that highlighted the difficulty in either asking for help or having networks that they can reply on for support. The nature of SME is that they are small, and that there is not always support available to draw upon. This isolation was not just in stressful events but in the everyday running of the business. This is clearly shown in the quote below.

> I think that a bigger business would be easy for my stress levels because there are more people to bounce off, as a small business, sometimes we make problems that aren't really problems because we don't have those people to bounce off. (P04)

Isolation was also relevant to construction managers working in larger business. However, participants from large business discussed how isolation occurs when there are not the resources available to provide correct assistance in the stressful events. Some of the participants from these larger businesses made reference to the need to go outside the organisation to get the support they needed.

4.2.2.1.2 Theme #2 Personal coping methods

Participants explored how personal coping methods were important in enabling them to be able to deal with workplace stressors.

One participant emphasised the importance of their spiritual beliefs (P03). This was the ability to release control of the stressors of the workplace.

> If you let the stress get to you then it becomes a problem. In some ways, you just have to wait for things to happen and like it says in the bible worrying won't change anything so there is no point in worrying about it but you do have to think about how you get around it. So for us we just keep going, it's not our business, its Gods business, so He's looking after it. (P03)

Six participants shared the importance of maintaining their health (P01, P02, P05, P07, P08, & P10).

> If you're not healthy, you're not going to perform. (P07)

As a part of their health, these participants discussed being able to walk away from the workplace and relax through getting out doors or leaving cell phone coverage in an effort to support their both their mental and physical health.

> I'm a physical relaxer. I've got to do. Sitting at home and I'll just pretty much fall asleep. But if I'm up in the hills, I find a bit of work like walking up a big hill I get tired, but I find I de-stress doing that. All my frustrations and stuff like that go and I'll walk it out up the hill. (P07)

> It's better for me to work through stuff in my own space. (P05)

Four participants cited the importance of being able to solve problems (P01, P03, P04, & P11). This ability showed stressors in a different light and meant that they were then able to be managed. The quote below clearly shows this.

> I have always found that actually nothing is surmountable and actually what can look like a dire absolute disaster on Thursday night at five o'clock and you get back on Friday morning at eight thirty and with a reasonably amount of rest and a break you are able to think more logically and rationally about how you are going to solve this problem and generally that has worked for me. (P01)

4.2.2.2 Team

In contrary to other levels of support that will be explored further below, all four types of support (emotional, tangible, informational and companionship) influenced how construction managers perceive and experience support during stressful events. Some of the responses from the participants did not show the positive effects of support, but rather the negative effects from lack of support.

4.2.2.2.1 Theme #3 Team-level emotional support

Nine of the participants highlighted the importance of emotional support. The ability to connect with members of their teams to receive empathy, concern, encouragement and acceptance reduced perceived stress in stressful event.

Talking was seen as important with eight participants. The ability to approach someone, whether face to face (P05) or via the phone (P10) was a key way that participants coped with the stressors of the workplace. The ability to talk through problems (P03 & P11) or get another perspective (P04), or as one participant (P05) put it have "sanity checks", was an important emotional support process.

> I just gave them a call and said this is what had happened just so they know and it's a process; they can affirm that I'm making the right decision. (P01)

Reading other emotions and understanding how to respond emerged as important to this kind of support. One participant (P06) noted the significance of understanding when to give team members space that allows them to relax. Others noted the importance of the encouragement to stop, sit down and talk (P01) or stop and walk away for a break (P08) as a way to alleviate pressure. This ability to relax reduced emotional pressure.

> I was fired up, I was starting to swear, I was starting to raise my voice and he straight away just stepped in said 'step back'. (P08)

Two participants raised the importance of having the backing of others in the team as a way to provide support. The backing of others gave justification in difficult situations (P07) and support when others disagreed (P01). This acceptance and encouragement was helpful in stressful events.

One participant (P03) noted the importance of trust as emotional support. The trust that was discussed here is important because of the role that it plays the stressors that build up. Knowing that people will do what is required, reduces task related stressors.

4.2.2.2.2 Theme #4 Team-level tangible support

Although not as reoccurring emotional support, tangible support was important to the way in which the participants experienced stressful events. Getting the tangible assistance they required from others within the team was seen as positive in helping in stressful events. Four of the participants explored this theme.

> The support around just being able to work the office. (P03)

On the construction site, the type of tangible support that was discussed, by these four participants, was the ability of others in the team to help out and give each other a hand and ensure the right gear was on site. The ability to get extra staff or team members was based around using the human resources that were available or getting more if needed. Having the correct gear was on site was about ensuring that the staff had access to the correct resources. One participant (P07) highlighted this concept by stating the importance of the younger staff members helping out the older members with physical tasks such as manual handling.

4.2.2.2.3 Theme #5 Team-level informational support

In many situations getting the correct advice and guidance can reduce a lot of the pressure that an event might produce. This theme was one that was seen important at this level with nine of the eleven participants referring to its effects on their stressful events.

Participants who made reference to this form of support, all expressed the importance of being able to get advice and guidance to support them or their team members. Examples

of this support in action consisted in the sharing of ideas through group meetings that were either informal (P04) or formal (P01), as well as getting colleagues to review work to get suggestions and advice (P05). Another suggested (P09) the worthiness of sharing ideas around the site and office and the support that comes from this.

> My team, we would sit together and nut it out. We tend to speak very openly and with no sort of hierarchical views, like 'the boss is always right', and always look for ideas and solutions and work together and find those in a collaborative way. (P01)

> We stand around and chat about what the issue is and about scenarios for fixing them. Between the builder and myself, we come up with a quick plan for doing it. (P04)

One participant (P06) discussed the significance of plans and using them to gain the correct information. Two participants (P03 & P07) described how the lack of or the withholding of information had added to a stressors during a stressful event. Without the correct information team members made judgements on the information they had and this led to disharmony within the team environment.

> It is not about sharing pressure or the stress with them it is about informing them about where it is up to so that they can see where to help. (P03)

4.2.2.2.4 Theme #6 Team-level companionship support

Having a sense of belonging to the team was important for participants. Nine of the participant's comments highlighted this theme and its impact on stressful events.

Three participants (P01, P03 & P04) talked about working together and the sense of belonging that came with being a part of a team. One participant (P04) shared how, as a

small business, they lacked others in team and how it was important for him and his wife to work well side by side. Another participant shared the damage that can come from not having that sense of belonging and how over time one "bad apple" was able to cause disharmony within the team.

Another two participants (P05 & P07) talked about the importance of a fun work environment. Having fun a work allowed participants to relieve pressure and joy the work they were doing.

> If things are getting a bit stressful you have a bit of a joke and a laugh and it just relieves the pressure. (P07)

Two participants (P07 & P10) promoted the value of good comradery that comes from normal conversations. The other people in the work environment are able to help individuals with confidence in decision making and provide support.

> Just enjoyed the sort of normal conversations that you have with people and you feel sort of ah you feel a bit more support and confidence you know so when people are around. (P10)

One participant (P09) talked about the difficulty that comes from not having a sense of companionship and what it means to feel unsupported when implementing health and safety policies.

4.2.2.3 Organisation

The organisational level is the level that encompasses the whole organisation. Although the organisational support is typically the way in which employees assign humanlike characterises to the organisation and therefore directors and owners of business are the agents that personify the organisation. For the following discussion around

informational support, the participants who were directors and owners have been included as part of the findings. This is because in these cases they relied on the structures and processes within the organisation to provide them with informational support that they needed during stressful events and this will be explored further below. However for the other types of support, emotional, tangible and companionship, they have not been included as they are the direct agents that show this type of support.

4.2.2.3.1 Theme #7 Organisation-level informational support

During stressful events, three of the participants saw informational support as helpful at the organisational level. Informational support at this level differs from both team and industry informational by the source of information that is provided. At a team level, information comes from within the team itself, and at the industry level is comes from the associations or regulatory bodies that operate to provide professionalism and regulatory oversite. Informational support at this level is seen as either an effort by the organisation to upskill and develop the employees through training and professional development, or the advice and guidance that comes from different people within the organisation, as well as from an from sources outside the company, such as counselling.

Two participants (P02 & P05) sought counselling. This was the ability of the organisation to provide support for individuals to elevate task and organisational stressors. Informational support at this level also involved a range of training opportunities that helped in a range of situations such as high ropes courses (P07) and management courses (P02).

4.2.2.3.2 Theme #8 Organisation-level emotional support

As with team level support, emotional support at the organisation level gives the individual the chance to gain emotional encouragement during stressful events. Two of

the participants made references to emotional support at the organisational level with one of those commenting on the negative effect that comes from lack of support here.

One participant (P08) made reference to having their decisions supported and the effects that has when you know someone will support you in difficult and stressful situations.

> Backing up my decisions on site, whether I'm right or wrong, If I'm wrong then I deserve a tune-up at the end of it, but at least you've got somebody to back you up with what your trying to achieve. (P08)

One participant (P09) explained the difficulties that come from not having the correct emotional support when implementing new company polices. He explained how the lack of emotional support added to the task stressors of the job assigned to him.

> It was quiet stressful just trying to get them on board and me feeling like I'm just writing these documents just to put in a folder, that no one will ever see or use. (P09)

4.2.2.3.3 Theme #9 Organisation-level tangible support

Three of the participants made reference to the importance of having the right tangible support and the impact that not having it has. One participant (P08) shared the need to have managers follow up the site paperwork and pricing and provide the answers when needed. This was added to with one manager (P01) discussing the need to adapt and slip project time lines in order to alleviate pressures.

One of the participants (P07) shared the damage that comes from not having correct support. These participants discuss how at times they were made to feel guilty by their employers when they weren't able to complete tasks and needed to ask for more

support. This therefore compounded the stress events with extra pressures without support.

4.2.2.3.4 Theme #10 Organisation-level companionship support

Companionship support at the organisation level was raised by one participant. This participant (P07) made reference to the importance of having an organisation that is flexible and able to make them feel they belong. He discussed the importance of a flexible work environment to suit life and family as well as the importance of training and up skilling together so everyone remains safe.

4.2.2.4 Industry

The construction industry in New Zealand has many associations and regulatory bodies that are able to provide support to members of the industry. These can include networks such as Master Builders and Certified to government agents such as Earthquake Commission, WorkSafe and BRANZ which is an independent consulting, research and information company. At the industry level, the participants made reference to the importance of informational support. However, in contrast to the organisation level, the interviews showed that they did not expect any other support at the industry level.

4.2.2.4.1 Theme # 11 Industry-level informational support

Nine of the participants discussed the support that comes at this level. Their thoughts were separated into two areas; the first was of guidance from the regulatory bodies and the second advice and guidance that comes from others within the industry.

The first comments of note relating to industry support were around the lack of support that came from regulatory bodies. These government agencies step in during events that are often very stressful and the comments made were about how the individuals felt isolated and attacked by their intervention rather than supported.

[The regulatory bodies] have no understanding whatsoever of what businesses go through and the legislation they bring in, they've obviously never worked in the business." (P02)

This idea was further developed by another participant who discussed the lack of support that came from the regulatory bodies after a work place accident.

They just made me feel like a criminal. (P08)

Further comments in relation to industry support focused on what information was available for them as a business and the ability to for them to get assistance with the mountain of paperwork that they were often encountering. The participants who raised these ideas were the directors and managers of smaller businesses. The support discussed here was the support they needed to run their business in an industry that is becoming more and more regulated. The organisations that were discussed were those that have developed as part of industries need to develop standards and codes of practice. These are associations of different individuals and business within the industry.

One participant (P03) highlighted the importance of these associations and their ability to provide support. Another (P06) discussed their importance of creating a space where people can come together to discuss important issues and get support.

We get legal support, pretty much anything to do with the Building Industry really. We'd ask, if the organisation couldn't give the support or the info they'd point us in the right direction anyway. (P06)

4.3 Summary

The aim of the study was to explore the impacts of support on stress in construction managers and this was done through two phases. The results from phase one showed below average scores in emotional exhaustions and depersonalization, and above average levels of personal accomplishment and ability to cope with perceived job stress. The results also showed that above average levels of support for all of the three types that were measured, co-worker, supervisor and POS. The findings from phase two lead to the development of 11 themes. Two of these themes explored the individual. These themes occurred outside of the developed support matrix and explored isolation and personal coping methods. The remaining themes explored different elements of the support matrix. At the team level, the participants perceived that all four types of support were important during stressful events, with tangible being the least referred to. At the organisational level, the participants explored all four types of support during stressful events but it was informational support that was most reoccurring. At the industry level, the only support explored by the participants was informational support.

Chapter Five: Discussion

> No matter how good you are as a foreman, you're going to get stressed, that is
> the job, you know. The more you go up the ladder, the stress becomes greater,
> the bigger the job, the bigger the stress. (P08)

Stress in the construction industry is prominent and worth investigation. This research aimed to investigate the impacts of support on stress amongst construction managers. As this study was conducted in two phases, the following discussion will explore each phase separately.

5.1 Phase One - Survey

The cross-sectional survey was able to take a snap shot of the industry with participants from a range of different backgrounds within the industry. There were participants from trade backgrounds as well as participants from academic backgrounds. This mix of perceptions within the industry was what this survey sought to engage with. However, the number of participants meant that the findings were not overly significant and therefore not entirely generalizable to the wider construction population. This meant that meaningful correlations between the different variables were not able to undertaken (see section 4.1.1.1 Reflection and evolution of the research process p.43). Due to this, the hypotheses 1-11 are unable to be discussed.

The results of the cross-sectional survey showed low levels of emotional exhaustion and depersonalization, with scores well below the medium point. Further to this, the results showed high levels of personal accomplishment and ability to cope with perceived job stress. These results would indicate that managers and supervisors in the New Zealand construction industry exhibit low levels of burnout, however further research would be needed to be conducted before this could be stated conclusively. The findings also

indicted that the participants indicated high levels of social support from co-workers, supervisors, and the organisation. However due to the participant numbers, meaningful correlations were unable to be undertaken and therefore it hard to state objectively whether not the support provided in the workplace had a meaningful impact on this. However studies such as the one undertaken by Charoensukmongkol et al. (2016) suggest that the support provided by the co-worker made individuals less likely to experience emotional exhaustion and depersonalization. Adding to this Lingard and Francis (2006) study's shows that support is also very important in prevention of burnout.

Although this part of the research had low participant numbers and therefore, it is important that any findings taken from it are considered with a grain of salt, it is interesting that the results showed high levels of confidence in participant's ability to deal with perceived job stress and low levels of burnout. This is contrary to studies that have been undertaken overseas, such as research undertaken by Bowen et al. (2013) Leung et al. (Leung et al., 2011) and Lingard (2005) which all looked at the effects of stress and burnout in various international construction contexts and raised the issues of high levels of stress experienced by construction professionals .

There are a number of explanations for this phenomenon in this study. The first is the sample size. With a sample size of only 47, it is important to state that it is difficult to say with certainty that these findings are generalizable to the wider population. The second explanation lies in the way in which participants were recruited. Participants were asked to take time out of their often busy schedules to engage with the survey, there is a possibility that those who were experiencing high levels of demand and even encountering burnout were unable to participate. There was a range of responses to the research, both in person and via email which indicated that time pressures and existing

work place stressors would be a contributing factor as to whether the survey could or would be undertaken.

The third and most interesting explanation is the idea that stress in the construction industry in New Zealand may be normalised. Justification for this idea involves weaving together a range of ideas. The first idea is that the industry exists in a state of constant renewal. The bust and boom cycles of the New Zealand construction industry have long been documented (BRANZ, 2011). The industry goes from periods of low levels of demands and the resulting loss of experience or upskilling to periods of extreme demand. The second is the idea that many of the demands of the industry, such as time pressures, financial demands and the availability of both staff and resources are accepted as part and parcel with the New Zealand construction industry (PricewaterhouseCoopers, 2016). As with the idea mentioned above, the industry for many years has been faced with increasing demands as it has moved out of the bust period and into the boom period. Professionals within the industry have been faced with a range of pressures on existing resource bases. Thirdly is idea that within New Zealand there exists a culture that is it unmanly to have problems. The 'shell'be right', 'do-it-yourself' and the hard man attitudes, are ideas that New Zealand men have been stereotyped as. That is they are strong and unemotional (Ellis & Collings, 1997). This idea is then compounded by the 'number eight wire' culture that exists in New Zealand. This is a culture that has developed from the pioneer days that saw the developing colony improvise and adapt in situations that were isolating and often lacking in the resources that were needed to succeed. This is an approach that historically New Zealanders are well adept at applying. These ideas together would explain the high levels of confidence in the ability to deal with perceived job stress shown by professionals within the sector. This would also explain the low levels of reported

burnout that are contrary to the high levels of burnout that other construction industries overseas show and that are often reported in the New Zealand construction industry.

There are a range of theories that explain deliberate behaviour and the relationship between attitude and behaviour (Stroebe, 2011). The two theories that are help explain the above phenomena are those of reasoned action and planned behaviour. The theory of reasoned action assumes that an individual's behaviour is a function of their intention to perform that behaviour. The behavioural intention is a result of the attitudes the individual embraces as well as the subjective norms they favour in regards to that behaviour (Stroebe, 2011). On the other hand, the theory of planned behaviour, which is developed from the former, takes into account a wider range of factors in the determination of actions (Louis, Chan, & Greenbaum, 2009). This theory links an individual's beliefs rather than the just their intention to their behaviours. It takes into account the variables of an individuals perceived behavioural control, their attitudes and the subjective norms that exist, the perceived social pressures to act or refrain from acting (Louis et al., 2009). If construction professionals hold to the belief that stress is a normal everyday occurrence within project environments then that would explain the justification for normalization under the guise of the theory of reasoned action. However, although this statement may explain the first part of the phenomena in this study it does not stand up to scrutiny when linked to international studies, as professionals in those contexts would have access to the same information and general understanding that the industry is 'stressful'. What makes this theory plausible is the link between the idea industry normalization and the underlining culture of New Zealand and its 'number eight wire' approach to solving problems. It is the beliefs of the culture and the effect they it have on the development of the behaviours of the individual that makes the theory of planned behaviour explanation possible. Here, in

contrary to many of the international contexts, the cultural context may have greater effect on the way stress is seen and perceived. This idea would be in line with research undertaken by Chan, Leung and Yuan (2014). Their research looked into the relationship that exists between cultural values and coping behaviours of construction professionals. This study based in Hong Kong indicates that the cultural values individuals have impact on the coping behaviours that they exhibit.

The results from phase one did confirm hypotheses 12 and 13. The results showed that the majority of participants considered that the industry was experiencing a period of high demand. 72% of the participants reported that they felt that the industry was above average in busyness. This is shown by figure 4.0. The results also showed that 87% participants felt that it was either difficult or extremely difficult to find skilled workers. This is shown by figure 5.0.

5.2 Phase Two – Interviews

The experiences of the participants were used to develop a matrix that could explain the importance of the different levels of support that are provided in the workplace. There were 11 themes that were developed from the interview data, with two of those themes occurring outside of the developed matrix.

One area of note was that of the individual. This area did not fit into the developed matrix. However it is important to understanding how individuals engage with their environment during stressful events. Two themes that explored the individual were isolation and personal coping methods.

The matrix explored the findings in three levels of support: team-level, organisation-level, and industry-level support. These layers were explored in regards to the four types of social support, emotional, tangible, informational and companionship. At the team

level, the participants perceived that all four types of support were important during stressful events, with tangible support being the least referred to. At the organisational level, the participants explored all four types of support during stressful events but support at this level was not discussed in great depth by the participants. At the industry level, the only support explored by the participants was that of informational support. Support at an industry level is significant as it is an area that has not received academic attention in general literature.

5.2.1 The individual

One of the key themes relating to the individual was a theme of isolation. Isolation is separation; in terms of this study, loneliness describes the phenomena concisely. It is a psychological theoretical explanation of isolation, in which the individuals own assessment about their environment, in regard to its social connectedness, is ranked (Zavaleta, Samuel, & Mills, 2017). Managers of SME perceived lack of support and that made them feel isolated. Without the in-depth networks that larger businesses could draw upon, the SME managers felt isolated. This isolation not only occurred during stressful events but in the everyday running of their business. Larger businesses also experienced this isolation when they were unable to get the correct resources in times of need. Many of the managers spoken to explored the importance of being able to draw upon support of other businesses to get the correct assistance. This idea of isolation is significant because it provides insight into how construction managers perceive their place in the industry and gives greater understanding to the findings of industry level support that is explored in the matrix. This finding is similar to Bowen and colleagues (Bowen et al., 2014a) who also acknowledged that isolation is an issue for construction project consultants. They suggest that a lack of assistance can create a perception of

being left alone to cope with problems. This creates a level of uncertainty that can lead to elevated stress.

The second theme that emerged relating to support at the individual level was personal coping methods. Personal coping methods were found to be important by participants in this study. Several different types of coping methods were discussed by participants including health and energy of the individual, their personal beliefs and their ability to problem solve. These personal coping methods reflect several of those identified by Lazarus and Folkman (1984) as coping resources. One participant emphasised the importance of their beliefs. This is an important coping resource that allows the individual to sustain hope during the most adverse conditions (Lazarus & Folkman, 1984). Six participants shared the importance of maintaining their health. This is a passive coping resource, in that sick and tired individuals are less likely to have the energy to expend in difficult situations (Lazarus & Folkman, 1984). Four participants cited the importance of being able to solve problems. This is an important coping resource because it allows individuals to analyse situations and anticipate and plan appropriately to reduce stressors (Lazarus & Folkman, 1984). This also supports claims by Chan, Leung and Wang Yu (2012) in a study that explored the mainland Chinese construction industry. They found that these personal coping methods had positive effects on stress in the construction industry.

5.2.2 Levels of Support

Current literature explores three important levels of support within the work environment (Charoensukmongkol et al., 2016; Eisenberger et al., 1986; Mengue & Boichuk, 2012). The first is that of co-worker support. This is the willingness of co-workers and peers to provide support to each other within the work environment. These relationships are often close because co-workers are the people with whom individuals

have the most interaction with (Mengue & Boichuk, 2012). The second level is that of supervisor support. Because of the direct relationship between supervisors and workers they are able to influence the attitudes and the behaviours of their employees (Liaw et al., 2010). They are able to allocate resources and therefore are able to play an important role in the work environment (Charoensukmongkol et al., 2016). Lack of support from the supervisor has a stronger link to negative psychological states than lack of co-worker support (Maslach et al., 2001). The third level is Perceived Organization Support (POS). This is the way in which employees assign humanlike characteristics to the organisation such as the organisation cares or values them (Eisenberger et al., 1986). The actions of the organisations agents, in this case the managers and supervisors, gives rise to the personification of the organisation as an individual rather than just the motivations of the individual agents themselves (Eisenberger et al., 1986).

This research used these levels of support to develop a matrix, however the data showed that these levels did not describe the levels of support showed by construction managers and supervisors in New Zealand. Co-worker support was redeveloped to become team level support. This was because of the work environment that construction workers operate in. It has multiple aspects such as co-workers, peers, and sub-contractors with whom construction workers work with very closely. With the majority of New Zealand's businesses in the construction industry being small, it means that there is a lot of crossover of businesses as they work together on projects. Contractors often work closely with other trades and therefore the team they work with may not just be co-workers. These contractors are integral to the work environment and are often considered a part of the team. This is why it was important to extend co-worker support to include these team members who work outside of the company, something that current literature does not explore.

It became clear that the supervisor level did not suit the work place environment that many of the participants came from. Overall, the businesses in New Zealand's construction industry are small and this was reflected in the interviews. Many of those interviewed did not have a direct supervisor and therefore, this level was irrelevant. This level was removed and was merged into the organisation level of support, as supervisors support is similar to organisational support. This is an interesting point of difference to international studies. Studies, such as Lingard and Francis (2006) look at supportive work environments, have explored construction managers from larger companies where this level of support can be considered a considerable form of support. However in this study, the majority participants were employed in small to medium enterprises where they were the CEO or they were the owner-operators and because of this supervisor support was not available to them. This research suggests that construction managers in NZ are more likely to rely on support from the team and the industry levels and therefore businesses and industry associations need to ensure that these types of support are in place.

Finally, many of the ideas discussed by the participants explored support at an industry level, and so support at this level was included into the matrix. In the current literature this is a level of support that has not seen any attention. The New Zealand construction industry is complex and is made up of four sub-sectors: residential, commercial, construction services and heavy and civil engineering (MBIE, 2013; Worksafe, 2015). Therefore, because of the make up being mainly SMEs (Curtis, 2014), there is a need for information sharing. There are many different industry associations that provide opportunities for networking as well as also providing minimum standards and codes of practice that keep the industry accountable to high standards (Building Guide, n.d.). The participants of this study indicated that there was a need for support at the industry

level. This provides an insight into the New Zealand construction industry and informs future research that is investigating the support for managers from SME. Informational support was the only form of support that emerged as relevant to construction managers at industry level. This is likely to be because support mechanisms at this level are independent from organisations and therefore are unable to provide the other forms of support.

5.2.3 Team Support

Team level support is important to how managers and supervisors perceived stressful events. This was shown by the inclusion of all four of the types of support during the interviews. Current studies into support within construction industries that have explored the co-worker environment and the effects of the four types support on stress have provided contradictory results (P. Bowen, P. Edwards, H. Lingard, & K. Cattell, 2014c; Lingard & Francis, 2006). The following exploration of team support claims the importance of all four different types of support during stressful events.

The first type of support the emerged as a theme at the team level was emotional support. The participants highlighted the importance of being able to receive empathy from those around them. It is important to note here that it was not necessarily the ability to go to others for empathy but rather that they were available if an individual felt they needed it. This availability was seen as important by the participants. This is consistent with research in the wider field which suggests that it is not necessarily the support that is available that has an impact but rather how the individual perceives the availability of that support (Sarason & Sarason, 1986). The participants also highlighted the importance of understanding and responding to emotions in the work place. By

being allowed the opportunity to stop, relax and walk away from the problem, the emotional pressure they felt was reduced. The indication here is that emotional support at the team level is important for construction professionals. It allows them to vent, problem solve and relax when they encounter stressful situations. If they do not have the support, the participants indicated that stressful events were harder to deal with.

The next type to discuss is that of companionship, the ability to belong to something. Humans are social beings. They are shaped by their experiences and the need to engage with others (Bronfenbrenner, 2005). The interviewees noted this and highlighted the importance of doing this in a team setting within the workplace. The ability to engage with others was an important part of coping in stressful situations. The participants also expressed the importance of comradery and normal conversations. More than one participant made reference to the importance of the team working to support each other towards achieving common goals. They expressed the level of impact a team that worked together could have in a range of situations. According to social identification theory (Dimmock, Grove, & Eklund, 2005; Inoue, Funk, Wann, Yoshida, & Nakazawa, 2015), it is not only the individual but the collective group that all gain a range of psychological benefits from belonging to a group (Dimmock et al., 2005). Social identification theory may explain why the participants found companionship important during stressful events.

Tangible support, such as material goods, services and financial assistance, is a form of social support that is not as well regarded as the psychological types such as emotional support (Cohen & Mckay, 1984). At times it is not distinguished as its own type of support because of its close connection the psychological forms of support. It is for that reason that this type of support has received less academic attention (Cohen & Mckay, 1984). However, despite being the least referenced of the four forms of support, several

participants in this study indicated that tangible support was important. Getting help around the office and onsite were two examples, cited by participants, of tangible support. They also raised the importance of having the correct gear and resources on sites, as well as the ability of the younger workers to help out the older workers with physical tasks. Tangible support is at its most effective when the recipient perceives that it is the most appropriate form of support for the situation. It is interesting to note here that this support, even when clearly tangible, can be considered to have psychological implications since it can be interpreted as evidence of emotional support (Morelli, Lee, Arnn, & Zaki, 2015).

Informational support was found to be important at all levels of this model. The correct advice and guidance in a given situation can reduce a range of stressors (Fernandes & Tewari, 2012). The participants determined that the ability to engage in information sharing was an important way to problem solve. The nature of the industry is that there are often problems that are unseen or complex in nature. The ability to look for ideas and solutions within the team was an effective way to reduce pressure in stressful events. Informational support at this level looks very different to informational support at the next two levels, as at this level, it seems from the responses of the participants that informational support was linked to both emotional and companionship support. Informational support could provide elements of encouragement and the chance to share experiences.

5.2.4 Organisation Support

The next level of the support matrix is organisation support. It is the support that the individual receives from organisation they belong to, the interactions with the wider context of the team and how those individuals in the organisation perceive the way they are valued, treated and cared for (Eisenberger et al., 1986; Rhoades & Eisenberger,

2002). Organisational support in this study included situations where CEOs and owners used organisational structures for support.

Compared with team level, this level was not discussed by as many of the participants. The most likely justification for this is that the supervisors and managers interviewed were the most senior people in the organisation and were themselves the representatives of 'the organisation'. Therefore, as the agents that display these types of support, it was not relevant to them. This is an important finding for future studies into the industry, implying that exploration of perceived organisational for support for SMEs needs to be approached differently.

5.2.5 Industry Support

The final level of the support matrix is the industry. Industry support emerged as a key form of support for construction managers; however this form of support has not been identified before in the general literature. This may be because New Zealand's construction industry is predominantly SME and therefore managers rely more on the industry for support than from the organisation or supervisors. This therefore is important for future researchers exploring POS in populations that consist largely of SMEs.

The construction industry has a number of industry associations that seek to introduce standards and practices that keep the industry to account in meeting high standards (Building Guide, n.d.), as well as networking opportunities. Above these associations, sitting at the regulatory level, exists a range of codes of practice. These codes provide a minimum standard that must be adhered to and are enforced by the government at a central and local level (Building Guide, n.d.; MBIE, 2013). Further to these codes, exists workplace safety regulations that are enforced by WorkSafe to ensure health and

safety in all work places (MBIE, 2013; Worksafe, 2015). The participants of this study were asked about the support, if any, that came from this level. Informational support at this level, as highlighted by the participants, came in two forms. The first was that of guidance from the regulatory governing bodies and the second advice and guidance that comes from others within the industry, such as the wide range of associations that exist and other businesses.

Participants of this study highlighted the stressful nature of dealing with regulatory governing bodies. The experiences shared identified the demanding nature of these bodies and the lack of information that comes with their interaction. As mentioned above, whether not the support exists, is not the defining factor, rather it is the perception of the individual and how they see the support that is provided (Bowen et al., 2014a). The participants, who explored industry support, highlighted the degree to which interaction with these bodies affected their psychological well-being due to the demanding workplace stressors. It is important to note that the participants did not speak favourably about these organisations and their support. The comments were mostly about the perceived lack of support. Considering that this is a key form of support in a context such as New Zealand's construction industry, where a large percentage of the businesses are SMEs, it is imperative that regulators and industry associations address these shortcomings.

Industry associations provide networking which gives managers a chance to engage with a number of different sources, such as other trades, consultants and specialists, which are able to provide support in the form of information, advice and guidance. The participants highlighted the importance of these sources of information and how it was very helpful in reducing stress in an environment that is becoming heavily documented and held to account for all and any actions.

5.3 Implications for practice

As the construction industry in New Zealand is comprised of mostly SME, it is important that industry bodies provide support for managers during stressful events. This research suggests that helpful forms of support that industry bodies can provide include informational support around regulations and networking. This research also shows that sources of support at the industry-level are lacking and that SME construction businesses feel isolated without this support. This is of concern and is likely to be contributing to managers' experiences of stress. For the regulatory bodies that govern the industry, this study serves as a reminder to ensure that they are providing construction managers with sufficient and correct informational support. This research suggests that team level support is important for managers. This level of social support is important for providing support for managers especially in SME businesses that lack supervisor and organisational support levels. Organisations need to ensure that managers have effective teams upon which they can draw support during stressful events.

5.4 Limitations and Future Research.

There are a number of limitations that this study encountered. These will be explored below, along with the implications these limitations could have on future research within this field in the future.

The first limitation for this study lies in the organisations from which the participants for the cross-sectional survey were drawn. Although this study took a similar approach to conducting research into the sector the same way as many international studies (Charoensukmongkol et al., 2016; Leung, Chan, & Olomolaiye, 2008; Leung et al., 2011; Lingard & Francis, 2006; Lingard & Valerie, 2004), it was not tailored enough

for the New Zealand context. Although the study had an even spread of participants from both large and small business, many of the question sets were difficult for participants from smaller business to answer because in many situations, the participant, did not have the levels of support that the study focused on. However, this provides some interesting insights. Future research needs to take into consideration the different types of support that are available to those within different size businesses. Small and medium sized businesses are vastly different to larger business and enterprises. Therefore, the main stressors that the managers and directors encounter in SME are different to their counter parts in larger firms. Not only are the stressors different but so are the support networks that the individuals are able to draw upon. The research in this study has sought to highlight this through the support matrix. Future research should build upon this foundation to explore the contrast that may exist between the different types of support for both large and SME construction businesses.

The second limitation for this study has been raised above, and that was the size of the participant pool for the cross-sectional survey. The research encountered a number of problems with engaging with a wide range of participants in the sector, including gaining support from sector bodies and both large and small businesses alike. Participant recruitment is a problem that is often encountered with research. Low response rates are often recorded in many studies. The limited participant size reduces the overall statistical ability of data collected and therefore its generalizability to the overall population. Further research in this sector would do well to engage with many different sector bodies and gain the use of their existing networks.

As with the second limitation the third touches upon the participants. Not for the lack of participants but rather type of participants that were sought for both parts of the study. Participants that are in the sector do provide an insight into the sector and how it

operates but it may be that for future studies participants who have left the industry may be just as vital to providing insight into the nature of stress in the industry and the role that support plays in moderating it. It may be that participants of this nature will be able to provide future researchers with an in-depth snap shot of the industry.

Chapter Six: Conclusion

Through two phases, this study has sought to explore impacts of support on stress in construction managers. Although phase one had results that were overall not significant enough to provide meaningful insight, the second phase was able to provide valuable insight into how construction managers perceive and experience support during stressful events. This study has found that the construction industry in New Zealand is busy. The phase one results confirmed hypotheses 12 and 13 which explored the busyness of the sector. The majority of participants expressed that the industry was experiencing a period of high demand and that they felt that it was either difficult or extremely difficult to find skilled workers. The findings from the phase two have explored the importance of the team level in providing support during stressful events. This is an important finding to add to the discussion around workplace support in the construction industry. Of particular note is the lack of support construction managers get from an organisation level. As SME comprise the majority of the industry businesses, managers are often owners and managers and therefore are unable to provide themselves with support. This makes the discussion around the industry level support an important finding of this study. As there is a perceived lack of support at the organisational level managers rely more heavily on the support that comes from others in the industry, whether they are other businesses, associations or regulatory bodies.

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Appendixes

7.1 Appendix One: Scales

Emotional Exhaustion (Maslach & Jackson, 1981)

1. I feel emotionally drained from my work
2. I feel used up at the end of the workday
3. I feel fatigued when I get up in the morning and have to face another day on the job
4. Working with people all day is really a strain for me
5. I feel burned out from my work
6. I feel frustrated by my job
7. I feel I'm working too hard on my job
8. Working with people directly puts too much stress on me
9. I feel like I'm at the end of my rope.

Personal Accomplishment (Maslach & Jackson, 1981)

10. I can easily understand how my recipients feel about things
11. I deal very effectively with the problems of recipients
12. I feel I'm positively influencing other people's lives through my work
13. I feel very energetic
14. I can easily create a relaxed atmosphere with my recipients
15. I feel exhilarated after working closely with my recipients
16. I have accomplished many worthwhile things in this job
17. In my work I deal with emotional problems very calmly

Depersonalization (Maslach & Jackson, 1981)

18. I feel I treat some recipients as if they were impersonal 'objects'
19. I've become more callous towards people since I took this Job
20. I worry that his job is hardening me emotionally
21. I don't really care what happens to some recipients
22. I feel recipients blame mem for some of their problems.

Perceived Organizational Support (Eisenberger et al., 1986)

23. The organization takes pride in my accomplishments
24. The organization really cares about my well-being.
25. The organization values my contributions to its well-being.
26. The organization strongly considers my goals and values.
27. The organization shows little concern for me (R)
28. The organization is willing to help me if I need a special favour.

Supervisor Support (Lambert, 2000)

My Supervisor…

29. Is concerned about me as a person.
30. Is helpful to me when I have a family or personal emergency.
31. Feels each of us is important matter to attend to.
32. Is helpful to me when I have a routine family or personal matter to attend to.
33. Is concerned about the way we workers think and feel about things.
34. Is understanding when I have personal or family problems which interfere with my work.
35. Appears to know a lot about company policies that help employees manage their family responsibilities.
36. Keeps the things we tell him/her confidential

Supervisor Support (Thomas & Ganster, 1995)

My Supervisor…

37. Switched schedules (hours, overtime hours, vacation) to accommodate my family responsibilities.
38. Listened to my problems.
39. Was critical of my efforts to combine work and family.
40. Juggled tasks or duties to accommodate my family
41. Shared ideas or advice.
42. Held my family responsibilities against me.
43. Helped me to figure out how to solve a problem.

Job Satisfaction (Brayfield & Rothe, 1951)

44. I am enthusiastic about my work.
45. I feel satisfied with my present job.
46. I find real enjoyment in my work.

Career Satisfaction (Greenhaus et al., 1990)

47. I am satisfied with the success I have achieved in my career.
48. I am satisfied with the success I have made towards meeting my overall career goals.
49. I am satisfied with the success I have made towards meeting my income goals.
50. I am satisfied with the success I have made towards meeting my goals for advancement.
51. I am satisfied with the success I have made towards meeting m goals for the development of new skills.

Organisational Commitment (Allen & Meyer, 1990)

52. I would be very happy to spend the rest of my career with this organisation
53. I really feel as if this organisation's problems are my own.
54. This organisation has a great deal of personal meaning for me

Turnover (Kelloway et al., 1999)

55. I am thinking about leaving my organization
56. I am planning to look for a new job.
57. I intend to ask people about new job opportunities
58. I don't plan to be at my organisation much longer

Perceived Mobility (Tepper, 2000)

59. If I were to quit my job, I could find another job that is just as good.
60. I would have no problem finding an acceptable job if I quit
61. I know there are similar jobs available to me outside my organisation.

Withdrawal Behaviour (Eisenberger et al., 2001)

62. I am always punctual in arriving at work on time after breaks
63. I always begin work on time
64. My attendance at work is above the norm
65. I give advance notice when unable to come to work

Co-worker Support (Cook and Wall, 1980, as cited in Cook et al., 1981)

66. If I got into difficulties at work, I know my workmates would try and help me out
67. I can trust the people I work with to lend me a hand if I need it
68. Most of my workmates con be relied upon to do as they say they will do

Co-worker Support *(Taylor and Bower, 1972, as cited in Cook et al., 1981)*

69. How friendly or easy to approach are the persons in your work group?
70. When you talk with persons in your work group to what extent do they pay attention to what you're saying?
71. To what extent are persons in your work group willing to listen to your problems?

Job Stress (Gmelch, 1982 as cited in Leung, Chan, & Olomolaiye, 2008)

Rate your ability in relation to your expected ability

72. Number of project deadlines
73. Number of tasks

74. The level of difficulty of my work
75. The quality of my work
76. The responsibilities of my work
77. The degree of complexity of my work
78. Number of projects

Qualitative Questions (Flanagan, 1954)

Please think of an experience at work in the past 6 months that was or could have been particularly stressful. Please explain how the support (or lack of) of your co-workers, your supervisor, and the organisation had a positive and/or negative impact on your experience?

79. Please explain the (potentially) stressful experience:

80. Please explain the support (or lack of) of your co-workers and the impact it had on this experience:

81. Please explain the support (or lack of) of your supervisor and the impact it had on this experience:

82. Please explain the support (or lack of) of the organisation and the impact it had on this experience:

7.2 Appendix Two: Copyright Permission

RightsLink

Copyright Clearance Center

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Dear Mr. Steven Elms,

Thank you for placing your order through Copyright Clearance Center's RightsLink service. John Wiley and Sons has partnered with RightsLink to license its content. This notice is a confirmation that your order was successful.

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7.3 Appendix Three: Introduction Email

Dear [Insert Name]

I am a Masters Student at Massey University and am looking to recruit participants for either a 30-minute interview or a 10-minute online survey. The study is looking into effects of support on stress and burnout within the construction industry. It is an anonymous study and participants will not be able to be identified through the data provided.

Potential participants are:
-Anyone involved with project management in New Zealand at a supervisor level or above, including but not limited to site foremen, site managers, office based managers and project managers.
-Any industry that is part of the construction industry, including but not limited to Trades, Contractors, Engineers, Surveyors, and Architects.

I am hoping that you may be able to support me in this process. If so, please either respond to this email to set up an interview or follow the link below to go directly to the survey.

https://www.surveymonkey.com/r/L562N6G

In an effort to make the findings of this study internationally recognisable, it is important that the study be undertaken by as many participants as possible. I would greatly appreciate it if you could pass on the following invitation to any members of your organisation who are in a position where they are a project manager or involved in the supervision of projects within New Zealand's construction industry. These roles include but are not necessarily limited to site foremen, site managers, office based managers and project managers.

Title of Study:
The effects of support on the stress and burnout of construction project management professionals in New Zealand.

Study Aims:
-To explore the extent of stress and burnout of New Zealand based, construction project management professionals
-To explore the effects of three different types support on stress and burnout
If you have any questions, please contact the researcher, Steve Elms, directly on steve.elms.1@uni.massey.ac.nz.

This project has been evaluated by peer review and is judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher named is responsible for the ethical conduct of this research. If you have any concerns about the conduct of this research that you wish to raise with someone other than the researcher(s), please contact Dr Brian Finch, Director, Research Ethics, Telephone: +64 (06) 356 9099 ext. 84459, email humanethics@massey.ac.nz.

Finally,   thank   you   for   your   time   and considering   my   request.
Kind Regards
Steve Elms
Post-graduate Student, Massey University
Ph: [Number]
Email: [Email]

7.4 Appendix Four: Online Survey

MASSEY UNIVERSITY
TE KUNENGA KI PŪREHUROA

10%
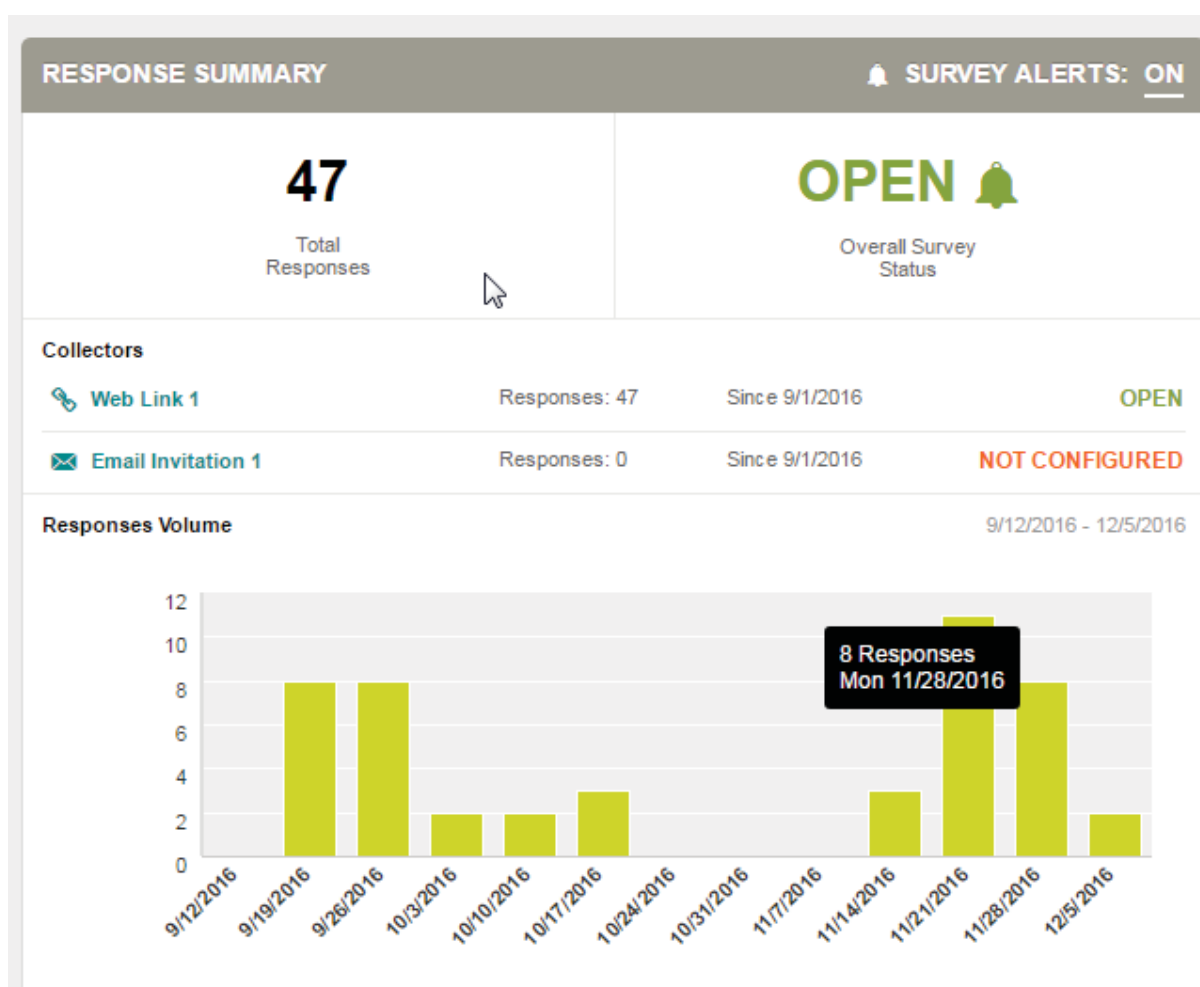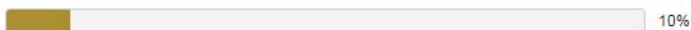
Dear potential participant

Thank you for taking the time to respond to the invitation to participate in this study. It is one that focuses on the effects of support on reducing stress and burnout in construction project managers and supervisors. I appreciate that surveys can be onerous and I have tried to make the survey as brief as possible while still being comprehensive. Please be assured that all responses are confidential and secure.

This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher named is responsible for the ethical conduct of this research. If you have any concerns about the conduct of this research that you wish to raise with someone other than the researcher(s), please contact Dr Brian Finch, Director, Research Ethics, Telephone: +64 (06) 356 9099 ext. 84459, email humanethics@massey.ac.nz.

Should you wish to participate you have the right to:
-Decline to answer any particular question.
-Ask any questions about this research project at any time during participation.
-Provide information on the understanding that you will remain anonymous.
-Be given access to the completed research report.

Please feel free to contact the researcher directly if you have any questions or comments.

Kind Regards

Steven Elms
Post-graduate Student, Massey University
Ph: 027 635 2881
Email: steve.elms.1@uni.massey.ac.nz

20%
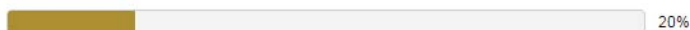
Please answer the following: 💬

	Gender	Age	Marital Status	Ethnicity
What is your:	⬍	⬍	⬍	⬍

Other Ethnicity (please specify)

[   ]

Please indicate your highest secondary school qualification. 💬

◯ None

◯ NZ School Certificate in one or more subjects or National Certificate Level 1 or NCEA Level 1 NZ

◯ Sixth Form Certificate in one or more subjects or National Certificate Level 2 or NZ UE before 1986 in one or more subjects or NCEA Level 2

◯ NZ Higher School Certificate or Higher Leaving Certificate or NZ University Bursary/Scholarship or National Certificate Level 3 or NCEA Level 3 or NZ Scholarship Level 4

◯ Other secondary school qualification gained in NZ.

◯ Other secondary school qualification gained overseas

Please indicate your highest qualification. 💬

◯ No qualification beyond secondary school

◯ Bachelors degree, eg BA, BSc

◯ Bachelors degree with honours

◯ Masters degree, eg MA, MSc

◯ PhD

◯ Diploma (not post-graduate)

◯ Diploma - Postgraduate Trade or technical certificate which took more than 3 months full-time study

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30%

Please indicate in your opinion how busy the industry has been so far in 2016

○ 1- Below average/quiet

○ 2

○ 3

○ 4

○ 5- Above average/busy

Please indicate how difficult you believe it is to find skilled workers within the industry?

○ 1- Extremely Easy

○ 2

○ 3

○ 4

○ 5- Extremely Difficult

Prev   Next

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40%

Please indicate how you feel about your work

	Never	A few times a year	Monthly	A few times a month	Every week	A few times a week	Every day
I feel emotionally drained from my work	○	○	○	○	○	○	○
I feel used up at the end of the workday	○	○	○	○	○	○	○
I feel fatigued when I get up in the morning and have to face another day on the job	○	○	○	○	○	○	○
Working with people all day is really a strain for me	○	○	○	○	○	○	○
I feel burned out from my work	○	○	○	○	○	○	○
I feel frustrated by my job	○	○	○	○	○	○	○
I feel I'm working too hard on my job	○	○	○	○	○	○	○
Working with people directly puts too much stress on me	○	○	○	○	○	○	○
I feel like I'm at the end of my rope.	○	○	○	○	○	○	○
I can easily understand how my clients feel about things	○	○	○	○	○	○	○
I deal very effectively with the problems of clients	○	○	○	○	○	○	○

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60%

The following questions relate to your co-workers 💬

	1-No, I strongly disagree	2	3	4	5-Yes, I Strongly agree
If I got into difficulties at work, I know my workmates would try and help me out	○	○	○	○	○
I can trust the people I work with to lend me a hand if I need it	○	○	○	○	○
Most of my workmates can be relied upon to do as they say they will do	○	○	○	○	○

The following questions relate to your co-workers 💬

	1-To a very little extent	2	3	4	5-To a very great extent
How friendly or easy to approach are the persons in your work group?	○	○	○	○	○
When you talk with persons in your work group, to what extent do they pay attention to what you're saying?	○	○	○	○	○
To what extent are persons in your work group willing to listen to your problems?	○	○	○	○	○

MASSEY UNIVERSITY
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70%

Please think of an experience at work in the past 6 months that was or could have been particularly stressful. Please explain how the support (or lack of) from your co-workers, your supervisor, and the organisation had a positive and/or negative impact on your experience?

Please explain the (potentially) stressful experience:

Please explain the support (or lack of) of your co-workers and the impact it had on this experience:

Prev   Next

MASSEY UNIVERSITY
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90%

Thank you for taking the time to complete this survey!

Please feel free to contact the researchers directly if you have any questions or comments.

Your participation in this research project is greatly appreciated.

Kind Regards

Steven Elms
Post-graduate Student, Massey University
Ph: 027 635 2881
Email: steve.elms.1@uni.massey.ac.nz

If you feel this survey has raised health concerns that you would like to discuss with someone in the position to help, please contact Lifeline – 0800 543 354

If you would be willing to participant in a formal interview please email your contact details to steve.elms.1@uni.massey.ac.nz . Or enter your email below.

Prev   Next

7.5 Appendix Five: Interview Outline

Hi _____

How are you? Thanks so much for taking the time to speak with me. Should we get started?

Firstly, I would like to record this interview. Do you consent to being recorded?

Yes: Thank you. (Turn recorder on). We are now recording.

No: Take as many notes as possible. After the interview, researcher to make a voice recording of the discussion summarising the key points made.

I am interested in your perspective as a construction professional on stress in the workplace and the role support plays. The interview should take between 20 to 40 minutes and no participants will be identified in the findings of this research. As a participant in this study, you have the right to decline to answer any question, you can ask to stop at any time, and if for any reason wish for the information you provide to no longer be included in this study, please let me know within two weeks from today and I will remove it. You also have the right to a report on the findings.

Would you like a report on the findings? Yes/No Email:_____

Do you have any questions about the study you would like answered before we start?

1. **Demographics**
a) How many years have you been within the construction industry? _____
b) And how many of those years have been at a supervisor level or above? _____
c) What areas within the industry do you belong?
   Residential/Commercial/Construction Services/Heavy and Civil Engineering
d) What is you trade? _____

2. **What does support in the workplace look like to you? What is your expectation?**
a) If a co-worker or a peer was to provide you with support what actions would best describe the support that they would provide?

b) If your direct supervisor was to provide you with support, what would that look like and would this be any different to the support provided by your peers?

c) What would support provided by your organisation look?

d) Of these three types of support, what do you think is the most helpful for helping you through stressful events or periods at work?

3. **What does stress in the construction industry look like to you?**
a) Have you had much experience with stress either personally or with others?

4. Ok now I would like to you think about a stressful event that has occurred recently. Can you please explain what happened?

a) Can you explain how support impacted on the event? Was is positive or negative?

b) What did you peers or co-workers do in the situation?

c) What did your supervisors do in the situation?

d) What did your organisation or company do in the situation

e) Can you describe what could have been done better by you peers to support you more?

f) Can you describe what could have been done better by you supervisors to support you more?

g) Can you describe what could have been done better by you organisation to support you more?

5. Repeat Question four as necessary.

That bring us to the end of the questions that I have for you. Thank you so much for your time. Do you have any final comments you would like to make?

Introduction questions:

- Please tell me about when …?
- Have you ever …?
- Why did you …?

Follow up questions:

- Could you say some more about that?
- What do you mean by that …?
- Can you give me an example of that?

Specify questions:

- What did you do then?
- How did 'x' react to …?

Structuring questions:

- I would like to move on to ...?

Interpreting questions:

- Do you mean …?
- Is it fair to say …?