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# Does being kind, warm and accepting towards yourself affect your well-being?: A study of construction apprentices in New Zealand

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## Abstract

In Australia and New Zealand (NZ), young construction workers have alarming rates of suicide. Research from Australia has linked the high suicide rates to increased psychological distress and exposure to risk factors, such as workplace bullying, during young workers' apprenticeship training. Despite this, no research has been conducted to explore the experience of psychological distress and bullying within NZ's construction apprentices. Furthermore, there is a gap in research on factors associated with fostering psychological well-being and the development of strength-based interventions for the industry. One factor which is shown to be related to psychological well-being is self-compassion, or, the ability to be empathic towards oneself during times of suffering or failure. This study aimed to investigate whether self-compassion would predict psychological well-being in NZ construction apprentices. Additionally, it aimed to assess the levels of psychological distress and exposure to bullying among apprentices, as well examine the relationships between selfcompassion, psychological distress and bullying. A sample of 265 construction apprentices completed self-report measures of self-compassion, psychological well-being, psychological distress and exposure to workplace bullying. Results indicated that self-compassion is positively and uniquely related to psychological well-being and negatively related to psychological distress. Experiences of workplace bullying and psychological distress are substantial, and workplace bullying is positively related to psychological distress. These results underline the need to address bullying and the mental health of the NZ construction sector, particularly 17-25 year olds. Further, results indicate that self-compassion interventions may have promise as a mechanism to improve the well-being of NZ construction apprentices.

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# **Abbreviations List**

AOD	Alcohol and Drug Use
BCITO	Building and Construction Industry Training Organisation
CFT	Compassion Focussed Therapy
GDP	Gross Domestic Product
IRT	Item Response Theory
K6	Kessler Psychological Distress Scale (6-items)
K10	Kessler Psychological Distress Scale (10-items)
MBSR	Mindfulness-Based Stress Reduction
MIT	Manukau Institute of Technology
MIC	Mates In Construction
MSC	Mindful Self-Compassion
NAQ	Negative Acts Questionnaire
NAQ-R	Negative Acts Questionnaire-Revised
NCVER	National Centre for Vocational Education Research
NZ	New Zealand
PWB	Psychological Well-Being
RCT	Randomised Control Trial
SCS	Self-Compassion Scale
SCS-SF	Self-Compassion Scale-Short Form
SMI	Severe Mental Illness
TTAF	Targeted Training Apprenticeship Fund

#### **Chapter One: Introduction**

Within New Zealand (NZ) and across the globe, the construction industry has one of the worst records for employee mental health and suicides (Chan et al., 2020). Alarmingly, research shows that young workers within the NZ and Australian construction industries have the highest rates of suicide, relative to older workers (Heller et al., 2007; Jenkin & Atkinson, 2021). Research from Australia has linked the high suicide rates to increased psychological distress and exposure to risk factors, such as workplace bullying, during young workers' apprenticeship training (Ross et al., 2021). While there has been a focus on identifying risk factors, there is a gap of research exploring factors that may be associated with psychological well-being among young construction apprentices. Mirroring this, there is a gap in strengthbased psychological interventions for construction apprentices and the wider industry (Bryson & Duncan, 2018).

Psychological well-being is the sense of contentment achieved from fulfilling one's human potential (Ryff, 1989; Ryff, 2018). It is composed of six dimensions: self-acceptance, personal growth, purpose in life, positive relationships with others, environmental mastery, and autonomy (Ryff, 1989; Ryff, 2018). One factor which has recently been shown to strongly correlate with psychological well-being is self-compassion, or, the ability to extend an empathic and non-judgmental orientation towards the self during times of suffering or failure (Neff, 2003a). Research has shown that self-compassion is positively associated with factors related to positive mental health such as positive affect, happiness, life satisfaction, optimism, wisdom and personal initiative (Neff at al., 2007; Zessin et al., 2015). Further, other studies have shown that self-compassion relates negatively to negative affect, depression, anxiety and stress (MacBeth & Gumley, 2012). Remarkably, unlike other intrinsic protective factors, self-compassion is something that anyone can develop through mindfulness and self-compassion training (Germer & Neff, 2019).

Despite self-compassion proving itself to be a valuable construct, only one study in the UK has explored how self-compassion could be used to improve the mental health of people working in the construction industry (Kotera et al., 2019b). Furthermore, to date, no research has explored NZ construction apprentices' mental health and exposure to workplace bullying. Thus, the main aim of the present study was to explore the relationships between self-compassion and psychological well-being in NZ construction apprentices. It was hypothesised that self-compassion will uniquely predict each of the six dimensions of psychological well-being. Secondary aims were to assess levels of psychological distress and exposure to bullying. It was hypothesised that self-compassion will be negatively related to psychological distress, and that bullying will be positively related to psychological distress. Further, it was examined whether self-compassion moderates the relationship between bullying and psychological distress.

The study used a quantitative approach, and involved an anonymous survey of male construction workers aged 17 years or over, which was administered online and took approximately 20 minutes to complete. The survey included demographic questions (i.e., age, ethnicity, job type) as well as psychometric measures for psychological well-being, psychological distress, self-compassion and bullying. Assuming that this research demonstrates self-compassion as valuable in fostering psychological well-being in NZ construction workers, we would argue for the establishment of a self-compassion intervention to enhance construction workers' psychological well-being, and thereby, further decrease suicidal behaviours and psychological distress. This study has the potential to enhance the overall health, safety, workmanship and productivity of the NZ construction industry, which will ultimately create positive financial outcomes for the sector (Bryson & Duncan, 2018). The rest of the thesis will be laid out as follows: The following chapter will review the relevant literature and provide context for the aforementioned hypotheses. Chapter 3 will discuss the methodology used for this study; including the research design, ethical considerations, participants' details, the procedure and measures used. In Chapter 4, the results of the study will be presented in relation to each of the hypotheses. In Chapter 5, the findings will be discussed in the wider context of previous research, the study limitations will be outlined and directions for future research will be highlighted. Finally, Chapter 6 will conclude with underlining the central findings and their implications for the industry.

## **Chapter Two: Literature Review**

#### 2.1 The Mental Health Crisis of the New Zealand Construction Industry

The NZ construction industry is a huge industry that currently employs roughly 184,000 employees and growing (Granwal, 2020). The industry is a major contributor to NZ's gross domestic product (GDP), contributing over 15 billion dollars in 2019 (Granwal, 2020). Furthermore, it allows other sectors to expand their economic activity, for example, through the development of new commercial building spaces (Rice & Forgan, 2016). In this way, it also has far-reaching and significant indirect contributions to NZ's GDP (Rice & Forgan, 2016). Given the importance of the construction industry for providing employment and wealth to NZ, it is vital that the industry is able to thrive. Furthermore, in the wake of COVID-19, with the government leaning on the construction industry to stabilise national employment levels and stimulate the economy, the ability of the construction sector to thrive has never been so important (Infrastructure Reference Group 2020; Office of the Minister of Finance / Office of the Minister for Infrastructure, 2020). Unfortunately, the industry is far from thriving. In fact, the industry has been facing a number of challenges over the last couple of years, which have been threatening its growth and potential (Construction Sector Accord, 2019). Some of the challenges that the sector is grappling with include: skills and labour shortages, poor risk management, unclear regulations and construction pipeline and a lack of coordinated leadership (Construction Sector Accord, 2019). Yet, perhaps one of the most difficult challenges revealed is the industry's alarming levels of suicidal behaviours and psychological distress.

According to the Suicide Mortality Review Committee (2016), the NZ construction industry has the highest proportion of suicides across all industries in NZ. Further, research by Bryson and Duncan (2018) showed that men working in the NZ construction industry suffer from higher rates of mental health issues compared to the general population or other

industries. Bryson and Duncan (2018) investigated the reasons underlying the mental health issues, which are seen to drive the high incidence of suicide, by interviewing construction industry employees. Most frequently highlighted by the interviewees as a catalyst for poor mental health was the "macho" and "bullying" culture of the industry (Bryson & Duncan, 2018, p. 1). The boom-bust cycle of the industry was also described as inflicting significant strain on employees' well-being. Even though the bust phase generates job insecurity, the boom phase of the cycle was generally perceived by the interviewees as more stressful (Allan et al., 2008; Bryson & Duncan, 2018). During boom periods, interviewees described struggling to keep up with the demand (Bryson & Duncan, 2018). As a result, they experience long hours and lack of work/life balance, which was seen to take a significant toll on family relationships and contribute to relationship breakdowns (Bryson & Duncan, 2018). Drug and alcohol use was identified as another factor related to the poor mental health outcomes for workers (Bryson & Duncan, 2018). Bryson and Duncan (2018) state that the industry is seen to attract high-risk individuals, which may be partly due to the fact that the industry is perceived as a poor career path. Finally, the difficulties that stem from an intergenerational and ethnically diverse workforce was also highlighted as a stressor for workers (Bryson & Duncan, 2018).

The suicidal behaviours and mental distress of construction workers can lead to: absenteeism (not attending work), presenteeism (attending work, but not in a fit state to be productive), increased injuries and poor workmanship (Bryson & Duncan, 2018). Overall, these factors result in reduced productivity (Bryson & Duncan, 2018). Due to the multiplier impacts of the industry on the NZ economy, a report by Rice and Forgan (2016) shows that one dollar invested in the construction sector generates around two dollars and eighty cents of total economic activity. Therefore, tackling the industry's mental health crisis (not to mention, the other challenges faced by the industry) is not only a humane calling, but it also makes

economic sense for NZ. With this in mind, in April 2019, the NZ government stepped in to transform the industry through the creation of the Accord (Construction Sector Accord, 2019). The Accord aims to achieve a more productive, innovative and safer industry (Construction Sector Accord, 2019). To help them deliver on this vision, they outlined nine priority areas for action, one of which, is improved health and safety at work, specifically, "reducing the number of people being harmed by work and create a safe construction sector that supports well-being and improves productivity" (Construction Sector Accord, 2019, p. 14). Off the back of this commitment, mental health in construction strategy programmes, namely, Mates in Construction (MIC) have been implemented (Office of the Minister of Building and Construction, 2021).

MIC is a large-scale suicide prevention programme for the construction industry that was originally developed in Queensland, Australia in 2008 (Martin et al., 2016). Though, it has grown quickly and now runs widely across Australia, it was implemented in Auckland, NZ in 2019 (Martin et al., 2016; Office of the Minister of Building and Construction, 2021). Since its establishment in NZ, MIC has attained partnerships with 76 industry organisations, inducted roughly 8,057 workers and its programmes are being delivered across 127 sites nationwide (Office of the Minister of Building and Construction, 2021). The MIC programme aims to increase help-seeking behaviours and early intervention through delivering on-site psychoeducation and training volunteers to be 'connectors' who can offer suicide first aid (Martin et al., 2016). The programme is also facilitated by outreach workers, case managers, a 24-hour crisis helpline and online counselling (Martin et al., 2016). The importance of the programme's deficit-based approach, that is, its focus on preventing suicide, cannot be denied. However, there is still room for strength-based approaches, which work to strengthen factors that can promote the industry's positive mental well-being. With COVID-19 inflicting a sense of unease on the well-being of New Zealanders, ensuring the delivery of robust mental well-being support to vulnerable populations, such as construction workers, is essential now more than ever before (King & Lamontagne, 2021).

#### 2.2 Mental Health of Construction Apprentices

The poor mental health statistics and high suicide rates of the construction industry have become well-established through copious research over that last few decades (Bryson & Duncan, 2018; Chan et al., 2020; Heller et al., 2007; Milner et al., 2013; Milner et al., 2015; Roberts et al., 2013; Suicide Mortality Review Committee, 2016). Despite the extensive international research on the industry as a whole, very little attention has been paid to examining the well-being of young construction workers, specifically. This is surprising given that early research by Heller et al. (2007) found that young Australian construction workers were at the greatest risk of suicide, relative to older workers. In fact, they were seen to be twice as likely to take their own lives than young Australian males in the general population (Heller et al., 2007). More recently, research in NZ has uncovered similar findings. That is, construction workers aged 20-24 had the highest proportions of suicide, based on suicide data collected between 2007-2019 (Jenkin & Atkinson, 2021). This age group also had the highest rates of suicide at 32.94 per 100,000 compared to 18.72 per 100,000 for men working outside of construction (Jenkin & Atkinson, 2021).

Compared to other sectors across NZ, the construction industry employs younger workers on average (Rice & Forgan, 2016). A possible explanation is the fact that, unlike many industries, the construction industry provides employment opportunities to those who may have come straight out of school, with minimal or no experience (Rice & Forgan, 2016). These young people are able to enter the industry and receive training through a construction apprenticeship. In an effort to rebuild the economy and stabilize employment levels in the wake of Covid-19, the government has set up the Targeted Training and Apprenticeship Fund

(TTAF) and the Apprenticeship Boost Programme. Both programmes help employers keep and take on new apprentices through providing free or subsidized education and training. As a result of these initiatives, there has been a massive influx of apprentices into the construction industry (Beehive, 2020; Beehive, 2021). With so many apprentices now entering the industry, the need for research on the wellbeing of this population seems particularly urgent.

For young workers in general, the school-to-work transition period is a pivotal developmental point for their psychological well-being (Pidd et al., 2017). That is, starting employment can significantly contribute to increases, or, decreases in young peoples' well-being. Unfortunately, given the many challenges associated with workforce entry and often stressful working conditions, the latter is more typical (Pidd et al., 2017). Relative to old workers, young workers are more susceptible to work stress, low job control, bullying and occupational injuries (Hennecke et al., 2021; LaMontagne et al., 2013; Ministry of Business, Innovation & Employment [MBIE], 2020). Young people have also an increased risk for engaging in harmful alcohol and drug use (AOD), which has been linked to their higher rate of occupational injuries (Frone, 2013; McEwen et al., 2013; Patterson et al., 2018). Aside from the stressful working conditions, young workers' vulnerability to mental health and AOD problems may also be attributed to low educational attainment, low socio-economic status, and early experimentation with AOD use (Carter et al., 2017; Milner et al., 2014).

As outlined, there are a range of risk factors which may impact young people as they enter the workforce. For construction apprentices, these risk factors may be further amplified by the particularly adverse environment of the construction industry. However, due to the lack of studies which focus on this young group in particular, the unique experience of construction apprentices remains to be fully explored. Therefore, conducting research which can build-on the limited understanding of factors associated with apprentices mental health will be extremely valuable. Such research could inform the need for specialised well-being

support strategies for apprentices, to accompany MIC's more general strategies for the industry as a whole.

A report conducted by the National Centre for Vocational Education Research (NCVER) in Australia on apprenticeship non-completion has offered valuable insight into one particularly significant risk factor for construction apprentices (Bednarz, 2014). The report showed that, despite the high number of young people entering into construction apprenticeships, approximately half of those individuals do not complete them (Bednarz, 2014). Although non-completion can be attributed to a range of negative workplace experiences and personal reasons, one of the main contributors was recorded as "difficulties with employers or colleagues" (Bednarz, 2014, p. 35). This finding has been important in highlighting the need for researchers to put more of a focus on investigating construction apprentices' experience of workplace bullying (Riggall et al., 2017).

## 2.2.1 The Impact of Bullying on Construction Apprentices

By definition, workplace bullying refers to "situations where an employee is persistently exposed to negative and aggressive behaviours at work primarily of a psychological nature, with the effect of humiliating, intimidating, frightening or punishing the target" (Einarsen et al., 2009, p. 25). Workplace bullying can involve direct negative acts (e.g., verbal abuse) and/or indirect negative acts (e.g., rumours; Einarsen et al., 2009). Further, workplace bullying can be person-related (e.g., slander), work-related (e.g., criticism of a person's work) or include physical intimidation (e.g., physical violence or the threat of physical violence). Additionally, bullying involves the presence of a power imbalance between the parties involved, which presumably hinders the target's ability to retaliate or successfully defend themselves (Einarsen et al., 2003). This power imbalance may be generated through an unequal balance of informal factors, such as, access to social support,

or, as commonly seen in the workplace, it may reflect the formal power-structure of the organisation, for example, an employee receiving negative acts from someone higher up in the organizational hierarchy (Einarsen et al., 2003). The identification of bullying rests on the subjective perception made by the victim and does not require validation by third parties or observers (Einarsen et al., 2009).

Two qualitative studies in Australia revealed that building and construction apprentices were subjected to a range of bullying behaviours (McCormack et al., 2013; Riggall et al., 2017). The bullying behaviours included not receiving entitlements, overwork, inappropriate teasing, and in some cases physical violence (McCormack et al., 2013; Riggall et al., 2017). The toxic masculine ideals within the construction industry, such as being tough and self-reliant, are thought to contribute to why the weaker/smaller/younger workers (common characteristics of construction apprentices) are frequently the targets of these workplace bullying behaviours (Ross et al., 2021). In addition to these toxic masculine beliefs, Riggall et al. (2017) also found that the industry is characterised by a culture of informal "banter", which involves rituals and jokes being used as part of a socialisation process (Riggall et al., 2017). While banter can be harmless, it appears that it has the potential to escalate into bullying behaviours if left unchecked. Further, banter can often be used to disguise bullying behaviour, which makes it difficult for the target to interpret and identify bullying behaviours (Riggall et al., 2017). Consistent with findings from the Australian NCVER report, Riggall et al.'s findings (2017) showed that construction workers typically deal with bullying through avoidance coping strategies, including, ignoring the problem or escaping the situation by being absent from work or quitting entirely.

Aside from job dissatisfaction, apprenticeship non-completion and avoidant coping strategies, worksite bullying has also been linked to increased substance use and poor mental health. Pidd et al. (2017) investigated the prevalence of AOD use for 169 Australian

construction apprentices, as well as, the relationship between AOD use, workplace bullying and psychological well-being. They found that Australian construction apprentices are at elevated risk of AOD related harm and poor mental health, compared to age and gender equivalent Australian population norms (Pidd et al., 2017). Surprisingly, they did not find any direct association between AOD use and psychological distress (Pidd et al., 2017). Though, they did find that poor workplace social support was significantly associated with alcohol and cannabis use, whereas, workplace bullying was significantly associated with methamphetamine use (Pidd et al., 2017). Additionally, they found that workplace bullying and job stress were significant predictors of psychological distress. Taken together, these findings indicate that the relationships between construction apprentices' psychosocial environment, AOD use and psychological well-being are complex (Pidd et al., 2017).

At a request from MIC in Australia, Ross et al. (2021) assessed the prevalence of bullying and mental health of Australian apprentices using an exploratory sequential mixed method study. The first part of their research was qualitative, involving six focus groups (n = 57). Within the focus groups, the experience of workplace bullying was discussed by many of the construction apprentices and described as engrained in the worksite and industry culture (Ross et al., 2021). Further, bullying was found to coincide with high rates of substance misuse and suicide, suggesting that construction apprentices' experiences of bullying lead to adverse mental health consequences (Ross et al., 2021). To explore this further, Ross et al. (2021) carried out a large cross-sectional survey (n = 1483), which revealed that workplace bullying was a relatively common experience, consistent with previous findings. That is, 30% of participants labelled themselves as a victim of workplace bullying using a subjective scale of bullying, and 20% scored within the severe range on the Negative Acts Questionnaire - Revised bullying scale (NAQ-R; Einarsen et al., 2009). In addition to exploring the prevalence of bullying, Ross et al. (2021) explored factors of apprenticeships that are

associated with bullying. It was found that working for a large employer, working for a group training organisation, not currently having an employer, not currently being in an apprenticeship or having an apprentice status as other (for reasons other than completion or on-leave, such as dismissal; Ross et al., 2021) were factors commonly associated with bullying. Furthermore, bullying was found to be consistently associated with being aged 18– 25 years and psychological distress (Ross et al., 2021).

Unlike Australia, there has been no research in NZ to explore the experience of bullying and psychological distress in NZ construction apprentices. Based on the cultural similarities of Australia and NZ, there are grounds to assume that bullying may equally effect NZ apprentices. For example, NZ is known to endorse the same toxic masculine ideals and banter culture as Australia, which are seen to facilitate bullying behaviours (Balanovic et al., 2018; Bannister, 2005; Kimmel et al., 2005; Ross et al., 2021). However, to clarify the prevalence and effects of bullying in NZ construction apprentices, it is imperative that research situated in the NZ context is performed. In alignment with previous research, Ross et al.'s findings (2021) demonstrate that there is variability in exposure to bullying, and thus variability in mental health outcomes, according to the unique apprenticeship environment (Cherry et al., 2018). Therefore, instead of assuming that all apprenticeships are the same, future research would also benefit from taking a detailed-approach and analysing the unique environments of different apprenticeships. In doing so, the construction industry will be better equipped to pin-point which training environments put apprentices at greater risk of poor mental health and, ultimately, be better able to identify exactly which apprentices are in the most need of psychological interventions.

#### 2.2.2 Directions in Mental Health Interventions for Construction Apprentices

Across both Australia and NZ, the main organisation for addressing the mental health of the construction industry is MIC. As previously outlined, MIC's interventions mainly focus on suicide prevention through normalising conversations around suicide and mental health and fostering help-seeking behaviours within the industry. With a view to gain more insight on risk factors which contribute to the industry's poor mental health and extend their suite of interventions, MIC in Australia have been facilitating important research on bullying in construction apprentices. In addition to requesting the research by Ross et al. (2021), MIC Australia also requested a report be undertaken by Doren et al. (2020) from Central Queensland University. The report by Doren et al. (2020) reviewed the evidence of the impact of workplace bullying, as well as, interventions for workplace bullying within the construction industry. Both the research by Ross et al. (2021) and Doren et al. (2020) have been instrumental for setting the wheels in motion towards MIC Australia establishing effective bullying interventions for the Australian construction industry, in particular, for construction apprentices who tend to be the common targets of bullying. As MIC in NZ is equally interested in supporting at-risk construction apprentices, studies on the prevalence and psychological impact of bullying on NZ construction apprentices are a priority.

At present, all of MIC's interventions stem from a deficit-based approach, whereby risk-factors (e.g., the stigma surrounding suicide and poor mental health) are targeted and reduced to prevent the incidence of poor mental health and suicide (Bryson & Duncan, 2018). However, it is important to note that factors associated with fostering positive mental well-being equally play a role in preventing the incidence of poor mental health (World Health Organisation [WHO], 2004). Such factors, aptly named "protective factors" are able to buffer the effects of risk factors through increasing competency and resiliency (WHO, 2004). Additionally, their role in increasing psychological well-being cannot be overlooked. This is

because overall mental well-being is not simply defined as the absence of mental distress and measured using a single scale of psychopathology, as previously thought (WHO, 2004). Rather, overall mental well-being is now understood as both the absence of mental distress and the presence of positive mental well-being (WHO, 2004). Furthermore, research has shown that these components exist on separate scales (Huppert and Whittington 2003; Keyes 2005; Lamers et al. 2011; Weich et al. 2011; Westerhof and Keyes 2009). This implies that if a person has mental distress, it does not mean that they cannot also have positive mental wellbeing, and vice versa. Therefore, a person's overall mental well-being comprises the summation of their measures on each scale, making factors associated with both dimensions important to prioritise and investigate in their own right (Trompetter et al., 2017).

Given that the equally important role of protective factors is now well-known, the lack of strength-based approaches currently available within the industry seems difficult to understand. According to research by Bryson and Duncan (2018), strength-based approaches aimed at improving mental health have been attempted within the construction industry in the past. Unfortunately, those behind the delivery of such interventions reported that they experienced low-uptake of their wellness programmes and stated that the industry had expressed to them that it did not see a need for programmes of this type (Bryson & Duncan, 2018). Bryson and Duncan concluded that "coming to the industry with a wellness approach before educating them about the problem may be putting the cart before the horse" (p. 17). For this reason it was deemed that, during the initial stages, a deficit approach to mental health interventions for the construction industry may be more appropriate (Bryson & Duncan, 2018). However, we are now a few years on and, due to the hard work from MIC NZ, the high suicide rates and mental distress of the construction industry are becoming increasingly well-known. With this in mind, it may be time to examine protective factors and the development of strength-based approaches to accompany MIC's existing ones. Therefore,

in addition to progressing research on the prevalence and impact of bullying, there remains an important research gap to fill on factors which foster positive mental health in NZ construction apprentices.

# 2.2.3 Factors Associated With Construction Apprentices Well-being

There are less than a handful of studies that have explored protective factors related to construction workers' mental well-being. Moreover, there are even fewer studies, on factors related to construction apprentices' well-being, specifically. The studies that have been conducted centre around how various forms of support are linked with promoting well-being for construction workers. For example, Buchanan et al. (2016) explored the work-based social support structures available for young Australian construction apprentices and how these could contribute to better mental health and well-being outcomes. Their research comprised a literature review and eight case studies across several different construction firms and group training organisations in Australia. Through their exploration, they discovered that informal or peer-based mentorship arrangements were more effective in supporting apprentices' wellbeing than the formal and hierarchical (i.e., senior tradesperson and subordinate apprentice) mentorship arrangements of traditional apprenticeships. These superior and informal mentorship arrangements are described as fostering vocational development, which includes not only the acquisition of technical competency, but the nurturing of the whole person, including their mental health. Though, as Buchanan et al. (2016) point out, establishing these informal mentorship arrangements are difficult. Further, even in workplaces that have adopted these 'best practice' arrangements, it was evident that some people still "slip through" (Buchanan et al., 2016, p. 54).

In another Australian study by Love at al. (2010), the relationship between stress, support, and mental health were examined across different construction industry workers,

namely, onsite contractors (e.g., foreman) versus consultants (e.g., architects or engineers). Stress, support and mental health were all measured using one comprehensive tool known as the International Survey of Stress and Mental Health (SWS Survey; Gutierrez, 1999). The SWS Survey is based on the theory that mental health in the workplace is the net effect of both stressors and supports. These stressors and supports include not only those present at work, but those outside of work (e.g., in one's social life), as well as, within oneself (e.g., personal attitudes and behaviours; Ostermann, 1999). Through comparing scores from the SWS Survey, Love et al. (2010) found that, for both contractors and consultants, poor mental health was predicted by self and social stress scores. Positive mental health was predicted by all three types of support (e.g., self-support, work-support and social-support) in consultants, whereas, it was only predicted by self-support in contractors (Love et al., 2010). Love et al. (2010) speculated that work and social interactions may have deteriorated for contractors and thus no longer provide a relevant source of support.

Amongst other conclusions drawn, Love et al. (2010) acknowledged the crucial role of self-stress and self-support in influencing construction workers' mental health. Essentially, changing the way construction employees subjectively appraise their circumstances and manage their behaviours may be vital to improving employee mental health. The most widely cited factor highlighted throughout the literature as underlying the ability to engage in positive appraisals and self-supportive behaviours is self-esteem, or, the degree to which people evaluate themselves positively (Crocker & Park, 2004; Love et al., 2010; Miller et al., 1989). Self-esteem drives behaviour and shapes how people think about themselves, other people, and events in their lives (Crocker & Park, 2004). It is also a predictor of positive well-being (Diener & Diener, 1995). Thus, employee programmes aimed at increasing self-esteem may be beneficial for the construction worker population. However, it is important to note that self-esteem does not come without its pitfalls (see Crocker & Park, 2004). Having high self-

esteem is in part conditional upon evaluations of self-worth in various life domains. In this way, even high self-esteem can fluctuate significantly (Neff & Vonk, 2009). Moreover, people sometimes engage in dysfunctional behaviours in order to pursue a sense of high self-esteem, such as dismissal of negative feedback, intolerance of alternative view-points (known as 'need for cognitive closure'), engagement in downward social comparisons and other narcissistic behaviours (Neff & Vonk, 2009).

In contrast, a highly similar construct known as self-compassion is not based on positive judgments or evaluations, rather, it is a way of relating to oneself in the same way one would treat a friend (Neff, 2021; Neff & Vonk, 2009). Neff and Vonk (2009) conducted two studies to evaluate the differences between self-esteem and self-compassion. The first study (n = 2,187) found that, unlike self-esteem, self-compassion had no association with narcissism. Furthermore, self-compassion had stronger negative relationships with several other negative psychological states (e.g., social comparison, need for cognitive closure and so on) which are commonly associated with self-esteem. Finally, self-compassion was found to be more consistent in predicting feelings of self-worth and less contingent on certain outcomes, compared to self-esteem (Neff & Vonk, 2009). The second study (n = 165) found that self-esteem and self-compassion were statistically equivalent in predicting positive affect, optimism and happiness. Overall, the research by Neff and Vonk (2009) highlights that selfcompassion may be a promising alternative to global self-esteem. For this reason, the construction industry may benefit from research which explores how self-compassion may be able to increase self-supportive behaviours and hence the positive mental health of its employees.

# 2.3 Self-Compassion

Self-compassion was developed by researcher Dr. Kristen Neff and is described as the ability to extend an empathic and non-judgmental orientation towards the self when considering personal mistakes and failures, as well as when facing painful life situations (Neff, 2003a). Self-compassion utilises the affective, cognitive and attentional domains to respond to suffering with self-kindness, common humanity, and mindfulness (Neff 2003a, 2003b; Neff, 2016). Self-kindness is the capacity to be supportive and empathic towards oneself during periods of suffering and failure, rather than being self-judgemental. Common humanity is the ability to understand that one's failures, imperfections and suffering are part of the shared human experience, rather than viewing one's suffering in isolation. Mindfulness is the capacity to pay attention to painful thoughts and feelings in a non-judgmental way, rather than allowing the self to over-identify with them. Additionally, self-compassion is described as having "yin" and "yang" qualities (Yarnell et al., 2019). Stemming from traditional Chinese philosophy, yin, or female qualities involve soothing, comforting, and validating suffering (Yarnell et al., 2019). Whereas, yang, or male qualities involve protecting, providing, and motivating action to relieve suffering (Yarnell et al., 2019). Thus, self-compassion cannot be said to be "masculine" or "feminine," but instead surpasses this duality in its focus on the alleviation of suffering (Yarnell et al., 2019).

Robust evidence demonstrates the beneficial role of self-compassion on mental health. In two meta-analyses, self-compassion was found to have moderate to large effect size on its protective role against psychopathology, such as, depression, anxiety and stress (r = -0.54, MacBeth & Gumley, 2012; rs = -0.27 to 0.50, Muris & Petrocchi, 2017). Self-compassion is proposed to both directly and indirectly influence anxiety and depression. One pathway proposed for its indirect effects on depression and anxiety is through perceived stress. Luo et al. (2019) tested this hypothesis in their study on 1,453 nursing students in China. Using

structural equation modelling (SEM), self-compassion was shown to be negatively associated with anxiety, depression and perceived stress, whereas, perceived stress was positively associated with anxiety and depression (Luo et al., 2019). Interestingly, in the effect of perceived stress, self-compassion had no significant correlation with anxiety and depression. This demonstrates self-compassion's major role in indirectly influencing anxiety and depression through perceived stress for this population (Luo et al., 2019).

In addition to self-compassion's protective function, it is also shown to be positively associated with factors related to positive mental health such as happiness, life satisfaction and optimism (Neff at al., 2007). A meta-analysis which examined the relationship between self-compassion and well-being found a medium effect size on the association of self-compassion and well-being (r = 0.47; Zessin et al., 2015). Furthermore, Neely et al. (2009) conducted two studies which looked at the impact of goal management, stress, self-compassion, and need for and availability of social support on student well-being (n = 203). They found that although goal management, stress, and need for and availability of support were important predictors of students' well-being, self-compassion was seen to account for a significant amount of additional variance in well-being (Neely et al., 2009). These findings highlight the vital impact of self-compassion on the achievement of well-being.

One study has unveiled interesting results on the relationship between selfcompassion, workplace bullying and emotional exhaustion. As a target of workplace bullying, being subjected to incivility (berating or belittling by others) and ostracism (shunning and exclusion at work) are seen to increase employees' experience of emotional exhaustion. Anjum et al. (2020) conducted a study on 310 Pakistan service-sector employees to examine whether self-compassion may act as a moderator in the relationships between workplace incivility and emotional exhaustion, and workplace ostracism and emotional exhaustion. The results showed that while workplace incivility and workplace ostracism were positively

correlated with emotional exhaustion, self-compassion was negatively correlated with workplace incivility, workplace ostracism, and emotional exhaustion (Anjum et al., 2020). Consistent with their hypothesis, they found that self-compassion moderated both the workplace incivility–emotional exhaustion and workplace ostracism–emotional exhaustion relationships. In this way, following exposure to ostracism and incivility, people high in selfcompassion felt less emotionally exhausted (Anjum et al., 2020). Therefore, these results demonstrate that self-compassion may also play an important role in buffering the effects of workplace bullying within the construction industry. However, to clarify self-compassion's role in moderating the effects of workplace bullying, more research is required.

# 2.3.1 The Association Between Self-Compassion & Demographic Characteristics Of NZ Construction Apprentices

Research on self-compassion underlines the fact that people who are more selfcompassionate are more likely to have better mental health (Chio et al., 2021). Additionally, research shows that the amount of self-compassion people have varies as a function of demographic factors such as age, gender and culture (Neff et al., 2008; Tóth-Király & Neff, 2021, Yarnell et al., 2015). Through identifying the key demographic characteristics of the NZ construction apprentice population and using what is known about the relationship between these demographic factors and self-compassion, it may be possible to predict the general self-compassion levels of the NZ construction apprentice group.

To enrol in a construction apprenticeship in NZ, the minimum age requirement is 16 years. Consequently, the average age of construction apprentices in NZ has historically been quite young, with many new entrants starting their apprenticeship following, or prior to, finishing school. However, as a result of the TTAF and the Apprenticeship Boost Programme, the intake of construction apprentices has dramatically increased and the average age of construction apprentices has seen a rise to 27.5 years (Wynn, 2021). According to research by Tóth-Király and Neff (2021), people become more self-compassionate as they get older. The theory underlying this phenomenon is that; as individuals mature and gain more life experience, they recognise the shared nature of human suffering and gain a more balanced orientation toward themselves that involves relating to personal imperfections and suffering with increased compassion and mindfulness (Tóth-Király & Neff, 2021). Though there are subtle increases in self-compassion levels with age, research shows that the strong association between self-compassion and well-being persists regardless of changes in age (Neff & McGehee, 2009).

Compared to other industries in NZ, the construction industry continues to remain strongly male-dominated, with only 16-18% of new entrants identifying as women each year (Sweet Analytics, n.d.). Meta-analytic research, including a total of 88 study samples, shows that men have slightly higher levels of self-compassion than women (Yarnell et al., 2015). Seeking to explain these differences, Yarnell et al. (2019) examined the influence of gender role orientation and found that masculinity was the strongest and most consistent predictor of self-compassion. Yarnell et al. (2019) note that this finding may be surprising given that masculine gender norms are associated with "hard" rather than "soft" emotions in the face of adversity. Yet, the yang aspect of self-compassion involves several qualities that are part of masculine gender role norms (e.g., protecting, providing, and motivating the self). Further, Yarnell et al. (2019) point out that the lower levels of self-compassion found in women may be due to the feminine norms of self-sacrifice. Many people incorrectly interpret selfcompassion as "selfish", this perception may be standing in the way of people with a feminine gender role orientation giving themselves permission to be kind to themselves (Yarnell et al., 2019). On the other hand, masculine traits do not entail self-sacrifice and instead emphasize autonomy and self-assertion which likely facilitate caring for the self (Yarnell et al., 2019).

Despite the lack of gender diversity, the NZ construction industry is exceptionally culturally diverse. For construction apprenticeships, there are no prerequisite qualifications required as all training occurs on the job. This means that construction apprenticeships provide significant employment opportunities for ethnic groups, such as Māori and Pacific peoples, who are characterised by lower educational attainment rates (Rice & Forgan, 2016). The industry also provides significant employment opportunities to migrant workers from Asia and other continents. Numerous studies have demonstrated differences in levels of selfcompassion across cultures and such differences have often been explained in reference to the self-construal theory. According to this, the degree to which an individual identifies with an "individualistic" or "collectivistic" culture determines the extent to which they adopt a selfcompassionate stance towards themselves (Markus & Kitayama, 1991; Neff et al., 2008). Widely cited in the literature, Eastern Asian countries are said to be representative of collectivistic culture and are described as having an interdependent self-concept that is centred around interpersonal connectedness and maintaining harmony within the group (Neff et al., 2008; Steindl et al., 2020). Whereas, Western countries are known to be representative of individualistic culture and are described as having an independent self-concept that is based around autonomy, self-expression and pursuing individuality over group goals (Neff et al., 2008; Steindl et al., 2020).

Because self-compassion involves awareness of common humanity, it might be assumed that self-compassion is favoured in collectivistic, rather than individualistic cultures (Neff et al., 2008). Yet, because recognition of personal flaws encourages self-improvement efforts required for individuals to harmoniously interact with others, it has also been argued that self-criticism (the opposite to self-compassion) is adaptive for those within collectivist cultures (Heine, 2003; Heine et al., 2001; Kitayama et al., 1997). Such contradictions also exist with regard to understanding self-compassion in individualistic cultures, making the ambiguity of the self-construal theory a clear limitation (Neff et al., 2008; Singelis, 1994).

Another limitation of the theory is that it can lead to over-generalizations about Western and Eastern cultures. The unique and vital influence of one's community, religion, philosophy and family must be taken into account when considering the impact of culture on self-compassion (Neff et al., 2008). For example, even though Thais and Taiwanese both belong to collectivistic cultures, Taiwanese orientate towards Confucianism philosophy, which is thought to promote self-criticism as a means of achievement (Heine, 2003). Neff et al. (2008) compared self-compassion levels in the United States, Thailand, and Taiwan and found that Thais had the most self-compassion and Taiwanese the least, with American's falling in between. Further, self-compassion was significantly associated with well-being in all three cultures. Neff et al.'s (2008) findings highlight the need for a more nuanced understanding of cross-cultural differences in self-compassion levels, a view which has been supported through other research (Gilbert, 2014, 2017; Gilbert et al., 2011; Montero-Marin et al., 2018). Equally, in accordance with Neff et al.'s (2008) findings, current research demonstrates that the association between self-compassion and well-being is universal (Steindl et al., 2020; Toth-Kiraly & Neff, 2021).

# 2.3.2 Research on Self-Compassion Within The Construction Industry

To our knowledge, only one study has examined the role of self-compassion within the construction worker population. This study, carried-out in the UK by Kotera et al. (2019b), explored the relationships among masculinity, mental health shame, mental health problems, motivation and self-compassion. As previously described, the construction worker population is known to have a strong masculine culture (emphasising toughness, stoicism and self-reliance), which is related to shame for mental health problems (Bryant & Garnham, 2015; Lomas, 2014; Ross et al., 2021). In turn, mental health shame creates a barrier for helpseeking and is seen to be positively associated with mental health problems (Gilbert et al., 2007; Kotera et al., 2018; Kotera et al., 2019a). On the other hand, empirical evidence demonstrates that self-compassion is related to lower levels of mental health problems and mental health shame (Kotera et al., 2018; Raes, 2011). Given this, an additional aim of Kotera et al. (2019b) was to examine whether self-compassion would mediate the relationship between mental health shame and mental health problems.

Using correlation analysis, Kotera et al. (2019b) found that mental health problems were positively related to mental health shame and amotivation, while they were negatively related to self-compassion. However, contrary to previous findings and their hypothesis, masculinity was not related to mental health shame, suggesting that many construction workers had high masculinity yet low shame about mental health problems and vice versa. Indeed, masculinity scores were high across the sample, leading Kotera et al. (2019b) to suggest that workers may use certain factors of masculinity to counter their feelings of shame. Finally, Kotera et al. (2019b) found that self-compassion was a significant mediator in the relationship between mental health shame and mental health problems. Using path analysis, the potent effect of self-compassion was illuminated: the total effect (of mental health shame on mental health problems, including self-compassion) and the effect of selfcompassion on mental health problems were stronger than the direct effect (of mental health shame on mental health problems; Kotera et al., 2019b). These results showcase the important role of self-compassion in protecting against psychopathology in UK construction workers.

Though Kotera et al.'s study (2019b) is the only one to explore self-compassion in the construction industry, self-compassion has been explored in similar male-dominated, highstress and physically demanding industries with equivalent results. For example, in a study of trauma-exposed fire-fighters, self-compassion was shown to buffer the association between

self-criticism and depression (Kaurin et al., 2018). Additionally, research on policemen has shown the effective role of self-compassion in protecting against burnout, depression and anxiety (Kaplan et al., 2020; Trombka et al., 2018; Trombka et al., 2021). Finally, a review of self-compassion research in veteran samples has shown that self-compassion has an impact upon trauma-related disorders (e.g., post-traumatic stress disorder) and this is then related to reductions in anger, shame, distress, deliberate self-harm, and suicidal behaviour (Steen et al., 2021). What has remained unexplored in the construction worker population and neglected within research on similar populations, is self-compassion's role in fostering well-being. Knowing only how self-compassion protects against psychopathology in the construction worker population, is to know only half of what there is to know about self-compassion's role in shaping this group's overall well-being (Trompetter et al., 2017; WHO, 2004). Therefore, expanding the knowledge on how self-compassion may promote psychological well-being in construction workers is an important research venture which remains to be explored.

#### 2.3.3 Self-Compassion Interventions and Construction Apprentices

With the beneficial nature of self-compassion becoming increasingly solidified through the accumulation of findings from scientific research, psychologists have become progressively interested in ways to enhance self-compassion (Neff & Germer, 2013). Luckily, unlike many intrinsic protective factors, self-compassion is not a fixed trait and it can be developed through training (Neff & Germer, 2013). On the basis that mindfulness is a key component of self-compassion, training in mindfulness (e.g., through mindfulness-based stress reduction [MBSR]) was originally identified as an important way to increase selfcompassion (Neff & Germer, 2013). Although increases in self-compassion are achieved through MBSR and other mindfulness-based interventions, these programmes devote relatively little time explicitly teaching skills of self-compassion (Neff & Germer, 2013). Consequently, it was acknowledged that therapeutic interventions, which are more specific to self-compassion were required (Neff & Germer, 2013). In response, Paul Gilbert and colleagues developed compassion-focused therapy (CFT). The theory underlying CFT draws upon evolutionary psychology, attachment theory, neuroscience and social psychology (CFT; Gilbert, 2010). Furthermore, CFT focusses on compassion in a broad sense (e.g., compassion to others, to self, and receiving compassion from others) and is designed only for use with clinical patients (Gilbert, 2010; Kirby, 2017). As a result, Neff and Germer (2013) saw the need to develop a "hybrid" programme (for use within the general public and some clinical populations) that is uniquely based on Neff's conceptualisation of self-compassion, called Mindful Self-Compassion (MSC).

The structure of MSC is modelled on MBSR, with participants meeting for 2 (or 2.5) hours once a week over the course of 8 weeks, and also meeting for a half-day meditation retreat (Neff & Germer, 2013). MSC has been evaluated in a single case study and three randomized controlled trials (RCT; Friis et al., 2016; Germer & Neff, 2013; Neff & Germer, 2013). In the primary RCT of MSC, Neff and Germer (2013) evaluated the programme with 52 participants, who were randomized to either MSC or a wait-list control condition. The results found that MSC significantly increased self-compassion, compassion for others, mindfulness, and life satisfaction, as well as decreased depression, anxiety and stress. Brief three-week variations of the MSC programme have also been evaluated in three RCTs (Albertson et al., 2014; Haukaas et al., 2018; Smeets et al., 2014). Most recently, a brief webbased variation of the MSC programme has been evaluated in an RCT by Eriksson et al (2018). Eriksson et al. (2018) found that the brief online MSC intervention increased self-compassion and decreased symptoms of stress and burnout in a group of practicing psychologists. Overall, each of the variations of the MSC intervention appears to be successful in producing positive outcomes. Furthermore, a strength of all of the MSC

interventions is that their beneficial effects are independent from the availability of adaptive external factors, such as, social support. With the COVID-19 pandemic still generating uncertainty, unrest and restrictive lockdowns, this characteristic is particularly valuable.

Despite RCT's uncovering promising results on the effectiveness of the MSC intervention, it is important to note that all of these studies have engaged primarily female samples. In a recent pilot study, which investigated the acceptability and impact of MSC in veterans (n = 80), Serpa et al. (2021) note that, relative to veteran samples, the female samples of previous studies typically have higher socioeconomic status and education levels, as well as lower prevalence of psychopathology and chronic pain. As the construction apprentice population shares many similarities with the veteran population (e.g., male-dominated, low socioeconomic status and education levels, high rates of psychopathology), the findings of the study by Serpa et al. (2021) are particularly relevant. Serpa et al. (2021) found that the veterans' engagement with MSC was high, with 74% of participants completing the intervention and 96% of them rating their participation in the intervention as positive (Serpa et al., 2021). Those who completed the intervention showed small to medium effect size increases in self-compassion, happiness, and social role satisfaction and decreases in depression, anxiety, fatigue, and pain interference (Serpa et al., 2021). Serpa et al. (2011) concluded that an MSC intervention for veterans may be highly effective, though, an RCT is necessary to validate its success for the veteran population (Serpa et al., 2021). Given the likeness of the veteran population with construction apprentices, a future RCT will serve as a useful indicator to predict how an MSC intervention may contribute to the well-being of NZ construction apprentices.

# 2.4 Well-Being

To explore self-compassion's role in promoting well-being in construction apprentices, one must first decide on which construct of well-being to use. Well-being can be defined and measured in two main ways, known as subjective well-being and psychological well-being (Chen et al., 2012). Subjective well-being (also known as hedonic well-being) refers to a highly satisfying and emotionally pleasant life, with frequent positive emotions and infrequent negative emotions (Diener, 1984). It has three major components, including two affective dimensions (e.g., positive affect and negative affect) and one cognitive dimension (e.g., life satisfaction; Proctor, 2014). Both the affective and cognitive components of subjective well-being can each be assessed via self-report (Proctor, 2014). Examples of the most common measures include the Satisfaction with Life Scale (Diener et al., 1985), the Positive and Negative Affect Schedule (Watson et al., 1988), and the Affect Balance Scale (Bradburn, 1969; Proctor, 2014).

In contrast to subjective well-being, through integrating psychological concepts such as self-actualization and optimal functioning, psychological well-being (also known as eudemonic well-being) focuses on fulfilment of human potential and a meaningful life (Keyes et al., 2002; Maslow, 1962 ; Rogers, 1961; Ryff, 1989, Ryff, 2018). According to Carol D. Ryff's (1989) comprehensive psychological well-being model, psychological well-being involves perceived thriving in the face of existing challenges of life and can be captured by six dimensions: positive evaluations of oneself and one's life (self-acceptance), a sense of continued growth and development as a person (personal growth), the belief that one's life has meaning and purpose (purpose in life), the experience of quality relationships with others (positive relationships with others), the capacity to effectively manage one's life (environmental mastery), and a sense of self-determination (autonomy). Ryff's psychological well-being model was also developed with a focus on life span development. Given that
psychosocial tasks and environmental challenges change as a function of age, there are agerelated changes in the six dimensions. In a study examining changes in psychological wellbeing dimensions from early through to late adulthood, it was shown that personal growth and purpose in life gradually declined, environmental mastery and autonomy increased, whereas, self-acceptance and positive relationships with others remained stable across adulthood (Ryff, 1989).

Over the years, there has been debate about whether there is a meaningful differentiation between psychological well-being and subjective well-being (Kashdan et al., 2008; Keyes et al., 2002). Rigorous research by Chen et al. (2012) has found that psychological well-being and subjective well-being are indeed strongly related at the general construct level. However, they found that once their overlap with the general construct of well-being is partialled out, their individual components are unique (Chen et al., 2012). Essentially, this means that both psychological well-being and subjective well-being have merit in measuring distinct aspects of well-being. Given this, the question then becomes which theoretical framework of well-being is best suited and more valuable to measure the well-being of construction apprentices.

The construction worker population comprises mostly adolescents or young adults, where two important themes during these developmental stages are personal growth and purpose in life. Therefore, it appears that the psychological well-being framework may be better suited than the subjective well-being framework to measure the well-being of construction apprentices. Further, it seems plausible that apprentices who are motivated to embark on a new career in the construction industry are seeking to fulfil their human potential through striving for psychological well-being goals, as opposed to the more basic subjective well-being goals. Arguably, if construction apprentices were seeking to achieve subjective well-being goals, they may not sign up for a construction apprenticeship which is notoriously

hard work and could induce more negative emotions than positive ones. Instead, they would presumably choose an easier and more guaranteed route to attaining subjective well-being goals of increased positive emotions. Finally, given that psychological well-being has been described as perceived thriving in the face of life's challenges, the psychological well-being framework seems the more suitable choice of framework for construction apprentices who appear to be up against numerous adversities. Relative to the subjective well-being model, the psychological well-being framework may deliver a much more comprehensive view on how self-compassion uniquely relates to each dimension of Ryff's psychological well-being model and may help NZ construction apprentices to thrive despite their challenges.

# 2.4.1 Associations between Self-Compassion and the Six Dimensions of Psychological Well-Being

There is theoretical and empirical evidence to support the link between selfcompassion and each of the six dimensions of psychological well-being.

Self-compassion and personal growth. In a qualitative study on five women exercisers, Berry et al. (2010) found that women who treated themselves with compassion were able to have greater clarity of their limitations and recognize their unhealthy behaviours. These realisations were reported to encourage personal growth and changes to improve wellbeing (Berry et al., 2010). Building on this, Zhang and Chen (2016) carried out three studies to examine whether relating to recalled regret experiences with self-compassion promotes personal improvement. In Study 1, 210 anonymous regret descriptions posted on a blog website were coded and analysed. The analyses revealed that people who described their regret experiences with greater self-compassion were also judged as having expressed more personal improvement (Zhang & Chen, 2016). In Study 2, 125 participants were asked to recall an experience they regretted. It was found that participants with higher trait selfcompassion predicted greater self-reported and observer-rated personal improvement (Zhang & Chen, 2016). In Study 3, participants (n = 400) were induced to take a self-compassionate perspective toward a recalled regret experience. Relative to the control group, these participants reported greater acceptance, forgiveness, and personal improvement (Zhang & Chen, 2016). Self-compassion's effects on personal improvement were distinct from selfesteem and were not explained by adaptive emotional responses (Zhang & Chen, 2016).

Self-compassion and self-acceptance. Zhang et al. (2020) recruited 136 university undergraduates, who were currently in a romantic relationships, to examine the relationship between self-compassion and self-acceptance, as well as, how self-compassion affects acceptance towards others. Three studies were conducted in total. Studies 1 (n = 127) and 2 (n = 401) indicated that self-compassionate people expressed having more acceptance of their own flaw, which, in turn, predicted greater acceptance of their romantic partner's flaws. Study 3 used a dyadic design with 89 heterosexual couples (n = 178) and found that self-compassion fostered felt acceptance of one's own flaw by both members in the relationship. These findings highlight that acceptance of one's own flaws leads to increased acceptance of each other's flaws (Zhang et al., 2020). Based on their findings, Zhang et al. (2020) theorize that the within-person benefits (i.e., acceptance of own flaw, acceptance of partner's flaw) and between-person benefits (i.e., felt partner accepts own flaw) of self-compassion could give rise to more fulfilling and better functioning relationships.

Self-compassion and positive relationships with others. Neff and Beretvas (2013) explored whether people who are more self-compassionate express more caring and supportive behaviours, rather than controlling or verbally aggressive behaviours in their romantic relationships. A total of 104 couples (n = 208) participated in the study. Through comparing self-reported self-compassion levels with partner reports of relationship behaviour,

Neff and Beretvas (2013) found that self-compassionate individuals displayed more positive relationship behaviour than those with low self-compassion. Additionally, self-compassion was found to be a stronger predictor of positive relationship behaviour than trait self-esteem or attachment style (Neff & Beretvas, 2013).

In another study, Yarnell and Neff (2013) explored how self-compassion may enhance one's ability to balance the needs of self and other in conflict situations. University undergraduates (*n* = 506) were asked to provide an example of when their needs conflicted with those of their mother, father, best friend and romantic partner (Yarnell & Neff, 2013). Participants were asked how they resolved the conflict, for example, through subordinating, self-prioritizing, or compromising. They also reported the degree of emotional disturbance experienced during conflict resolution, whether their resolution choice felt authentic, and their sense of well-being in each relational context (Yarnell & Neff, 2013). For all relational contexts, more self-compassionate individuals were more likely to compromise than subordinate their needs in conflict situations. Furthermore, they were seen to experience greater authenticity, lower levels of emotional disturbance, and higher levels of relational well-being (Yarnell & Neff, 2013).

**Self-compassion and autonomy.** Autonomy refers to a sense of acting in an authentic and volitional manner, and it is captured by reports of pursuing behaviours because they are connected to one's interests and values (Hope et al., 2014). The self-determination theory refers to such behaviour as autonomous motivation (Deci & Ryan, 2000). Hope et al. (2014) carried out a longitudinal study on 159 university students to examine the role of selfcompassion in students' goal pursuit and well-being over their first year of university. Using data collected from a daily diary exercise, it was found that, compared to individuals who were low in self-compassion, those high in self-compassion tended to experience less daily negative affect when they were pursuing goals towards which they held more autonomous

motivation. Further, individuals higher in trait self-compassion were protected against the tendency to experience increased negative affect on days in which less goal progress was made. These results suggest that for highly self-compassionate people, the process and meaning of their goal pursuits are more valuable to them than the success of their goals (Hope et al., 2014).

Self-compassion and environmental mastery. The link between the psychological well-being dimension of environmental mastery and self-compassion has been evidenced largely through research examining university students' achievement goals. There are two basic achievement goals: mastery goals and performance goals (Ames & Archer, 1988). A mastery goal orientation is defined as a focus on improving competency and can be further differentiated into mastery-approach and mastery-avoidance goals. Mastery-approach goals are related to attempts to improve knowledge, whereas, mastery-avoidance goals represent a focus on avoiding misunderstanding. In contrast, a performance goal orientation focuses on doing better than others and showcasing one's competence (Dweck & Leggett, 1988). As with mastery goals, it can also be differentiated into performance-approach and performance-approach goals motivated to outperform others. On the other hand, performance-avoidance goal orientation refers to those who are motivated to avoid appearing inferior to others and receive negative judgements (Neff et al., 2005).

Neff et al. (2005) carried out two studies to explore the association between selfcompassion, achievement goals, and coping with academic failure among undergraduates. In Study 1 (n = 222), Neff et al. (2005) found that self-compassion was positively associated with mastery goals and negatively associated with performance goals, a relationship that was mediated by the lesser fear of failure and greater perceived competence of self-compassionate individuals. Study 2 confirmed these findings among students who perceived their recent

midterm grade as a failure (n = 110), with results also indicating that self-compassion was positively associated with emotion-focused coping strategies (e.g., seeking emotional support, venting negative feelings, accepting the situation and so on) and negatively associated with avoidance-oriented strategies (Neff et al., 2005). Babenko and Oswald (2019) built on the findings by Neff et al. (2005) in their study on medical students (n = 200) where they found that those students who were less self-compassionate reported a greater endorsement of mastery avoidance goals. On the other hand, students who were more self-compassionate tended to endorse mastery avoidance goals to a lesser extent, as mistakes and failures were viewed as learning opportunities (Babenko & Oswald, 2019).

Self-compassion and purpose in life. Significant correlations between meaning in life and self-compassion have been found in numerous studies with varying populations (Homan, 2018; Neely et al. 2009; Phillips & Ferguson, 2013; Pollet & Schnell, 2017). The most recent study to examine the relationship between self-compassion and purpose in life was carried out in the U.S. by Suh and Chong (2020) on 245 diverse community adults. Suh and Chong (2020) employed the Self-Compassion Scale scale (Neff, 2003b) to measure self-compassion and the Multidimensional Existential Meaning in Life Scale (George & Park, 2017) to measure meaning in life. The findings showed that self-compassion significantly positively predicted meaning in life, indicating that having a healthy attitude toward oneself promotes meaning in life (Suh & Chong, 2020).

#### 2.4.2 The Psychological Well-Being Scale, Self-Compassion and Construction Apprentices

Of the studies that have used Ryff's psychological well-being scale (PWB; Ryff, 1989) to measure the relationship between self-compassion and psychological well-being, many have only used the total PWB scale score. As a result, the unique relationship between self-compassion and each of the six PWB subscales, representing the six dimensions of psychological well-being, have not been explored (Tarber et al., 2016; Yela et al., 2020). A few studies have computed the PWB subscale scores, for example, Ferguson et al. (2014) conducted a study on women athletes (n = 83) and found that self-compassion was positively correlated with all the PWB subscales. Additionally, Homan et al. (2016) looked at older adults (n = 121) and found that for each subscale of the PWB, self-compassion explained unique variance, above and beyond the set of control variables. Finally, in a study by Sun et al. (2016) on 277 Hong Kong adolescents, associations were found between self-compassion and all PWB subscales. Importantly, these associations differed according to gender, for example, while the self-compassion subscale of self-kindness merely increased the PWB subscale of self-acceptance for boys, it increased girls' self-acceptance, positive relations with others, and environmental mastery (Sun et al., 2016). As the findings by Sun et al. (2016) highlight, one cannot assume that the associations between self-compassion and psychological well-being outlined in the studies above will be indicative of those found in the construction worker population because the sample populations are in no way similar to construction apprentices. Rather, to gain a better understanding of the associations between selfcompassion and psychological well-being dimensions in construction apprentices, it is helpful to review studies that use a similar population in terms of gender, age and so on.

One population that is similar to construction apprentices is male athletes. A study by Reis et al. (2019) explored the interaction of self-compassion and diverse versions of masculinity on the psychological well-being of 172 men athletes with a mean age of 22.8 years. The findings of interest were that self-compassion was negatively related to all of the potentially unhealthy variables that were tested (e.g., shame, self-stigma of seeking help, fear of failure, fear of negative evaluation, rumination, self-criticism, concern over mistakes, fear of compassion for self) as well as to ruminative, passive, and self-critical reactions to a hypothetical emotionally difficult sport-specific scenario (Reis et al., 2019). On the other

hand, self-compassion was shown to be positively correlated to self-compassionate, positive, perseverant, and responsible reactions to a hypothetical emotionally difficult sport-specific scenario (Reis et al, 2019). Most importantly, self-compassion was shown to be positively related to psychological well-being and each of its six subscales (all p < .01): Autonomy (r = .45), Environmental Mastery (r = .59), Personal Growth (r = .39), Positive relations with others (r = .60), Purpose in life (r = .51) and Self-Acceptance (r = .67).

#### 2.5 Summary and Hypotheses

Drawing on previous literature, the main aim of the present study was to explore the relationships between self-compassion and psychological well-being in NZ construction apprentices. It was hypothesised that self-compassion will uniquely predict each of the six dimensions of psychological well-being. Secondary aims were to assess levels of psychological distress and exposure to bullying among apprentices, as well examine the relationships between self-compassion, psychological distress and exposure to bullying. It was hypothesised that self-compassion will be negatively related to psychological distress, and that bullying will be positively related to psychological distress. Further, it was examined whether self-compassion will moderate the relationship between bullying and psychological distress. Overall, this research will contribute to informing the relevance of self-compassion interventions, as well as, bullying interventions for the NZ construction apprentice population.

#### **Chapter Three: Methodology**

#### **3.1 Research Design and Ethics**

This study used a cross sectional survey design. The survey data were collected during the months of July to October 2021, via an anonymous online survey. The survey was administered using the Qualtrics survey software, and was available online for 93 days (from July 13 to October 14).

The study was preregistered through submitting information about the research design, hypotheses and analyses of the study at https://aspredicted.org. It was hypothesized that self-compassion will uniquely predict the six dimensions of psychological well-being as delineated by Ryff (1989). Upon pre-registration approval, the platform generated a time-stamped, single page .pdf document which included a unique URL for verification. The study was approved by the Massey University Human Ethics Committee (Human Ethics Southern A Committee – SOA 21/19).

In terms of ethical issues, the study's information sheet stated that survey completion implied consent. The first item of the survey asked participants to consent to the collection of their responses (see Appendix A). At the conclusion of the survey, participants were given the option to proceed to another window and record their email address, so that they could be sent a summary of the results and/or enter the prize draw to win one of ten \$40.00 supermarket vouchers. Although it was not anticipated, it was explained that some participants might find some questions in the survey distressing. A number of available support options along with the relevant contact details were listed in the information sheet and presented at the end of the survey.

The study used non-probability sampling. An a priori power analysis using G\*Power (version 3.1.9.7; Faul et al., 2009) was conducted to estimate the required sample size for a medium effect size (f2 = .15; Cohen, 1992) in a regression model with 4 predictors (allowing

for the inclusion of covariates); assuming an  $\alpha$  of .05, and target power of .95, it was aimed to recruit a minimum of 129 participants.

### **3.2 Participants**

Of the 415 participants who consented to undertaking the survey, listwise deletions for 150 people were made as they had more than 95% missing data. In total, 265 construction apprentices were included in the data analyses. Demographic characteristics of participants are presented in Table 1. Participants were on average 31 years old ( $SD_{age} = 10.09$ ) ranging from 17 to 63 years. As expected, over 80% of the current sample was male (219; 82.6%), which is representative for the gender distributions among construction workers in NZ (e.g., 82% male in 2021; Construction Sector Accord, 2021). The sample was highly ethnically diverse and many participants identified with more than one ethnicity.

## Table 1

	n	%
Gender		
Male	219	82.6
Female	46	17.4
Age group		
17-25 years	101	38.1
26-39 years	104	39.2
40 years and over	54	20.4
Ethnicity		
Māori	54	20.0
New Zealand European	179	67.5
Other European	19	7.2
Pacific People	27	10.2
Asian	27	10.2
Middle Eastern	2	.8
Latin American	7	2.6
African	2	.8
Other ethnicity	13	4.9

Demographic Background (N = 265)

*Note.* Sum of columns for ethnicity exceeds 100% because of option to select as many as applied.

Detailed information of the apprenticeship background of participants is presented in Table 2. Almost 90% of the participants had an active apprenticeship status. Just under 50% of the participants were in the first year of their apprenticeship, with the rest either in their second, third or fourth year. Roughly 85% worked for a private company, 10% were selfemployed, with only very few participants working for industry training organisations or government departments. Around 50% of the participants reported working for an employer with 1-10 employees, approximately 25% reported working for an employer with 10-50 employees, and the remaining participants were spread across the larger employer categories. Of the twelve different apprenticeship trade options presented in the survey, over 80% of participants selected that they were training to become a carpenter / joiner. Roughly 75% of the participants worked within the residential builds sector, with the remainder largely occupying the commercial sector (less than 2% of participants occupied the civil sector).

# Table 2

Apprenticeship Background (N = 265)

	п	%
Apprenticeship status		
Active	238	89.8
Completed within last 12 months	19	7.2
Ongoing but on long term leave	8	3.0
Year of apprenticeship		
First year	117	44.2
Second year	52	19.6
Third year	45	17.0
Fourth year	27	10.2
Completed within the last 12 months	17	6.4
Other	7	2.6
Employer type		
Private company	223	84.2
Industry training organisation	3	1.1
Government department	6	2.3
Self-employed	29	10.9
No employer currently	4	1.5
Employer size		
A very large employer (more than 501 employees)	13	4.9
A large employer (101-500 employees)	17	6.4
A medium size employer (51-100)	16	6.0
A small employer (11-50)	71	26.8
A very small employer (1-10)	139	52.1
Not applicable	9	3.4
Apprenticeship trade /occupation		
Bricklayer / Stonemason	2	.8
Carpenter / Joiner	220	83.0
Electrician	7	2.6
Floor finisher	4	1.5

Glazier	2	.8
Machine Operator	2	.8
Painter	12	4.5
Plasterer	5	1.9
Roofer	1	.4
Technician / Draftsperson	2	.8
Welder/Fabricator	1	.4
Other	7	2.6
Main industry sector		
Residential builds	200	75.5
Commercial construction	50	18.9
Civil construction	5	1.9
Other	9	3.4

#### **3.3 Procedure**

The researcher contacted several construction-related organisations (e.g., tradestraining institutions and companies that focus on construction workers site safety or mental health) and invited them to take-part in the research (see Appendix B). Of the nine organisations contacted, four organisations agreed to be involved: Building and Construction Industry Training Organisation (BCITO), Whitireia, WelTec and Manukau Institute of Technology (MIT). BCITO provides on-the-job training to construction apprentices who are employed by construction companies across NZ (including the South Island). Whitireia and WelTec are strategic partners that deliver tertiary trades-training to students at their campuses in Wellington. Similarly, MIT is another tertiary institution which delivers trades-training to students at their campuses in Auckland.

Whitireia, WelTec and MIT required the research proposal to be reviewed by their internal ethics committee, before the organisations formally committed to take part. Whitireia and WelTec instructed the researcher to fill out a memorandum which was presented to the Whitireia and WelTec Ethics Committee at meetings in July. The researcher received a letter of approval from the Whitireia and WelTec Ethics Committee thics Committee on the 10<sup>th</sup> of August.

Similarly, the ethics process for MIT required the researcher to complete an External Researchers Application Form, as well as, provide a copy of the full MUHEC application and the MUHEC letter granting ethics approval. The MIT ethics committee reviewed the application at their meeting on the 3<sup>rd</sup> of September and the researcher was notified of their approval on the 8<sup>th</sup> of September. Despite gaining ethics approval, MIT did not end up participating in the research.

Each of the companies that agreed to help with recruitment sent potential participants an email advertising the research project and asking for interested participants (See Appendix C). The advertising email included a link to the information sheet and survey. The information sheet outlined the objectives of the study, what was required of each participant, and the eligibility requirements (See Appendix A). To be eligible to participate in the study, participants needed to be: currently enrolled in and/or completing an apprenticeship within the NZ Construction Industry; or having completed an apprenticeship within the last 12 months; fluent in English; and 16 years or over. At the bottom of the information sheet, participants were presented with the option to proceed to the survey.

The survey was designed by the researcher (more information is included in the Measures section), and was reviewed by MIC NZ, who recommended several changes. Firstly, they advised that the researcher base the apprenticeship trade options on the Australian and New Zealand Standard Classification of Occupations (Stats NZ, 2019). Secondly, due to their existing knowledge of the high rates of bullying found in Australian apprentices, MIC emphasized the importance of including a measure of bullying in the survey. Thirdly, they suggested simplifying the language used to make it more appropriate for apprentices who are typically young and have low-educational attainment. Finally, they encouraged that the researcher shorten the survey length as much as possible, to minimise the burden on participants. MIC NZ's recommendations were incorporated into the final version

of the survey which was subsequently built using Qualtrics software and placed on a Massey University computer server. The researcher pre-tested the survey several times. From the pretests, it was calculated that the average length of time taken to complete the questionnaire was approximately 20 minutes.

#### 3.4 Measures

The survey questionnaire (see Appendix A) consisted of 92 items in total. The first section of the survey included 10 questions on various demographic characteristics, which were informed by the survey questions used in Ross et al.'s (2021) research on Australian construction apprentices. Six of the demographic items related to the apprenticeship, including status (e.g., active), stage of completion (in years), type of trade training, company type, company size and industry sector. The rest of the demographic questions related to, age, English language fluency, ethnicity and gender.

In addition to the demographic questions, four psychological scales were included to measure self-compassion, psychological well-being, psychological distress and exposure to bullying. These constructs were measured by the corresponding scales: Self-Compassion Scale - Short From (Raes et al., 2011), Ryff's Psychological Well-Being Scale (Ryff, 1989), Kessler Psychological Distress Scale (Kessler et al., 2002) and the Negative Acts Questionnaire Revised (Einarsen et al., 2009).

#### 3.4.1 Self-Compassion Scale – Short Form

The Self-Compassion Scale-Short Form (SCS-SF) is a shortened, 12-item version of the original 26-item Self-Compassion Scale (SCS, Neff, 2003b), which measures selfcompassion (Raes et al., 2011). Like the original SCS, the self-report SCS-SF scale uses positively and negatively framed items to measure three bipolar components of selfcompassion: self-kindness vs. self-judgment, common humanity vs. isolation, mindfulness vs. over-identification (Neff, 2003b).

The subscales of the SCS-SF consist of two items each, which describe thoughts and behaviours towards oneself. For each item, participants are asked to indicate how often they behave in the stated manner using a five-point Likert scale (1= *Almost never* to 5 = *Almost always*). Items include "I try to be understanding and patient towards those aspects of my personality I don't like." (Self-kindness), "I'm disapproving and judgmental about my own flaws and inadequacies." (self-judgement), "I try to see my failings as part of the human condition." (Common humanity), "When I'm feeling down, I tend to feel like most other people are probably happier than I am" (Isolation), "When something upsets me I try to keep my emotions in balance" (Mindfulness) and "When I'm feeling down I tend to obsess and fixate on everything that's wrong" (Over-identification; Raes et al., 2011). Subscale scores are computed by calculating the mean of subscale item responses (Raes et al., 2011). To compute a total self-compassion score, firstly, the negative subscale items (self-judgment, isolation, and over-identification) must be reverse scored. Following this, a total mean can be computed (Raes et al., 2011). Mean scores range from 1 to 5, with higher scores indicating higher self-compassion.

The SCS-SF was constructed and its factorial structure cross-validated by Raes et al. (2011) using two Dutch samples and an English sample. Raes et al. (2011) found that the SCS–SF demonstrated adequate internal consistency (Cronbach's alpha  $\geq$  0.86 in all samples) and a near-perfect correlation with the original SCS ( $r \geq$  0.97 all samples). Confirmatory factor analysis on the SCS–SF supported the same six-factor structure as found in the original SCS, as well as a single higher-order factor of self-compassion (Raes et al. 2011). Despite all subscales, except self-kindness, demonstrating Cronbach's alphas of above 0.60 (internal consistencies which are generally deemed acceptable for use in groups), Raes et al. (2011)

considered the internal consistencies of the subscales to be relatively low across the samples. As a result, Raes et al. (2011) recommend using the full scale if information about subscales is crucial. Though, for total score information, Raes et al. (2011) recommend the SCS–SF as an economical alternative to the long form as it has the same factor structure, good internal consistency and a near-perfect correlation with the original SCS.

The SCS-SF has been used in a large variety of populations, including new mothers, diabetics, older adults, university students, health professionals, social workers, male victims of childhood mistreatment, military veterans and service sector workers, to name a few (Anjum et al, 2020; Ferrari et al., 2017; Gammer et al., 2020; Homan, 2016; Homan, 2018; Kotera et al., 2019a; Kotera & Ting, 2021; Kotera & Van Gordon, 2021; Rao et al., 2017; Ramon et al., 2020; Tarber, 2016). In the present study, Cronbach's alpha coefficient of internal consistency for the total SCS-SF score was .81.

#### 3.4.2 Ryff's Psychological Well-Being Scale

Psychological well-being was measured with the 42-item version of the Scales of Psychological Well-Being (PWB; Ryff & Keyes, 1995). Accounting for each of the six dimensions of psychological well-being, the scale consists of six subscales: self-acceptance, positive relationships with others, personal growth, purpose in life, environmental mastery, and autonomy. Seven items measure each subscale, for example, "I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people" (autonomy), "In general, I feel I am in charge of the situation in which I live" (environmental mastery), "I think it is important to have new experiences that challenge how I think about myself and the world" (personal growth), "Most people see me as loving and affectionate" (positive relations with others), "I have a sense of direction and purpose in life" (purpose in life), and "In general, I feel confident and positive about myself" (self-acceptance). Respondents indicate agreement with each item using a six-point Likert scale (1 = strongly disagree, 6 = strongly agree). Prior to analysis, negatively worded items are reverse scored. The items comprising each subscale are summed and averaged to reveal a score ranging between 1-6 with high values indicating well-being.

Ryff's original PWB scale was 120-items total, with 20 items for each of the six dimensions (Ryff, 1989). To reduce respondent burden, the original scale was reduced to an 84-item version (14 items per dimension) and, subsequently, a 21-item version (3 items per dimension) for use in a national U.S. survey. The 3 items per dimension in the 21-item version of the PWB scale were selected according to their ability to cover the dimensions' conceptual foundation (Ryff, 2014). As a result, this ultra-short scale demonstrated support for all of the six-factors of psychological well-being in the large U.S. sample, but all the subscales had low internal consistencies and consequently the scales reduction was deemed excessive (Ryff, 2014). To improve on the scale's psychometric properties, the 42-item version (seven items per dimension) was implemented for longitudinal follow-up of the U.S. national sample (Morozink et al., 2010; Ryff, 2014). This 42-item scale is supported by growing evidence which demonstrates that it is a quality assessment of the constructs (Abbot et al., 2006; Ryff, 2014).

For the current study, the Cronbach's alpha coefficients of internal consistency for each subscale of the PWB were good (i.e., Autonomy, 0.70; Personal growth, 0.75; Positive relations with others, 0.75; Purpose in life, 0.75; Self-acceptance, 0.83), except for the Environmental Mastery subscale, which was 0.39. To assess whether the low alpha was due to poor correlations between items, the correlation of each test item with the total subscale score was computed. All items for the subscale correlated well with the overall subscale score, except for item number 8, namely "The demands of everyday life often get me down", which had a negative correlation of r = -.42. According to Tavakol and Dennick (2011), items with

low correlations (approaching zero) to the total score should be deleted in order to correct the low alpha. Consequently, item 8 was discarded and the Cronbach's alpha for the Environmental Mastery subscale was recalculated as 0.72, which is acceptable.

#### 3.4.3 Kessler Psychological Distress Scale

Psychological distress was measured with the six-item Kessler Psychological Distress Scale scale (K6; Kessler et al., 2010). Participants rate how often in the past 30 days they felt "nervous", "hopeless", "restless or fidgety", "so depressed that nothing could cheer you up", "that everything was an effort" and "worthless" (Kessler et al., 2010). Response categories for these items are on a five-point scale, ranging from 0 ("*all of the time*") to 4 ("*none of the time*"). Although methodological studies have documented good K6 validity in a number of countries, optimal scoring rules have never been proposed (Kessler et al., 2010).

Within the literature, there are three main scoring approaches to the K6 observed (Krynen et al., 2013). The first method is a classical summative scoring approach, where item scores are summed to give the final score for a respondent (ranging from 0-24), with higher scores indicating higher levels of psychological distress (Krynen et al., 2013). The second scoring method is to trichotimize K6 sum scores into three categories: 'low' (scores between 0-7), 'moderate' (scores between 8-12), and 'high' (scores 13 and above) (Krynen et al., 2013). The final method is to use Item Response Theory (IRT) weighted scores. Simply put, this more technical and time-consuming approach provides information on how reliable a scale is for measuring people depending upon their levels of the trait being measured (see Hambleton & Jones, 1993, for discussion). Seeking to understand whether the IRT approach is the most optimal scoring method for the K6, Krynen et al. (2013) compared the technical IRT-weighted approach with the traditional summative scoring approach in an NZ population. They found that, although the IRT-weighted K6 scores provided more precise information

about levels of psychological distress, the classical scoring methods (e.g., summing the K6 items or categorizing the responses) are also viable, yielding comparable results in most cases. As a result of these findings, the current study opted to use the time-efficient summative scoring approach, as well as the categorical approach to assist with interpreting the levels of distress.

The K6 stemmed from a need to distinguish between severe mental illness (SMI) and non-severe mental illness in an effort to define medical necessity for policy planning purposes in the U.S., that is, distribution of mental health block grants to states proportional to their SMI case quantity (Kessler et al., 2002). To meet this need, Kessler et al. (2002) developed the K6 and the 10-item Kessler Psychological Distress Scale (K10) for the redesigned U.S. National Health Interview Survey (NHIS). Based on the analysis conducted by Kessler et al. (2002), the K10 and K6 were found to have sufficient precision in discriminating SMI cases as defined by the Diagnostic and Statistical Manual of Mental Disorders 4th edition, as well as consistent psychometric properties across major sociodemographic subsamples (Kessler et al., 2010). As a result, the scales are now frequently used in annual government health surveys in the U.S. and Australia as well as large needs assessment surveys carried out in Europe and Asia (Kessler et al., 2010). However, the most widely used screening scale of SMI is the K6 scale (Furukawa et al., 2003; Kessler et al., 2002, 2003). An internal consistency coefficient of 0.86 was obtained in the present study.

#### 3.4.4 Negative Acts Questionnaire – Revised

The Negative Acts Questionnaire-Revised (NAQ-R) is a 22-item scale designed to measure workplace bullying or persistent negative acts, which have the effect of making an employee feel humiliated, intimidated, frightened or punished (Einarsen et al., 2009). The NAQ-R measures exposure to bullying within the last six months, with the response alternatives: "*Never*", "*Now and then*", "*Monthly*", "*Weekly*" and "*Daily*". The items on the NAQ-R tap into person-related, work-related and physical intimidation forms of bullying (Einarsen et al., 2009). None of the NAQ-R items reference the terms "bullying" or "harassment". Rather, the items are written in behavioural terms (e.g., "Being ordered to do work below your level of competence") in order to achieve a more objective estimate of exposure to bullying. Scoring the NAQ-R involves coding the response alternatives 1 ("*Never*") to 5 ("*Daily*"), then summating the coded responses (Notelaers & Einarsen, 2013). For the purposes of the current study, the summated score was explained using a categorical approach. According to this approach, employees with a score lower than 33 are considered not bullied, employees who score above 45 can be considered to be victims of workplace bullying (Notelaers & Einarsen, 2013).

The NAQ-R is based on the original Negative Acts Questionnaire scale (NAQ) which had 23 items. The original NAQ scale was developed and validity tested exclusively within Nordic countries. To create a scale that would be appropriate for use beyond this cultural setting (e.g., in Anglo-American cultures), it was deemed necessary to revise the NAQ scale. This revision process gave rise to the NAQ-R. Following the establishment of the 22-item NAQ-R, it was rigorously tested by Einarsen et al. (2009), using a heterogenous sample of 5288 UK employees. Einarsen et al. (2009) found that the NAQ-R has good criterion validity and high internal stability, with three core factors: person-related bullying, work-related bullying and physical intimidation. However, the instrument may also be used as a single factor measure. The NAQ-R correlates as expected with measures of mental health, psychosocial work environment and leadership, indicating that it has good construct validity. Furthermore, through a latent class cluster analysis, Einarsen et al. (2009) found that the NAQ-R has good sensitivity and can accurately distinguish between groups of employees with different levels of exposure to bullying, ranging from infrequent exposure to severe workplace bullying. The Cronbach's alpha coefficient of internal consistency for the total NAQ-R score was 0.94.

#### **Chapter Four: Results**

#### 4.1 Descriptive Statistics

Means, standard deviations and minimum and maximum scores for the SCS-SF, the six PWB subscales, the K6 and the NAQ-R measures are presented in Table 3.

#### Table 3

Variables	Mean	SD	Min score	Max score
SC	3.16	.67	1	5
AUT	4.10	.76	1	6
EM	4.09	.81	1	6
PG	4.69	.70	1	6
PR	4.39	.81	1	6
PIL	4.45	.79	1	6
SA	4.01	.92	1	6
K6	7.63	4.82	0	24
NAQ-R	34.08	12.61	22	110

Means, Standard Deviations, Minimum and Maximum Scores of the Variables

*Note*. SC, Self-compassion; AUT, Autonomy; EM, Environmental Mastery; PG, Personal Growth; PR, Personal Relations; PIL, Purpose in Life; SA, Self-acceptance; K6, Kessler Psychological Distress Scale; NAQ-R, Negative Acts Questionnaire-Revised.

The intercorrelations between all variables are displayed in Table 4. All correlations between the PWB subscales with the overall self-compassion score were statistically significant in the expected directions, ranging from .44 to .61. Pearson's product-moment correlation coefficients for self-compassion, psychological distress and bullying are also reported in Table 4. A negative large association was found for self-compassion and psychological distress (r = -.59) consistent to previous work that higher levels of self-

compassion are associated with lower levels of psychological distress. Similarly, a positive moderate association was found between bullying and psychological distress, r = .51, p < .01. Finally, a negative weak association was found between self-compassion and bullying, r = -.33, p < .01.

#### Table 4

Varia	bles	1	2	3	4	5	6	7	8	9
1. S	SC									
2. A	AUT	.44**								
3. E	EM	.58**	.57**							
4. P	<b>P</b> G	.44**	.38**	.57**						
5. P	PR .	.49**	.44**	.64**	.59**					
6. P	PIL	.47**	.37**	.65**	.72**	.58**				
7. S	SA	.61**	.49**	.78**	.62**	.68**	.66**			
8. K	K6	59**	41**	69**	46**	55**	56**	66**		
9. N	VAQ-R	33**	15*	34**	22**	33**	32**	27**	.51**	

Inter-Correlations of the Variables

*Note*. SC, Self-compassion; AUT, Autonomy; EM, Environmental Mastery; PG, Personal Growth; PR, Personal Relations; PIL, Purpose in Life; SA, Self-acceptance; K6, Kessler Psychological Distress Scale; NAQ-R, Negative Acts Questionnaire-Revised. \*\*p < .01 two tailed.

Gender differences on each of the variables were examined using independent samples *t*-tests. No significant gender differences were found for any of the measures; SCS-SF, *t* (253) = 1.29, p = .200; K6, t (255) = -1.79, p = .079; and NAQ-R, t (243) = .78, p = .438.

Three one-way between-subjects ANOVAs were conducted between the 17-25 year olds, 26-39 year olds, and over 40 year olds to examine age differences in self-compassion, bullying and psychological distress. There was a significant difference in SCS-SF scores at

the p < .001 level for the three different age groups, F(2, 247) = 14.40, p = .000. Post hoc comparisons using the Tukey HSD test indicated that the mean score for the 17-25 year old group (M = 2.89, SD = 0.60) was significantly different than the 26-39 year old group (M = 3.26, SD = 0.61), as well as the over 40 year old group (M = 3.41, SD = 0.73). However, the 26-39 year old group did not significantly differ from the over 40 year old group. Essentially, these findings mean that young apprentices aged 17 to 25 years exhibited significantly less self-compassion compared to apprentices aged 26 to 39 years and those over 40 years.

In terms of differences in NAQ-R across the different age groups, a non-significant effect was found at the p < .001 level for the three different age groups [F(2,237) = 2.381, p =.095]. However, there was a significant difference in K6 scores at the p < .001 level for the three different age groups, F(2, 249) = 11.26, p = .000. Post hoc comparisons using the Tukey HSD test indicated that the mean score for the 17-25 year old group (M = 9.30, SD =5.08) was significantly different than the 26-39 year old group (M = 6.96, SD = 4.39), as well as the over 40 year old group (M = 5.85, SD = 4.33). However, the 26-39 year old group did not significantly differ from the over 40 year old group. These findings indicate that young apprentices aged 17 to 25 years exhibited significantly more psychological distress compared to apprentices aged 26 to 39 years and those over 40 years.

#### 4.2 Levels of Psychological Distress and Exposure to Workplace Bullying

Frequency analyses were conducted to determine the participants' level of psychological distress and exposure to bullying. Findings indicated that 22.6% of the apprentices in the overall sample (49 [22.4%] men and 11 [23.9% women) were identified as being bullied occasionally, and 13.2% (32 [14.6%] men and 3 [6.5% women) as victims of workplace bullying. More than half of the apprentices [150; 56.6%] reported not being bullied. K6 sum scores were also converted into three categories: 'low' (scores between 0-7),

'moderate' (scores between 8-12), and 'high' (scores 13 and above) (Krynen et al., 2013). Findings indicated that 28% of the apprentices in the overall sample (63 [30%] men and 12 [26%] women) were identified as having moderate psychological distress, and 16% (31 [14%] men and 12 [26%] women) serious psychological distress.

#### 4.3 Self-Compassion as a Predictor of Psychological Well-Being

It was hypothesized that self-compassion will uniquely predict each of the six dimensions of psychological well-being. As can be seen in Table 4, there were strong positive correlations between self-compassion and each of the PWB subscales. In order to test the unique contribution of self-compassion to psychological well-being, six hierarchical regression analyses were performed. In each analysis, one of the six PWB dimensions was regressed on the control variable, age. In Step 2, self-compassion explained unique variance, above and beyond the effect of age. Effect sizes were moderate, ranging from  $R^2 = .15$  for the total model involving autonomy as the criterion variable to  $R^2 = .33$  for the total model for self-acceptance.

## Table 5

Hierarchical Regression Analyses for the Prediction of the Six Subscales of Psychological

Well-Being

Step	)	$R^2$	Change $R^2$	t	β	VIF
Sun	mary of model 1: Predictors of AUT					
1	Age	.05***	.05***	1.71	.10	1.09
2	Self-compassion	.20***	.15***	6.69***	.40	1.09
Sun	mary of model 2: Predictors of EM					
1	Age	.06***	.06***	1.81	.01	1.09
2	Self-compassion	.34***	.27***	10.02***	.67	1.09
Sun	mary of model 3: Predictors of PG					
1	Age	.01	.01	16	.00	1.09
2	Self-compassion	.19***	.17***	7.12***	.46	1.09
Sun	mary of model 4: Predictors of PR					
1	Age	.03**	.03**	.61	.00	1.10
2	Self-compassion	.23***	.20***	7.95***	.56	1.10
Sum	mary of model 5: Predictors of PIL					
1	Age	.02	.02	08	.00	1.09
2	Self-compassion	.22***	.20***	7.92***	.56	1.09
Sun	mary of model 6: Predictors of SA					
1	Age	.04**	.04**	.18	.00	1.09
2	Self-compassion	.37***	.33***	11.26***	.85	1.09
1 2	Age Self-compassion	.04** .37***	.04** .33***	.18 11.26***	.00 .85	1.09

*Note*. SC, Self-compassion; AUT, Autonomy; EM, Environmental Mastery; PG, Personal Growth; PR, Personal Relations; PIL, Purpose in Life; SA, Self-acceptance. \*\* p < .01; \*\*\* p < .001.

# 4.4 Relationships between Self-Compassion, Psychological Distress and Exposure to Workplace Bullying

A multiple regression was undertaken to determine whether self-compassion moderated the relationship between bullying and psychological distress. Bullying and selfcompassion were mean centred. At Step 1, psychological distress was regressed on bullying and self-compassion. At Step 2, an interaction term, formed by multiplying these two predictor variables, was entered. The effect of bulling on psychological distress was positive and significant [b = .34, 95% CI (.08, .18), t = 5.77, p < .000]. The effect of self-compassion on psychological distress was negative and significant [b = -.48, 95% CI (-.35, -.22), t = -9.02, p < .000]. However, the interaction between bulling and self-compassion was not statistically significant [b = -.07, 95% CI (-.009, -.002), t = -1.18, p = .237], contrary to the hypothesis that self-compassion moderates the effect of bullying on psychological distress.

#### **Chapter Five: Discussion**

Findings provided support for this study's main hypotheses, as self-compassion uniquely predicted all six dimensions of psychological well-being, and bullying significantly predicted psychological distress. However, self-compassion did not have a moderating effect on psychological distress for apprentices with high bullying scores. Findings also indicated that 16% of apprentices reported serious psychological distress, while nearly 30% reported moderate psychological distress. Finally, almost 23% of apprentices reported to be occasionally bullied and 13% were classified as victims of workplace bullying.

#### **5.1 Sample Characteristics**

In accordance with several of the dominant construction industry characteristics, the prevalent features of the participants in the current study were that they were: male, training to be a carpenter/joiner and working for small, private companies in the residential sector (MBIE, 2021; Stats NZ, 2020). Though the study sample accurately reflected the most common features of the industry population, these tended to be overrepresented, while other features were underrepresented or absent. This meant that the sample did not accurately represent all of the diversity available in the wider industry, though it did represent the typical NZ construction apprentice. The sample was found to consist of 20% Maori, 10% Pacific peoples and 10% Asian peoples (participants were able to select more than one ethnicity), which roughly reflects the same ethnicity percentages reported at the whole-industry level in 2021 (e.g., 15% Maori, 7% Pacific, 11% Asian peoples; MBIE, 2021).

Age-related differences were calculated by grouping participants into three age categories consistent with those used in Ross et al.'s (2021) study, excluding the "up to 17 years of age" category (as the minimum age in this study was 17 years). The mean NAQ-R scores showed that the 17-25 years group experienced the most bullying, followed by the 26-

39 year old group, and lastly, the 40 years and above group. Though, these differences were not significant. Interestingly, in Ross et al.'s (2021) study, the youngest age group (up to 17 years of age) reported the lowest amount of bullying, whereas, consistent with this study's findings, apprentices in the 18-25 year old category reported the most amount of bullying. To explain the fact that the youngest group experienced the least amount of bullying, Ross et al. (2021) stated "It is possible that this group may be more protected (as many commence their apprenticeships while still attending school), that supervisors may be more demanding of older apprentices, or perhaps new apprentices do not recognize certain behaviours as bullying" (p. 14). As our study did not include people below the age of 17 years, future research should explore whether NZ apprentices in this age category are also protected from bullying behaviours.

Findings also indicated that the 17-25 year old group was significantly more distressed and exhibited significantly less self-compassion compared to apprentices aged 26-39 years and those over 40 years. This finding is consistent with previous research, which shows that self-compassion increases with age (Tóth-Király & Neff, 2021). Furthermore the fact that the 17-25 year old group experienced the highest levels of psychological distress is also consistent with findings on mental distress for the NZ population, as a whole. Specifically, in a report by Wilson and Nicolson (2020), it was found that a greater proportion of 15 to 24 year-olds experience anxiety and high mental distress than that of older age groups. Aside from the general age trends for the self-compassion and psychological distress wariables, the relationship between self-compassion and psychological distress may also explain why the 17-25 year old group were significantly less self-compassionate and more distressed compared to the other age groups. However, this potential explanation will be explored later on in the discussion section.

#### 5.2 Levels of Psychological Distress and Exposure to Workplace Bullying

Results from the 2018 Mental Health Monitor and the 2018/19 New Zealand Health Survey show that 13% of the NZ population (n = 1296) exhibited moderate levels of mental distress and 9% had very high levels of mental distress, as measured using the K10 (Wilson & Nicolson, 2020). Relative to these 2018/19 NZ statistics, the current study sample experienced dramatically higher levels of psychological distress. That is, almost 30% of the sample had moderate psychological distress and 16% had elevated psychological distress, as measured using the K6. The significantly higher levels of psychological distress found in this study could be due to risk-factors that are prevalent in the construction apprentice environment, for example, bullying (Ross et al., 2021). However, it is important to note that the difference may also be explained by several other factors. Firstly, the current study had a much smaller and fairly homogenous sample of males from low-educational and low-socioeconomic backgrounds; factors that are generally associated with higher rates of psychological distress (Macintyre et al., 2018). Secondly, the prevalence of psychological distress in the NZ population consistently rises each year and, hence, we would expect the prevalence of psychological distress to have increased over this time period, especially given the occurrence of Covid-19 (Anderson et al., 2020; Wilson & Nicolson, 2020).

Compared to the levels of psychological distress reported in the study by Ross et al. (2021; 13% with elevated psychological distress), the current study's sample of NZ construction apprentices appeared to experience slightly more psychological distress. However, it must be noted that the K6 used by Ross et al. (2021) had a different scale and soring method compared to the one that was used in the current study. Consequently the difference in results may be attributed to the different scale and scoring methods, rather than representing any actual differences in the psychological distress of the two sample populations.

In terms of experiences of workplace bullying in NZ, a number of studies over the years have found bullying to be highly prevalent in NZ compared to international samples (Bentley et al., 2019; MBIE, 2020). For example, findings from the 2018 survey of the NZ Workplace Barometer showed that 12.2% of respondents (*n* = 1409) reported experiencing at least two negative acts at least weekly, as measured using the Short-Negative Acts Questionnaire (Bentley et al., 2019; Notelaers et al., 2019). The findings of the current study used a different scale version (the NAQ-R) and therefore the results on bullying are not directly comparable. However, generally, the findings from the current study similarly indicate a concerning amount of bullying behaviours occurring. Specifically, the study found that 22.6% of the participants were reported to be occasionally bullied and 13.2% were classified as victims of workplace bullying.

These findings are similar to Ross et al.'s (2021) findings, which showed that 21.4% of respondents scored above the cut-off of being bullied occasionally, though, a larger percentage (20%) of their participants scored above the cut-off for being a victim of severe workplace bullying. Therefore, overall, the participants in the current study seemed to experience slightly less exposure to bullying behaviours compared to Ross et al.'s (2021) sample. This may reflect a genuine difference in the level of exposure to bullying in construction apprentices in NZ versus Australia. However, again, it should be noted that this study recruited a small and fairly homogenous group of construction apprentices that did not represent all of the industry diversity in apprenticeship backgrounds and this may have affected the results. For instance, the current study lacked participants who worked for a large employer, a group training organisation, trained for other trades, or who were not employed or active in their apprenticeship. Yet, research shows that many of these factors may increase an apprentices' exposure to bullying (Cherry et al., 2018; Ross et al., 2021). Given this, it is possible that the levels of bullying recorded in this study do not accurately reflect the overall

levels of bullying experienced by NZ apprentices in the wider construction industry. To clarify the prevalence of bullying within NZ construction apprentices, it is recommended that future research use a larger sample size with a greater range of apprenticeship backgrounds.

Nevertheless, the study's findings, which showcase the alarming levels of psychological distress and bullying in construction apprentices can be indicative of those experienced by the majority of apprentices in industry. Given that previous research highlights that bullying and psychological distress are associated with apprenticeship noncompletion, absenteeism, presenteeism, avoidance coping, and AOD use, these findings paint a bleak picture of the industry's productivity, health and safety and the NZ economy. For example, the annual cost of the burden of SMI, including addiction, in NZ is an estimated \$12 billion or 5% of gross domestic product (Patterson et al., 2018). Therefore, even though studies evaluating the effectiveness of MIC interventions in Australia (and the first phase of a longitudinal evaluation study of MIC in NZ) have provided promising results regarding the important work of MIC, the findings of this study underline that significantly more work needs to be done (King et al., 2018; Martin et al., 2011; Martin et al., 2016; Ross et al., 2020; Wilson et al., 2021). Firstly, workplace bullying is a significant problem that needs to addressed. Secondly, young 17-25 year-olds are most vulnerable to elevated levels of psychological distress and hence interventions which can prioritise and cater to the needs of this specific age group should also be considered. This is especially critical given that young Australian construction workers (aged 15-24 years) are found to have the poorest suicide prevention literacy relative to older workers, and the 20-24 year-old NZ construction workers have the highest rates of suicide (Jenkin & Atkinson, 2021; King et al., 2019). Lastly, there is a need for strength-based approaches, which will be debated in more detail further on.

#### 5.3 Self-Compassion as a Predictor of Psychological Well-Being

The central hypothesis of this study was that self-compassion will uniquely predict each of the six dimensions of psychological well-being. The present results showed that selfcompassion predicted each PWB dimension above the effect of age (which was controlled for), providing evidence for the main hypothesis. These findings are consistent with the findings from Reis et al. (2019) and Homan et al. (2016). Specifically, Homan et al. (2016) found that self-compassion explained unique variance, above and beyond the set of control variables (age, education, gender, health, self-esteem) for every PWB variable. Similarly, Reis et al. (2019) found that self-compassion was positively related to each dimensions of psychological well-being. Though, unlike Homan et al. (2016), after semi-partialling out selfesteem, only the positive relationships between self-compassion and two of the PWB subscales (i.e., positive relations with others, self-acceptance) remained significant. As selfesteem was not controlled for in the current study, it may be that the strong relationships observed between self-compassion and some of the PWB dimensions could be explained, to some extent, by the influence of self-esteem. Thus, it is recommended that future research controls for self-esteem.

Consistent with the findings from Homan et al. (2016), Reis et al. (2019) and Ferguson et al. (2014), the relationship between self-compassion and self-acceptance was the strongest. This robust relationship is not difficult to understand given that one of the core elements of self-compassion is self-kindness and, by definition, self-kindness involves recognizing and accepting one's weaknesses and strengths (Homan et al., 2016). The link between self-compassion and positive relations with others is also unsurprising. It makes sense, and has been demonstrated in several studies, that self-compassionate behaviours flow into one's interactions with others, resulting in more positive personal relations (Neff & Beretvas, 2013; Yarnell & Neff, 2013; Zhang et al, 2020). Finally, the associations between

self-compassion, environmental mastery and personal growth are perhaps best understood from a motivational perspective (Homan et al., 2016). Self-compassion is associated with realistic self-appraisal, which is seen to increase the desire to learn and improve oneself, or, seek out challenges that would enhance growth as a person (Homan et al., 2016). Subsequently, the awareness that one can grow to better adapt to the external environment, is understood to increase one's experience of environmental mastery (Homan et al., 2016).

Across Homan et al. (2016), Reis et al (2019), Ferguson et al. (2014) and this study, the strength in the positive relationship between self-compassion with the other five subscales of psychological well-being was variable. This is not surprising given that all of the studies had different samples. For instance, Homan et al. (2016) employed a sample of older adults, for which the strength of the relationship between self-compassion and autonomy was a lot weaker, compared to the other studies. This finding may reflect that, for older populations, self-compassion may involve an aspect of letting go of some autonomous goals that their aging bodies and minds may no longer be able to pursue (Moilanen et al., 2021). Overall, however, the pattern of correlations between self-compassion and each subscale of PWB seemed to be most similar to the correlations reported in Reis et al.'s (2019) study. This was as expected, given that this study's sample population is the most similar to Reis et al.'s (2019) sample population of male athletes. While the correlations found in the current study were the most similar to Reis et al.'s, they were still a bit weaker overall compared to all the correlations reported in the other studies (including Reis et al.'s [2019]). Nevertheless, the strength of the relationship between self-compassion and each psychological well-being subscale observed in this study warrants further research on how self-compassion interventions could increase the well-being of NZ construction apprentices.

The findings on self-compassion's relationship with psychological well-being have been important in helping to close the construction industry's research gap on protective

factors, as well as contributing evidence towards the development of a strength-based approach within the NZ construction industry. As previously discussed, up until now, research and interventions within the industry have only focussed on risk factors and how to reduce these. However, expecting to improve the mental well-being of workers in the construction industry through an exclusive focus on the reduction of risk factors (ignoring the contribution of protective factors) is a misguided strategy. Furthermore, with research showing that the absence of life satisfaction and positive emotions is more predictive of subsequent mortality and morbidity than the presence of negative emotions, research on protective factors is long overdue (Maier & Smith, 1999; Sadler et al., 2011; Wiest et al., 2011). Thus, it is hoped that this study will trigger a wave of research on protective factors, such as self-compassion, that may help with the development of strength-based interventions within the industry.

# 5.4 Relationships between Self-Compassion, Psychological Distress and Exposure to Workplace Bullying

A regression analysis revealed that the effect of bulling on psychological distress was positive and significant, whereas, the effect of self-compassion on psychological distress was negative and significant. However, the interaction between bulling and self-compassion was not statistically significant, contrary to the hypothesis that self-compassion moderates the effect of bullying on psychological distress.

The findings that bullying increases psychological distress are not surprising and are consistent with previous findings (Anjum et al., 2019; Doran et al., 2020; National Academies of Sciences, Engineering, & Medicine, 2016; Pidd et al., 2017; Ross et al., 2021). Equally, self-compassion's effect on decreasing psychological distress is also as predicted, based on previous findings (Kotera et al., 2019b; Luo et al., 2019; MacBeth & Gumley, 2012; Muris & Petrocchi, 2017; Reis et al., 2019). Kotera et al. (2019b) found that a key mechanism through which self-compassion decreased psychological distress in their sample of UK construction
workers was through mediating the relationship between mental health shame and mental health problems. Given these findings, it could be speculated that self-compassion plays a similar mediator role in the well-being of NZ construction apprentices. If that is the case, selfcompassion interventions may strengthen and support the existing programmes by MIC, which focus on reducing the shame and stigma associated with mental health problems and increasing help-seeking behaviours. However, further research is required to confirm the precise mechanism through which self-compassion decreases the psychological distress of construction workers.

The finding that self-compassion has a significant negative relationship with psychological distress, opens up a potential explanation regarding the high levels of psychological distress and low levels of self-compassion in the 17-25 year old group. Specifically, it could be postulated that this group's high levels of psychological distress could be caused, in part, by their significantly lower levels of self-compassion (Gunnell et al., 2017). Though, because the study employed a cross-sectional design, it is not possible to determine causation. Future studies with a longitudinal design will be required to determine the causation between these variables (Gunnell et al., 2017).

The finding that self-compassion did not moderate the effect of workplace bullying on psychological well-being is contrary to the results of Anjum et al. (2020), which showed that self-compassion moderated the effect of workplace incivility and ostracism on emotion exhaustion. However, despite emotional exhaustion and psychological distress being strongly linked with each other, they are indeed separate constructs. Therefore, the contradictory findings regarding the moderator role of self-compassion in the current study relative to those reported by Anjum et al. (2020) likely reflect the different constructs measured. While the current study found that self-compassion has no direct moderator effect on the relationship between bullying and psychological distress, perhaps self-compassion may moderate an

antecedent to psychological distress, such as perceived stress, as seen in the research by Luo et al. (2019) in their study on nursing students. Alternatively, the fact that self-compassion did not moderate the relationship between bullying and psychological distress may be because the effects of bullying are so severe, and the pathways through which these effects occur are so engrained that self-compassion is entirely outweighed.

One major mechanism through which bullying affects a person's mental health is via self-blame (National Academies of Sciences, Engineering, & Medicine, 2016). For instance, an individual with a history of bullying and the perception of being singled out as a target may question "Why me?" and begin to blame themselves for being bullied (National Academies of Sciences, Engineering, & Medicine, 2016, p. 14). Both biologically and culturally, humans have been programmed to react to bullying via this maladaptive, self-critical pathway (Neff, 2021). Biologically, if a threat is detected, our fear response is triggered and we begin surveillance to locate the threat and control it, in order to stay safe. If the threat is a bully, rather than attempting to control the bully, humans can undertake self-surveillance to identify what makes them a bullying target (e.g., "I'm too small and weak") and attempt to self-correct to keep themselves safe (Neff, 2021). Self-criticism is not just an inherent human behaviour, it is also learned through the influence of one's culture (Neff, 2021). In NZ (and many other countries), self-criticism is pervasive, whereas, self-compassion is not emphasized at all. Furthermore, fuelling self-criticizing behaviours is the belief that people can control themselves better and prevent themselves from making future mistakes, if they are harsh enough on themselves (Neff, 2021).

However, research shows that self-criticism is not a helpful response and only makes individuals feel worse, whereas, self-compassion is a much better response that can lead to more adaptive outcomes (Binder et al., 2019; Neff, 2021). Perhaps what it needed for selfcompassion to begin to infiltrate the self-critical reaction to bullying, is psychoeducation on

the harmful effects of self-criticism, as well as psychoeducation and training on selfcompassion as an alternative (Binder et al., 2019; Gilbert & Proctor, 2006). In this way, people may begin to exchange their self-critical response for a self-compassionate one instead. Though, before piloting such an intervention for NZ construction apprentices, it may be useful to clarify the mechanisms through which bullying effects this population's mental distress through conducting qualitive research.

#### 5.5 Study Limitations

This study had some limitations. Firstly, as previously mentioned, the study did not control for self-esteem or other potential confounding variables (Neff & Vonk, 2009; Pourhoseinghol et al., 2012). Secondly, although it is plausible that self-compassion promotes psychological well-being, the cross-sectional design of the study does not allow for this causal conclusion to be drawn (Homan et al., 2016). Rather, it may also be possible that enhanced well-being leads to increased self-compassion, or that a third variable underlies these relationships (Homan et al., 2016). To gain greater clarity on the causal directions between the variables, future studies with longitudinal designs are necessary. A third limitation was that the study relied on self-report measures, which are subject to biases and limitations (Chan, 2010). Fourth, the sample population was fairly homogenous and did not represent all of the diversity in apprenticeship backgrounds that is available in the wider industry. Therefore, the findings are limited in their ability to be generalised to all NZ apprentices (Ferguson, 2004). Finally, as a result of the survey being quite long, survey responses tapered off towards the end of our survey, which is indicative of survey fatigue. Survey fatigue may have affected the quality of the data collected (Rolstad et al., 2011).

## **5.6 Directions for Future Research**

The results of this study highlight that self-compassion could be a promising mechanism through which to improve the well-being of construction apprentices. Therefore, the next step for future research would be to pilot a self-compassion intervention for the construction apprentice population. Given the ongoing presence of COVID-19 (and hence physical distancing and restrictive lockdowns), the isolated locations of many construction sites, and to ensure minimal training burden, the most appropriate self-compassion intervention to pilot may be a brief web-based variation of the MSC programme (Eriksson et al., 2018; Gluckman & Bardsley, 2020). As outlined previously, in a RCT by Eriksson et al. (2018), it was found that a brief online MSC intervention increased self-compassion and decreased symptoms of stress and burnout in a group of practicing psychologists. In this RCT, the brief online training involved 15-minutes exercises per day, 6 days a week, for 6 weeks. Such a programme could easily be incorporated into the apprenticeship training programme in NZ, should a pilot study confirm its effectiveness.

A pilot study of a self-compassion intervention will also be important for assessing the acceptability of a self-compassion intervention for the NZ construction industry. Though research on self-compassion in U.K. construction workers and other international research on similar populations have shown positive results regarding the acceptability of self-compassion interventions, it may be that the NZ construction industry are not comfortable with the self-compassion concept (Bryson & Duncan, 2018; Kotera et al., 2019b; Kotera & Van Gordon, 2021; Serpa et al., 2021). If this were the case, this would curtail the feasibility of self-compassion interventions. Thus, a pilot study which can assess, not only the effectiveness of a self-compassion intervention on improving NZ construction apprentices mental health, but the acceptability of such an intervention, will be crucial.

To gain more of an understanding of the causational directions underlying the associations between self-compassion, psychological well-being, psychological distress and bullying, a longitudinal study design, with repeated observations will be helpful. Furthermore, to acquire greater knowledge of how self-compassion exerts its effects on psychological well-being and psychological distress in the construction apprentice population, it may be valuable for future research to include a qualitative component. Additionally, to extrapolate the direct and indirect pathways involved in these relationships, future research could include measures for other variables that have been shown previously to have an integral role. For instance, because research by Kotera et al. (2019b) on a sample of UK construction workers revealed that self-compassion plays a mediator role in the relationship between mental health problems and mental health shame, future research may benefit from including a measure of mental health shame to examine whether a similar relationship is observed in NZ construction apprentices.

Future studies that include a more varied and larger sample will also be able to provide a more accurate reading on the prevalence of workplace bullying for apprentices in the building and construction industry. In fact, to facilitate this, it has been recommended in the report by Doran et al. (2020) that the NAQ-R be added to all MIC training programmes. Aside from achieving a more precise gauge on the prevalence of workplace bullying, future research should aim to uncover more about workplace bullying in the unique context of NZ construction apprentices. That is, what causes workplace bullying, what does it look like and what factors of an apprentice or their apprenticeship environment increase their susceptibility to becoming a recipient of workplace bullying. Additionally, comprehending how apprentices respond to bullying behaviours cognitively and emotionally is crucial. A better understanding of how bullying experiences are being processed and internalised by construction apprentices may shed light on ways to interrupt these pathways and facilitate more adaptive mental well-

being outcomes. To achieve such an in-depth examination into workplace bullying in NZ construction apprentices, future qualitative research will be key.

Learning how to reduce the impact of bullying after is has occurred and cope with its lasting effects, are important forms of bullying interventions, known as secondary and tertiary intervention types (Doran et al., 2020). Though, primary interventions which aim to prevent workplace bullying before it occurs are also critical. Given that construction apprentices have a tendency to deal with workplace bullying using avoidance coping, a prevention approach for this population is especially necessary (Ross et al., 2021). However, ideally, a workplace will have a combination of primary, secondary and tertiary interventions in place that can be adapted to the individual and their circumstances (Doran et al., 2020). According to the report by Doran et al. (2020), workplace interventions are most effective when conducted by a respected person within the workplace, as opposed to an outsider. As such, a proposed option for future research would be to pilot a peer-led, or 'ambassador' model intervention approach, in which workplace leaders coordinate primary interventions to reduce the prevalence of bullying (Doran et al., 2020). If successful, this ambassador approach would not be difficult to implement as it is already used as the structure for many of MIC's interventions (King et al., 2018; Martin et al., 2011; Martin et al., 2016; Wilson et al., 2021).

## **Chapter six: Conclusion**

This study adds to the growing evidence that self-compassion is an asset for psychological flourishing. In particular, it has highlighted self-compassion's powerful dual role; protecting against psychological distress, as well as, fostering positive psychological well-being. The relationships between self-compassion and the six dimensions of psychological well-being are under-researched, thus, the current study has been able to contribute to the limited understanding of these unique relationships. In this way, these findings have provided a more detailed understanding of precisely how self-compassion effects positive psychological well-being.

Additionally, self-compassion has not been explored in construction apprentices and only scarcely within the construction industry and similar populations (e.g., predominantly male with high levels of psychopathology and low socioeconomic statuses and educational levels). The current study demonstrated the value of self-compassion for the well-being of the construction apprentice population specifically, and thus has contributed crucial new evidence to the application of self-compassion. Overall, the findings of this study suggest that selfcompassion training programmes tailored to construction apprentices could yield valuable benefits.

The current study has also shed light on the prevalence of psychological distress and workplace bullying occurring within the population of NZ construction apprentices. That is, an alarming proportion of apprentices are experiencing workplace bullying. Furthermore, the levels of psychological distress experienced by apprentices are cause for concern. The findings that psychological distress was significantly higher in 17-25 year olds relative to other age groups are consistent with other studies (Jenkin and Atkinson, 2021).

The implications of these results should not be underestimated. Given the increased vulnerability of young construction apprentices and the strong industry support to address the

issue of suicide and workplace bullying, the timely development of appropriate interventions will be critical, echoing Ross et al.'s (2021) recommendations. This study's findings may be used to inform the development of policies and evidence-based interventions to address bullying and the mental health of apprentices in this sector.

According to MIC, since the onset of COVID-19, their mental health initiatives have seen a big increase in demand (Office of the Minister of Building and Construction, 2021). With COVID-19 still rearing its head and inflicting a sense of uncertainty and unease on the well-being of New Zealanders, the importance of providing preventative mental healthcare interventions to vulnerable populations, such as construction workers, cannot be taken for granted (King & Lamontagne, 2021).

## References

- Abbott, R. A., Ploubidis, G. B., Huppert, F. A., Kuh, D., Wadsworth, M. E. J., & Croudace, T. J. (2006). Psychometric evaluation and predictive validity of Ryff's psychological well-being items in a UK birth cohort sample of women. *Health and Quality of Life Outcomes*, 4, Article 76. <u>https://doi.org/10.1186/1477-7525-4-76</u>
- Albertson, E. R., Neff, K. D., & Dill-Shackleford, K. E. (2015). Self-compassion and body dissatisfaction in women: A randomized controlled trial of a brief meditation intervention. *Mindfulness*, 6(3), 444–454. <u>https://doi.org/10.1007/s12671-014-0277-3</u>
- Allan, N., Yin, Y., & Scheepbouwer, E. (2008). A study into the cyclical performance of the New Zealand construction industry. Centre for Advanced Engineering. <u>https://ir.canterbury.ac.nz/handle/10092/11524</u>
- Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivation processes. *Journal of Educational Psychology*, 80(3), 260–267. https://doi.org/10.1037/0022-0663.80.3.260
- Anderson, D., Dominick, C., Langley, E., Painuthara, K., & Palmer, S. (2020). *Rapid Evidence Review: The immediate and medium-term social and psycho-social impacts of Covid-19 in New Zealand*. Ministry of Social Development.
   <u>https://www.msd.govt.nz/documents/about-msd-and-our-work/publications-</u>
   resources/statistics/covid-19/social-impacts-of-covid-19.pdf
- Anjum, M. A., Liang, D., Durrani, D. K., & Parvez, A. (2020). Workplace mistreatment and emotional exhaustion: The interaction effects of self-compassion. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues*. Advance online publication. <u>https://doi.org/10.1007/s12144-020-00673-9</u>
- Babenko, O., & Oswald, A. (2019). The roles of basic psychological needs, self-compassion, and self-efficacy in the development of mastery goals among medical

students. Medical Teacher, 41(4), 478–481.

https://doi.org/10.1080/0142159X.2018.1442564

- Balanovic, J., Stuart, J., & Jeffrey, J. (2018). "Harden up and face reality:" Exploring underlying bullying beliefs in New Zealand. *Journal of School Violence*, 17(1), 46–57. https://doi.org/10.1080/15388220.2016.1208570
- Bannister, M. (2005). *Kiwi blokes: Recontextualising white New Zealand masculinities in a global setting*. Genders Online, 42. <u>http://researcharchive.wintec.ac.nz/217/</u>
- Beehive. (2020, May 14). Free trades training to support New Zealanders into work [Press release]. <u>https://www.beehive.govt.nz/release/free-trades-training-support-new-zealanders-work</u>
- Beehive. (2021, March 16). *More than 100,000 people have accessed free trades training* [Press release]. <u>https://www.beehive.govt.nz/release/more-100000-people-have-accessed-free-trades-training</u>
- Bednarz, A. (2014). Understanding the non-completion of apprentices. NCVER. https://core.ac.uk/download/pdf/30674420.pdf
- Bentley, T., Tappin, D., Blackwood, K., Bone, K., Forsyth, D., Gardner, D., D'Souza, N., Catley, B., Port, Z., Piplani, R., Brougham, D., & Ashby, L. (2019). *The New Zealand Workplace Barometer: A report on findings from the 2018 survey of the New Zealand Workplace Barometer*. Massey University. Healthy Work Group. <u>https://www.massey.ac.nz/shadomx/apps/fms/fmsdownload.cfm?file\_uuid=6B533D7</u> B-63EB-4D20-B80A-E14A64C0F8E5
- Berry, K. A., Kowalski, K. C., Ferguson, L. J., & McHugh, T. L. F. (2010). An empirical phenomenology of young adult women exercisers' body self-compassion. *Qualitative Research in Sport and Exercise*, 2(3), 293–312.

https://doi.org/10.1080/19398441.2010.517035

Binder, P. E., Dundas, I., Stige, S. H., Hjeltnes, A., Woodfin, V., & Moltu, C. (2019).
Becoming aware of inner self-critique and kinder toward self: A qualitative study of experiences of outcome after a brief self-compassion intervention for university level students. *Frontiers in Psychology, 10*, Article 2728.

https://doi.org/10.3389/fpsyg.2019.02728

Bradburn, N. M. (1969). The structure of psychological well-being. Aldine.

- Bryant, L., & Garnham, B. (2015). The fallen hero: Masculinity, shame and farmer suicide in Australia. *Gender, Place & Culture, 22*(1), 67–82. https://doi.org/10.1080/0966369X.2013.855628
- Bryson, K. & Duncan, A. (2018). *Mental health in the construction industry scoping study*. (Report No. SR411). BRANZ. <u>https://www.branz.co.nz/pubs/research-reports/sr411/</u>
- Buchanan, J., Raffaele, C., Glozier, N., & Kanagaratnam, A. (2016). *Beyond mentoring:* Social support structures for young Australian carpentry apprentices. National Centre for Vocational Education Research (NCVER). <u>https://www.ncver.edu.au/research-and-statistics/publications/all-publications/beyond-mentoring-social-support-structures-for-young-australian-carpentry-apprentices
  </u>
- Carter, K., Filoche, S., & McKenzie, S. (2017). *Alcohol and young people: A review of New Zealand and other international literature*. Health Promotion Agency. <u>https://www.hpa.org.nz/sites/default/files/2017-Literature-Review-Alcohol-and-young-people.pdf</u>
- Chan, D. (2010). So why ask me? Are self-report data really that bad? In C. E. Lance & R. J.
  Vanderberg (Eds.), *Statistical and methodological myths and urban legends* (pp. 329-356). Taylor & Francis.
- Chan, A.P., Nwaogu, J.M., & Naslund, J.A. (2020). Mental ill-health risk factors in the construction industry: Systematic review. *Journal of Construction Engineering and*

*Management, 146* (3), Article 04020004. https://doi.org/10.1061/(ASCE)CO.1943-7862.0001771

- Chen, F. F., Jing, Y., Hayes, A., & Lee, J. M. (2012). Two concepts or two approaches? A bifactor analysis of psychological and subjective well-being. *Journal of Happiness Studies*, 14(3), 1033–1068. <u>https://doi.org/10.1007/s10902-012-9367-x</u>
- Cherry, N., Arrandale, V., Beach, J., Galarneau, J.-M. F., Mannette, A., & Rodgers, L. (2018). Health and work in women and men in the welding and electrical trades: How do they differ? *Annals of Work Exposures & Health*, 62(4), 393–403.

https://doi.org/10.1093/annweh/wxy007

Construction Sector Accord (2019). *Construction sector accord: A shared commitment between government and industry to transform the sector*. New Zealand Government. <u>https://www.constructionaccord.nz/assets/Construction-</u>

Accord/files/0930eac2bb/construction-sector-accord.pdf

Construction Sector Accord (2021). *Construction Sector Accord partnership builds sustainable workforce*. <u>https://www.constructionaccord.nz/news/news-</u> stories/construction-sector-accord-partnership-builds-sustainable-workforce/

Crocker, J., & Park, L. (2004). The costly pursuit of self-esteem. *Psychological Bulletin*,

130(3), 392–414. https://doi.org/10.1037/0033-2909.130.3.392

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104\_01

Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95(3), 542–575. https://doi.org/10.1037/0033-2909.95.3.542 Diener, E., & Diener, M. (1995). Cross-cultural correlates of life satisfaction and self-esteem. Journal of Personality and Social Psychology, 68(4), 653–663. https://doi.org/10.1037/0022-3514.68.4.653

- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment*, 49(1), 71–75. https://doi.org/10.1207/s15327752jpa4901\_13
- Doran, C., Rebar, A., Waters, K., & Meredith, P. (2020). A review of the evidence related to the impacts of, and interventions for, workplace bullying in the Construction Industry [A report conducted for MATES in Construction (Queensland)]. Central Queensland University. <u>https://mates.org.au/media/documents/Workplace-bullying-report.pdf</u>
- Dweck, C., & Leggett, E.L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, *95*, 256–273.
- Einarsen, S., Hoel, H., & Notelaers, G. (2009). Measuring exposure to bullying and harassment at work: Validity, factor structure and psychometric properties of the Negative Acts Questionnaire-Revised. *Work & Stress, 23*(1), 24–44. https://doi.org/10.1080/02678370902815673
- Einarsen, S., Hoel, H., Zapf, D., & Cooper, C.L. (Eds.). (2003). Bullying and emotional abuse in the workplace. International perspectives in research and practice. Taylor & Francis.
- Eriksson, T., Germundsjö, L., Åström, E., & Rönnlund, M. (2018). Mindful self-compassion training reduces stress and burnout symptoms among practicing psychologists: A randomized controlled trial of a brief web-based intervention. *Frontiers in Psychology, 9,* Article 2340. <u>https://doi.org/10.3389/fpsyg.2018.02340</u>

- Ferguson L. (2004). External validity, generalizability, and knowledge utilization. Journal of nursing scholarship : An official publication of Sigma Theta Tau International Honor Society of Nursing, 36(1), 16–22. https://doi.org/10.1111/j.1547-5069.2004.04006.x
- Ferguson, L. J., Kowalski, K. C., Mack, D. E., & Sabiston, C. M. (2014). Exploring selfcompassion and eudaimonic well-being in young women athletes. *Journal of Sport & Exercise Psychology*, 36(2), 203–216. <u>https://doi.org/10.1123/jsep.2013-0096</u>
- Ferrari, M., Dal Cin, M., & Steele, M. (2017). Self-compassion is associated with optimum self-care behaviour, medical outcomes and psychological well-being in a crosssectional sample of adults with diabetes. *Diabetic Medicine*, 34(11), 1546–1553. https://doi.org/10.1111/dme.13451
- Friis, A. M., Johnson, M. H., Cutfield, R. G., & Consedine, N. S. (2016). Kindness matters: A randomized controlled trial of a mindful self-compassion intervention improves depression, distress, and HbA1c among patients with diabetes. *Diabetes Care, 39*(11), 1963–1971. <u>https://doi.org/10.2337/dc16-0416</u>
- Frone, M. (2013). Alcohol and illicit drug use in the workforce and workplace. American Psychological Association.
- Gammer, I., Hartley-Jones, C., & Jones, F. W. (2020). A randomized controlled trial of an online, compassion-based intervention for maternal psychological well-being in the first year postpartum. *Mindfulness, 11*, 928–939. https://doi.org/10.1007/s12671-020-01306-9
- George, L. S., & Park, C. L. (2017). The Multidimensional Existential Meaning Scale: A tripartite approach to measuring meaning in life. *The Journal of Positive Psychology*, *12*(6), 613–627. <u>https://doi.org/10.1080/17439760.2016.1209546</u>

Germer, C., & Neff, K. (2019). Mindful self-compassion (MSC). In I. Itvzan (Ed.), The handbook of mindfulness-based programs: Every established intervention, from medicine to education (pp. 357–367). Routledge.

- Germer, C. K., & Neff, K. (2013). Self-compassion in clinical practice. *Journal of Clinical Psychology*, 69(8), 856–867. <u>https://doi.org/10.1002/jclp.22021</u>
- Gilbert, P. (2010). *Compassion focused therapy: Distinctive features*. Routledge/Taylor & Francis Group.
- Gilbert, P. (2014). The origins and nature of compassion focused therapy. *British Journal of Clinical Psychology*, 53, 6–41. <u>https://doi.org/10.1111/bjc.12043</u>
- Gilbert, P. (2017). Compassion as a social mentality: An evolutionary approach. In P. Gilbert (Ed.), Compassion: Concepts, research and applications (p. 31–68). Routledge/Taylor & Francis Group. <u>https://doi.org/10.4324/9781315564296-3</u>
- Gilbert, P., Bhundia, R., Mitra, R., McEwan, K., Irons, C., & Sanghera, J. (2007). Cultural differences in shame-focused attitudes towards mental health problems in Asian and Non-Asian student women. *Mental Health, Religion & Culture, 10*(2), 127–141. https://doi.org/10.1080/13694670500415124
- Gilbert, P., McEwan, K., Matos, M., & Rivis, A. (2011). Fears of compassion: Development of three self-report measures. *Psychology & Psychotherapy: Theory, Research & Practice*, 84(3), 239–255. https://doi.org/10.1348/147608310X526511
- Gilbert, P. and Procter, S. (2006), Compassionate mind training for people with high shame and self-criticism: overview and pilot study of a group therapy approach. *Clinical Psychology & Psychotherapy*, *13*(6), 353–379. https://doi.org/10.1002/cpp.507
- Gluckman, P., & Bardsley, A. (2020). *The future is now: Implications of covid-19 for New Zealand*. Koi Tū: The Centre for Informed Futures. The University of Auckland.

https://informedfutures.org/wp-content/uploads/Koi-T%C5%AB-The-Future-is-Now.pdf

- Granwal, L. (2020, June 5). Construction industry in New Zealand statistics & facts. Statista. <u>https://www.statista.com/topics/5725/construction-industry-in-new-</u> <u>zealand/#:~:text=In%20the%20first%20quarter%20of,New%20Zealand%20dollars%</u> <u>20in%202019</u>.
- Gunnell, K. E., Mosewich, A. D., McEwen, C. E., Eklund, R. C., & Crocker, P. R. E. (2017).
  Don't be so hard on yourself! Changes in self-compassion during the first year of university are associated with changes in well-being. *Personality and Individual Differences*, 107, 43–48. https://doi.org/10.1016/j.paid.2016.11.032
- Gutierrez, R. E. (1999). Development of the SWS surveys: An international research instrument. National University of New Mexico.
- Haukaas, R. B., Gjerde, I. B., Varting, G., Hallan, H. E., & Solem, S. (2018). A randomized controlled trial comparing the Attention Training Technique and Mindful Self-Compassion for students with symptoms of depression and anxiety. *Frontiers in Psychology*, *9*, Article 827. <u>https://doi.org/10.3389/fpsyg.2018.00827</u>
- Heine, S. J. (2003). An exploration of cultural variation in self-enhancing and self-improving motivations. In V. Murphy-Berman & J. J. Berman (Eds.), *Cross-cultural differences in perspectives on the self* (pp. 118–145). University of Nebraska Press.
- Heine, S. J., Kitayama, S., Lehman, D. R., Takata, T., Ide, E., Leung, C., & Matsumoto, H. (2001). Divergent consequences of success and failure in Japan and North America: An investigation of self-improving motivations and malleable selves. *Journal of Personality and Social Psychology*, *81*(4), 599–615. <u>https://doi.org/10.1037/0022-3514.81.4.599</u>

- Hennecke, J., Meehan, L., & Pacheco, G. (2021). *Workplace health and safety and the future of work in NZ literature review*. New Zealand Work Research Institute, Auckland.
- Homan, K. J. (2016). Self-compassion and psychological well-being in older adults. *Journal* of Adult Development, 23(2), 111–119. <u>https://doi.org/10.1007/s10804-016-9227-8</u>
- Homan, K. J. (2018). Secure attachment and eudaimonic well-being in late adulthood: The mediating role of self-compassion. *Aging & Mental Health*, 22(3), 363–370. https://doi.org/10.1080/13607863.2016.1254597
- Hope, N., Koestner, R., & Milyavskaya, M. (2014). The role of self-compassion in goal pursuit and well-being among university freshmen. *Self & Identity*, 13(5), 579–593. <u>https://doi.org/10.1080/15298868.2014.889032</u>
- Huppert, F. A., & Whittington, J. E. (2003). Evidence for the independence of positive and negative well-being: Implications for quality of life assessment. *British Journal of Health Psychology*, 8, 107–122. <u>https://doi.org/10.1348/135910703762879246</u>
- Infrastructure Reference Group (2020). *The Infrastructure Reference Group and the* government's economic response to COVID-19.

https://www.beehive.govt.nz/sites/default/files/2020-07/IRG%20slides.pdf

- Jenkin, G., & Atkinson, J. (2021). *Construction Industry Suicides: numbers, characteristics and rates* [External research report ER65]. Suicide and Mental Health Research Group, University of Otago Wellington. <u>https://mates.net.nz/wp-</u> <u>content/uploads/2021/10/Construction-Industry-Suicides-Numbers-Characteristics-</u> <u>and-Rates-Report-prepared-for-MATES-in-Construction-NZ-August-2021.pdf</u>
- Kaplan, J., Bergman, A. L., Green, K., Dapolonia, E., & Christopher, M. (2020). Relative impact of mindfulness, self-compassion, and psychological flexibility on alcohol use and burnout among law enforcement officers. *Journal of Alternative & Complementary Medicine*, 26(12), 1190–1194. <u>https://doi.org/10.1089/acm.2020.0178</u>

- Kashdan, T. B., Biswas-Diener, R., & King, L. A. (2008). Reconsidering happiness: The costs of distinguishing between hedonics and eudaimonia. *The Journal of Positive Psychology*, 3(4), 219–233. <u>https://doi.org/10.1080/17439760802303044</u>
- Kaurin, A., Schönfelde, S., & Wessa, M. (2018). Self-compassion buffers the link between self-criticism and depression in trauma-exposed firefighters. *Journal of Counselling Psychology*, 65(4), 453–462. <u>https://doi.org/10.1037/cou0000275</u>
- Kessler, R. C., Andrews, G., Colpe, L. J., Hiripi, E., Mroczek, D. K., Normand, S. L. T., Walters, E. E., & Zaslavsky, A. M. (2002). Short screening scales to monitor population prevalence's and trends in non-specific psychological distress. *Psychological Medicine*, 32(6), 959–976.

https://doi.org/10.1017/S0033291702006074

Kessler, R. C., Green, J. G., Gruber, M. J., Sampson, N. A., Bromet, E., Cuitan, M.,
Furukawa, T. A., Gureje, O., Hinkov, H., Hu, C. Y., Lara, C., Lee, S., Mneimneh, Z.,
Myer, L., Oakley-Browne, M., Posada-Villa, J., Sagar, R., Viana, M. C., & Zaslavsky,
A. M. (2010). Screening for serious mental illness in the general population with the
K6 screening scale: Results from the WHO World Mental Health (WMH) survey
initiative. *International Journal of Methods in Psychiatric Research*, *19*, 4–22.
https://doi.org/10.1002/mpr.310

- Keyes, C. L. M. (2005). Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of Consulting & Clinical Psychology*, 73(3), 539–548. doi:10.1037/0022-006X.73.3.539.
- Keyes, C. L. M., Shmotkin, D., & Ryff, C. D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology*, 82(6), 1007–1022. <u>https://doi.org/10.1037/0022-3514.82.6.1007</u>

- Kimmel, M. S., Hearn, J., & Connell, R. W. (2005). Handbook of studies on men & masculinities. <u>https://doi.org/10.4135/9781452233833</u>
- King, T. L., Gullestrup, J., Batterham, P. J., Kelly, B., Lockwood, C., Lingard, H., Harvey, S.
  B., LaMontagne, A. D., & Milner, A. (2018). Shifting beliefs about suicide: Pre-post evaluation of the effectiveness of a program for workers in the construction industry. *International Journal of Environmental Research and Public Health*, *15*(10), Article 2106. https://doi.org/10.3390/ijerph15102106
- King, T. L., & Lamontagne, A. D. (2021). COVID-19 and suicide risk in the construction sector: preparing for a perfect storm. *Scandinavian Journal of Public Health*, 49(7), 774–778. <u>https://doi.org/10.1177/1403494821993707</u>
- King, T. L., Milner, A., Batterham, P. J., Lingard, H., Gullestrup, J., Lockwood, C., Harvey,
  S. B., Kelly, B., & Lamontagne, A. D. (2019). Are young men getting the message?
  Age differences in suicide prevention literacy among male construction workers. *International Journal of Environmental Research and Public Health, 16*(3), Article
  475. https://doi.org/10.3390/ijerph16030475
- Kirby, J. N. (2017). Compassion interventions: The programmes, the evidence, and implications for research and practice. *Psychology & Psychotherapy: Theory, Research & Practice*, 90(3), 432–455. https://doi.org/10.1111/papt.12104
- Kitayama, S., Markus, H. R., Matsumoto, H., & Norasakkunkit, V. (1997). Individual and collective processes in the construction of the self: Self-enhancement in the United States and self-criticism in Japan. *Journal of Personality and Social Psychology*, *72*(6), 1245–1267. <u>https://doi.org/10.1037/0022-3514.72.6.1245</u>
- Kotera, Y., Adhikari, P., & Van Gordon, W. (2018). Motivation types and mental health of UK hospitality workers. *International Journal of Mental Health and Addiction*, 16(3), 751–763. <u>https://doi.org/10.1007/s11469-018-9874-z</u>

- Kotera, Y., Green, P., & Sheffield, D. (2019a). Mental health attitudes, self-criticism, compassion and role identity among UK social work students. *The British Journal of Social Work, 49*(2), 351–370. <u>https://doi.org/10.1093/bjsw/bcy072</u>
- Kotera, Y., Green, P., & Sheffield, D. (2019b). Mental health shame of UK construction workers: Relationship with masculinity, work motivation, and selfcompassion. *Journal of Work and Organizational Psychology*, 35(2), 135–143.
- Kotera, Y., & Ting, S.-H. (2021). Positive psychology of Malaysian university students: Impacts of engagement, motivation, self-compassion, and well-being on mental health. *International Journal of Mental Health and Addiction, 19*, 227–239. https://doi.org/10.1007/s11469-019-00169-z
- Kotera, Y., & Van Gordon, W. (2021). Effects of self-compassion training on work-related well-being: A systematic review. *Frontiers in Psychology*, 12, Article 630798. https://doi.org/10.3389/fpsyg.2021.630798
- Krynen, A., Osborne, D., Duck, I., Houkamau, C., & Sibley, C. (2013). Measuring psychological distress in New Zealand: Item response properties and demographic differences in the Kessler-6 screening measure. *New Zealand Journal of Psychology,* 42(2), 69–83.
- Lamers, S. M. A., Westerhof, G. J., Bohlmeijer, E. T., ten Klooster, P. M., & Keyes, C. L. M. (2011). Evaluating the psychometric properties of the Mental Health Continuum-Short Form (MHC-SF). *Journal of Clinical Psychology*, 67, 99–110. https://doi.org/10.1002/jclp.20741

LaMontagne, A. D., Krnjacki, L., Kavanagh, A. M., & Bentley, R. (2013). Psychosocial working conditions in a representative sample of working Australians 2001–2008: An analysis of changes in inequalities over time. *Occupational and Environmental Medicine*, 70, 639–647. <u>https://doi.org/10.1136/oemed-2012-101171</u> Lomas, T. (2014). *Masculinity, meditation, and mental health*. Palgrave MacMillan. https://doi.org/10.1057/9781137345288

- Love, P. E. D., Edwards, D. J., & Irani, Z. (2010). Work stress, support, and mental health in construction. *Journal of Construction Engineering & Management*, 136(6), 650–658. https://doi.org/10.1061/(ASCE)CO.1943-7862.0000165
- Luo, Y., Meng, R., Li, J., Liu, B., Cao, X., & Ge, W. (2019). Self-compassion may reduce anxiety and depression in nursing students: A pathway through perceived stress. *Public Health*, 174, 1–10. <u>https://doi.org/10.1016/j.puhe.2019.05.015</u>
- MacBeth, A., & Gumley, A. (2012). Exploring compassion: A meta-analysis of the association between self-compassion and psychopathology. *Clinical Psychology Review*, 32(6), 545–552. <u>https://doi.org/10.1016/j.cpr.2012.06.003</u>
- Macintyre, A., Ferris, D., Gonçalves, B. & Quinn, N. (2018). What has economics got to do with it? The impact of socioeconomic factors on mental health and the case for collective action. *Palgrave Communications, 4*, Article 10.
   <a href="https://doi.org/10.1057/s41599-018-0063-2">https://doi.org/10.1057/s41599-018-0063-2</a>
- Maier, H., & Smith, J. (1999). Psychological predictors of mortality in old age. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences, 54*(1), 44–54.
   https://doi.org/10.1093/geronb/54b.1.p44
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*(2), 224–253.
- Martin, G., Gullestrup, J., & Lequertier, B. (2011). MATES in Construction: Impact of a multimodal, community-based program for suicide prevention in the construction industry. *International Journal of Environmental Research and Public Health*, 8(11), 4180–4196. <u>https://doi.org/10.3390/ijerph8114180</u>

- Martin, G., Swannell, S., & Gullestrup, J. (2016). Mates in Construction Suicide Prevention
  Program: A five year review. *Journal of Community Medicine & Health Education*, 6(4), Article 465. <u>https://doi.org/10.4172/2161-0711.1000465</u>
- Maslow, A. (1962). *Toward a psychology of being*. D Van Nostrand. https://doi.org/10.1037/10793-000
- McCormack, D., Djurkovic, N., & Casimir, G. (2013). Workplace bullying: the experiences of building and construction apprentices. *Asia Pacific Journal of Human Resources*, 51(4), 406–420. https://doi.org/10.1111/1744-7941.12014
- McEwan, B. J., Campbell, M. M., Lyons, A., & Swain, D. (2013). Pleasure, profit and pain: Alcohol in New Zealand and the contemporary culture of intoxication. University of Waikato Faculty of Arts & Social Sciences. <u>https://hdl.handle.net/10289/8035</u>
- Miller, P. M., Kreitman, N. B., Ingham, J. G., & Sashidharan, S. P. (1989). Self-esteem, life stress and psychiatric disorder. *Journal of Affective Disorders*, 17(1), 65–75. https://doi.org/10.1016/0165-0327(89)90025-6
- Milner, A., Niven, H., & LaMontagne, A. (2014). Suicide by occupational skill level in the Australian construction industry: Data from 2001 to 2010. *Australian and New Zealand Journal of Public Health*, 38(3), 281–285. https://doi.org/10.1111/1753-6405.12205
- Milner, A. J., Niven, H., & LaMontagne, A. D. (2015). Occupational class differences in suicide: evidence of changes over time and during the global financial crisis in Australia. *BMC Psychiatry*, 15, Article 223.

https://doi.org/10.1186/s12888-015-0608-5

Milner, A., Spittal, M. J., Pirkis, J., & LaMontagne, A. D. (2013). Suicide by occupation:
Systematic review and meta-analysis. *The British Journal of Psychiatry*, 203(6),
409–416. https://doi.org/10.1192/bjp.bp.113.128405

Ministry of Business, Innovation & Employment. (2020). *Bullying and harassment at work: Issues paper: An in-depth look.* New Zealand Government. <u>https://www.mbie.govt.nz/assets/bullying-and-harassment-at-work-issues-paper-in-depth-look.pdf</u>

Ministry of Business, Innovation & Employment. (2021). Building and construction sector trends annual report 2021. New Zealand Government. <u>https://www.mbie.govt.nz/dmsdocument/16973-building-and-construction-sector-trends-annual-report-2021-pdf</u>

Moilanen, T., Kangasniemi, M., Papinaho, O., Mynttinen, M., Siipi, H., Suominen, S., & Suhonen, R. (2021). Older people's perceived autonomy in residential care: An integrative review. *Nursing Ethics*, *28*(3), 414–434.

https://doi.org/10.1177/0969733020948115

Montero-Marin, J., Kuyken, W., Crane, C., Gu, J., Baer, R., Al- Awamleh, A. A., Akutsu, S.,
Araya-Veliz, C., Ghorbani, N., Job Chen, Z., Kim, M. -S., Mantzios, M., Rolim Dos
Santos, D. N., Serramo Lopez, L. C., Teleb, A. A., Watson, P. J., Yamaguchi, A.,
Yang, E., & García-Campayo, J. (2018). Self-compassion and cultural values: A crosscultural study of self-compassion using a multitrait-multimethod (MTMM) analytical
procedure. *Frontiers in Psychology*, 9, Article 2638.

https://doi.org/10.3389/fpsyg.2018.02638

- Morozink, J. A., Friedman, E. M., Coe, C. L., & Ryff, C. D. (2010). Socioeconomic and Psychosocial Predictors of Interleukin-6 in the MIDUS National Sample. *Health Psychology*, 29(6), 626–635. <u>https://doi.org/10.1037/a0021360</u>
- Muris, P., & Petrocchi, N. (2017) Protection or vulnerability? A meta-analysis of the relations between the positive and negative components of self-compassion and

psychopathology. *Clinical Psychology & Psychotherapy*, *24*(2), 373–383. https://doi.org/10.1002/cpp.2005

- National Academies of Sciences, Engineering, & Medicine. (2016). *Preventing bullying through science, policy, and practice*. The National Academies Press. <u>https://doi.org/doi:10.17226/23482</u>
- Neely, M. E., Schallert, D. L., Mohammed, S. S., Roberts, R. M., & Chen, Y.-J. (2009). Selfkindness when facing stress: The role of self-compassion, goal regulation, and support in college students' well-being. *Motivation and Emotion*, 33, 88–97. https://doi.org/10.1007/s11031-008-9119-8
- Neff, K. (2021). Fierce self-compassion: How women can harness kindness to speak up, claim their power, and thrive. Penguin.
- Neff, K. (2003a). Self-Compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity*, *2*(2), 85–101.

https://doi.org/10.1080/15298860309032

- Neff, K. (2003b). The development and validation of a scale to measure self-compassion. *Self* and Identity, 2(3), 223–250. <u>https://doi.org/10.1080/15298860309027</u>
- Neff, K. (2016). The Self-Compassion Scale is a valid and theoretically coherent measure of self-compassion. *Mindfulness*, 7, 264–274. https://doi.org/10.1007/s12671-015-0479-3
- Neff, K., & Beretvas, S. N. (2013). The role of self-compassion in romantic relationships. *Self* & *Identity*, *12*(1), 78–98. <u>https://doi.org/10.1080/15298868.2011.639548</u>
- Neff, K., & Germer, C. K. (2013). A pilot study and randomized controlled trial of the Mindful Self-Compassion program. *Journal of Clinical Psychology*, 69, 28–44. https://doi.org/10.1002/jclp.21923

- Neff, K., Hsieh, Y.-P., & Dejitterat, K. (2005). Self-compassion, achievement goals, and coping with academic failure. *Self and Identity*, 4(3), 263–287. <u>https://doi.org/10.1080/13576500444000317</u>
- Neff, K., & McGehee, P. (2009). Self-compassion and psychological resilience among adolescents and young adults. *Self and Identity*, 9(3), 225–240. https://doi.org/10.1080/15298860902979307
- Neff, K., Pisitsungkagarn, K, & Hsieh, Y.-P. (2008). Self-compassion and self-construal in the United States, Thailand, and Taiwan. *Journal of Cross-Cultural Psychology*, 39(3), 267–285. <u>https://doi.org/10.1177/0022022108314544</u>
- Neff, K., Rude, S. S., & Kirkpatrick, K. L. (2007). An examination of self-compassion in relation to positive psychological functioning and personality traits. *Journal of Research in Personality*, 41(4), 908–916. https://doi.org/10.1016/j.jrp.2006.08.002
- Neff, K., & Vonk, R. (2009). Self-compassion versus global self-esteem: Two different ways of relating to oneself. *Journal of Personality*, 77, 23–50. https://doi.org/10.1111/j.1467-6494.2008.00537.x
- Office of the Minister of Building and Construction (2021). *Construction Sector Accord 2020 Progress and next steps*. <u>https://www.mbie.govt.nz/dmsdocument/14957-construction-</u> <u>sector-accord-2020-progress-and-next-steps-proactiverelease-pdf</u>
- Office of the Minister of Finance / Office of the Minister for Infrastructure (2020). *Cabinet Paper: DEV-20-SUB-0114: Update on Infrastructure Reference Group (IRG) Infrastructure Projects.* <u>https://www.crowninfrastructure.govt.nz/wp-</u> <u>content/uploads/Cabinet-paper\_update-on-infrastructure-reference-group-irg-</u> <u>infrastructure-projects-24-jun-2020.pdf</u>
- Ostermann, R.F. (1999). *The SWS stress / support mode*. School of Psychology: Fairleigh Dickinson University.

Patterson, R., Durie, M., Disley, B., Rangihuna, D., Tiatia-Seath, J., & Tualamali'i, J. (2018). *He Ara Oranga: Report of the government inquiry into mental health and addiction*. Te Kāwanatanga o Aotearoa.

https://www.mentalhealth.inquiry.govt.nz/inquiry-report/he-ara-oranga/

- Pourhoseingholi, M. A., Baghestani, A. R., & Vahedi, M. (2012). How to control confounding effects by statistical analysis. *Gastroenterology and Hepatology from Bed to Bench*, 5(2), 79–83.
- Notelaers, G., & Einarsen, S. (2013). The world turns at 33 and 45: Defining simple cutoff scores for the Negative Acts Questionnaire–Revised in a representative sample.
   *European Journal of Work and Organizational Psychology, 22*(6), 670–682.
   <a href="https://doi.org/10.1080/1359432x.2012.690558">https://doi.org/10.1080/1359432x.2012.690558</a>
- Notelaers, G., Van der Heijden, B., Hoel, H., & Einarsen, S. (2019). Measuring bullying at work with the Short-Negative Acts Questionnaire: Identification of targets and criterion validity. *Work & Stress, 33*(1), 58–75.

https://doi.org/10.1080/02678373.2018.1457736

- Pidd, K., Duraisingam, V., Roche, A., & Trifonoff, A. (2017). Young construction workers:
   Substance use, mental health, and workplace psychosocial factors. *Advances in Dual Diagnosis, 10*(4), 155–168. <u>https://doi.org/10.1108/ADD-08-2017-0013</u>
- Phillips, W. J., & Ferguson, S. J. (2013). Self-compassion: A resource for positive aging. Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 68(4), 529–539. https://doi.org/10.1093/geronb/gbs091
- Pollet, E., & Schnell, T. (2017). Brilliant: But what for? Meaning and subjective well-being in the lives of intellectually gifted and academically high-achieving adults. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being, 18*(5), 1459–1484. https://doi.org/10.1007/s10902-016-9783-4

- Rice, C., & Forgan, R. (2016). Valuing the role of construction in the New Zealand economy: A report to the construction strategy group in association with construction industry council BRANZ. PwC. <u>https://www.pwc.co.nz/pdfs/CSG-PwC-Value-of-</u> <u>Construction-Sector-NZ.pdf</u>
- Proctor, C. (2014). Subjective Well-Being (SWB). In A. C. Michalos (Ed.), *Encyclopedia of quality of life and well-being research* (pp. 6437-6441). Springer Netherlands. <u>https://doi.org/10.1007/978-94-007-0753-5\_2905</u>
- Raes, F. (2011). The effect of self-compassion on the development of depression symptoms in a non-clinical sample. *Mindfulness*, 2, 33–36. <u>https://doi.org/10.1007/s12671-011-</u> <u>0040-y</u>
- Raes, F., Pommier, E., Neff, K., & Van Gucht, D. (2011). Construction and factorial validation of a short form of the Self-Compassion Scale. *Clinical Psychology & Psychotherapy*, 18(3), 250–255. https://doi.org/10.1002/cpp.702
- Ramon, A. E., Guthrie, L., & Rochester, N. K. (2020). Role of masculinity in relationships between mindfulness, self-compassion, and well-being in military veterans. *Psychology of Men & Masculinities, 21*(3), 357–368.
  https://doi.org/10.1037/men0000240

Rao, N., & Kemper, K. J. (2017). Online training in specific meditation practices improves gratitude, well-being, self-compassion, and confidence in providing compassionate care among health professionals. *Journal of Evidence-Based Complementary & Alternative Medicine*, 22(2), 237–241. https://doi.org/10.1177/2156587216642102

Reis, N. A., Kowalski, K. C., Mosewich, A. D., & Ferguson, L. J. (2019). Exploring selfcompassion and versions of masculinity in men athletes. *Journal of Sport & Exercise Psychology*, 41(6), 368–379. https://doi.org/10.1123/jsep.2019-0061

- Riggall, M., Skues, J., & Wise, L. (2017). Apprenticeship bullying in the building and construction industry. *Education* + *Training*, 59(5), 502–515. https://doi.org/10.1108/et-09-2016-0150
- Roberts, S. E., Jaremin, B., & Lloyd, K. (2013). High-risk occupations for suicide. *Psychological Medicine*, 43(6), 1231–1240. <u>https://doi.org/10.1017/S0033291712002024</u>
- Rogers, C. R. (1961). On becoming a person: A therapist's view of psychotherapy. Houghton Mifflin.
- Rolstad, S., Adler, J., & Rydén, A. (2011). Response burden and questionnaire length: Is shorter better? A review and meta-analysis. *Value in Health*, 14(8), 1101–1108. <u>https://doi.org/https://doi.org/10.1016/j.jval.2011.06.003</u>
- Ross, V., Caton, N., Gullestrup, J., & Kõlves, K. (2020). A longitudinal assessment of two suicide prevention training programs for the construction industry. *International Journal of Environmental Research and Public Health*, 17(3), Article 803.
   <a href="https://doi.org/10.3390/ijerph17030803">https://doi.org/10.3390/ijerph17030803</a>
- Ross, V., Mathieu, S. L., Wardhani, R., Gullestrup, J., & Kõlves, K. (2021). Factors associated with workplace bullying and the mental health of construction industry apprentices: A mixed methods study. *Frontiers in Psychiatry*, 12, Article 629262. <u>https://doi.org/10.3389/fpsyt.2021.629262</u>
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), 1069–1081. <u>https://doi.org/10.1037/0022-3514.57.6.1069</u>
- Ryff, C. D. (2014). Psychological well-being revisited: Advances in the science and practice of eudaimonia. *Psychotherapy and Psychosomatics*, 83(1), 10–28. <u>https://doi.org/10.1159/000353263</u>

- Ryff, C. D. (2018). Well-being with soul: Science in pursuit of human potential. *Perspectives* on *Psychological Science*, *13*(2), 242–248. <u>https://doi.org/10.1177/1745691617699836</u>
- Sadler, M. E., Miller, C. J., Christensen, K., & McGue, M. (2011). Subjective wellbeing and longevity: a co-twin control study. *Twin Research and Human Genetics: The Official Journal of the International Society for Twin Studies*, 14(3), 249–256. https://doi.org/10.1375/twin.14.3.249
- Serpa, J. G., Bourey, C. P., Adjaoute, G. N., & Pieczynski, J. M. (2021). Mindful Self-Compassion (MSC) with veterans: A program evaluation. *Mindfulness*, 12, 153–161. https://doi.org/10.1007/s12671-020-01508-1
- Singelis, T. M. (1994). The measurement of independent and interdependent selfconstruals. *Personality and Social Psychology Bulletin*, 20(5), 580–591. https://doi.org/10.1177/0146167294205014
- Smeets, E., Alberts, H., Peters, M., & Neff, K. (2014). Meeting suffering with kindness: Effects of a brief self-compassion intervention for female college students. *Journal of Clinical Psychology*, 70(9), 794–807. <u>https://doi.org/10.1002/jclp.22076</u>
- Stats NZ (2019). Australian and New Zealand Standard Classification of Occupations [V1.3.0]. http://aria.stats.govt.nz/aria/?\_ga=2.187452200.1462157600.1643320929-659321179.1639443283#ClassificationView:uri=http://stats.govt.nz/cms/Classificatio nVersion/Z9DujoqhMVdksKZG
- Stats NZ (2020). Small businesses contribute more to construction industry profits. <u>https://www.stats.govt.nz/news/small-businesses-contribute-more-to-construction-industry-profits</u>
- Steen, M., Di Lemma, L., Finnegan, A., Wepa, D., & McGhee, S. (2021). Self-compassion and veteran's health: A scoping review. *Journal of Veterans Studies*, 7(1), 86–130. https://doi.org/10.21061/jvs.v7i1.219

- Steindl, S. R., Yiu, R. X. Q., Baumann, T., & Matos, M. (2020). Comparing compassion across cultures: Similarities and differences among Australians and Singaporeans. *Australian Psychologist*, 55(3), 208–219. <u>https://doi.org/10.1111/ap.12433</u>
- Suicide Mortality Review Committee. (2016). *Ngā rāhui hau kura: Suicide Mortality Review Committee feasibility study 2014–2015.*
- Suh, H., & Chong, S. S. (2020). What predicts meaning in life? The role of perfectionistic personality and self-compassion. *Journal of Constructivist Psychology*, 1–15. <u>https://doi.org/10.1080/10720537.2020.1865854</u>
- Sun, X., Chan, D. W., & Chan, L.-k. (2016). Self-compassion and psychological well-being among adolescents in Hong Kong: Exploring gender differences. *Personality and Individual Differences*, 101, 288-292. <u>https://doi.org/10.1016/j.paid.2016.06.011</u>
- Sweet Analytics. (n.d.) Construction workforce demographics. https://sweetanalytics.co.nz/content/construction-workforce-demographics/
- Tarber, D. N., Cohn, T. J., Casazza, S., Hastings, S. L., & Steele, J. (2016). The role of selfcompassion in psychological well-being for male survivors of childhood maltreatment. *Mindfulness*, 7(5), 1193–1202. <u>https://doi.org/10.1007/s12671-016-0562-4</u>
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal* of Medical Education, 2, 53–55. <u>https://doi.org/10.5116/ijme.4dfb.8dfd</u>
- Tóth-Király, I., & Neff, K. (2021). Is self-compassion universal? Support for the measurement invariance of the Self-Compassion Scale across populations. *Assessment*, 28(1), 169–185. <u>https://doi.org/10.1177/1073191120926232</u>
- Trombka, M., Demarzo, M., Bacas, D. C., Antonio, S. B., Cicuto, K., Salvo, V., Claudino, F.C. A., Ribeiro, L., Christopher, M., Garcia-Campayo, J., & Rocha, N. S. (2018). Studyprotocol of a multicenter randomized controlled trial of mindfulness training to reduce

burnout and promote quality of life in police officers: The POLICE study. *BMC Psychiatry*, 18, Article 151. https://doi.org/10.1186/s12888-018-1726-7

- Trombka, M., Demarzo, M., Campos, D., Antonio, S. B., Cicuto, K., Walcher, A. L., Garcia-Campayo, J., Schuman-Olivier, Z., & Rocha, N. S. (2021). Mindfulness training improves quality of life and reduces depression and anxiety symptoms among police officers: Results from The POLICE Study—A multicenter randomized controlled trial. *Frontiers in Psychiatry, 12,* Article 624876. https://doi.org/10.3389/fpsyt.2021.624876
- Trompetter, H. R., de Kleine, E., & Bohlmeijer, E. T. (2017). Why does positive mental health buffer against psychopathology? An exploratory study on self-compassion as a resilience mechanism and adaptive emotion regulation strategy. *Cognitive Therapy* and Research, 41(3), 459–468. https://doi.org/10.1007/s10608-016-9774-0
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality* and Social Psychology, 54(6), 1063–1070. <u>https://doi.org/10.1037/0022-</u> 3514.54.6.1063
- Weich, S., Brugha, T., King, M., McManus, S., Bebbington, P., Jenkins, R., Cooper, C.,
  McBride, O., & Stewart-Brown, S. (2011). Mental well-being and mental illness:
  Findings from the adult psychiatric morbidity survey for England 2007. *The British Journal of Psychiatry*, 199(1), 23–28. doi:10.1192/ bjp.bp.111.091496.
- Westerhof, G., & Keyes, C. (2010). Mental illness and mental health: The two continua model across the lifespan. *Journal of Adult Development*, 17(2), 110–119. https://doi.org/10.1007/s10804-009-9082-y
- Wiest, M., Schüz, B., Webster, N., & Wurm, S. (2011). Subjective well-being and mortality revisited: Differential effects of cognitive and emotional facets of well-being on mortality. *Health Psychology*, 30(6), 728–735. <u>https://doi.org/10.1037/a0023839</u>

Wilson, M., Bryson, K., & Bartolo-Doblas, J. (2021). MATES in Construction New Zealand: A longitudinal assessment of suicide prevention programme for construction workers
[PROJECT LR12647]. MATES in Construction New Zealand. https://mates.net.nz/wp-content/uploads/2021/10/MATES-in-Construction-NZ-Alongitudinal-assessment-of-suicide-prevention-programme-for-constructionworkers.pdf

Wilson, A. & Nicolson, M. (2020). Mental Health in Aotearoa: Results from the 2018 Mental Health Monitor and the 2018/19 New Zealand Health Survey. Te Hiringa Hauora/ Health Promotion Agency.

https://www.hpa.org.nz/sites/default/files/Mental Health Aotearoa Insight 2020.pdf

World Health Organization. (2004). Prevention of mental disorders: Effective interventions and policy options: Summary report / A report of the World Health Organization, Department of Mental Health and Substance Abuse in collaboration with the Prevention Research Centre of the Universities of Nijmegen and Maastricht. <u>https://apps.who.int/iris/handle/10665/43027</u>

- Wynn, K. (2021, April 26). Rise of the tradies: Record numbers sign up as apprentices. The New Zealand Herald. https://www.nzherald.co.nz/nz/rise-of-the-tradies-recordnumbers-sign-up-as-apprentices/RODI7XRL2GXW7HBP5R5JZQL6HU/
- Yarnell, L., & Neff, K. (2013). Self-compassion, interpersonal conflict resolutions, and wellbeing. Self & Identity, 12(2), 146–159. https://doi.org/10.1080/15298868.2011.649545
- Yarnell, L. M., Neff, K., Davidson, O. A., & Mullarkey, M. (2019). Gender differences in self-compassion: Examining the role of gender role orientation. *Mindfulness*, 10(6), 1136–1152. https://doi.org/10.1007/s12671-018-1066-1

- Yarnell, L. M., Stafford, R. E., Neff, K., Reilly, E. D., Knox, M. C., & Mullarkey, M. (2015).
  Meta-analysis of gender differences in self-compassion. *Self & Identity*, 14(5), 499–520. https://doi.org/10.1080/15298868.2015.1029966
- Yela, J. R., Gómez-Martínez, M. Á., Crego, A., & Jiménez, L. (2020). Effects of the Mindful Self-Compassion programme on clinical and health psychology trainees' well-being: A pilot study. *Clinical Psychologist*, 24(1), 41–54. https://doi.org/10.1111/cp.12204
- Zessin, U., Dickhäuser, O., & Garbade, S. (2015). The relationship between self-compassion and well-being: A meta-analysis. *Applied Psychology: Health and Well-Being*, 7(3), 340–364. https://doi.org/10.1111/aphw.12051
- Zhang, J. W., & Chen, S. (2016). Self-compassion promotes personal improvement from regret experiences via acceptance. *Personality and Social Psychology Bulletin*, 42(2), 244–258. https://doi.org/10.1177/0146167215623271
- Zhang, J. W., Chen, S., & Tomova Shakur, T. K. (2020). From me to you: Self-compassion predicts acceptance of own and others' imperfections. *Personality and Social Psychology Bulletin*, 46(2), 228–242. https://doi.org/10.1177/0146167219853846

## Appendices

Appendix A. Information Sheet and Survey

# Does being kind, warm and accepting towards yourself affect your well-being? A study of construction apprentices in New Zealand

## **Information Sheet**

## Who is doing this research?

Kia Ora, I am Georgina Caldwell and I am from Te Whanganui-a-Tara, Wellington. Ever since I learnt about the poor mental health statistics within the construction industry, I decided I wanted to do something about it. I am conducting this study as part of the requirements for a Master of Science majoring in Psychology at Massey University. My research is supervised by Dr Tatiana Tairi, Lecturer in the School of Psychology at Massey University, and Registered Counselling Psychologist.

## What is this research about?

The purpose of this project is to investigate whether self-kindness, self-warmth and self-acceptance affects the well-being of construction apprentices in New Zealand (NZ), such as yourself. Your participation in this study will be much appreciated. However, your participation is voluntary. Your contribution will help us obtain a better understanding of how being kind, warm and accepting towards yourself may affect your well-being, and ideally, increase the resiliency and well-being of NZ construction apprentices.

## Participant eligibility

You are eligible to participate in this study if you are:

- Currently enrolled in and/or completing an apprenticeship within the NZ Construction Industry; or have completed an apprenticeship within the last 12 months; and
- Fluent in English; and
- 16 years or over.

## What you will be asked to do?

You will be asked to fill out an anonymous survey, administered online, that will take approximately 20 minutes to complete. The survey includes a few demographic questions as well as questions which measure psychological well-being, mental distress, bullying and how much kindness, warmth and acceptance you have towards yourself. In each section of the survey, you will be provided with detailed instructions on how to answer the questions. All questions are close-ended and you will be asked to simply click on an option that gives the best answer to a question. I do not expect participation to have any psychological risks for you. However, if any parts of the survey do cause distress, you are encouraged to contact MATES on free phone 0800 111 315, or free support line 1737.

The data will be used for research purposes and will be securely stored for a five-year period, after which it will be destroyed. Once the survey is completed, you will be given the opportunity to enter a prize draw to win one of ten \$40 supermarket vouchers, and receive a summary of the research findings. Anonymity will be preserved in the case of a prize by stepping from the completion of the main survey to another which collects contact details for a prize draw. There is no link between the two data sets other than the time and date. Based on previous use, it has been confirmed that names could not be linked to the primary responses.

Completion and return of the questionnaire implies consent. You have the right to decline to answer any particular question.

Thank you for your time and consideration.

Many thanks, Georgina Caldwell Contact information

If you have any questions or queries regarding this project, please do not hesitate to contact the following:

Researcher Georgina Caldwell School of Psychology Massey University Wellington New Zealand Email: <u>Georgie.Caldwell.1@uni.massey.ac.nz</u>

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*This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern A, Application 21/19.* 

If you have any concerns about the conduct of this research, please contact Dr Negar Partow, Chair, Massey University Human Ethics Committee: Southern A, telephone 04 801 5799 x 63363, email humanethicsoutha@massey.ac.nz.

>>>>[NEXT]
## **Respondent Consent**

I have read and understood the information sheet for this study and consent to collection of my responses and participation in the study.

○ <sub>Yes</sub> ○ <sub>No</sub>

# Section 1: Demographic Information

Please respond by selecting or filling in the relevant answer.

What is your current age? \_\_\_\_\_

Are you fluent in English?

○ <sub>Yes</sub> ○ <sub>No</sub>

My current apprenticeship status is:

- Active
- Completed within last 12 months
- Ongoing but on long term leave
- Not currently in an apprenticeship

#### I am a:

- <sup>C</sup> First Year Apprentice / Trainee
- Second Year Apprentice / Trainee
- Third Year Apprentice / Trainee
- Fourth Year Apprentice / Trainee
- C I completed my training within the last 12 months

I work for a:

- Private company
- Industry Training Organisation
- Government department
- Self-employed
- I currently do not have an employer

#### My employer is:

- A very large employer (More than 501 employees)
- A large employer (101- 500 employees)
- C A medium size employer (51-100) A small employer (11-50)
- A very small employer (1-10)
- Not applicable

The trade or occupation I am training for is (please select ONE option that is most relevant to you. If your occupation is not listed, please select 'Other'):

- Air-conditioning and refrigeration
- C Bricklayer / Stonemason
- C Carpenter / Joiner
- Construction
- Electrician
- Floor finisher
- Glazier
- Landscaper
- Machine Operator (including cranes, earthmovers etc.)
- Painter
- C Plasterer
- C Plumber / Gasfitter / Drain layer
- Roofer
- C Technician / Draftsperson
- Tiler
- Welder / Fabricator
- C Other\_\_\_\_\_
- Not applicable

What industry sector do you work mostly in:

- Residential builds
- Commercial Construction
- Civil Construction
- C Other \_\_\_\_\_

Which ethnic group(s) do you identify with? (Make sure that participants can tick more than one option)

- Māori
- New Zealand European
- C Other European\_\_\_\_\_
- C Pacific Peoples
  - Samoan
  - Cook Islands Māori
  - Tongan
  - Niuean
  - Tokelauan
  - Fijian
  - Other Pacific Peoples\_\_\_\_\_\_
- Asian
  - Southeast Asian
  - Chinese
  - Indian
  - Other Asian\_\_\_\_\_
- Middle Eastern
- C Latin American
- African
- Other ethnicity (Please specify)

Which gender do you identify with?

Male

C Female C Gender Diverse, please specify\_\_\_\_\_

# Section 2: Survey

#### How I typically act towards myself in difficult times.

Please read each statement carefully before answering. For each item, indicate how often you behave in the stated manner, using the following scale:

Almost never 1 2 3 4 5 Almost always

	Almost never				Almost always
When I fail at something important to me I become consumed by feelings of inadequacy	1	2	3	4	5
I try to be understanding and patient towards those aspects of my personality I don't like.	1	2	3	4	5
When something painful happens I try to take a balanced view of the situation.	1	2	3	4	5
When I'm feeling down, I tend to feel like most other people are probably happier than I am.	1	2	3	4	5
I try to see my failings as part of the human condition.	1	2	3	4	5
When I'm going through a very hard time, I give myself the caring and tenderness I need.	1	2	3	4	5
When something upsets me I try to keep my emotions in balance.	1	2	3	4	5
When I fail at something that's important to me, I tend to feel alone in my failure	1	2	3	4	5
When I'm feeling down I tend to obsess and fixate on everything that's wrong.	1	2	3	4	5

When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.	1	2	3	4	5
I'm disapproving and judgmental about my own flaws and inadequacies.	1	2	3	4	5
I'm intolerant and impatient towards those aspects of my personality I don't like.	1	2	3	4	5

Please indicate your degree of agreement (using a score ranging from 1-6 Strongly Disagree to Strongly Agree) to the following sentences.

	Strongly					Strongly
	disagree					agree
I am not afraid to voice my opinions, even when						
they are in opposition to the opinions of most	4	2	2		-	c
people.		2	3	4	5	6
In general, I feel I am in charge of the situation		•	-		-	c
in which I live.	1	2	3	4	5	6
I am not interested in activities that will expand	_	-	-		_	-
my horizons.	1	2	3	4	5	6
Most people see me as loving and affectionate.	1	2	3	4	5	6
I live life one day at a time and don't really think						
about the future.	1	2	3	4	5	6
When I look at the story of my life, I am pleased						
with how things have turned out.	1	2	3	4	5	6
My decisions are not usually influenced by what						
everyone else is doing.	1	2	3	4	5	6
The demands of everyday life often get me						
down.	1	2	3	4	5	6
I think it is important to have new experiences		•••••	••••••		•••••	
that challenge how you think about yourself and						
the world.	1	2	3	4	5	6
Maintaining close relationships has been difficult		•••••	••••••		•••••	
and frustrating for me	1	2	3	4	5	6
	4			A		<i>c</i>
I have a sense of direction and purpose in life.		2	3	4	5	6
In general, I feel confident and positive about					_	
myself.	1	2	3	4	5	6
I tend to worry about what other people think of		_	_		_	_
me.	1	2	3	4		6
I do not fit very well with the people and the						
community around me.	1	2	3	4	5	6
When I think about it, I haven't really improved						
much as a person over the years.	1	2	3	4	5	6

I often feel lonely because I have few close			••••••			
friends with whom to share my concerns.	1	2	3	4	5	6
My daily activities often seem trivial and	••••••		••••••			
unimportant to me.	1	2	3	4	5	6
I feel like many of the people I know have	••••••		••••••			
gotten more out of life than I have	1	2	3	4	5	6
I tend to be influenced by people with strong	•••••		••••••			
opinions	1	2	3	4	5	6
Lam quite good at managing the many	-					<u> </u>
responsibilities of my daily life	1	2	R	4	5	6
Lesue the serve that I have developed a later of	±	~				
I have the sense that I have developed a lot as a	1	2	2	Л	5	6
person over time.	±	~				0
I enjoy personal and mutual conversations with	1	c	2	л	5	6
tamily members or friends.	<u>т</u>	۷	5	4	5	0
I don't have a good sense of what it is I'm trying	1	n	r	4	F	c
to accomplish in life.	T	2	3	4	5	D
Llike most aspects of my personality.	1	2	3	4	5	6
I have confidence in my opinions, even if they	••••••		••••••			
are contrary to the general consensus	1	2	3	4	5	6
are contrary to the Scheral consensus.	••••••		••••••			
I often feel overwhelmed by my responsibilities	1	2	3	4	5	6
I do not enjoy being in new situations that						
require me to change my old familiar ways of						
doing things.	1	2	3	4	5	6
People would describe me as a giving person,						
willing to share my time with others.	1	2	3	4	5	6
I enjoy making plans for the future and working						
to make them a reality.	1	2	3	4	5	6
In many ways, I feel disappointed about my						
achievements in life.	1	2	3	4	5	6
It's difficult for me to voice my own opinions on						
controversial matters.	1	2	3	4	5	6
I have difficulty arranging my life in a way that is	•••••		••••••			
satisfying to me	1	2	3	4	5	6
For me, life has been a continuous process of	••••••		••••••			
learning, changing, and growth.	1	2	3	4	5	6
I have not experienced many warm and trusting	••••••		•••••			
relationships with others.	1	2	3	4	5	6
Some people wander aimlessly through life, but I	••••••		•••••		•••••	
am not one of them	1	2	3	4	5	6
My attitude about myself is probably not as	••••••		••••••			
nositive as most people feel about themselves	1	2	3	4	5	6
Liudge myself by what I think is important not	•••••					
by the values of what others think is important.	1	2	3	4	5	6
by the values of what others think is important.	_					-
for myself that is much to my liking	1	2	3	4	5	6
l gave un traing to make hig improvements or	-	-				•
changes in my life a long time age	1	2	З	4	5	6
Changes in my me diong unne dgo.	±	-			2	0
r know that I can trust my friends, and they	1	2	R	Л	5	6
know they can trust me.	<u>ــ</u>	∠				U
i sometimes reel as it i ve done all there is to do	1	С	2	л	5	6
in me.	тт				ر 	U

when I compare myself to friends and						
acquaintances, it makes me feel good about						
who I am.	1	2	3	4	5	6

During the last 30 days, how often did...

	None of the time	A little of the time	Some of the time	Most of the time	All of the time
you feel nervous?	0	1	2	3	4
you feel hopeless?	0	1	2	3	4
you feel restless or fidgety?	0	1	2	3	4
you feel so depressed that nothing could cheer you up?	0	1	2	3	4
you feel that everything was an effort?	0	1	2	3	4
you feel worthless?	0	1	2	3	4

During the last 6 months, how often have you been subjected to the following negative acts in the workplace?

	Never	Now and then	Monthly	Weekly	Daily
Someone withholding information which affects your performance	1	2	3	4	5
Being humiliated or ridiculed in connection with your work	1	2	3	4	5

Being ordered to do work below your level of competence	1	2	3	4	5
Having key areas of responsibility removed or replaced with more trivial or unpleasant tasks	1	2	3	4	5
Spreading of gossip and rumours about you	1	2	3	4	5
Being ignored or excluded	1	2	3	4	5
Having insulting or offensive remarks made about your person, attitudes or your private life	1	2	3	4	5
Being shouted at or being the target of spontaneous anger	1	2	3	4	5
Intimidating behaviours such as finger- pointing, invasion of personal space, shoving, blocking your way	1	2	3	4	5
Hints or signals from others that you should quit your job	1	2	3	4	5
Repeated reminders of your errors or mistakes	1	2	3	4	5
Being ignored or facing a hostile reaction when you approach	1	2	3	4	5
Persistent criticism of your errors or mistakes	1	2	3	4	5
Having your opinions ignored	1	2	3	4	5
Practical jokes carried out by people you don't get along with	1	2	3	4	5
Being given tasks with unreasonable deadlines	1	2	3	4	5
Having allegations made against you	1	2	3	4	5
Excessive monitoring of your work	1	2	3	4	5
Pressure not to claim something to which by right you are entitled (e.g. sick leave, holiday entitlement, travel expenses)	1	2	3	4	5

Being the subject of excessive teasing and sarcasm	1	2	3	4	5
Being exposed to an unmanageable workload	1	2	3	4	5
Threats of violence or physical abuse or actual abuse	1	2	3	4	5

## Prize draw or results

#### Thank you for your answers!

This section of the survey is separate from your earlier answers and provides you with the opportunity to take part in a prize draw. If you wish to participate in the draw, please click the >> **Next** button at the bottom of this page

As this is the end of our research, we have a special draw for the participants who answer the entire survey. We will make a random selection using the contact details of participants wishing to enter the draw, and the winners will each receive one of ten \$40 supermarket vouchers. If you want to go in the draw, or would like to see the summary of results of this research, please remember to give us your email address in the page which follows.

**Contact information:** If you have any questions or queries regarding this project, please do not hesitate to contact the following:

#### Researcher

Georgina Caldwell School of Psychology Massey University Wellington New Zealand Email: <u>Georgie.Caldwell.1@uni.massey.ac.nz</u>

Supervisor

Dr Tatiana Tairi School of Psychology Massey University Wellington New Zealand +64 4 801-5799 ext 63606 Email: <u>t.tairi@massey.ac.nz</u> Massey University School of Psychology – Te Kura Hinengaro Tangata

Wellington, New Zealand

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*This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern A, Application 21/19.* 

If you have any concerns about the conduct of this research, please contact Dr Negar Partow, Chair, Massey University Human Ethics Committee: Southern A, telephone 04 801 5799 x 63363, email <u>humanethicsoutha@massey.ac.nz</u>.

>>>>[NEXT]

Would you like to enter the draw to win for one of ten \$40 supermarket vouchers?

○ Yes

○ No

Would you like to receive a summary of the findings of this research project?

O Yes

🔿 No

If you answered 'Yes' to receiving a summary of results OR entering the draw, please provide your email address.

#### **Support Lines**

If any parts of the survey have caused you distress, you are encouraged to contact the following free support line options:

MATES: 0800 111 315 1737: 0800 1737 1737

## **Appendix B. Initial Email to Organisations**

To Whom It May Concern at Site Safe,

I am currently completing a Master of Science (Psychology) Degree under the supervision of Dr. Tatiana Tairi (cc'd), Lecturer in the School of Psychology at Massey University, Wellington. The title of my research is: <u>Does being kind, warm and accepting towards</u> <u>yourself affect your well-being?: A study of construction apprentices in New Zealand</u>. I am contacting you as I would appreciate your help in recruiting participants for my research.

I am looking for apprentices in the NZ construction industry to fill out an anonymous survey online, which takes approximately 15-20 minutes to complete. The survey includes a few demographic questions, as well as, questions which measure well-being, mental distress, bullying, and the amount of kindness, warmth and acceptance participants have towards themselves. You will find a detailed information sheet attached for your review.

I ask that you please consider contacting your clients and notifying them of the opportunity to take part in this research using the advertising email attached. *Please note, the survey link in the advertising email provided is not active.* Once we have confirmation of your willingness to aid us with recruitment (and the survey has been finalized), we will provide you with an updated advertising email with an active survey link for you to send to your clients.

If willing and able, please let me know and I will supply you with whatever additional information you deem necessary. This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern A, Application 21/19. If you have any concerns about the conduct of this research, please contact Dr Negar Partow, Chair, Massey University Human Ethics Committee: Southern A, telephone 04 801 5799 x 63363, email humanethicsoutha@massey.ac.nz.

#### **Research contacts:**

Georgina Caldwell - Researcher Phone: +64

Dr Tatiana Tairi - Supervisor Phone: +64 (04) 801 5799 ext. 63606

Thank you for taking the time to consider my request – I look forward to hearing back from you.

Kind regards,

Georgina

## Appendix C. Advertising Email

Kia Ora,

# We are interested to know how you think being kind towards yourself might affect your well-being.

Tell us what you think by taking part in a **20 minute, anonymous online survey**. Upon completion of the survey, you can go into the draw to win a **\$40 supermarket voucher**.

The survey is part of a Masters research study being conducted through Massey University, which investigates whether being kind, warm and accepting towards yourself affects your well-being. Participation in this study is entirely voluntary. However, your participation will be much appreciated and will help to obtain a better understanding of the issues faced by construction apprentices.

Please <u>CLICK HERE</u> to be directed to the survey.

Thank you for your time and for considering this request. If you have any questions regarding this project, please do not hesitate to contact the researcher, Georgina Caldwell at <u>Georgie.Caldwell.1@uni.massey.ac.nz</u>, or her supervisor, Dr Tairi at T.Tairi@massey.ac.nz.

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern A, Application 21/19. If you have any concerns about the conduct of this research, please contact Dr Negar Partow, Chair, Massey University Human Ethics Committee: Southern A, telephone 04 801 5799 x 63363, email humanethicsoutha@massey.ac.nz.