Job Demands and Resources: Flourishing and Wellbeing in The New Zealand Defence Force

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Abstract

Occupational wellbeing is a pertinent issue that has been widely researched, however, there is a dearth of research that investigates occupational wellbeing in military work environments that do not focus on deployments, combat exposure, and post-traumatic stress disorder. In line with the positive psychology approach to research, this study aims to fill a gap in the existing literature by investigating general military job demands in relation to both positive and negative psychological outcomes, including the positive psychology concept of flourishing. The Job Demands-Resources (JD-R) model provided a robust theoretical framework for the present research to examine the predictors of psychological distress, wellbeing, flourishing, and turnover intention with a sample of New Zealand Defence Force personnel. The inclusion of Army, Navy, Air Force, and civilian personnel working within the New Zealand Defence Force formed a large sample, providing substantial statistical power to detect small group differences and the relationships between variables. The primary job demand investigated in this study was perceived unmanageable workload. Both personal resources (resilience and social support) and job resources (self-reported job resources and perceptions of leadership) were incorporated into the JD-R framework. This research provided strong support for the main effects that were hypothesised based on the JD-R model. Minimal support was found for the mediated or moderated relationships proposed by the JD-R model. Overall, this research concludes that among New Zealand Defence Force personnel, good resilience, social support, and job resources are associated with higher levels of flourishing, greater wellbeing, less turnover intention, lower psychological distress, and in some small part the detrimental effect that a perceived unmanageable workload has on psychological distress may be reduced.

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Chapter One: Work Related Stress and Wellbeing

Occupational wellbeing research has gained increasing interest across various disciplines of study including psychology, as it was recognised that work characteristics can have an important impact on employees' general health and wellbeing, and in turn can significantly impact job performance and other organisational outcomes (Bakker et al., 2007; Sears et al., 2013; Van den Broeck et al., 2013). All occupations have different job demands that are specific to the role, industry, and particular workplace. While job demands (e.g., workload, time pressure, and emotional interactions) are not inherently negative, they require employees' effort, and continued exposure to job demands depletes employees' energy reserves and can turn into job stressors (Bakker et al., 2007; Demerouti et al., 2001; Schaufeli & Bakker, 2004; Van den Broeck et al., 2013). These job stressors can have an adverse effect on employees' psychological and physiological health (Bakker et al., 2007; Van den Broeck et al., 2013). For example, occupational stress literature has commonly linked unmanaged job demands to burnout, an issue characterised by chronic exhaustion, negative work attitudes, and professional inefficacy (Maslach et al., 2001). Similarly, demands have been linked to other adverse outcomes including psychological distress (Hino et al., 2015; McDougall & Drummond, 2010), depression (Hakanen, Schaufeli, et al., 2008), musculoskeletal disorders (Joling et al., 2008), and in a military work context, post-traumatic stress disorder (PTSD) (Booth-Kewley et al., 2010).

Helping to mitigate the ill effects and allowing employees to cope with job demands, are resources such as colleague support, leadership, resilience, and social support. Resources are a concept encompassing situational characteristics of the work environment and personal characteristics that help to achieve work goals, reduce job demands and their associated costs, and they can directly affect individual and organisational wellbeing measures (Bakker et al., 2007; Brauchli et al., 2015; Demerouti et al., 2001). Although wellbeing is intertwined and

related to stress, wellbeing is not merely the absence of stress, burnout, psychological distress, and ill health. Wellbeing is often used as an umbrella term that encompasses a broad array of factors, and within occupational research wellbeing often focuses on the concepts of work motivation and engagement. Work motivation is defined by a willingness to put in effort to successfully complete work (Golembiewski, 2000), while work engagement is a state of mind characterised by dedication (being strongly involved in work and experiencing enthusiasm), absorption (being engrossed in work), and vigour (high energy while working) (Schaufeli et al., 2002). These concepts of work motivation and engagement are linked to hedonic wellbeing (focused on pleasure and enjoyment) and eudaimonic wellbeing (focused on meaning and purpose) (Ryan & Deci, 2001). Other measures of wellbeing may be specific, such as physical health (Southern Cross Health Society & BusinessNZ, 2019), while other approaches to wellbeing are more general. General wellbeing encompasses many aspects including physical health, emotional, psychological, spiritual, and social wellbeing. This holistic view of wellbeing is captured by the Māori wellbeing model of Te Whare Tapa Whā, in which the four dimensions of taha tinana (physical wellbeing), taha hinengaro (mental wellbeing), taha wairua (spiritual wellbeing), and taha whānau (family and social wellbeing) all have equal importance in contributing to a person's overall wellbeing (Durie, 1985).

Related to wellbeing, the concept of flourishing grew from the positive psychology movement, and the need to research people who are thriving rather than the common psychological focus of researching disorders and mental distress. A Flourishing Scale was created by Diener and colleagues (2009) and has been validated across numerous contexts and countries (Checa et al., 2018; Kyriazos et al., 2018; Rump, 2015; Tong & Wang, 2017; Villieux et al., 2016). The Flourishing Scale assesses self-perceived success in important areas of human functioning such as relationships, self-esteem, optimism, and purpose (Diener

et al., 2009). Research has found that the Flourishing Scale is a significant predictor of general health over and above scales measuring mental illness (Rump, 2015).

Employee wellbeing can have a significant effect on business outcomes, as wellbeing related measures such as burnout and psychological distress tend to be negatively correlated with work performance and positively correlated with absenteeism (Schaufeli et al., 2009; Sears et al., 2013). Absenteeism can result in financial losses in instances where replacement or temporary staff need to be hired, and when employees are paid for sick leave rather than for working. A similar issue is presenteeism, when employees are at work but due to illness they are not performing optimally or perhaps not working at all (Hemp, 2004). Presenteeism is a costly problem that may be insidious. Unlike absenteeism which is apparent when an employee does not show up to work, presenteeism is not necessarily apparent because it can be hard to determine if and how much poor wellbeing is reducing performance (Hemp, 2004; Pärli, 2018).

In addition to the costs associated with poor wellbeing in terms of performance and absenteeism, there is the related issue of employee turnover. Wellbeing is generally positively correlated with employee retention, meaning greater wellbeing is associated with less employee turnover intention (Sears et al., 2013). Both turnover intention and actual turnover can have a significant occupational impact, with research finding that employees who have formed an intention to leave often mentally distance themselves from their work, and are less productive than employees who have no intention of leaving their jobs (Beehr & Gupta, 1978). Consequently, organisations suffer when they are unable to retain trained and effective employees. As poor employee wellbeing is associated with an array of detrimental work outcomes, it is in an employer's best interest to promote employee wellbeing.

In summary, it is important to investigate the impact that work characteristics can have on employee stress and wellbeing, and their relationships to organisational outcomes.

Specifically, this study will focus on employee holistic wellbeing (based on Te Whare Tapa Whā), flourishing, and psychological distress and their links to demands, resources, and turnover intention. As background for the present study this thesis will introduce the Job Demands-Resources model as a framework to investigate this, and will refer to existing research that has investigated job demands and resources in relation to the various measures under the broad employee stress and wellbeing umbrellas.

The Job Demands Resources Model (JD-R)

JD-R Model Background

Since the introduction of the JD-R model in 2001 (Demerouti et al., 2001), it has become one of the most popular frameworks in occupational psychology for investigating the relationships between work characteristics and employee wellbeing. The JD-R model was influenced by other occupational psychology models such as the Demand-Control model (Karasek, 1979), the Demand-Control-Support model (Johnson & Hall, 1988), and the Effort-Reward Imbalance model (Siegrist, 1996). Early models of job stress and work motivation primarily overlooked each other's literature; however, the current JD-R model combines principles from both literature areas. This is aligned with the positive psychology movement, aiming to create a balanced understanding of the positive and negative aspects of employee health and occupational outcomes (Seligman & Csikszentmihalyi, 2014). The JD-R model now links job demands and job resources to both detrimental outcomes (e.g., strain) and positive ones such as wellbeing, as the original model was supplemented by adding motivation or work engagement as a positive dimension within the JD-R model (Schaufeli & Bakker, 2004). The JD-R model is depicted in Figure 1; the remainder of this chapter explains the main concepts, theory, and the relationships between variables proposed by the JD-R model, and discusses related research.
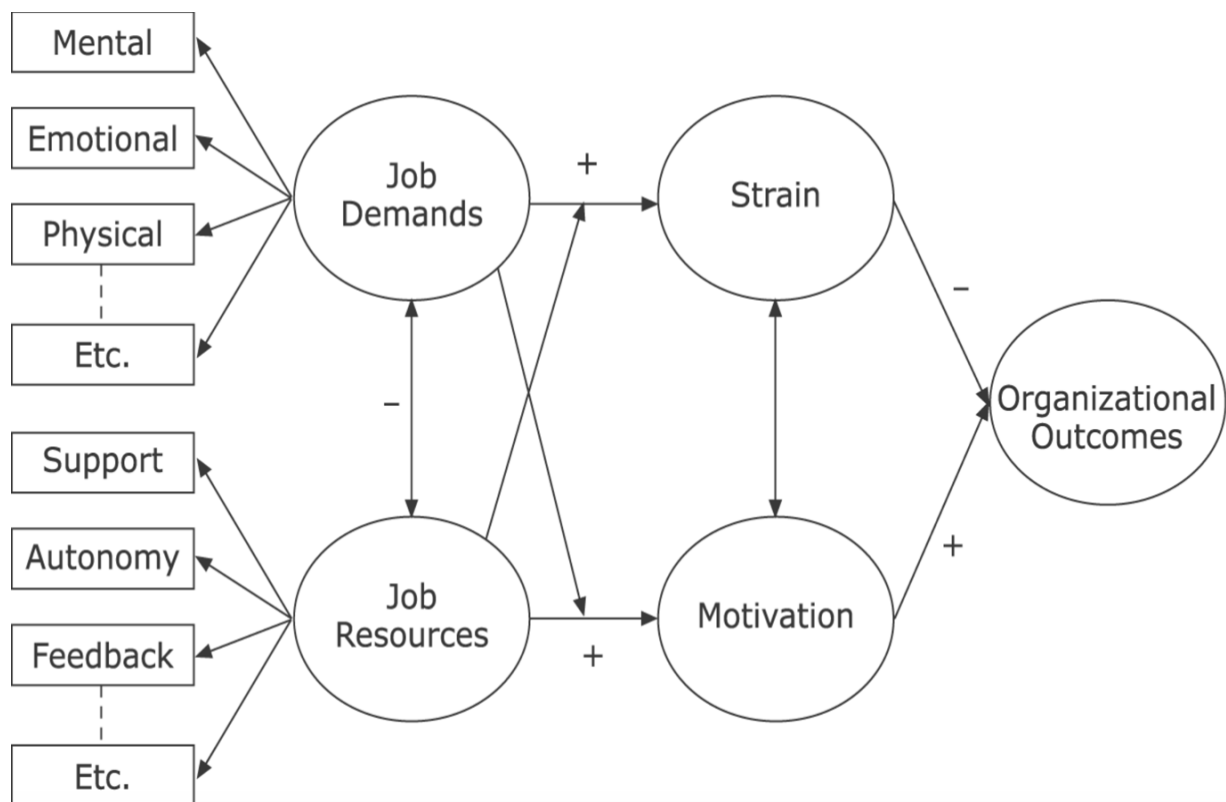
Figure 1. The Job Demands-Resources Model. Source: Bakker and colleagues 2007, p. 313

Job Demands

The JD-R model proposes that regardless of the type of work, the characteristics of work environments can be grouped into two meaningful general categories: demands and resources. Job demands are physical, social, and organisational job features that require employees' prolonged mental or physical effort (Demerouti et al., 2001). Commonly researched job demands include workload, time pressure, emotional strain, and role ambiguity. Continued exposure to job demands increasingly depletes employees' energy reserves, and as a result, job demands are associated with psychological and physiological costs such as exhaustion (Van den Broeck et al., 2013).

Job Resources

Given that many people experience high job demands yet remain healthy, the question of what keeps people healthy in such instances arises (Demerouti et al., 2001). Demerouti and colleagues (2001) proposed that the answer is health protecting factors referred to as resources. Job resources are physical, social, and organisational job features that assist in achieving work goals, reduce job demands and their associated costs, or facilitate personal growth and development (Demerouti et al., 2001). For example, supervisor and colleague support, performance feedback, opportunities for professional development, and autonomy can all be categorised as job resources. Job resources may be intrinsically motivating by fostering growth and learning, or extrinsically motivating by assisting in achieving work goals (Demerouti & Bakker, 2011). For example, in an intrinsic sense, proper feedback promotes learning and consequently may increase job performance, while colleagues' social support satisfies the need to belong (Baumeister & Leary, 1995; Van den Broeck et al., 2008). Similarly, in an extrinsic sense, proper feedback and supportive colleagues increase the likelihood of achieving a task, and having many job resources stimulates one's willingness to dedicate efforts to a task (Demerouti & Bakker, 2011).

Initially, the JD-R model only considered situational characteristics of the work environment as resources, and overlooked personal factors that may operate as resources such as self-efficacy, resilience, and general social support. Personal resources can be integrated into the JD-R model, and have been proposed by some to function the same as job resources (e.g., Karatepe & Olugbade, 2009; McDougall & Drummond, 2010; Tremblay & Messervey, 2011), forming a broad category of resources. However, others (e.g., Llorens et al., 2007; Xanthopoulou et al., 2009a) have integrated personal resources into the JD-R model in various other ways, distinguishing them from job resources in the model. Acknowledging that personal resources do matter, the theory and literature of personal resources in JD-R will

be discussed in greater detail later in this chapter, following an explanation of the main proposals of the JD-R model.

Dual Processes of the JD-R Model

The two categories of demands and resources form the basis of two largely independent psychological processes, a health impairment process and a motivational process. Job demands may initiate a health impairment process, where job demands deplete employees' resources and lead to job strain, exhaustion, and health issues (Bakker & Demerouti, 2017; Bakker et al., 2007; Demerouti et al., 2001). In contrast, job resources may initiate a motivational process, where job resources have motivational potential and lead to work engagement and positive wellbeing (Bakker et al., 2007; Brauchli et al., 2015; Demerouti et al., 2001).

JD-R Model and Outcomes

Via the health impairment and motivational processes, job demands and job resources have been found to relate to various aspects of employee health and wellbeing, including burnout (Bakker et al., 2005; Demerouti et al., 2001), depression (Hakanen, Schaufeli, et al., 2008), post-traumatic stress disorder (Balducci et al., 2011), and musculoskeletal disorders (Joling et al., 2008). While the JD-R model has been frequently used in regards to employee wellbeing outcomes, it has also been used to predict an array of employee work related attitudes such as work engagement (Bakker et al., 2007), work enjoyment (Bakker et al., 2010), job satisfaction (Martinussen et al., 2007), and acceptance of organisational change (van Emmerik et al., 2009). In addition to this, the model also functions to predict employee behaviour and important organisational outcomes including job performance, presenteeism (Demerouti et al., 2009), absenteeism (Schaufeli et al., 2009), productivity, organisational commitment, employee turnover, turnover intentions (Bakker et al., 2003; Van den Broeck et al., 2013), early retirement (Schreurs et al., 2011), antisocial behaviour, workplace bullying

(Baillien et al., 2011), and financial outcomes (Xanthopoulou et al., 2009b). The JD-R model can also be used to predict cooperative behaviour, including safety behaviour (Hansez & Chmiel, 2010), in-role performance (Bakker et al., 2008), and extra-role behaviours of helping behaviours and taking initiative (Hakanen, Perhoniemi, et al., 2008).

Schreurs and colleagues (2011) investigated early retirement intention as the final outcome of the strain and motivation relationships initiated by demands and resources respectively. Overall, their results supported the motivational process, finding that job resources were positively related to work enjoyment, which subsequently had a negative relationship with early retirement intention. However, they did not find evidence in support of the strain relationship as job demands positively correlated with perceived ill health, but ill health was not significantly related to the intention to retire early. Research has also shown that the availability of job resources can have a positive financial impact, as employees in fast-food restaurants had better financial returns when they had an abundance of job resources and were engaged in their work (Xanthopoulou et al., 2009b).

Expanding on previous JD-R research, Balducci and colleagues (2011) tested a JD-R based model of bullying, with bullying conceptualised as a strain phenomenon amongst Italian public sector employees. Balducci and colleagues found that bullying was positively related to job demands (workload and role conflict) and negatively related to job resources (decision authority, colleagues support, promotion prospects), and further that bullying mediated the relationship between job demands and symptoms of PTSD. A buffering effect of job resources on the job demands-bullying relationship was also found. This study is important because it expands the use of the JD-R model by viewing bullying as the strain phenomenon in the health impairment process, thereby exemplifying the functional flexibility of the JD-R model.

The Buffering Role of Job Resources

Resources are important in their own right by contributing to motivation and work engagement, but are also important in assisting employees to effectively cope with job demands. Along with the main effects of job demands and job resources, the JD-R model also proposes that job demands and job resources have joint effects. That is, the interaction between job demands and job resources plays an important role in employees' wellbeing, as job resources may buffer the impact of job demands in the health impairment process (Bakker et al., 2005). As such, job resources should reduce the detrimental impact of high job demands on outcomes such as strain and burnout (Bakker et al., 2005). The buffering role of job resources is congruent with other theories, such as the Demand-Control model which states that task control may reduce the impact of work overload on stress, and the Effort-Reward Imbalance model which suggests that rewards minimise the unfavourable effects of work effort (Karasek, 1979; Siegrist, 1996). The JD-R model expands on these models because it is less restrictive, by instead suggesting that any context appropriate job demand and job resource may interact in predicting job strain (Demerouti & Bakker, 2011). Various studies have supported this buffer hypothesis, finding that job resources like autonomy, feedback, and development opportunities can alleviate the impact of job demands on strain (Bakker et al., 2005).

For example, Sargent and Terry (2000) found that supervisor support buffered the negative effects of high strain jobs on job satisfaction. Further research substantiating the buffer effect of job resources is a large of study of teachers by Bakker and colleagues (2005), who found that job demands were associated with greater burnout only when the teachers had few job resources. Similarly, in a study with home-care workers, Bakker and colleagues (2007) found that the relationship between job demands and exhaustion disappeared when job resources were high. These findings suggest that a lack of job resources can to some

extent be considered to contribute to the health impairment process leading to detrimental outcomes such as strain, cynicism, and burnout (Van den Broeck et al., 2013). This aligns with the conservation of resources theory, which proposes that stress is experienced when individuals lose or lack valued resources (Hobfoll, 1989; 2001).

Research with employees from a Japanese manufacturing company found that employees who had low job control and worked many overtime hours had a higher prevalence of psychological distress compared to employees who also had low job control but worked fewer overtime hours (Hino et al., 2015). Conversely, among the employees who had high job control, overtime work hours were not associated with psychological distress. This research suggests that job control can act as a resource to buffer the adverse effect of overtime hours on psychological distress.

Job Demands Increase the Beneficial Effect of Resources

While it is clear that job demands can play a crucial role in the health impairment process, it has also been proposed that job demands can increase the beneficial effect of job resources on motivation and work engagement. In other words, job resources can increase motivation to a greater extent when job demands are high relative to when job demands are lower. Hakanen and colleagues (2005) provided some initial evidence for this boosting hypothesis in their study among dentists, finding that job resources had a stronger positive relationship with work engagement when workload and physical work demands were high. Furthermore, in a study with employees holding various occupations, Bakker and colleagues (2010) found that task enjoyment and organisational commitment were most positive in instances of both high job demands and high job resources. Many different demands and resources played a role across the different occupations, with task enjoyment and occupational commitment being greatest when employees had stimulating and challenging tasks as well as sufficient resources such as performance feedback and colleague support.

Personal Resources

An important yet relatively recent extension of the JD-R model is the inclusion of personal resources. Personal resources can be defined as aspects of the self that tend to be associated with the ability to impact and operate successfully in one's environment, for example resilience and self-efficacy (Bakker & Demerouti, 2017). Like job resources, personal resources assist in accomplishing work goals and may stimulate personal development. Highlighting the heuristic nature of the JD-R model, personal resources have been integrated into the JD-R model and proposed to work in numerous ways, including as mediators, moderators, antecedents, and also directly (Schaufeli & Taris, 2014).

In relation to the direct effects of personal resources, there is some evidence showing that personal resources have a main effect on burnout and work engagement. For example, in a longitudinal study, Xanthopoulou and colleagues (2009a) found that the time one personal resources of self-efficacy and optimism positively related to time two work engagement. A meta-analysis also found evidence that social support has direct effects on reducing work stress (Viswesvaran et al., 1999). These findings highlight the importance of personal resources as contributors to employee and work-related wellbeing. Further supporting the notion that personal resources have a main effect on burnout and work engagement is a study by Van den Broeck and colleagues (2012) which investigated whether humour had a main effect on burnout and work engagement. Their findings indicated that humour can serve as a personal resource in the work context, with humour relating negatively to burnout and positively to work engagement.

Personal resources may be antecedents of job demands and job resources, with personal resources preventing the occurrence of job demands and fostering job resources. That is, if an employee is high in personal resources such as optimism, resilience, and self-efficacy they are more likely to perceive their job resources and support as higher, and

consequently their work will be construed as less demanding. In other words, personal resources influence the way employees perceive their work environment and their wellbeing (Grover et al., 2018; Schaufeli & Taris, 2014).

As with job resources, Bakker and Demerouti (2017) proposed that personal resources can have a direct positive effect on motivation and work engagement, as well as a buffering or moderating effect on the impact of job demands on strain. Personal resources such as optimism, resilience, and self-efficacy may play a similar buffering role to job resources within the JD-R model. Prior research has primarily focused on job-based resources, so consequently there is limited support for this proposition.

Additionally, personal resources have been modelled as mediators in the relationship between job characteristics and wellbeing (Schaufeli & Taris, 2014). Supporting the theory of personal resources as mediators, Xanthopoulou and colleagues (2007) found that the personal resources of self-efficacy, organisation-based self-esteem, and optimism partially mediated the positive relationship between job resources (autonomy, colleague support, supervisory coaching, and opportunities for professional development) and work engagement. Llorens and colleagues (2007) also provided support for this theory with their longitudinal study of university students, finding that the personal resource of efficacy beliefs mediated the relationship between task-based job resources (comprised of control around time spent on a task, and how to do a task) and task engagement.

Xanthopoulou and colleagues (2007) also investigated the role of the personal resources of self-efficacy, organisational-based self-esteem, and optimism in predicting work engagement and exhaustion. Contrary to expectations based on findings with job resources, these personal resources did not offset the relationship between job demands and exhaustion. Instead, it was found that personal resources partially mediated the relationship between job resources and work engagement.

The combination of personal resources and job resources may be the most powerful in reducing the adverse impact of job demands on employee wellbeing (Van den Broeck et al., 2013). As personal resources are a relatively recent addition to the JD-R model, there is limited evidence for this theory. However, Fernet and colleagues (2004) found that the combination of motivation and job resources was important, with their research concluding that job control moderated the detrimental effects of job demands in predicting emotional exhaustion and depersonalisation only for employees high in the personal resource of work self-determination. In addition, they found that job control increased the strength of the relationship between job demands and feelings of personal accomplishment, but again only for employees with high levels of work self-determination. Similarly, Meier and colleagues (2008) used the framework of the Job Demand-Control model to investigate job control and personal characteristics that relate to exercising control. Their research found that self-efficacy and internal locus of control were necessary personal resources in order for the job resource of job control to mitigate the health-impairing effect of job demands on feelings of strain and musculoskeletal pain. On the other hand, Meier and colleagues (2008) found that for people who had an external locus of control, job control actually predicted worse employee wellbeing.

JD-R Model Applicability and Validity

The JD-R model has been applied to thousands of organisations and contexts around the world (for overviews and meta-analyses see Bakker & Demerouti, 2017; Bakker et al., 2014; Crawford et al., 2010; Lesener et al., 2019; Schaufeli & Taris, 2014). The model has been validated across a diverse range of occupations, such as teachers (Bakker et al., 2007), police officers (Hu et al., 2016), dentists (Hakanen et al., 2005; Hakanen, Schaufeli, et al., 2008), nurses (Demerouti et al., 2000), call centre workers (Bakker et al., 2003), university academics (Boyd et al., 2011), and fast-food employees (Xanthopoulou et al., 2009b). The

vast range of professions and heterogeneous samples that the JD-R model has been successfully applied to demonstrates the robustness and generalisability of the model (Korunka et al., 2009; Van Ruysseveldt et al., 2011). The model has been utilised and validated around the world with studies from countries such as Australia (Boyd et al., 2011), Belgium (Van den Broeck et al., 2008), China (Hu et al., 2011), Finland (Hakanen, Schaufeli, et al., 2008), Nigeria (Karatepe & Olugbade, 2009), and many more. The model has also been found to be robust across the demographics of gender and age (Korunka et al., 2009). Furthermore, the core assumptions of the JD-R model have been validated with longitudinal evidence in a meta-analytic review by Lesener and colleagues (2019).

In summary, the JD-R model has developed into a multidimensional model, encompassing dual pathways that were initially conceptualised as separate processes, however have since been found to interact. Although the JD-R model has been expanded from the original version proposed by Demerouti and colleagues (2001), the model remains parsimonious and able to include a wide range of job demands, diverse resources, and various wellbeing measures and organisational outcomes. By broadly classifying work characteristics as either a demand or a resource, the model can easily be applied to any work environment and tailored to specific roles and occupations within an organisation. As such, the JD-R model represents a heuristic and flexible way of thinking about how job and personal factors may relate to employee wellbeing and organisational outcomes (Schaufeli & Taris, 2014). The parsimonious and flexible nature of the model are the primary reasons the JD-R model has achieved its popularity within occupational psychology research (Schaufeli & Taris, 2014).

Chapter Two: Work Related Stress and Wellbeing in the Military

Demands and resources may be specific to a task (e.g., task interruptions or task feedback), a team (e.g., team pressure or team dynamic), social relations (e.g., social support or emotionally draining encounters), or work more generally (Van den Broeck et al., 2013). For example, having continued access to appropriate job tools is a crucial job resource, although which tools are relevant varies between occupations, with a wheelbarrow likely being of great use to a labourer but not to a dentist. This exemplifies that although the broad categories of demands and resources operate the same across contexts, the exact demands and resources at play will depend on both the specific occupation and the organisation an employee works within. As such, workplace stress and wellbeing have been widely studied in an array of occupational contexts, although published studies within the military working environment are far fewer. In the military literature, there has been more investigation of job stress in regards to deployments, combat exposure, and the threat of bodily harm than the more routine job stressors of long work hours, shift work, and work overload (Anand et al., 2013). While deployment inarguably poses a potentially dangerous and complex environment that can cause stress, job stress can also occur among personnel who have not experienced deployment or combat.

There is a broad array of job tasks and occupations within military organisations, with personnel completing vastly different activities depending on their role. While individual experience of military work may be very different across roles, it is likely that high workloads, long work hours, and shift work are common job stressors. If unmanaged, job stressors may begin to have a detrimental impact on employee wellbeing and effectiveness, with research highlighting that employees with poor wellbeing tend to be less effective at work (Hemp, 2004; Sears et al., 2013). In a military environment this is of particular significance, as an ineffective employee could be placing themselves and others in serious

danger in situations where a small mistake could result in harmful or life-threatening consequences.

Furthermore, work stress and employee wellbeing are linked to employee turnover (Amin & Akbar, 2013; Coetzee & Oosthuizen, 2017; de Croon et al., 2004; Demerouti et al., 2001), which has been highlighted as an important issue for all organisations. There are distinct features of military organisations that make retaining personnel paramount. It is essential to have skilled, fully trained, and prepared personnel across the ranks at all times, and employee turnover can have a detrimental impact on military readiness. Military organisations have personnel with very specific training and skillsets that cannot be quickly or easily replaced with civilian counterparts. Accordingly, the military relies heavily on its own people to achieve operational and daily outcomes. Training military personnel is also time-intensive and costly: in the U.S. Army it is estimated that each soldier who must be trained to replace another costs between $54,000 and $73,000 USD (Harms et al., 2013). Additionally, it can take around seven years for some military personnel to become fully qualified in their trade (Dupré & Day, 2007). Employee turnover can also have a personal impact, for example personnel may be posted into another role and or location at short notice, without the opportunity to make family arrangements, or may be posted into a role that is outside of their trade if there are no other suitable candidates to fill the role. Although the importance of retaining military personnel is clear, research with U.S. active-duty soldiers found that turnover intention is a large issue, with over 42% of U.S. active-duty soldiers reporting that they intend to leave once their current obligation is complete (Mental Health Advisory Team 6, 2009). In summary, it is vitally important to have an understanding of how to maintain the wellbeing of military personnel, and the factors that contribute to their retention. This can be achieved by investigating the impacts of job demands and resources within military work.

Research has found that measures of employee wellbeing are related to employee turnover intention (Bakker et al., 2003; Demerouti et al., 2001). The dual processes of the JD-R model propose that strain phenomena (e.g., burnout and psychological distress) are linked to increased turnover intention (de Croon et al., 2004), and positive employee wellbeing phenomena are linked to reduced employee turnover intention (Bakker et al., 2003; Demerouti et al., 2001). For example, Coetzee and Oosthuizen (2017) found that flourishing was linked to lower employee turnover intentions, de Croon and colleagues (2004) found that psychological strain was linked to increased employee turnover, and Amin and Akbar, (2013) found a negative correlation between psychological wellbeing and turnover intention. Therefore, based on the JD-R model and existing research it is hypothesised that:

Hypothesis 1A: Turnover intention will be positively related to psychological distress.

Hypothesis 1B: Turnover intention will be negatively related to flourishing.

Hypothesis 1C: Turnover intention will be negatively related to wellbeing.

Military Job Demands and Resources

Along with the abundance of research investigating the military job demands of deployments and combat exposure, some research has investigated military job demands and resources more generally. For example, Spielberger and Reheiser (1994) compared occupational stress amongst individuals employed in university, corporate, and senior military roles. They found that corporate employees reported more perceived job stress than the other groups, while military personnel reported experiencing all job stress events more frequently than university and corporate employees. The finding that military personnel reported frequently experiencing all of the job stress events highlights the importance of going beyond a deployment and combat focus when conducting occupational stress research among military personnel. Similarly, research with U.S. Marines returning from deployments found that non-combat stressors such as problems with leadership, long deployments,

problems communicating back home, and lack of time off were more strongly linked with PTSD symptoms than combat exposure (Booth-Kewley et al., 2010). Unmanaged non-combat work stress can have a significant detrimental impact, as Pflanz (2001) found that amongst a sample of military mental health outpatients primarily comprised of U.S. Air Force personnel, almost half reported non-combat related work stress as a significant contributor to the onset of their mental illness.

Research investigating the job demands of workload, hours worked, and shift work among military samples is outlined below, along with a brief outline of military research regarding the beneficial and protective effects of personal resources (resilience and social support) and job resources (leadership, colleague support and unit cohesion).

Workload

A significant stressor for military personnel is workload. In a study of U.S. Air Force personnel, at least 30% of the sample listed work overload as the main source of their job stress (Pflanz & Ogle, 2006). Likewise, a greater workload or work overload was associated with greater strain among U.K. Navy personnel (Bridger et al., 2009), and military chaplains (Tremblay & Messervey, 2011), and greater psychological distress in the Australian Navy (McDougall & Drummond, 2010). In the Netherlands Army, qualitative work overload that related to work complexity predicted poor work ability (Goedhard & Goedhard, 2005). Similarly, in the Malaysian Navy, having a heavy workload and high quantity of work likely to interfere with work quality predicted occupational stress (Mohd Bokti & Abu Talib, 2009).

Hours Worked

Long working hours are also a common stressor for military personnel. In a study of U.S. Air Force personnel, at least 30% of the sample listed long work hours as a source of their job stress (Pflanz & Ogle, 2006), and more hours worked per week were found to be a predictor of suicidal ideation in another study of U.S. Air Force personnel (Langhinrichsen-

Rohling et al., 2011). A study of South African Defence Force Nurses also found that long working hours were one of the most commonly reported work stressors (van Wijk, 1997).

Shift work

Another significant non-deployment-related stressor is shift work. Military organisations require personnel for some jobs 24 hours a day, seven days a week, and consequently employees are often organised to work days, nights, and weekends on a roster or shift basis. Shift work has been associated with increased stress in military police officers in Brazil (França et al., 2011), and rotating shifts related to greater turnover intention in Dutch military police (Demerouti et al., 2004).

Based on this existing research it is hypothesised that:

Hypothesis 2A: Job demands (hours worked, shift work, and perceived unmanageable workload) will be positively related to psychological distress.

Hypothesis 2B: Job demands (hours worked, shift work, and perceived unmanageable workload) will be negatively related to flourishing.

Hypothesis 2C: Job demands (hours worked, shift work, and perceived unmanageable workload) will be negatively related to wellbeing.

Social Support

Social support is an important personal resource in most contexts, including in the military. There is an abundance of research on PTSD with military personnel, with numerous studies, including meta-analyses and reviews, finding that social support is strongly related to less severe PTSD symptoms among military personnel (Brewin et al., 2000; Charuvastra & Cloitre, 2007; Ozer et al., 2003; Whealin et al., 2015). Meta-analyses also provide evidence that lack of social support is the largest risk factor for developing PTSD following a traumatic experience (Brewin et al., 2000). The protective effects of social support against PTSD have been found to remain even after controlling for factors such as coping style

(Solomon et al., 1988). Research with British military personnel also found that perceived social support was associated with better psychological wellbeing and job satisfaction (Limbert, 2004). However, it is important to note that social support is a complex issue with various factors to be considered, such as the source, availability, and use of support. For example, research has shown that the source of support may be important in some circumstances, as previous research with a sample of New Zealand Defence Force trainees found that support from instructors reduced the difficulty that trainees had coping, while support from external sources such as friends and family had the paradoxical effect of increasing difficulty in coping with military training (Overdale & Gardner, 2012).

Team-based Job Resources - Unit Cohesion and Colleague Support

A similar construct to social support, yet more specific to the military work environment, is unit cohesion. This is the unity that service members feel in regards to interpersonal relationships and task orientation with the other people in their unit. Social support from colleagues in the form of unit cohesion was found to be positively associated with less stress in U.S. military personnel (Mitchell et al., 2011). Conversely, conflict with co-workers was associated with increased stress and depression among U.S. Air Force personnel (Pflanz & Ogle, 2006). Unit cohesion has been associated with lower PTSD severity and depression among U.S. Marines returning from Iraq (Armistead-Jehle et al., 2011), and among U.S. Air Force medical personnel even after controlling for war zone stress exposure (Dickstein et al., 2010). Similarly, Brasher and colleagues (2010) found that the majority of Royal Navy submariners were satisfied with their colleagues' support, however the minority that reported lacking colleague support were more likely to suffer from stress. In addition, research with Nigerian military personnel found that workplace support moderated (strengthened) the positive relationship between perceived work life balance and flourishing (Ujoatuonu et al., 2019).

Resilience

Resilience can be defined as a person's ability to recover or bounce back from stress (B. W. Smith et al., 2008). Resilience increases the ability of individuals to adapt and to and cope with stressors, adversity, and traumatic experiences (B. W. Smith et al., 2008). Resilience has been found to have an important role in protecting against psychological distress symptoms, including in military contexts (Pietrzak et al., 2010). Research has found that resilience is negatively associated with PTSD severity among military populations (Pietrzak et al., 2010; Pietrzak et al., 2009; Whealin et al., 2015). Zang and colleagues (2017) combined resilience, social support, and unit cohesion as a single construct which they called personal resources, and found that greater personal resources were associated with lower PTSD severity among military personnel seeking PTSD treatment.

Leadership

Another work-related resource that is important within the military context is leadership. Research with a U.S military sample found that perceived supervisor support was related to higher wellbeing and lower turnover intentions of personnel (Dupré & Day, 2007). Furthermore, a study with naval cadets investigated the effects of transformational leaders, a leadership style defined by four behavioural components of idealised influence, inspirational motivation, individual consideration, and intellectual stimulation (Breevaart et al., 2014). Transformational leaders foster performance by creating an emotional attachment of respect and trust with followers, as well as fostering collective commitment to the cause. Findings showed that transformational leaders had a positive effect on the naval cadets' daily work engagement. Transformational leaders improved work engagement by creating an abundance of job resources that the cadets could utilise to deal with their job challenges.

Based on this research, it is hypothesised that:

Hypothesis 3A: Job resources (self-reported job resources and perceptions of leadership) and personal resources (resilience and social support) will be negatively related to psychological distress.

Hypothesis 3B: Job resources (self-reported job resources and perceptions of leadership) and personal resources (resilience and social support) will be positively related to flourishing.

Hypothesis 3C: Job resources (self-reported job resources and perceptions of leadership) and personal resources (resilience and social support) will be positively related to wellbeing.

Based on the JD-R model and literature finding that resources buffer the detrimental effects of job demands (Bakker et al., 2005), it is hypothesised that job resources (self-reported job resources and perceptions of leadership) and personal resources (resilience and social support) will moderate the relationship between job demands and psychological distress. Specifically, it is hypothesised that:

Hypothesis 4A: Self-reported job resources will moderate the relationship between job demands and psychological distress, such that the relationship between demand and distress will be reduced when self-reported job resources are high.

Hypothesis 4B: Perceptions of leadership will moderate the relationship between job demands and psychological distress, such that the relationship between demand and distress will be reduced when perceptions of leadership are high.

Hypothesis 4C: Resilience will moderate the relationship between job demands and psychological distress, such that the relationship between demand and distress will be reduced when resilience is high.

Hypothesis 4D: Social support will moderate the relationship between job demands and psychological distress, such that the relationship between demand and distress will be reduced when social support is high.

Grounded in the JD-R model's health impairment pathway, previous research has found that job demands lead, via burnout, to employee turnover intentions (e.g., Hu et al., 2011). Similarly, Hakanen and colleagues (2006) found that burnout mediated the effect of job demands on ill-health, and de Croon and colleagues (2004) found that psychological strain (fatigue and need for recovery after work) mediated the relationship between job demands and employee turnover. In line with the JD-R model and this existing research, it is hypothesised that:

Hypothesis 5: Psychological distress will mediate the relationship between job demands and turnover intention.

Based on the motivational pathway of the JD-R model, research has found that measures of positive employee wellbeing have mediated the relationship between job resources and turnover intention. For example, work enjoyment fully mediated the negative relationship between job resources and employee intentions to retire early (Schreurs et al., 2011). Demerouti and colleagues (2001) also found that job resources predicted work engagement, and that work engagement mediated the relationship between job resources and turnover intention. Similarly, Bakker and colleagues (2003) found that commitment and dedication mediated the relationship between job resources and turnover intentions. Therefore, based on JD-R theory and research, it is hypothesised that:

Hypothesis 6A: Flourishing will mediate the relationship between self-reported job resources and turnover intention.

Hypothesis 6B: Flourishing will mediate the relationship between perceptions of leadership and turnover intention.

Hypothesis 6C:Flourishing will mediate the relationship between resilience and turnover intention.

Hypothesis 6D: Flourishing will mediate the relationship between social support and turnover intention.

Hypothesis 7A: Wellbeing will mediate the relationship between self-reported job resources and turnover intention.

Hypothesis 7B: Wellbeing will mediate the relationship between perceptions of leadership and turnover intention.

Hypothesis 7C: Wellbeing will mediate the relationship between resilience and turnover intention.

Hypothesis 7D: Wellbeing will mediate the relationship between social support and turnover intention.

Demographic Differences in Military Wellbeing

Research that has investigated military job stress in relation to wellbeing and mental health outcomes such as PTSD and psychological distress has shown some common group level differences. Studies of military samples from different countries have frequently found mental health and wellbeing-related differences related to gender, rank, age, service, and relationship status. Although research with a large U.S. military sample found that the overall mental health of their personnel was favourable in comparison to the general U.S. population, it was noted that some subpopulations within their sample had a greater likelihood of some mental disorders (Riddle et al., 2007). These common demographic and group differences are discussed below as they are important to be considered alongside job demands and resources in their relationship to employee wellbeing.

Research investigating gender differences in wellbeing-related measures in military populations have yielded mixed results. There are numerous studies that have found being

female is associated with a greater likelihood of some mental disorders (e.g., depression and anxiety) (Hourani et al., 2015; Polusny et al., 2014; Riddle et al., 2007; T. C. Smith et al., 2008), including psychological distress in a post-deployment New Zealand Defence Force sample (Morrison, 2018). A meta-analysis investigating PTSD risk factors also identified that female personnel were more likely to suffer from PTSD symptoms than male personnel (Xue et al., 2015). Conversely, there is research acknowledging that while gender differences in mental health generally exist, resilience to combat related stress and the effects of deployment are similar for men and women (Rona et al., 2007; Vogt et al., 2011; Woodhead et al., 2012).

Military rank has been found to be related to levels of psychological distress, with several studies and a meta-analysis finding that commissioned officers generally have less risk of depression and PTSD compared to enlisted personnel or non-commissioned officers (Golenbock et al., 2017; T. C. Smith et al., 2008; Wells et al., 2010; Xue et al., 2015). This relationship has been found to remain even after adjusting for levels of reported job strain (Fear et al., 2009). Research with the Australian Defence Force found that, compared to commissioned officers, non-commissioned officers were more likely to meet the criteria for an anxiety disorder (Van Hooff et al., 2014). Research with U.S. Army personnel found that commissioned officers were more likely to report better health than enlisted personnel (Golenbock et al., 2017). Iversen and colleagues (2008) also found that generally being of lower rank was associated with greater PTSD symptoms.

Previous research with military samples has found that age is associated with mental health, whereby younger people tend to have a greater likelihood of some mental disorders (Riddle et al., 2007). Van Wijk (1997) found that military nurses aged between 19 and 25 had a higher incidence of burnout and job stress compared to the older age groups that were studied. The authors proposed that because those in the younger age brackets are likely to be

new to the military and perhaps the location, these personnel may still be developing their social support networks and consequently are particularly vulnerable to job stress. Previous research with a post-deployment New Zealand Defence Force sample also found that even after controlling for rank, age had a significant relationship with psychological distress, with younger personnel reporting greater psychological distress (Morrison, 2018). Likewise, Morrison (2018) also found that while rank initially had a significant relationship with psychological distress, after controlling for age this relationship did not remain. This suggests that age is an important predictor of psychological distress symptoms.

There is a dearth of research comparing the wellbeing of personnel in the Army, Navy, and Air Force services; however, the small amount of existing literature has noted some differences, finding mixed results across studies and countries. Some research has found that Army personnel tend to be more likely to have PTSD symptoms than the other services (Riddle et al., 2007; T. C. Smith et al., 2008; Xue et al., 2015). Research with the Australian Defence Force across Army, Navy, and Air Force found that Air Force personnel reported the lowest rates of mental and alcohol disorders, while Army personnel were more likely to meet the criteria for either disorder, and Navy had a higher prevalence of alcohol disorders compared to the Air Force (Van Hooff et al., 2014). Contrary to the research findings that Army personnel report poorer mental wellbeing than the other services (Riddle et al., 2007; T. C. Smith et al., 2008; Xue et al., 2015), research with a post-deployment New Zealand Army, Navy, and Air Force sample found that Navy personnel reported greater levels of psychological distress than Army and Air Force personnel, while Army and Air Force personnel did not significantly differ in reports of psychological distress (Morrison, 2018). Morrison (2018) proposed that this may be because there is little research comparing the services, and the impact of Navy deployments on psychological wellbeing is both underestimated and less understood.

Research looking at risk factors for PTSD in the U.K. Armed Forces found that single personnel (single, divorced, widowed, separated) were more likely to have PTSD symptoms than personnel in a relationship (either married or cohabitating) (Iversen et al., 2008). Similarly, previous research with New Zealand Defence Force personnel found that single personnel reported higher levels of psychological distress post deployment compared to personnel in a relationship (Morrison, 2018). Overall, this research indicates that having a partner can be a protective factor for symptoms of psychological distress, whereas being single may be considered a risk factor for such symptoms. Being in a happy relationship may be a source of positivity and social support which has consistently been linked to better health and wellbeing outcomes (Loving & Slatcher, 2013).

The Present Study

The New Zealand Defence Force

The New Zealand Defence Force employs over 15,000 personnel, including approximately 9,639 Regular Force members, 2,693 Reserve Force, and 3,131 civilian staff (New Zealand Defence Force, n.d.). The Regular Force comprises around 4,710 Army, 2,343 Navy, and 2,586 Air Force personnel (New Zealand Defence Force, n.d.). Together, these groups create a "Force for New Zealand" with the aim of protecting New Zealand and contributing to international peace (New Zealand Defence Force, n.d.). Although trained and prepared for combat situations, NZDF personnel may assist with other tasks such as disaster relief, search and rescue operations, maritime surveillance, and security in times of other crises (e.g., the current global pandemic) (New Zealand Defence Force, n.d.). In order to effectively achieve such tasks, the NZDF must prioritise the wellbeing and retention of their personnel.

Overview of this Research

This study aims to help fill the knowledge gap by applying the fundamental theory of JD-R to work in The New Zealand Defence Force, by investigating the impact of general job demands in a broad military population encompassing Army, Navy, Air Force, and civilian personnel. This research utilises the objective job demands of hours worked and shift work, along with the subjective measure of perceived unmanageable workload. Perceived unmanageable workload will be the primary demand focused on in this research. This study also examines personal resources (resilience and social support) and job resources (self-reported job resources and perceptions of leadership) as moderators of the relationship between demands and psychological distress.

Within the JD-R framework, the present research includes both positive and negative indicators of employee wellbeing (flourishing, wellbeing, and psychological distress) and their links to turnover intention. As depicted in Figure 2, this study will examine psychological distress in the health impairment pathway, and flourishing and wellbeing will be examined in the motivational pathway, with turnover intention being the final variable in the model.
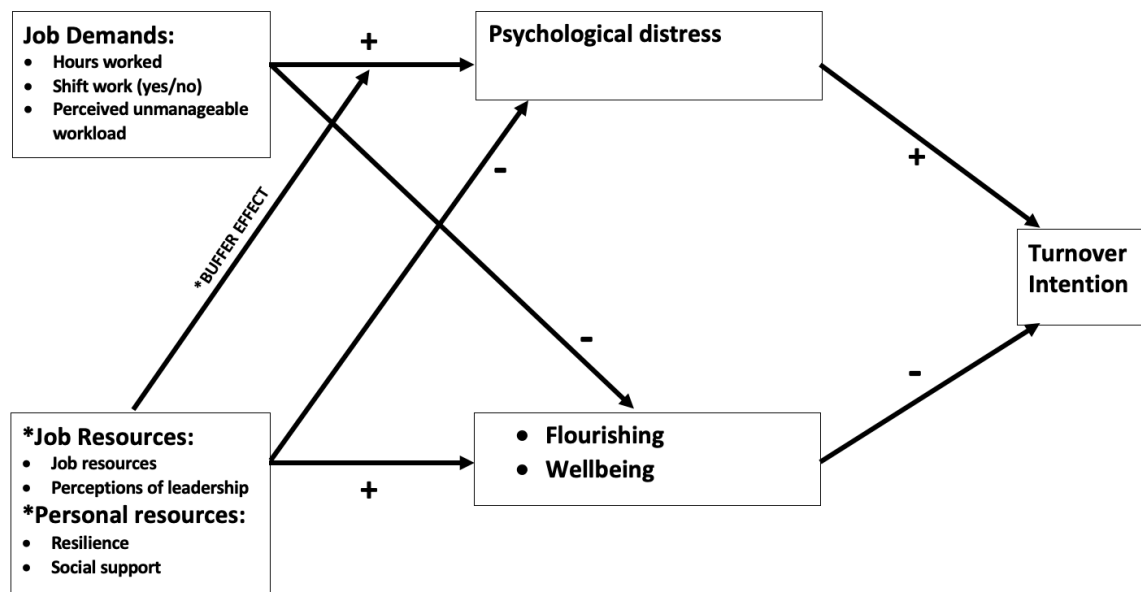
Figure 2. Proposed relationships of this research between job demands, resources,

psychological distress, wellbeing, flourishing, and turnover intention.

Chapter Three: Method

Data were collected via a larger internal 'NZDF Health and Wellbeing Survey' conducted between 23 September and 6 October 2019 (Appendix A). For the present thesis research, a subset of data was drawn from 'Section 1: Overall Wellbeing', 'Section 3: Resilience', 'Section 4: Your Job', and 'Section 7: Demographic Characteristics'. This thesis research was approved by the NZDF Research Ethics Committee and the NZDF Organisational Research Team (Appendix B). Ethics approval was also secured by a Low Risk Notification to the Massey University Human Ethics Committee (Appendix C).

Procedure

The NZDF Health and Wellbeing survey was created for NZDF internal use to gather an accurate and relevant representation of the health and wellbeing across the NZDF, with the aim of informing decisions towards improving the health and wellbeing of all NZDF personnel (Appendix A). All current NZDF employees including civilian, reserve, contractor and regular force personnel were invited via an internal email sent by the Director of Defence Health to participate in the online survey (Appendix D). Recruits in training and deployed personnel not on ships were not included. Personnel who had limited or no access to the internet were invited to complete a paper version of the same survey. The first page of the survey provided information on the purpose of the survey and informed participants that no personal identifiers would be captured, data would be stored securely, and that the survey was voluntary and anonymous. No survey questions were compulsory. Participants were advised again during the collection of demographic data that they were free to skip any questions they were uncomfortable answering or that they believed could compromise their anonymity. On completion of the survey, a list of internal NZDF and external support resources was provided to all participants. Participants were given some feedback regarding their scores on selected scales and encouraged to seek help if their scores indicated they may

be at risk. Those who completed the online version of the survey received automated messages tailored to their score range, while those who completed a paper copy were provided with self-score information to interpret their scores and where to seek help if they wished.

Participants

Data for this thesis were extracted by the NZDF Organisational Research Team from the larger data set. The dataset provided for this thesis comprised 4,103 responses. A response rate was not available as no information was provided on the initial number of personnel surveyed. The thesis dataset included only data from regular force and civilian personnel, as data from contractors, civilian-ex-military, and reservist personnel had been removed. Seventeen cases with missing data on ten or more questions were removed, leaving 4,086 participants.

Gender response options included three categories of male, female, and other; however, due to an extremely small sample size (n = 10) the 'other' category will not be used in gender-based analyses and will be considered as missing data.

Age was measured with seven response categories. However, due to a small sample size of personnel aged less than 20 (n = 54), this category was combined to form the '17 – 24' category used in analysis.

Current rank was recorded with seven response options of:

(1) Private – Corporal / Ordinary Rate – Leading Hand / Leading Aircraftsman – Corporal,

(2) Sergeant – Warrant Officer Class One / Petty Officer – Warrant Officer / Sergeant – Warrant Officer,

(3) Officer Cadet – Captain / Midshipman – Lieutenant / Pilot Officer – Flight Lieutenant,

(4) Major / Lieutenant Commander / Squadron Leader,

(5) Lieutenant Colonel / Commander / Wing Commander,

(6) Colonel and above, and

(7) not applicable.

For analysis, rank was recoded into four groups ordered by leadership equivalence across the three services:

(1) "Junior non-commissioned officers" comprised those with ranks Private – Corporal / Ordinary Rate – Leading Hand / Leading Aircraftsman – Corporal,

(2) "Senior non-commissioned officers" comprised those with ranks Sergeant – Warrant Officer Class One / Petty Officer – Warrant Officer / Sergeant – Warrant Officer,

(3) "Junior officers" comprised those with the ranks Officer Cadet – Captain / Midshipman – Lieutenant / Pilot Officer – Flight Lieutenant, and

(4) "Senior Officers" comprised those with the ranks Major / Lieutenant Commander / Squadron Leader and all higher ranks above these.

Demographic data are reported in Table 1. The final sample had more male than female participants, and civilian personnel comprised almost a third of the sample. Of regular force personnel there were more Army than Navy or Air Force participants. All participants were at least 17 years of age, as this is the minimum age of employment in the NZDF. Forty-three percent of the sample were aged between 30 and 49 years old. Of the regular force personnel, the largest proportion were junior non-commissioned officers. The majority of participants were in a relationship rather than single, did not complete shift work, and worked less than 51 hours per week.

Table 1

Demographic data of study participants

	N	%
Gender		
Male	2825	69.1%
Female	1203	29.4%
Missing	58	1.4%
Service		
Army	1150	28.1%
Air Force	824	20.2%
Navy	688	16.8%
Civilian	1318	32.3%
Missing	106	2.6%
Age		
17 – 24 years	545	13.3%
25 – 29 years	577	14.1%
30 – 39 years	878	21.5%
40 – 49 years	887	21.7%
50 – 59 years	798	19.5%
60 years and over	351	8.6%
Missing	50	1.2%
Rank		
Junior non-commissioned officers	1008	24.7%
Senior non-commissioned officers	763	18.7%
Junior Officers	341	8.3%
Senior Officers	453	11.1%
Civilian (no rank)	1318	32.3%
Missing	203	4.9%.
Relationship status		
In a relationship	3198	78.3%
Single	885	21.7%
Missing	3	.1%
Shift Work		
Yes	604	14.8%
No	3477	85.1%
Missing	5	.1%
Hours worked		
40 hours or less	1811	44.3%
41 – 50 hours	1664	40.7%
51+ hours	574	14%
Missing	37	.9%
Total Sample	4086	100%

Measures

Psychological distress

The Kessler Psychological Distress Scale (K10) is a 10-item scale that assesses psychological distress based on symptoms of anxiety and depression and is commonly used for screening, clinical testing, and research purposes (Kessler et al., 2002). This section of the survey opened with the instruction "The following questions ask about how you have been feeling during the last month (4 weeks). Please read each question carefully and then indicate the response that best describes how you have been feeling". Participants answered questions such as "How often did you feel so nervous that nothing could calm you down?" using a five-point Likert-type scale, of (1) "None of the time", (2) "A little of the time", (3) "Some of the time", (4) "Most of the time, and (5) "All of the time". The K10 is usually scored as the total of the ten items, with higher scores indicating an increased likelihood of a mental disorder (Kessler et al., 2002). However, for this study the mean of the ten items was used rather than the sum, to avoid artificially low scores for participants with missing data. Lower mean scores indicate lower levels of distress. The scale yielded a Cronbach's alpha of .91, signifying good internal consistency.

Flourishing

The Flourishing Scale is an eight-item scale to assess self-perceived success in important areas of human functioning such as relationships, self-esteem, optimism, and purpose (Diener et al., 2009). The survey asked participants to "please indicate how much you agree or disagree with the statements", for example "I am competent and capable in the activities that are important to me". Participants responded using a five-point Likert-type scale, of (1) "Strongly disagree", (2) "Somewhat disagree", (3) "Neither agree nor disagree", (4) "Somewhat agree", and (5) "Strongly agree". Scale scores were computed as the mean of

the eight items, with a lower score signifying a lower level of flourishing. The scale yielded a Cronbach's alpha of .91, signifying good internal consistency.

Wellbeing

Te Whare Tapa Whā is a Māori framework of holistic wellbeing (Durie, 1985). The framework is comprised of four cornerstones of health: taha tinana (physical health), taha hinengaro (mental and emotional health), taha whānau (family and social health), and taha wairua (spiritual health). The wellbeing questions based on Te Whare Tapa Whā were designed within the NZDF for use with their personnel. The survey asked participants to "please rate your average levels of wellbeing during the past four weeks in the following four areas" of "Taha tinana (physical health), physical fitness and overall body wellbeing", "Taha wairua (spiritual health), identity, self-awareness, faith, compassion, connection to land and ancestors, joy, and fulfilment", "Taha whānau (family health), social and family connectedness and support", and "Taha hinengaro (mental health), thoughts, feelings, and emotions". Participants responded using a ten-point Likert-type scale, with one being "very low" and ten being "very high". Scale scores were computed as the mean of the four items, with a low score indicating a low level of holistic wellbeing. The scale yielded a Cronbach's alpha of .81, signifying good internal consistency.

Resilience

The Brief Resilience Scale is a six-item scale designed to assess the personal resource of 'resilience', defined as the ability to bounce back or recover from stress (B. W. Smith et al., 2008). The survey asked participants to "Please indicate how much you agree or disagree with the statements", for example "I tend to bounce back quickly after hard times". Participants responded using a five-point Likert-type scale, of (1) "Strongly disagree", (2) "Somewhat disagree", (3) "Neither agree nor disagree", (4) "Somewhat agree", and (5) "Strongly agree". Scale scores were computed as the mean of the six items, with a low score

indicating a low level of resilience. The scale yielded a Cronbach's alpha of .86, signifying good internal consistency.

Perceptions of leadership

Five items were used to create a measure of perceptions of leadership as a job resource. Participants were asked to rate the statements "My direct manager/leader treats everyone fairly", "My direct manager/leader is approachable", "My direct manager/leader treats me with dignity and respect", "My direct manager/leader refrains from improper remarks or comments", and "My direct manager/leader demonstrates command courage if work circumstances require it" using a five-point Likert-type scale of (1) "Strongly disagree", (2) "Somewhat disagree", (3) "Neither agree nor disagree", (4) "Somewhat agree", and (5) "Strongly agree". These questions were developed for internal use by the NZDF. Principle Component Analysis confirmed one factor with an eigenvalue over 1, and inspection of the scree plot also indicated that a single factor solution best fit the data. Scale scores were computed as the mean of the five items, with a high score indicating good perceptions of leadership. The scale yielded a Cronbach's alpha of .93, signifying good internal consistency.

Job resources

Eight items were used to form a measure of self-reported job resources. Participants were asked to rate the items "I am enthusiastic about my job", "I am clear about what is expected of me at work", "I get appropriate recognition for the work I do", "If I have a problem at work I can talk to my boss about it", "My colleagues treat me with dignity and respect", "Members of my team are able to bring up problems and discuss tough issues", "From a safety perspective, I feel supported / enabled to do my job", and "I am; or I feel, excluded by my work colleagues" (reverse coded) using a 5-point Likert-type scale of (1) "Strongly disagree", (2) "Somewhat disagree", (3) "Neither agree nor disagree", (4) "Somewhat agree", and (5) "Strongly agree". The questions measuring job resources were

developed for internal use by the NZDF. Principle Component Analysis identified one factor with an eigenvalue over 1 and inspection of the scree plot also indicated that a single factor solution best fit the data. Scale scores were computed as the mean of the eight items, with a high score indicating greater job resources. The scale yielded a Cronbach's alpha of .85, signifying good internal consistency.

Social support

Perceived availability of social support was measured with a single item: "If I have a problem there is someone I trust that I can talk to about it". Participants responded on a five-point Likert-type scale of (1) "Strongly disagree", (2) "Somewhat disagree", (3) "Neither agree nor disagree", (4) "Somewhat agree", and (5) "Strongly agree".

Hours worked

Hours worked were measured with a single question: "On average how many hours did you work each week, over the last four weeks (average over 1 week)? If you have been on leave during this time, please record your usual average work hours". Participants could choose one of six options "Less than 15 hours", "15 – 30 hours", "31 – 40 hours", "41 – 50 hours", "51 – 59 hours", and "60 + hours". For demographic analyses these were recoded into three groups of "40 hours or less", "41 – 50 hours", and "51 or more hours".

Shift work

Shift work is a categorical variable measured with a single question. Participants were asked "Does your job involve regular shift work, including working at night?" and could respond "yes" or "no".

Perceived unmanageable workload

Four items were used to form a measure of perceived unmanageable workload. One item was taken from the 'Wellbeing' section of the survey and asked participants to rate how much "workload" had been "a concern for you over the past four weeks" using a five-point

Likert-type scale of (1) "Not at all", (2) "A little", (3) "Somewhat", (4) "Quite a lot", and (5) "A great degree". Another three questions were taken from the 'Your Job' section of the survey: "The level of work related stress I experience is acceptable", "I can cope with the pressure of my work", and "My workload is manageable" using a five-point Likert-type scale of (1) "Strongly disagree", (2) "Somewhat disagree", (3) "Neither agree nor disagree", (4) "Somewhat agree", and (5) "Strongly agree". These three items were reverse coded to mirror the negative phrasing of the first item. These questions were developed for internal use by the NZDF. Principle Component Analysis identified a single factor with an eigenvalue over 1, and inspection of the scree plot indicated that a single factor solution best fit the data. Scale scores were computed as a mean of the four items, with low scores reflecting a perceived manageable workload and high scores reflecting a perceived unmanageable workload. The scale yielded a Cronbach's alpha of .85, signifying good internal consistency.

Turnover intention

Turnover intention was measured with a single item: "I intend to leave NZDF within the next 12 months". Participants responded on a five-point Likert-type scale of (1) "Strongly disagree", (2) "Somewhat disagree", (3) "Neither agree nor disagree", (4) "Somewhat agree", and (5) "Strongly agree".

Assumption Testing

Preliminary examination of the data was conducted to ensure that there were no major violations of the assumptions of normality, linearity, and homoscedasticity. Games-Howell tests were used for all ANOVA post-hoc tests because group sizes were often unequal and Levene's tests for homogeneity of variance were often violated. The Games-Howell post-hoc test was used because it remains robust when homogeneity of variance assumptions are not met and group sizes are unequal (Field, 2013, p. 459).

Data Analysis

Analyses were conducted using IBM SPSS Statistics Version 26. Bivariate correlations with scale data used Pearson's *r*, whereas the categorical age variable was analysed with Spearman's rho. Independent samples t-tests were conducted to explore gender, relationship status, and shift work differences. One-way between-groups analysis of variances with Games-Howell post-hoc tests were conducted to explore service, rank, age, and hours worked differences.

For regression analyses categorical variables were dummy coded. For gender, males were coded as 0 and females were coded as 1. For relationship status, single personnel were coded as 0 and personnel in a relationship were coded as 1. For shift work, no was coded as 0 and yes was coded as 1. For regression analyses, the hours worked groups were recoded into two groups of "40 hours or less" (coded as 0) and "41 hours or more" (coded as 1). Rank was dummy coded, with Senior Officers as the reference group (coded as 0).

Hypotheses 2 and 3 were tested using hierarchical regression. The first step in each analysis entered the demographic control variables of gender, relationship status, age, and rank. Entered into the second step were the hypothesised variables of either job demands (hours worked, shift work, and perceived unmanageable workload) or resources (self-reported job resources, perceptions of leadership, resilience, and social support).

Moderated regression analyses were conducted to test Hypothesis 4. The first step required centring the independent and moderator variables prior to analysis, to reduce the impact of multicollinearity (Aiken & West, 1991). Next, the interaction term was created by multiplying the centred independent variable by the centred moderator. In accordance with Baron and Kenny's (1986) recommendations for moderation analysis, regression was then used to test for linear effects. The centred independent variable, centred moderator, and the

dependent variable were entered into a hierarchical regression. Next, the interaction term was entered into the second block of this hierarchical regression to test for moderation.

To test the JD-R based strain and motivation pathways of the model, mediated regression analyses were conducted using the steps stated below (Baron & Kenny, 1986).

1. The dependent variable was regressed onto the independent variable.

2. The mediator was regressed onto the independent variable

3. The dependent variable was regressed onto both the independent variable and the mediator.

Chapter Four: Results

Descriptive Statistics and Correlational Analyses

Bivariate correlation coefficients, means, and standard deviations for scales included in this study are reported in Table 2. Turnover intention was associated with higher levels of psychological distress, greater perceived unmanageable workload, worse perceptions of leadership, and with lower levels of flourishing, wellbeing, resilience, self-reported job resources, and social support. Psychological distress was associated with worse perceptions of leadership, greater perceived unmanageable workload, and lower levels of flourishing, wellbeing, resilience, self-reported job resources, and social support. Flourishing and wellbeing were associated with greater resilience, self-reported job resources, and social support, as well as better perceptions of leadership.

Hypothesis 1A-C

All three components of Hypothesis 1 were supported, as bivariate correlations (Table 2) found that turnover intention was positively associated with psychological distress (Hypothesis 1A), and negatively related to flourishing (Hypothesis 1B) and wellbeing (Hypothesis 1C).

Demographic Differences

Gender and relationship status, service, rank, hours worked and shift work differences in scale variables are reported in Table 3, Table 4, Table 5, and Table 6 respectively.

Due to the large sample size, very small effect sizes yielded statistical significance. As shown by the Cohen's *d* values (Table 3 & Table 6) and the eta squared values (Table 4, Table 5, Table 6), all but two of the differences were below the medium effect size guidelines of 0.5 and 0.06 for Cohen's *d* and eta squared respectively (Cohen, 1988). Furthermore, while often statistically significant, few had more than a 0.3 difference on a five-point or ten-point scale, meaning that these demographic differences would likely be too small to be of practical

significance. Nonetheless, differences that met the Cohen's d value of 0.2 and the eta squared value of .01 indicating at least a small effect are discussed below.

In relation to gender (Table 3), female personnel scored slightly higher than male personnel in social support, flourishing and psychological distress, while male personnel had slightly higher resilience scores than female personnel.

Personnel in a relationship scored somewhat lower in psychological distress and slightly higher in social support, self-reported job resources, resilience, wellbeing, and flourishing compared to personnel not in a relationship (Table 3).

As shown in Table 4, Army personnel reported somewhat lower flourishing scores and self-reported job resources compared to all other services. Air Force personnel rated their job resources slightly higher than civilian personnel, while Army personnel rated their job resources lower than all other services. Air Force and Navy personnel perceived their leadership as comparatively better than Army and civilian personnel. Civilians scored somewhat lower in resilience compared to all other services.

Senior Officers' flourishing scores were almost 0.5 higher (on a five-point scale) than Junior NCOs' flourishing scores (Table 5). Senior NCOs scored somewhat in lower psychological distress than Junior NCOs, and Senior Officers scored lower in psychological distress than all other rank groups. Rank had a small relationship to wellbeing, with Senior Officers reporting greater wellbeing than all other rank groups. Senior Officers scored higher in resilience than both Junior and Senior NCOs, while Junior NCOs scored lower in resilience than Junior Officers and Senior NCOs. Rank had a small relationship with perception of leadership, with Junior NCOs perceiving their leadership as worse than all other rank groups. Rank had a small relationship with self-reported job resources, as Senior Officers rated their job resources higher than all other rank groups, and Junior NCOs rated their job resources lower than all other rank groups. Rank had a small relationship to

perceived unmanageable workload, with Junior NCOs scoring lower than all other rank groups, meaning Junior NCOs perceived their workload as the most manageable of the rank groups. Senior Officers reported somewhat greater social support than both Junior and Senior NCOs. Rank also had a small relationship with turnover intention, as Senior Officers had less turnover intention compared to Junior NCOs, and Junior Officers had less turnover intention than both Junior and Senior NCOs.

Hours worked was related to perceived unmanageable workload and resilience (Table 6). Those who worked more hours per week had higher perceived unmanageable workload and resilience scores.

Personnel who did shift work scored slightly higher in psychological distress, perceived their leadership as worse, and had lower self-reported job resources than those who did not do shift work (Table 6).

Despite the small effect sizes, rank, age, gender, and relationship status were included as control variables for hypothesis testing.

Table 2

Bivariate correlation coefficients, means, and standard deviations for scales included in this study

		1	2	3	4	5	6	7	8	9
1	Psychological distress	--								
2	Flourishing	-.55***	--							
3	Wellbeing	-.58***	.56***	--						
4	Resilience	-.48***	.51***	.40***	--					
5	Leadership	-.29***	.30***	.27***	.18***	--				
6	Job resources	-.49***	.55***	.45***	.33***	.67***	--			
7	Unmanageable workload	.42***	-.31***	-.44***	-.27***	-.34***	-.51***	--		
8	Social support	-.34***	.50***	.37***	.28***	.22***	.36***	-.25***	--	
9	Turnover intention	.26***	-.26***	-.27***	-.14***	-.25***	-.41***	.30***	-.13***	--
10	Age	-.17***	.19***	.06***	.05***	.08***	.14***	<.01	.01	-.02
	M (SD)	1.78 (.68)	3.98 (.75)	6.25 (1.75)	3.70 (.81)	4.19 (.94)	3.92 (.76)	2.32 (.93)	4.24 (.97)	2.37 (1.40)

*** p < .001

Table 3

Gender and relationship status differences in scale variables

	Female M (SD)	Male M (SD)	t	d	In a relationship M (SD)	Not in a relationship M (SD)	t	d
Psychological distress	1.85 (.68)	1.75 (.67)	-4.28***	.15	1.75 (.65)	1.90 (.75)	5.34***	.21
Flourishing	4.07 (.70)	3.94 (.76)	-4.93***	.17	4.05 (.73)	3.74 (.77)	-10.63***	.41
Wellbeing	6.17 (1.78)	6.29 (1.72)	2.02*	.07	6.32 (1.74)	6.01 (1.76)	-4.56***	.17
Resilience	3.57 (.81)	3.75 (.80)	6.75***	.23	3.73 (.81)	3.58 (.78)	-4.92***	.19
Leadership	4.10 (1.03)	4.23 (.89)	3.66***	.13	4.21 (.93)	4.12 (.97)	-2.38*	.09
Job resources	3.89 (.80)	3.94 (.73)	2.22*	.08	3.95 (.75)	3.81 (.76)	-4.99***	.19
Unmanageable workload	2.31 (.94)	2.31 (.92)	.03	< .01	2.33 (.94)	2.26 (.88)	-2.07*	.08
Social support	4.41 (.86)	4.17 (1.00)	-7.50***	.26	4.30 (.92)	4.00 (1.08)	-8.27***	.30
Turnover intention	2.32 (1.38)	2.38 (1.40)	1.16	.04	2.37 (1.40)	2.35 (1.37)	-.25	.02

*$p < .05$, ** $p < .01$, *** $p < .001$

Table 4

Service differences in scale variables

	Army	Navy	Air Force	Civilian	ANOVA	(*df*)	η²
	M (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*F*		
Psychological distress	1.80 (.72)[a]	1.84 (.68)[a]	1.72 (.58)[b]	1.78 (.68)[a, b]	4.28**	(3, 3976)	.003
Flourishing	3.88 (.80)	3.97 (.68)[a]	4.00 (.69)[a]	4.04 (.76)[a]	9.38***	(3, 3976)	.007
Wellbeing	6.25 (1.81)[a]	6.23 (1.73)[a]	6.24 (1.56)[a]	6.27 (1.82)[a]	.10	(3, 3975)	< .001
Resilience	3.79 (.79)[a]	3.72 (.77)[a]	3.73 (.78)[a]	3.58 (.85)	15.11***	(3, 3976)	.011
Leadership	4.13 (.96)[a]	4.30 (.86)[b]	4.27 (.83)[b]	4.12 (1.03)[a]	8.71***	(3, 3972)	.007
Job resources	3.83 (.78)	3.96 (.69)[a, b]	4.02 (.67)[b]	3.93 (.81)[a]	11.19***	(3, 3976)	.008
Unmanageable workload	2.40 (.93)[a]	2.37 (.93)[a, b]	2.28 (.84)[b]	2.26 (.97)[b]	5.26***	(3, 3976)	.004
Social support	4.17 (1.01)[a]	4.23 (.99)[a, b]	4.33 (.86)[b]	4.25 (.97)[a, b]	4.58**	(3, 3969)	.003
Turnover intention	2.44 (1.43)[a]	2.41 (1.38)[a]	2.21 (1.30)[b]	2.36 (1.40)[a, b]	4.96**	(3, 3972)	.004

* *p* < .05, ** *p* < .01, *** *p* < .001, Means within a row that have no superscript in common are significantly different from each other, *p* < .05.

Table 5

Rank differences in scale variables

	Junior NCO M (SD)	Senior NCO M (SD)	Junior Officer M (SD)	Senior Officer M (SD)	ANOVA F	(df)	η^2
Psychological distress	1.91 (.73)[a]	1.73 (.65)[b]	1.80 (.67)[a, b]	1.57 (.50)	28.91***	(3, 2561)	.033
Flourishing	3.76 (.75)	3.98 (.73)[a]	3.98 (.70)[a]	4.23 (.64)	53.76***	(3, 2561)	.059
Wellbeing	6.15 (1.70)[a]	6.10 (1.77)[a]	6.22 (1.66)[a]	6.67 (1.66)	12.07***	(3, 2560)	.014
Resilience	3.61 (.76)	3.80 (.79)[a,]	3.85 (.75)[a, b]	3.96 (.78)[b]	26.10***	(3, 2561)	.030
Leadership	4.07 (.92)	4.30 (.87)[a]	4.26 (.91)[a]	4.37 (.82)[a]	16.25***	(3, 2561)	.019
Job resources	3.75 (.74)	4.01 (.70)[a]	3.89 (.74)[a]	4.17 (.64)	41.74***	(3, 2561)	.047
Unmanageable workload	2.25 (.84)	2.42 (.92)[a]	2.42 (.89)[a]	2.43 (.97)[a]	7.55***	(3, 3561)	.009
Social support	4.18 (.98)[a]	4.21 (.99)[a]	4.26 (.93)[a, b]	4.42 (.86)[b]	7.46***	(3, 2554)	.009
Turnover intention	2.49 (1.41)[a]	2.38 (1.39)[a, b]	2.10 (1.29)[c]	2.23 (1.35)[b, c]	8.43***	(3, 2560)	.010

* $p < .05$, ** $p < .01$, *** $p < .001$, Means within a row that have no superscript in common are significantly different from each other, $p < .05$.

Table 6

Hours worked and shift work differences in scale variables

	40 hours or less M (SD)	41 -50 hours M (SD)	51 + hours M (SD)	ANOVA F	(df)	η²	Shift work - No M (SD)	Shift work - Yes M (SD)	t	d
Psychological distress	1.75 (.64)ᵃ	1.79 (.68)ᵃ, ᵇ	1.86 (.76)ᵇ	5.31**	(2, 4046)	.003	1.76 (.67)	1.89 (.73)	-3.93***	0.18
Flourishing	3.95 (.74)ᵃ	3.99 (.74)ᵃ	4.03 (.79)ᵃ	2.77	(2, 2046)	.001	3.99 (.75)	3.90 (.73)	3.02**	0.14
Wellbeing	6.34 (1.70)ᵃ	6.21 (1.74)ᵃ, ᵇ	6.05 (1.87)ᵇ	6.95***	(2, 4045)	.003	6.28 (1.75)	6.11 (1.72)	2.14*	0.10
Resilience	3.62 (.82)ᵃ	3.73 (.78)ᵇ	3.85 (.79)ᶜ	18.97***	(2, 2046)	.009	3.70 (.81)	3.69 (.80)	.17	< 0.01
Leadership	4.23 (.90)ᵃ	4.17 (.96)ᵃ, ᵇ	4.11 (1.02)ᵇ	4.20*	(2, 4042)	.002	4.21 (.93)	4.03 (1.00)	4.17***	0.19
Job resources	3.95 (.73)ᵃ	3.90 (.76)ᵃ	3.90 (.80)ᵃ	2.14	(2, 4046)	.001	3.94 (.76)	3.81 (.74)	4.14***	0.18
Unmanageable workload	2.01 (.77)ᵃ	2.47 (.93)ᵇ	2.89 (1.00)ᶜ	255.22***	(2, 4046)	.112	2.30 (.93)	2.41 (.87)	-2.84**	0.13
Social support	4.26 (.95)ᵃ	4.26 (.95)ᵃ	4.11 (1.07)	6.16**	(2, 4039)	.003	4.25 (.97)	4.20 (.95)	1.19	0.05
Turnover intention	2.29 (1.37)	2.41 (1.39)ᵃ	2.48 (1.44)ᵃ	5.91**	(2, 4042)	.003	2.34 (1.39)	2.50 (1.40)	-2.60**	0.12

* $p < .05$, ** $p < .01$, *** $p < .001$, Means within a row that have no superscript in common are significantly different from each other, $p < .05$.

Demands

Hypothesis 2A-C

Hypothesis 2 examined the relationships between the demands of hours worked, shift work, and perceived unmanageable workload to psychological distress (Hypothesis 2A), flourishing (Hypothesis 2B), and wellbeing (Hypothesis 2C). This hypothesis was only partially supported (Table 7).

In relation to psychological distress (Hypothesis 2A), perceived unmanageable workload was a significant predictor in the regression but shift work and hours worked were not. Age, rank, and relationship status were also significant predictors. Together the demographic variables (gender, relationship status, age, and rank) predicted 4% of the variance in psychological distress. Demographics and demands together predicted 24% of the variance in psychological distress.

Hypothesis 2B, examining flourishing, showed an unexpected pattern of results. While perceived unmanageable workload was negatively related to flourishing as expected, higher work hours related to more, not less flourishing, and shift work was not a significant predictor. Gender, relationship status, age, and rank were all significant and together explained 9% of the variance in flourishing. The full model of demographics and demands predicted 21% of the variance in flourishing.

In regards to wellbeing (Hypothesis 2C), perceived unmanageable workload had a negative relationship, however shift work and hours worked were not significant predictors. Relationship status and rank were also significant predictors, with the demographic variables (gender, relationship status, age, and rank) accounting for 2% of the variance in wellbeing. Together the demographics and the demands accounted for 22% of the variance in wellbeing.

Resources

Hypothesis 3A-C

Hypothesis 3 examined the relationships of job resources (self-reported resources and perceptions of leadership) and personal resources (resilience and social support) to psychological distress (Hypothesis 3A), flourishing (Hypothesis 3B), and wellbeing (Hypothesis 3C). Results partially supported this hypothesis (Table 8).

Supporting hypothesis 3A, psychological distress negatively related to self-reported job resources, resilience, and social support, although perceptions of leadership was not a significant predictor. Age was also a significant predictor, with demographic variables (gender, relationship status, age, and rank) predicting 4% of the variance in psychological distress. Together demographics and resources predicted 36% of the variance in psychological distress.

Analysis for flourishing (Hypothesis 3B) yielded some unexpected results. While self-reported job resources, resilience, and social support were all positively related to flourishing, converse to expectation perceptions of leadership was negatively related to flourishing. Gender, relationship status, age and rank were also significant predictors, together accounting for 9% of the variance in flourishing. The full model of demographics and resources predicted 53% of the variance in flourishing.

In relation to wellbeing (Hypothesis 3C), self-reported job resources, resilience, and social support all positively related to wellbeing; however, perceptions of leadership was not a significant predictor. Gender and rank were significant predictors, with demographic variables (gender, relationship status, age, and rank) predicting 2% of the wellbeing variance. Together the demographics and the resources predicted 31% of the variance in wellbeing.

Table 7

Demographic and job demand relationships to psychological distress, flourishing, and wellbeing

DV	Psychological distress					Flourishing					Wellbeing				
IV	*B*	*SE B*	Beta	*F*	Adj. R^2	*B*	*SE B*	Beta	*F*	Adj. R^2	*B*	*SE B*	Beta	*F*	Adj. R^2
Block 1				17.35***	.037				40.04***	.085				7.27***	.015
Gender	.05	.03	.03			.18	.04	.09***			-.15	.09	-.03		
Relationship status	-.06	.03	-.04			.25	.04	.14***			.18	.09	.04*		
Age	-.04	.01	-.09**			.04	.02	.07*			-.02	.04	-.02		
Rank – Junior NCO	.21	.05	.15***			-.37	.05	-.24***			-.50	.13	-.14***		
Rank – Senior NCO	.14	.04	.10***			-.26	.04	-.16***			-.58	.10	-.15***		
Rank – Junior Officer	.15	.05	.07**			-.21	.06	-.09***			-.44	.14	-.09***		
Rank – Senior Officer (reference)	-	-	-			-	-	-			-	-	-		
Block 2				89.05***	.239				76.31***	.211				82.17***	.224
Gender	.03	.03	.02			.19	.03	.10***			-.10	.08	-.02		
Relationship status	-.08	.03	-.05**			.27	.03	.15***			.23	.08	.06**		
Age	-.05	.01	-.10***			.04	.01	.07**			< .01	.03	< .01		
Rank – Junior NCO	.23	.05	.17***			-.37	.05	-.24***			-.56	.12	-.16***		
Rank – Senior NCO	.13	.04	.09***			-.25	.04	-.15***			-.55	.09	-.15***		
Rank – Junior Officer	.12	.05	.06**			-.19	.05	-.09***			-.39	.12	-.08***		
Rank – Senior Officer (reference)	-	-	-			-	-	-			-	-	-		
Shift work	.04	.03	.03			.03	.03	.01			-.04	.08	-.01		
Hours worked	-.04	.03	-.03			.13	.03	.09***			.12	.07	.04		
Unmanageable workload	.34	.01	.46***			-.31	.02	-.37***			-.90	.04	-.47***		

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 8

Demographic, personal resources, and job resources relationships to psychological distress, flourishing, and wellbeing

DV	Psychological distress					Flourishing					Wellbeing				
IV	*B*	*SE B*	Beta	*F*	Adj. R^2	*B*	*SE B*	Beta	*F*	Adj. R^2	*B*	*SE B*	Beta	*F*	Adj. R^2
Block 1				17.25***	.037				40.41***	.085				7.44***	.015
Gender	.05	.03	.03			.17	.04	.09***			-.14	.09	-.03		
Relationship status	-.06	.03	-.04			.25	.04	.14***			.18	.09	.04*		
Age	-.04	.01	-.09**			.03	.02	.06*			-.03	.04	-.02		
Rank – Junior NCO	.22	.05	.16***			-.37	.05	-.25***			-.52	.13	-.15***		
Rank – Senior NCO	.15	.04	.10***			-.26	.04	-.16***			-.59	.10	-.16***		
Rank – Junior Officer	.15	.05	.08**			-.21	.06	-.10***			-.45	.17	-.09***		
Rank – Senior Officer (reference)	-	-	-			-	-	-			-	-	-		
Block 2				144.10***	.360				285.18***	.528				114.92***	.310
Gender	.05	.03	.03			.15	.03	.08***			-.17	.07	.04*		
Relationship status	.02	.03	.01			.13	.03	.08***			-.03	.07	-.01		
Age	-.04	.01	-.08***			.03	.01	.06**			-.03	.03	-.02		
Rank – Junior NCO	< .01	.04	< .01			-.10	.04	-.07*			.01	.11	< .01		
Rank – Senior NCO	.04	.03	.03			-.12	.03	-.07***			-.31	.09	-.08***		
Rank – Junior Officer	.04	.04	.02			-.06	.04	-.03			-.15	.11	-.03		
Rank – Senior Officer (reference)	-	-	-			-	-	-			-	-	-		
Job resources	-.30	.02	-.32***			.43	.02	.42***			.75	.06	.32***		
Leadership	.01	.02	.02			-.07	.02	-.08***			-.01	.04	< -.01		
Resilience	-.28	.02	-.32***			.29	.01	.30***			.56	.04	.25***		
Social support	-.09	.01	-.13***			.18	.01	.23***			.31	.03	.17***		

* $p < .05$, ** $p < .01$, *** $p < .001$

Moderated Regression Analyses

Hypotheses 4A-D

Hypothesis 4 examined the role of resources as moderators of the demands-distress relationships. This hypothesis was partially supported. The only demand to be significantly related to distress in the regression analyses for hypothesis 2 was perceived unmanageable workload, consequently the other demands (shift work and hours worked) were not analysed further.

Figure 3 and Table 9 show that self-reported job resources moderated the relationship between perceived unmanageable workload and psychological distress (Hypothesis 4A): the interaction term was significant. Figure 3 shows that while psychological distress scores were low overall, for those with low self-reported job resources, distress was higher and increased somewhat more rapidly with perceptions of an unmanageable workload, than for those with high resources. This effect was small, and Table 9 shows that the direct effects were stronger than the interaction effect.

A similar finding was evident for hypothesis 4B, which examined perceptions of leadership as a moderator. As with self-reported job resources, perceptions of leadership showed a significant interaction term (Table 9 and Figure 4). Where there were low (i.e., worse) perceptions of leadership, distress was higher and increased slightly more with perceptions of unmanageable workload, than when there were high perceptions of leadership but the moderation effect was small compared to the direct effects.

Resilience was similar (Hypothesis 4C; Table 9; Figure 5), as a significant interaction term was found, but it was smaller than the direct effects. Psychological distress was slightly higher and increased somewhat more rapidly for those with low resilience, compared to those with high levels of resilience.

Social support (Hypothesis 4D; Table 9; Figure 6) followed the same patterns as the other resources, with a significant but small interaction term and stronger direct effects. For those with low social support, psychological distress was higher and increased to a greater extent with perceptions of an unmanageable workload, compared to those with high social support.

Table 9

Regression testing personal resources and job resources moderating the perceived unmanageable workload and psychological distress relationship

	IV	DV	*B*	*SE B*	Beta	*F*	Adj. R²
Block 1						797.61***	.281
	Unmanageable workload	Psychological distress	.18	.01	.24***		
	Job resources		-.33	.01	-.37***		
Block 2						547.31***	.287
	Unmanageable workload	Psychological distress	.17	.01	.23***		
	Job resources		-.31	.01	-.35***		
	Interaction of Unmanageable workload & Job resources		-.07	.01	-.08***		
Block 1						523.16***	.204
	Unmanageable workload	Psychological distress	.27	.01	.37***		
	Leadership		-.12	.01	-.17***		
Block 2						357.46***	.208
	Unmanageable workload	Psychological distress	.27	.01	.37***		
	Leadership		-.10	.01	-.14***		
	Interaction of Unmanageable workload & Leadership		-.05	.01	-.07***		
Block 1						987.24***	.326
	Unmanageable workload	Psychological distress	.23	.01	.32***		
	Resilience		-.33	.01	-.40***		
Block 2						677.11***	.332
	Unmanageable workload	Psychological distress	.23	.01	.31***		
	Resilience		-.33	.01	-.40***		
	Interaction of Unmanageable workload & Resilience		-.07	.01	-.08***		
Block 1						638.89***	.238
	Unmanageable workload	Psychological distress	.27	.01	.36***		
	Social support		-.18	.01	-.25***		
Block 2						432.09***	.241
	Unmanageable workload	Psychological distress	.26	.01	.36***		
	Social support		-.17	.01	-.24***		
	Interaction of Unmanageable workload & Social support		-.04	.01	-.05***		

* $p < .05$, ** $p < .01$, *** $p < .001$
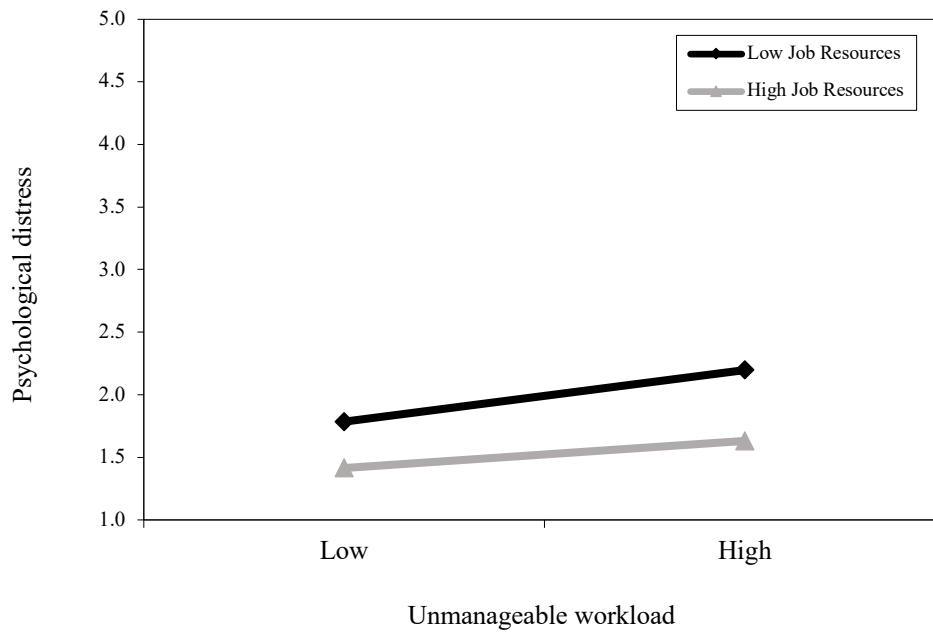
Figure 3. Self-reported job resources moderating the perceived unmanageable workload and psychological distress relationship.
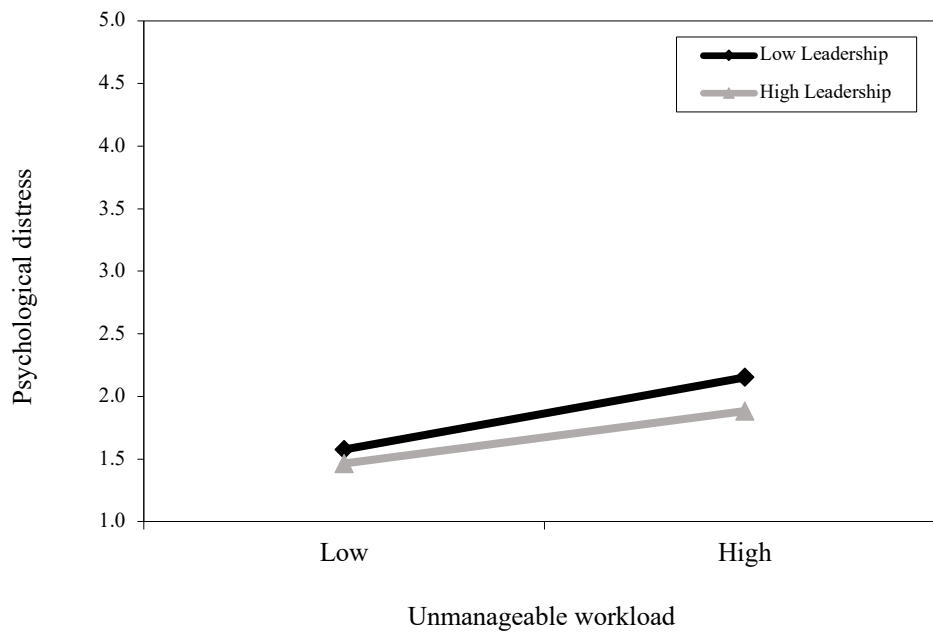
Figure 4. Perceptions of leadership moderating the perceived unmanageable workload and psychological distress relationship.
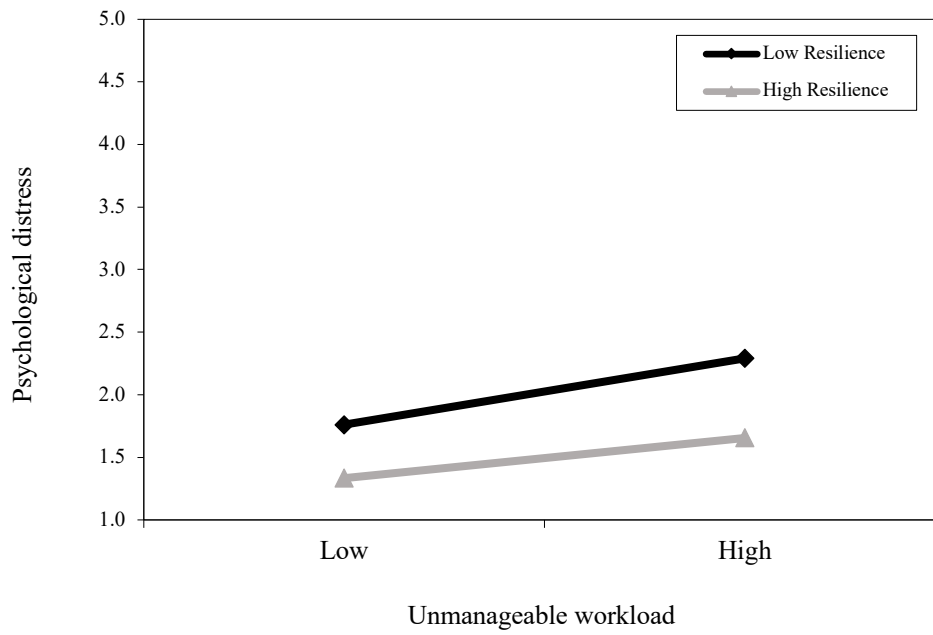
Figure 5. Resilience moderating the perceived unmanageable workload and psychological distress relationship.
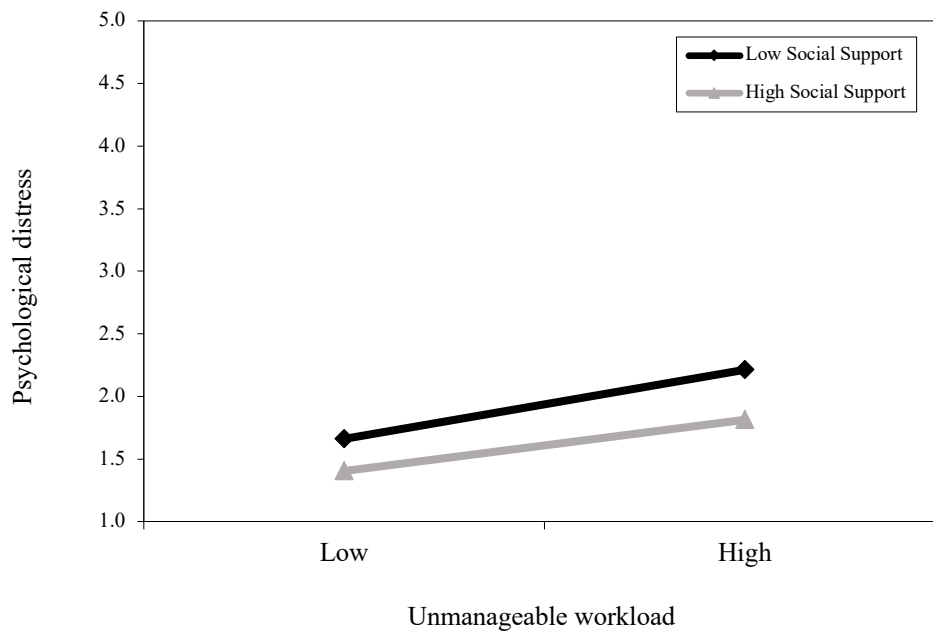
Figure 6. Social support moderating the perceived unmanageable workload and psychological distress relationship.

Mediated Regression Analyses

Hypothesis 5

Hypothesis 5 examined the role of psychological distress as a mediator of the relationship between job demands and turnover intention. As unmanageable workload was the only demand to be significantly related to psychological distress in hypothesis 2, the other demands (shift work and hours worked) were not explored for mediation. Table 10 shows that this hypothesis was partially supported; the beta value for the relationship between unmanageable workload and turnover intention showed a small decrease with the addition of psychological distress to the model and yielded a significant Sobel test, indicating partial mediation.

Table 10

Regression testing psychological distress as a mediator of perceived unmanageable workload and turnover intention

	IV	DV	B	$SE\ B$	Beta	F	Adj. R^2	Sobel Test
Block 1						401.32***	.089	
	Unmanageable workload	Turnover intention	.45	.02	.30***			
Block 2						897.55***	.180	
	Unmanageable workload	Psychological distress	.31	.01	.42***			
Block 3						251.96***	.110	9.34***
	Unmanageable workload	Turnover intention	.35	.03	.23***			
	Psychological distress		.32	.03	.16***			

$* p < .05, ** p < .01, *** p < .001$

Hypothesis 6A-D

Hypothesis 6 examined flourishing as a mediator of the relationship between resources (self-reported job resources (Hypothesis 6A), perceptions of leadership (Hypothesis 6B), resilience (Hypothesis 6C), and social support (Hypothesis 6D)) and turnover intention. The results shown in Table 11 provide some support for this hypothesis.

Flourishing partially mediated the relationship between self-reported job resources and turnover intention (Hypothesis 6A): the beta value for the relationship between job

resources and turnover intention decreased with the addition of flourishing to the model and the Sobel test was significant (Table 11). Only partial mediation was evident as the relationship between self-reported job resources and turnover intention remained significant.

Mediation was not explored for perceptions of leadership (Hypothesis 6B), as the findings for hypothesis 3B has showed only a slight and unexpectedly negative relationship between perceptions of leadership and flourishing, suggesting that the relationship between leadership and flourishing is unreliable and unstable.

Flourishing fully mediated the relationship between resilience and turnover intention (Hypothesis 6C), and between social support and turnover intention (Hypothesis 6D), as shown by the drop to non-significance of the relationships between resilience and turnover intention and social support and turnover intention when flourishing was added to the models; both Sobel tests were significant (Table 11).

Hypothesis 7A-D

Hypothesis 7 examined wellbeing as a mediator of the relationship between resources (self-reported job resources (Hypothesis 7A), perceptions of leadership (Hypothesis 7B), resilience (Hypothesis 7C), and social support (Hypothesis 7D)) and turnover intention. The results shown in Table 12 provide some support for this hypothesis. Wellbeing partially mediated the relationship between self-reported job resources and turnover intention (Hypothesis 7A; Table 12); the beta coefficient was decreased at the third step in the mediation analysis and the Sobel test was significant, but the relationship between self-reported job resources and turnover intention remained significant.

As perception of leadership was found not to be significantly related to wellbeing in hypothesis 3C, mediation was not explored for hypothesis 7B.

Providing some support for hypothesis 7C, wellbeing partially mediated the relationship between resilience and turnover intention (Table 12), with a significant Sobel

test, and reduction in the coefficient for resilience at Step 3 although this coefficient remained significant. Wellbeing also partially mediated the relationship between social support and turnover intention (Hypothesis 7D; Table 12).

Table 11

Regression testing flourishing as a mediator of resources (job resources, resilience, social support) and turnover intention

	IV	DV	B	SE B	Beta	F	Adj. R²	Sobel Test
Block 1						818.17***	.167	
	Job resources	Turnover intention	-.75	.03	-.41***			
Block 2						1750.55***	.300	
	Job resources	Flourishing	.54	.01	.55***			
Block 3						414.32***	.168	-2.96**
	Job resources	Turnover intention	-.70	.03	-.38***			
	Flourishing		-.10	.03	-.05**			
Block 1						81.75***	.019	
	Resilience	Turnover intention	-.24	.03	-.14***			
Block 2						1442.29***	.261	
	Resilience	Flourishing	.47	.01	.51***			
Block 3						147.15***	.067	-13.47***
	Resilience	Turnover intention	-.02	.03	-.01			
	Flourishing		-.47	.03	-.25***			
Block 1						72.75***	.017	
	Social support	Turnover intention	-.19	.02	-.13***			
Block 2						1339.04***	.247	
	Social support	Flourishing	.39	.01	.50***			
Block 3						146.90***	.067	-13.74**
	Social support	Turnover intention	-.01	.03	-.01			
	Flourishing		-.48	.03	-.26***			

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 12

Regression testing wellbeing as a mediator of resources (job resources, resilience, social support) and turnover intention

	IV	DV	*B*	*SE B*	Beta	*F*	Adj. R²	Sobel Test
Block 1						818.17***	.167	
	Job resources	Turnover intention	-.73	.03	-.41***			
Block 2						1059.07***	.206	
	Job resources	Wellbeing	1.05	.03	.45***			
Block 3						434.90***	.175	-6.34***
	Job resources	Turnover intention	-.66	.03	-.36***			
	Wellbeing		-.08	.01	-.11***			
Block 1						81.75***	.019	
	Resilience	Turnover intention	-.24	.03	-.14***			
Block 2						780.91***	.160	
	Resilience	Wellbeing	.87	.03	.40***			
Block 3						162.88***	.074	-13.65***
	Resilience	Turnover intention	-.07	.03	-.04*			
	Wellbeing		-.20	.01	-.26***			
Block 1						72.75***	.017	
	Social support	Turnover intention	-.19	.02	-.13***			
Block 2						628.54***	.133	
	Social support	Wellbeing	.66	.03	.37***			
Block 3						163.58***	.074	-13.37***
	Social support	Turnover intention	-.06	.02	-.04*			
	Wellbeing		-.20	-.01	-.26***			

* *p* < .05, ** *p* < .01, *** *p* < .001

Chapter Five: Discussion

The present study examined predictors of psychological distress, wellbeing, flourishing, and turnover intention in the New Zealand Defence Force (NZDF). The Job Demands-Resources (JD-R) model (Demerouti et al., 2001; Schaufeli & Bakker, 2004) provided the framework for investigating how job demands, job resources, and personal resources were related in NZDF personnel. The research aimed to take a balanced approach by including both positive and negative indicators: wellbeing, flourishing, and psychological distress.

While there was some evidence for moderated and mediated pathways, this evidence was weak, and direct effects predominated. The most salient job demand in the analyses was perceived unmanageable workload, as this was associated with higher levels of psychological distress, and lower levels of flourishing and wellbeing. With the exception of the unexpected finding that hours worked had a very small positive effect on flourishing, hours worked and shift work were not significant predictors of wellbeing, flourishing, and psychological distress. This is worth exploring further, as work stress associated with hours worked and shift work may have been encompassed by the perceived unmanageable workload variable. In addition, unmanageable workload was a continuous variable and may have been able to account for more variance than the categorical demands of hours worked and shift work.

In relation to resources, self-reported job resources, resilience, and social support all had salient effects, and were each associated with lower levels of psychological distress and greater levels of flourishing and wellbeing. However, perceptions of leadership was not significantly related to psychological distress or wellbeing, and had the paradoxical effect of a small negative relationship with flourishing.

Some evidence was found for resources (self-reported job resources, perceptions of leadership, resilience, and social support) moderating the relationships between perceived

unmanageable workload and psychological distress, although the moderation effects were small with the direct effects remaining stronger. This suggests that increasing job and personal resources can have a small protective effect against a perceived unmanageable workload, however it may not be the most effective way of managing a workload that is perceived to be unmanageable.

Flourishing and wellbeing were associated with reduced turnover intention, while psychological distress was associated with greater turnover intention. There was some evidence that flourishing and wellbeing mediated the relationships between the resources and turnover intention. Flourishing fully mediated the relationships between resilience and social support and turnover intention, but only partially mediated the relationship between self-reported job resources and turnover intention. Wellbeing showed a similar pattern of results, but only partial mediation of the relationships between resilience and social support and turnover intention, and very weak partial mediation of the relationship between self-reported job resources and turnover intention. There was also some evidence that psychological distress partially mediated the relationship between perceived unmanageable workload and turnover intention, but the mediation effect was small.

These findings are aligned with some of the JD-R literature that has found the main effects of demands and resources to be much stronger than the interaction effects, if interaction effects are found at all, as often they are not (van den Broeck et al., 2011). Taris and colleagues (2017) described the JD-R interaction findings as a "fickle phenomenon" (p.245), and noted where statistically significant interaction effects between demands and resources have been found, they may be too small to be of practical significance. For example, although Bakker and colleagues (2010) found numerous statistically significant demand and resource interactions, these interactions accounted for minimal variance beyond the main effects. The present research supports this conclusion and implies that while the JD-

R model can be successfully applied to a New Zealand military sample, direct effects are stronger and potentially more relevant than the moderated or buffering effects proposed by the model.

The finding that women scored slightly higher than men in psychological distress is consistent with previous research conducted with a post-deployment New Zealand military sample (Morrison, 2018). Similarly, personnel in a relationship scored slightly lower in psychological distress, and slightly higher in social support, self-reported job resources, resilience, wellbeing, and flourishing compared to personnel not in a relationship. These findings are consistent with the majority of the literature, with previous research with a New Zealand Defence Force sample finding that personnel in a relationship reported lower levels of psychological distress post deployment (Morrison, 2018). Generally, being in a happy relationship may serve as a source of positivity and social support. An array of research has consistently linked marriage and romantic partnership to a variety of better health and wellbeing outcomes (Diener et al., 2000; Haring-Hidore et al., 1985).

Civilian personnel scored lower in resilience than Army, Navy, and Air Force personnel. This was to be expected, as unlike civilian NZDF personnel, uniformed personnel receive resilience and hardiness briefings alongside training that is designed to build resilience, with the military positions likely requiring greater resilience than civilian positions. ANOVA post-hoc testing found that Air Force personnel had lower psychological distress and turnover intention than Army and Navy personnel, however these differences were below the eta squared criteria for a small effect. These results differ, but are not incongruent with previous research with a post-deployment NZDF sample, which found that Navy personnel reported greater levels of psychological distress than Army and Air Force personnel (Morrison, 2018). Interestingly, this study found no service differences in

wellbeing; however, service had a small relationship with flourishing, with Army personnel reporting lower flourishing scores than all other groups.

Increases in age and rank were also associated with greater flourishing and self-reported job resources, and less psychological distress. These findings are congruent with previous research (Riddle et al., 2007), including research with a post-deployment New Zealand Defence Force sample that found younger personnel reported greater psychological distress (Morrison, 2018). Furthermore, Morrison (2018) found that while rank initially had a significant relationship with psychological distress, after controlling for age this relationship did not remain. Conversely, the present research found both age and rank to be important predictors of wellbeing outcomes including psychological distress. Of the demographic variables analysed, rank yielded the most and largest group differences. Overall, rank-based analysis found that with the exception of perceived unmanageable workload, all other measured outcomes tended to be better for Senior Officers compared to the other rank groups. This finding is consistent with previous research and meta-analyses that focused specifically on mental health, finding that even after controlling for job strain, commissioned officers tended to have better outcomes than non-commissioned officers (Fear et al., 2009; Golenbock et al., 2017; T. C. Smith et al., 2008; Wells et al., 2010; Xue et al., 2015). These findings may be explained via adjustment to military life and selective attrition. Acknowledging that there is a strong correlation between being of younger age and lesser rank, such personnel are potentially new to the military and perhaps the posting location, and consequently may still be adjusting to military life, developing their social support networks, resilience, and other resources, making them more vulnerable to stressors than older and higher ranking personnel (van Wijk, 1997). Similarly, selective attrition may contribute to an explanation for these findings, whereby personnel who struggle with military life may be less

likely to remain the military and get promoted, leaving only those that thrive in a military career in the older age brackets and higher ranks.

It is important to note that due to the large sample size, small effects could reach statistical significance, and the practical implications of such small effects may be limited. This research found several group differences that are comparable to other studies (e.g., Morrison, 2018), suggesting that, while small, these effects may be consistent. This suggests that while group differences are not large, it may be important to recognise that some demographic groups may have slightly less access to personal and job resources, and slightly greater risks of lower wellbeing and flourishing, and greater psychological distress than others. This information may help inform interventions aimed at improving the overall wellbeing of personnel.

Limitations

This research was cross-sectional, so conclusions about causation cannot be made. It is possible, for instance, that participants experiencing psychological distress also perceived less social support, fewer job resources, and higher workloads, than those who were less distressed, regardless of the actual amount of these demands and resources. The use of a self-report survey could also present limitations in the form of social desirability and mono-method bias. Participants may have responded in a socially desirable manner due to the emphasis that is placed on being physically and mentally well, the prominence of resilience, hardiness, and leadership courses that are compulsory across military roles, and the ingrained pertinence of rank and hierarchy. However, the use of a self-report survey was necessary to maintain anonymity and to measure subjective phenomena such as perceptions of workload and leadership. A third potential limitation is that the measures of perceptions of leadership and job resources were not formed from single academically validated scales, rather both measures were created for NZDF internal use. Although both scales yielded high Cronbach's

alpha scores, indicating good internal consistency, perceptions of leadership yielded few of the expected findings, and it is possible that the leadership measure utilised in this research was not sensitive enough. Using a single validated scale for each variable could have produced different results in regards to the impact of perceptions of leadership, and allowed greater comparison of all the results to existing research.

Implications of this Research and Future Research Directions

This research extends existing literature by applying the fundamental theory of JD-R to New Zealand military work, a context in which JD-R theory has been sparsely applied. Likewise, this study sought to provide a New Zealand perspective, as the existing literature is dominated by research from the American and British militaries. This is of importance because NZDF deployments differ from those of the American and British military forces. American and British forces are more likely to be engaged in combat operations than New Zealand forces, which deploy primarily on peacekeeping and training missions (Ministry of Defence, 2016). Although, the focus of this research is not on deployment and combat, the different roles are likely to make the experience of working in the military vastly different between countries. Furthermore, most existing research does not separate the services into Army, Navy, and Air Force, with much of it focused on a single service, primarily Army. This present research focuses equally on all three of New Zealand's military services (Army, Navy, and Air Force) with the notable inclusion of civilians working in the military environment.

The results of this research can suggest potential improvements to the training and support that the NZDF provides to support wellbeing and retention of personnel. While there is abundant research on the effects of combat exposure and on severe distress outcomes such as PTSD, it is clear that non-combat-related work stressors are also important for wellbeing. Attention should be given to mitigating non-combat-related work stressors such as perceived

unmanageable workloads. Self-reported job resources, resilience, and social support accounted for the most variance in psychological distress, wellbeing, and flourishing, suggesting the potential value of fostering the development of resilience, and supporting unit or team events that contribute to effective team functioning and social support. To investigate this further, future research could include validated scales of leadership and job resources, and also explore the source of social support.

A perceived unmanageable workload was a significant job demand, related to increased distress and reduced wellbeing and flourishing. A better understanding is needed of the factors that cause people to view their workload as unmanageable, and how these factors can be managed. Future research could explore both objective and subjective measures of demands and resources, as well as longitudinal research to examine causal relationships.

Conclusion

In conclusion, this research suggests that NZDF personnel who have good resilience, social support, and self-reported job resources are more likely to be flourishing, have greater wellbeing, less turnover intention and psychological distress, and be to some level protected against the detrimental effect that a perceived unmanageable workload has on psychological distress. To retain a healthy and thriving Force for New Zealand the factors that contribute to workload being perceived as unmanageable should be investigated, alongside the continued fostering of resources such as resilience, social support, and team-based job resources.

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Appendix A: 2019 New Zealand Defence Force Health and Wellbeing Survey

Health & Wellbeing
Survey / 23 Sep – 6 Oct

New Zealand
DEFENCE FORCE
Te Ope Kātua O Aotearoa

What is this survey about?
The health and wellbeing of NZDF members is an important part of how we perform as a team, and an organisation. The aim of this survey is to get a picture of the current health and wellbeing of our people so that we may better understand and identify any areas of need. This is a key step in helping keep our people safe and well. We invite all members of the Regular Force, civilians and contractors to complete the survey.

What is involved in the survey?
The survey will take most people between 15–30 minutes to complete. Your participation is voluntary. There is an additional section on deployments that will require a little extra time if you have been deployed.

The survey is **anonymous** and no attempt will be made to identify you. This is because we ask some sensitive questions and it is important you feel comfortable answering these honestly and without worrying about being identified. However, because the survey is anonymous we do ask that you provide some basic demographic information at the end of the survey to help us understand patterns of health and wellbeing across different groups.

What questions will be asked?
There are six sections in the survey – these ask about your overall wellbeing; life experiences; resilience, spiritual and social health; your job; physical health; and, attitudes about help seeking. The job section includes questions about deployments that you can skip if you have never been deployed. We also invite your feedback about what we can be doing as an organisation to support you. You can find feedback about how you are doing in two areas of wellbeing at the end of the survey.

Some questions are of a personal nature so remember that all questions are voluntary and you do not have to answer any question if you do not want to. If you find involvement in this survey distressing, or if you have concerns about your health and wellbeing or that of someone else, information about a range of support options available is provided at the beginning and end of this survey.

What do we do with the information?
The data will be collected, collated and reported at an aggregated level. No personally identifying data will be reported. The information collected in the survey will be used for internal and external research projects approved by the NZDF and may also form the basis of reports and academic publications. A summary of the results of the survey and any key areas for action identified will be communicated by the end of the year.
A summary of findings will be also be released externally in early 2020. If you would like to be sent a summary of the results, please email healthcheck@nzdf.mil.nz

How will we maintain your privacy?
This research is being conducted in accordance with the Privacy Act (1993) and DFO 3 14[5] Authority to Conduct Personnel Research and has been approved by CDF. Data from paper copies of the survey will be entered into a database and then the copies will be destroyed. Your personal data will not be identifiable. The full database will be securely, electronically stored and will only be accessible by the Defence Health research team. The database will be retained as part of a longitudinal research study. By completing this survey you are giving your consent for your personal information to be used for the purpose and in the manner described above.

Why should I participate?
Your contribution is important to helping build a current and accurate picture of health and wellbeing across the NZDF and to inform decisions that aim to improve health and wellbeing for all NZDF staff. Nevertheless *t*he survey is voluntary and you may decide not to take part or withdraw from the study at any time without any disadvantage to yourself of any kind.

Please complete all sections by following the instructions at the beginning of each question.

Note:
The information collected in this survey is Unclassified and while the survey is anonymous, you must not disclose sensitive or classified information. Some questions may seem a little repetitive, but this is necessary due to the questions being grouped into scales.

The term **'organisation'** is used throughout the survey and refers to the unit that you are currently employed with.

For more information about the study, contact:
Col Clare Bennett, Chief Mental Health Officer,
Health Directorate, HQ NZDF clare.bennett@nzdf.mil.nz
or healthcheck@nzdf.mil.nz

If at any point you are concerned about your wellbeing you can find a list of contacts and resources on the last page or contact 0800 NZDF4U (0800 693348), or a Defence Health Centre.

A FORCE FOR NEW ZEALAND

1

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┌─────────────────────────────────────────────────────────────────┐
│                        INSTRUCTIONS                               │
│                                                                   │
│    ✓  Read the instructions that correspond to each section of    │
│       this survey                                                 │
│    ✓  Use a dark pencil or pen                                    │
│    ✓  Draw a line through the circle to indicate your response    │
│                                                                   │
│            ○       ∅       ○       ○                              │
│                                                                   │
│    If you want to change your response, ERASE or CROSS OUT your   │
│    initial response and draw a line in the desired circle.        │
│                                                                   │
│            ○       ⊗       ○       ∅                              │
└─────────────────────────────────────────────────────────────────┘
```

Section 1. Overall Wellbeing

The following section asks some general questions about how you have been feeling recently.

Wellbeing is important in different areas of your life. Please rate your average levels of wellbeing during the past 4 weeks in the following four areas.									
1.				**Taha tinana (physical health)** *Physical fitness and overall body wellbeing*					
Very Low									Very High
○	○	○	○	○	○	○	○	○	○
2.				**Taha wairua (spiritual health)** *Identity, self awareness, faith, compassion, connection to land and ancestors, joy, and fulfillment*					
Very Low									Very High
○	○	○	○	○	○	○	○	○	○
3.				**Taha whānau (family health)** *Social and family connectedness and support*					
Very Low									Very High
○	○	○	○	○	○	○	○	○	○
4.				**Taha hinengaro (mental health)** *Thoughts, feelings and emotions*					
Very Low									Very High
○	○	○	○	○	○	○	○	○	○

Life events and circumstances can have an impact on our overall wellbeing. How much have each of the areas below been of a concern for you over the last 4 weeks?		Not at all	A little	Somewhat	Quite a lot	A great degree
1.	Relationship issues	○	○	○	○	○
2.	Loneliness / Isolation	○	○	○	○	○
3.	The wellbeing of a friend or family member	○	○	○	○	○
4.	Loss or grief	○	○	○	○	○
5.	Conflict with others	○	○	○	○	○
6.	Personal experience of discrimination	○	○	○	○	○
7.	Personal experience of bullying	○	○	○	○	○
8.	Personal experience of sexual harassment	○	○	○	○	○
9.	Problems with your boss	○	○	○	○	○
10.	Lack of job satisfaction	○	○	○	○	○
11.	Workload	○	○	○	○	○
12.	Finances	○	○	○	○	○
13.	Alcohol consumption	○	○	○	○	○
14.	Drug use	○	○	○	○	○
15.	Prior stressful/traumatic experiences	○	○	○	○	○
16.	Difficulty sleeping	○	○	○	○	○
17.	Chronic pain	○	○	○	○	○
18.	Physical injury	○	○	○	○	○
19.	Overall physical health	○	○	○	○	○
20.	Parenting problems / difficulty with children	○	○	○	○	○
21.	Anger Management	○	○	○	○	○
22.	Eating habits	○	○	○	○	○
23.	Caregiver / welfare responsibilities other than parenting	○	○	○	○	○
24.	Subject to racist/ageist/non inclusive behaviours at work	○	○	○	○	○
25.	Dysfunctional team / departmental dynamics	○	○	○	○	○
26.	Other (Please specify) _____	○	○	○	○	○

		None of the time 1	A little of the time 2	Some of the time 3	Most of the time 4	All of the time 5
The following questions ask about how you have been feeling during the last month (4 weeks). **Please read each question carefully and then indicate the response that best describes how you have been feeling.**						
1.	How often did you feel tired for no good reason?	○	○	○	○	○
2.	How often did you feel nervous?	○	○	○	○	○
3.	How often did you feel so nervous that nothing could calm you down?	○	○	○	○	○
4.	How often did you feel hopeless?	○	○	○	○	○
5.	How often did you feel restless or fidgety?	○	○	○	○	○
6.	How often did you feel so restless that you could not sit still?	○	○	○	○	○
7.	How often did you feel depressed?	○	○	○	○	○
8.	How often did you feel that everything was an effort?	○	○	○	○	○
9.	How often did you feel so sad that nothing could cheer you up?	○	○	○	○	○
10.	How often did you feel worthless?	○	○	○	○	○

If you would like an indication about how you are going, add up the scores from items 1 – 10. The scores for each item is equal to the number in the header column you selected. (e.g. none of the time = 1, all of the time = 5). *Check out how you are going at the end of this survey.*

Score = _____

Section 2: Life Experiences and Wellbeing

The next questions are about life experiences, including traumatic experiences and sexual assault. By answering these questions you are helping NZDF build a better understanding about a range of sensitive issues our people may have experienced or be dealing with.

The survey is anonymous so we will not be able to identify you but please skip any question if you find it confronting, or difficult to deal with, and use the contact information provided if you would like support or advice.

		No	Yes		No	Yes
1.	Have you ever experienced a situation that was extremely stressful and / or where you feared for your life (eg. accident, natural disaster, personal attack, deployment experience, combat)?	○	○	If yes, did this happen as a result of or in relationship to your work in NZDF?	○	○
2.	Did someone very close to you die unexpectedly; for example, they were killed in an accident, murdered, committed suicide, or had a fatal heart attack at a young age?	○	○	If yes, did this happen as a result of or in relationship to your work in NZDF?	○	○
3.	In the last 12 months have you been systematically **verbally sexually harassed**? *(e.g., consistent sexual jokes made towards you, repeated comments made about your private life, repeated sexually offensive comments)*	○	○	If yes, did this happen as a result of or in relationship to your work in NZDF?	○	○
4.	Have you ever been **physically assaulted?** *(e.g., subject to an intentional or a threatened act of either direct or indirect interpersonal violence)*	○	○	If yes, did this happen as a result of or in relationship to your work in NZDF?	○	○
5.	Have you ever been **indecently assaulted** *(e.g., subject to unwelcome physical contact such as touching, pinching, and / or massage in circumstances that are indecent)*	○	○	If yes, did this happen as a result of or in relationship to your work in NZDF?	○	○

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6.	Have you ever been **sexually violated**? *(e.g., rape or unlawful sexual connection)*	○	○	If yes, did this happen as a result of or in relationship to your work in NZDF?	○	○
7.	Has anyone ever made or pressured you into having some type of **unwanted sexual contact?**	○	○	If yes, did this happen as a result of or in relationship to your work in NZDF?	○	○

Below is a list of problems and complaints that people sometimes have in response to stressful life experiences. Please read each one carefully, and then rate how much you have been bothered by that problem in the past month (4 weeks). Remember, confidential support is available if you find any of these questions distressing (0800 693348).

		Not at all	A little bit	Moderately	Quite a bit	Extremely
1.	Repeated, disturbing and unwanted memories, of a stressful experience?	○	○	○	○	○
2.	Repeated, disturbing dreams of a stressful experience?	○	○	○	○	○
3.	Suddenly acting or feeling as if the stressful experience were happening again (as if you were reliving it)?	○	○	○	○	○
4.	Feeling very upset when something reminded you of the stressful experience?	○	○	○	○	○
5.	Having a physical reaction (e.g., heart pounding, trouble breathing, sweating) when something reminded you of the stressful experience?	○	○	○	○	○
6.	Avoiding memories, thoughts or feelings related to the stressful experience?	○	○	○	○	○
7.	Avoiding external reminders of the stressful experience (eg. people, places, conversations, activities, objects or situations)?	○	○	○	○	○
8.	Trouble remembering important parts of the stressful experience?	○	○	○	○	○
9.	Having strong negative beliefs about yourself, other people, or the world (e.g., having thoughts such as: I am bad, there is something seriously wrong with me, no one can be completely trusted, the world is completely dangerous)?	○	○	○	○	○
10.	Blaming yourself or someone else for the stressful experience?	○	○	○	○	○
11.	Having strong negative feelings such as fear, horror, anger, guilt, or shame?	○	○	○	○	○
12.	Loss of interest in activities that you used to enjoy?	○	○	○	○	○
13.	Feeling distant or cut off from other people?	○	○	○	○	○
14.	Trouble experiencing positive feelings (e.g., being unable to feel happiness or have loving feelings for those close to you)?	○	○	○	○	○
15.	Irritable behavior, angry outbursts, or acting aggressively?	○	○	○	○	○
16.	Taking too many risks or doing things that could cause you harm?	○	○	○	○	○
17.	Being 'super alert; or watchful or on guard?	○	○	○	○	○
18.	Feeling jumpy or easily startled?	○	○	○	○	○
19.	Having difficulty concentrating?	○	○	○	○	○
20.	Trouble falling or staying asleep?	○	○	○	○	○

Sometimes people have thoughts or intentions to hurt themselves. The following 6 questions concern such feelings. Over the past year did you:

		No	Yes
1.	Think that you would be better off dead or wish you were dead?	○	○
2.	Want to harm yourself?	○	○
3.	Think about suicide?	○	○
4.	Have a suicide plan?	○	○
5.	Attempt suicide?	○	○
6.	Deliberately harmed or injured yourself in the past month (e.g. cut, burned or scratched) when not feeling suicidal?	○	○

If you answered yes to any of these questions, you are strongly encouraged to seek help. A list of help resources is provided at the end of this survey. Remember, seeking help is not a sign of weakness, it is a sign of strength. Sometimes you can't go it alone and seeking help is a positive step your recovery.

Section 3: Resilience

The following section asks about positive experiences and support in your life.

Please indicate how much you agree or disagree with the statements:

		Strongly Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Strongly Agree
1.	I tend to bounce back quickly after hard times	○	○	○	○	○
2.	I have a hard time making it through stressful events	○	○	○	○	○
3.	It does not take me long to recover from a stressful event	○	○	○	○	○
4.	It is hard for me to snap back when something bad happens	○	○	○	○	○
5.	I usually come through difficult times with little trouble	○	○	○	○	○
6.	I tend to take a long time to get over set-backs in my life	○	○	○	○	○
7.	I lead a purposeful and meaningful life	○	○	○	○	○
8.	My social relationships are supportive and rewarding	○	○	○	○	○
9.	I am engaged and interested in my daily activities	○	○	○	○	○
10.	I actively contribute to the happiness and wellbeing of others	○	○	○	○	○
11.	I am competent and capable in the activities that are important to me	○	○	○	○	○
12.	I am a good person and live a good life	○	○	○	○	○
13.	I am optimistic about my future	○	○	○	○	○
14.	People respect me	○	○	○	○	○
15.	I have a clear sense of my own identity	○	○	○	○	○
16.	I feel connected to my culture	○	○	○	○	○
17.	Religion or spiritual faith is an important factor that guides me	○	○	○	○	○
18.	I am able to live a life that is aligned to my values	○	○	○	○	○
19.	I can find forgiveness when carrying a sense of guilt	○	○	○	○	○

20. How do you feel about your life as a whole, taking into account what has happened in the last year and what you expect to happen in the future? (please choose one response only)									
Very Unhappy									Very Happy
○	○	○	○	○	○	○	○	○	○

RELATIONSHIPS AND SUPPORT

Often we have people in our lives who help us with our problems. Please indicate how much you agree or disagree with the statements:

		Strongly Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Strongly Agree
1.	If I have a problem there is someone I trust that I can talk to about it	○	○	○	○	○

The following questions are directed at those who have a partner/spouse. If these questions do not apply to you please leave them blank.

			No		Yes	
1.	Are you currently in a relationship? *If you answered no please skip to Section 4 Your Job*		○		○	
		Never	Not very often	Sometimes	Often	Very often
2.	How often do you let each other know you really care about each other?	○	○	○	○	○
3.	How often do you act in a supportive and understanding way towards one another?	○	○	○	○	○
4.	How often do arguments result in you feeling put down or bad about yourself?	○	○	○	○	○
5.	How often do arguments result in you or your partner breaking or throwing things?	○	○	○	○	○
6.	How often do arguments result in either you or your partner hitting, kicking or pushing one another?	○	○	○	○	○
7.	Is there any abuse (physical, sexual, psychological, financial) in your relationship now?	Yes ○		No ○		

Section 4. Your Job

The next section asks about your current and past work experiences at NZDF including previous deployments.

		Less than 15 hours	15-30 hours	31-40 hours	41-50 hours	51-59 hours		60+ hours
1.	On average how many hours did you work each week, over the last four weeks (average over 1 week)? If you have been on leave during this time, please record your usual average work hours	○	○	○	○	○		○
		Less than 2 weeks	Between 2 and 4 weeks	Between 4 and 8 weeks	Between 8 and 16 weeks	Between 4 and 6 months	Between 6 and 8 months	More than 8 months
2.	Approximately how many days have you spent away from home overnight as part of your work? (eg. operations, exercises, training courses, conferences, meetings, or in a commuter relationship etc) over the last 12 months?	○	○	○	○	○	○	○

3.	Does your job involve regular shift work, including working at night?	No ○	Yes ○

The following statements are about how you feel about your job. Please read each statement carefully and decide how much you agree with each of the following statements.

		Strongly Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Strongly Agree
4.	I am enthusiastic about my job	○	○	○	○	○
5.	I am clear about what is expected of me at work	○	○	○	○	○
6.	I get appropriate recognition for the work I do	○	○	○	○	○
7.	My workload is manageable	○	○	○	○	○
8.	If I have a problem at work I can talk to my boss about it	○	○	○	○	○
9.	The demands of my work interfere with my home and family life	○	○	○	○	○
10.	The level of work related stress I experience is acceptable	○	○	○	○	○
11.	I can cope with the pressure of my work	○	○	○	○	○
12.	My colleagues treat me with dignity and respect	○	○	○	○	○
13.	Members of my team are able to bring up problems and discuss tough issues	○	○	○	○	○
14.	From a safety perspective, I feel supported / enabled to do my job	○	○	○	○	○
15.	I am; or I feel, excluded by my work colleagues	○	○	○	○	○
16.	I intend to leave NZDF within the next 12 months	○	○	○	○	○

The following statements are about your relationships with your direct manager/leader.

		Strongly Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Strongly Agree
1.	My direct manager/leader treats everyone fairly	○	○	○	○	○
2.	My direct manager/leader is approachable	○	○	○	○	○
3.	My direct manager/leader treats me with dignity and respect	○	○	○	○	○
4.	My direct manager/leader refrains from improper remarks or comments	○	○	○	○	○
5.	My direct manager/leader demonstrates command courage if work circumstances require it	○	○	○	○	○

The following statements are about your relationships with all of the people you work with. How often have the following things happened as part of your work either by a work colleague or by your superiors?

		Never	Rarely	Occasionally	Frequently	Very Often
1.	I have been verbally abused	○	○	○	○	○
2.	I have been threatened with violence	○	○	○	○	○
3.	I have been singled out for discipline or criticism in an unfair way	○	○	○	○	○
4.	Offensive remarks or jokes have been made about me	○	○	○	○	○

5.	Who normally engages in these types of behaviours?	N/A	Colleagues	Superiors	Both
		○	○	○	○

Deployment

1.	Have you ever been deployed on either an operational mission that would be qualifying service for the Operational Service Medal or other overseas activities (excluding courses or permanent established postings)? **Note: for Navy** this might include non-operational deployments (e.g OP CALYPSO, OP APEC ASSIST, OP KAUWAE etc.), or operational deployments. **Note: For Air Force** this includes any overseas aircraft operations (e.g., NORPATs, TROPIC ASTRA, PITCH BLACK, HADRs, etc).	No ○		Yes ○		

If you answered **no** to the previous question, please leave the following section blank and skip forward to the section on Physical Health. (Page 12)

2.	In total how long have you spent on deployments while serving with the NZDF?	Less than 3 months	3 – 6 months	7 – 12 months	Between 12 – 24 months	3 – 4 years	5 or more years
		○	○	○	○	○	○

3.	What is the longest continuous period you have deployed on any one deployment?	Less than 3 months	3 – 6 months	7 – 12 months	More than 12 months
		○	○	○	○

4.	How many times have you been deployed?	Once	2 – 3 times	4 or more times
		○	○	○

5.	How do you rate the level of support has been provided by NZDF to you during your deployment(s)?	Poor	Adequate	Good
		○	○	○

6.	How do you rate the level of support that has been provided by NZDF to your family during your deployments?	○	○	○

7.	Please add any comments about your deployment support experiences, including what we could do better below: **Pre:** **During:** **Post:**

Thinking of **ALL** your deployments during your military career, **how often** did you/were you?		Never	Once	2-4 times	5-9 times	10+ times
1.	Seriously fear you would encounter an IED?	○	○	○	○	○
2.	Go on combat patrols/missions or participate in support convoys or armed RHIB patrols	○	○	○	○	○
3.	Concerned about yourself or others (including allies) having an unauthorised discharge of a weapon?	○	○	○	○	○
4.	Clear/search buildings, caves, vessels or other areas?	○	○	○	○	○
5.	Come under fire (i.e. small arms or anti-aircraft fire, guided or directed mortar/artillery fire or missile attack), in-direct fire (e.g. rocket attack), or small arms fire from an unknown enemy combatant?	○	○	○	○	○
6.	Experience an IED/EOD detonation, suicide bombing, or landmine strike?	○	○	○	○	○

7.	In danger of being killed or injured?	○	○	○	○	○
8.	Have casualties among people close to you (i.e. were present or heard of a close friend, co-worker or loved one who had been injured or killed)?	○	○	○	○	○
9.	Handle or see dead bodies?	○	○	○	○	○
10.	Experience a threatening situation where you were unable to respond due to the rules of engagement?	○	○	○	○	○
11.	Witness human degradation and misery on a large scale?	○	○	○	○	○
12.	Discharge your weapon in direct combat?	○	○	○	○	○
13.	Believe your action or inaction resulted in someone being seriously injured or killed?	○	○	○	○	○
14.	Exposed to smoke and/or dust, fumes or fuels, or chemicals	○	○	○	○	○
15.	Exposed to hazardous materials (i.e. non-iodising radiation, contact with chemical or biological weapons, contact with depleted uranium shells, exposed to ionising radiation or radioactive shells, use of NBS suit [not for training])?	○	○	○	○	○
16.	See something that you considered to be morally unacceptable?	○	○	○	○	○
17.	Confronted with an ethical dilemma where there was seemingly no 'best' answer?	○	○	○	○	○
18.	Placed in a situation where you felt compelled to make an uncomfortable ethical decision?	○	○	○	○	○
19.	Left with feeling a sense of guilt or shame about something that had happened.	○	○	○	○	○
20.	Left with feeling anger about something that had happened.	○	○	○	○	○
21.	Experienced hostile reactions from civilians e.g. boarding parties, supply runs, being mugged.	○	○	○	○	○
22.	Experiencing a no duff/safeguard/or not for exercise incident not already mentioned e.g. fire, flood, emergency landing, aircraft/vessel locked onto by enemy weapons	○	○	○	○	○

		No	Yes
1.	Do you have any concerns about how you are going now as a consequence of your deployments?	○	○
2.	Has a family member or someone close to you expressed any concerns about how you are going now as a consequence of your deployments?	○	○
3.	In what year did you last return from deployment?	**More than 4 years ago** ○ **Please go to Section 5 on Page 12.**	**In last 4 years** ○ **Please go Question 4 below**

4.	Select from the options below the deployment that was the most challenging deployment/overseas activity you've had in the last four years (2016-2019):

○ Deployment (qualifying for OSM)

○ Non-operational overseas deployment (e.g. OP CALYPSO, OP APEC ASSIST, OP NORPAT)

○ Domestic deployment (e.g. OP DEANS, OP WESTLAND, OP AWHINA)

○ Operational exercise in Australia (e.g. Talisman Sabre, Pitch Black)

○ Operational exercise overseas but not in Australia (e.g. CROIX DE SUD, TROPIC TWILIGHT)

○ HADR (E.g. TG Winston)

○ Other _____

5.	What made this particular deployment/overseas activity so challenging? *(Mark all that apply)*

○ First overseas activity with the NZDF
○ Lack of preparation for the job itself
○ Being away from friends and family
○ Leadership on the deployment/overseas activity
○ Significant events happening back home
○ Interpersonal issues within the NZDF team
○ Discrimination, harassment or bullying
○ Exposure to trauma
○ Living conditions
○ Environmental conditions

○ Uncertainty over amount of time away
○ Work tempo before or after the overseas activity
○ Being in an isolated role without much support
○ Frustration with systems and processes
○ Boredom
○ Overwork
○ Lack of respite / on duty all the time
○ Nothing was difficult
○ Other (please specify) _____

For each period please rate the **level of support from your unit/ship** for this particular deployment/overseas activity:

		Poor	Adequate	Good
6.	Prior to the deployment/overseas activity	○	○	○
7.	During the deployment/overseas activity	○	○	○
8.	After the deployment/overseas activity	○	○	○

For each period please rate the **level of support** from **NZDF Psychology** for this particular deployment/overseas activity:

		Poor	Adequate	Good
9.	Prior to the deployment/overseas activity	○	○	○
10.	During the deployment/overseas activity	○	○	○
11.	After the deployment/overseas activity	○	○	○

For each period please rate the **level of support** from **wider NZDF** for this particular deployment/overseas activity:

		Poor	Adequate	Good
12.	Prior to the deployment/overseas activity	○	○	○
13.	During the deployment/overseas activity	○	○	○
14.	After the deployment/overseas activity	○	○	○

Section 5 Physical Health and Health Behaviours

The next section asks about your physical health, as well questions about your behaviours such as alcohol consumption, nutrition, sleep, and physical activity.

		No	Yes
1.	Are you on any prescription medication for a physical health related illness?	○	○
2.	Are you on any prescription medication for a mental health related illness?	○	○
3.	Do you have any concerns about your physical health?	○	○
4.	If you answered **yes to qn 3**, have you sought help for these concerns?	○	○
5.	Do you have a long-term illness?	○	○
6.	Do you have a chronic injury or chronic pain?	○	○
7.	Do you consider yourself to be impaired or disabled in any way?	○	○

8.	If yes, please state your disability						
	Hearing	Vision	Mobility	Agility	Intellectual	Psychological	Other: Specify
	○	○	○	○	○	○	

		No		Yes	
9.	Do you use electronic cigarettes / vape?	○		○	

10.	Do you currently smoke tobacco?	Never	I used to but not now	Yes, socially on occasion	Yes, regularly
		○	○	○	○

		No	Maybe	Yes
11.	If you answered **Yes** to Qn 9 would you like to stop smoking?	○	○	○

12.	If you do smoke and would like to stop, what are the things making this difficult for you? (Mark all that apply)	○ I enjoy smoking ○ Others around me smoking ○ It's the norm in my social group ○ Having a drink makes me want to smoke ○ Smoking gives me something to do when I am bored ○ Smoking relaxes me ○ Craving or addiction ○ Other, please list_____

Supplements: How often do you use the following supplements?

		Never	Less than once a month	Monthly	Weekly	Daily or almost daily
1.	Body building supplements (such as amino acids, wait gain products, creatine etc.)?	○	○	○	○	○
2.	Energy supplements (such as energy drinks, pills or energy enhancing herbs)?	○	○	○	○	○
3.	Weight loss supplements?	○	○	○	○	○

Drugs: Do any of the following apply to you or have in the past?

		Never	Yes, but not since joining the NZDF	Yes, and this has been since I joined the NZDF but not in the last year	Yes, and in last year
1.	Used medication in a way that was not prescribed or used someone else's medication? (A reminder, this survey is anonymous)	○	○	○	○
2.	Used recreational drugs or drugs other than those required for medical reasons?	○	○	○	○
3.	Have a problem with gambling?	○	○	○	○
4.	What would you do if a colleague told you they were struggling with their drinking? (Mark all that apply)	○ Don't know ○ Nothing ○ Make a joke or make light of it ○ Tell them to get a grip / harden up ○ Listen and support ○ Encourage them to get help ○ Speak to someone else for advice about what to do ○ Other			
5.	What would you do if a colleague disclosed a mental health problem to you? (Mark all that apply)	○ Don't know ○ Nothing ○ Make a joke or make light of it ○ Tell them to get a grip / harden up ○ Listen and support ○ Encourage them to get help ○ Speak to someone else for advice ○ Other			

Alcohol Use

The questions below ask about your alcohol use. When answering the following questions use the guidelines below regarding the size of a standard drink. A standard drink measures the amount of alcohol, not the amount of liquid you are drinking.

1.	How often do you have a drink containing alcohol? *If you never drink please answer 'never' then skip to the next section.*	Never	1 per month or less	2-4 times per month	2-3 times per week	4 or more time per week
		○	○	○	○	○
2.	How many standard drinks do you have on a typical day when you are drinking?	1 or 2	3 or 4	5 or 6	7 to 9	10+
		○	○	○	○	○

Thinking of your alcohol consumption:

	Scoring	*0*	*1*	*2*	*3*	*4*
		Never	Occasionally	Monthly	Weekly	Twice a week or more
3.	How often do you have six or more standard drinks on one occasion?	○	○	○	○	○
4.	How often during the last year have you found that you were not able to stop drinking once you had started?	○	○	○	○	○
5.	How often during the last year have you failed to do what was normally expected from you because of drinking?	○	○	○	○	○
6.	How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?	○	○	○	○	○
7.	How often during the last year have you had a feeling of guilt or remorse after drinking?	○	○	○	○	○
8.	How often during the last year have you been unable to remember what happened the night before because you had been drinking?	○	○	○	○	○
9.	Have you or someone else been injured because of your drinking?	No **Score [0]**		Yes, but not in the last year **[2]**	Yes, during the last year **[4]**	
		○		○	○	
10.	Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down?	No **Score [0]**		Yes, but not in the last year **[2]**	Yes, during the last year **[4]**	
		○		○	○	
If you would like to assess your current levels of alcohol risk add up the scores from items 3-10. The score of each item is equal to the number in the circle that you selected (e.g., for items 3-8, never = 0, twice a week or more = 4). See how your rate on the last page of this survey.				Score=_____		

What do you eat?

1.	On average, how many servings of VEGETABLES (fresh, frozen, canned) did you eat per day over the past 7 days? *Do not include vegetable juices. A 'serving' = 1 medium potato/kumara or 1 cup cooked vegetables or 1 cup of salad vegetables)*	I don't eat these	Less than 1 serving a day	1 serving per day	2 or 3 servings per day	4 or more servings per day
		○	○	○	○	○
2.	On average, how many servings of FRUIT (fresh, frozen, canned or stewed) did you eat per day over the past 7 days? *Do not include fruit juice or dried fruit. A 'serving' = 1 medium piece or 2 small pieces of fruit or 1 cup of stewed fruit.*	I don't eat these	Less than 1 serving a day	1 serving per day	2 or 3 servings per day	4 or more servings per day
		○	○	○	○	○

3.	On average, how often during the working week do you eat breakfast? Breakfast is defined as consuming food or a liquid meal replacement before 10 am. *Exclude coffee and tea.*	Never	1 – 2 days per week	2 – 4 days per week		Daily
		○	○	○		○

4.	How often do you usually drink sugary beverages? *Include energy drinks, carbonated drinks, fruit juice or cordial. Exclude diet drinks.*	Never	Less than 1 per week	1 – 2 per week	3 - 5 per week	6+ per week
		○	○	○	○	○

Physical Activity

The next questions ask about your physical activity and exercise on average each week.

1.	On average, how often do you do light exercise of 20 minutes or more duration each week, such as riding a bike to work or going for a lunchtime walk?	Never	Once or twice a week	3-4 days a week	Most days	Daily
		○	○	○	○	○

2.	On average, how often do you do moderate or vigorous aerobic exercise of 20 minutes or more duration each week, such as a gym workout, PT, a sports game, running, cycling or swimming?	Never	Once or twice a week	3-4 days a week	Most days	Daily
		○	○	○	○	○

Sleep

1.	On average how many hours do you sleep each day/ night?	Less than 5	5 Hrs	6 Hrs	7 Hrs	8 Hrs	9+ Hrs
		○	○	○	○	○	○

		None	Mild	Moderate	Severe	Very Severe
2.	During the past TWO WEEKS how much difficulty have you had falling asleep and staying asleep	○	○	○	○	○

		Very Satisfied	Satisfied	Moderately Satisfied	Dissatisfied	Very Dissatisfied
3.	In the past TWO WEEKS how satisfied / dissatisfied are you with your current sleep pattern?	○	○	○	○	○

		Not at all interfering	A little	Somewhat	Much	Very much interfering
4.	In the past TWO WEEKS to what extent do you consider your sleep pattern to INTERFERE with your daily functioning (for example: daytime fatigue, ability to function at work / daily chores, concentration, memory, mood etc.)	○	○	○	○	○

Use of Personal Electronic Devices

		Less than 1 hr	2-4 Hrs	4-6 Hrs	More than 6 Hrs
5.	On average how many hours a day do you spend using electronic devices (mobile phone, laptop, Ipad, desktop PC etc.) required for your job?	○	○	○	○
6.	On average how many hours a day do you spend using electronic devices (mobile phone, laptop, Ipad, desktop PC, TV etc.) for leisure?	○	○	○	○
7.	How many hours on average daily do you spend playing video games?	○	○	○	○
8.	How many hours on average daily do you spend on social media?	○	○	○	○

Maintaining Balance

1.	What sort of things do you do to help you to maintain or increase health and balance in your life?

Section 6: Help Seeking

Every New Zealander can potentially suffer from problems with their mental health and wellbeing. Members of the NZDF are no exception to this. The next section ask about your previous experiences and current attitudes towards seeking help with mental health and wellbeing issues.

1.	Do you have any current concerns about your mental health and wellbeing?	No	Yes
		○	○

2.	Which of the following are you concerned about? (Please tick all that apply)
	○ Alcohol or drug abuse or dependency
	○ Work related issues
	○ Anxiety or stress
	○ Depression
	○ Post Traumatic Stress
	○ Anger Management
	○ Other psychological condition
	○ Gambling
	○ Chronic pain or injury
	○ Relationship issues
	○ Sleep
	○ Physical Health
	○ Other (please specify): _____

3.	Has there been a time in the last 12 months you felt you needed help to manage these concerns?	No ○	Yes ○
4.	If yes, did you seek help?	○	○

5.	If yes, and it was since you joined the NZDF, did you seek help inside or outside the organisation?	Inside NZDF	Outside NZDF	Both	N/A
		○	○	○	○

6.	If you did not get help, why didn't you? *(Mark all that apply)*
	○ I preferred to manage issues myself
	○ I didn't think anything could help
	○ I didn't know where to get help
	○ I was afraid to ask for help, or of what others would think of me
	○ I couldn't afford it
	○ I could still function effectively
	○ I was worried about career impacts
	○ Other (please specify) _____

7.	How likely is it you would seek help if you had a mental health problem in the near future?	Extremely unlikely						Extremely likely
		◯	◯	◯	◯	◯	◯	◯

8.	If you had concerns about your mental health in the future where would you seek help?	Inside NZDF	Outside NZDF	Both if I need to	I would not seek help
		◯	◯	◯	◯

9. Who would you approach within NZDF? *(Mark all that apply)*

- ◯ I would not seek help within NZDF
- ◯ Boss or supervisor
- ◯ Colleague
- ◯ Would contact NZDF4U Wellbeing Support for external confidential support (Call or text)
- ◯ NZDF Psychologist
- ◯ NZDF Medical Officer
- ◯ NZDF Chaplain
- ◯ NZDF Support Officer (DCF, DSO, DCC, NCO)
- ◯ NZDF Social Worker
- ◯ HR Advisor
- ◯ Vitae (Employee Assistance Programme)
- ◯ Cultural Advisor
- ◯ Nurse
- ◯ Medic
- ◯ SAPRA
- ◯ AHA (Anti-Harassment Advisor)
- ◯ Other (please specify) _____

10. Who would you approach for help externally? *(Mark all that apply)*

- ◯ I would not seek help outside NZDF
- ◯ Partner
- ◯ A friend
- ◯ Other family member
- ◯ Counsellor
- ◯ Psychologist
- ◯ GP /Doctor
- ◯ Kaumatua
- ◯ Chaplain
- ◯ Alternative medical provider/ healer
- ◯ A confidential support line (e.g., Healthline, Youthline)
- ◯ Online channels or social media
- ◯ Other (please specify) _____

If you were concerned about a mental health problem and did NOT seek help it would be because :

		Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree
11.	I don't know where to get help	○	○	○	○	○
12.	There would be difficulty getting time off work to get help	○	○	○	○	○
13.	It would be difficult to get an appointment	○	○	○	○	○
14.	My unit leadership / manager might treat me differently	○	○	○	○	○
15.	I would be seen as weak	○	○	○	○	○
16.	People might have less confidence in me	○	○	○	○	○
17.	It would stop me from being deployed	○	○	○	○	○
18.	I don't trust mental health professionals	○	○	○	○	○
19.	It would harm my career	○	○	○	○	○
20.	My visit would not remain confidential	○	○	○	○	○
21.	It would be too embarrassing	○	○	○	○	○
22.	I prefer to manage issues myself	○	○	○	○	○

If you are not military please go to Question 28

		Extremely dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Extremely satisfied	N/A
23.	If you are **military**, how satisfied are you with the access you get to **medical health** support services?	○	○	○	○	○	○
24.	If you are not satisfied with access to these services why is this?	Please describe: ○ Reluctance to attend / Don't feel comfortable attending ○ Can't get time off ○ The time it takes to travel ○ Difficulty getting appointment ○ Waiting time for an appointment ○ No reminders ○ Other (please list): _____					○
25.	If you are **military**, how satisfied are you with the access you get **to oral health** support services?	○	○	○	○	○	○
26.	If you are not satisfied why is this?	Please describe: ○ Reluctance to attend / Don't feel comfortable attending ○ Can't get time off ○ The time it takes to travel ○ Difficulty getting appointment ○ Waiting time for an appointment ○ No reminders ○ Other (please list):_____					○
27.	If you are **military**, how satisfied are you with the level of support provided to your family?	○	○	○	○	○	○

28.	What could we do differently or better as an organisation to support you (or others)?	Please describe:		○

Are you aware of the following:

		No	Yes
29.	Who you can speak to if you or someone you know has been subject to inappropriate, unacceptable or harmful behaviours? *(e.g. bullying, sexual harassment etc.)*	○	○
30.	Are you aware of NZDF4U Wellbeing Support services (0800 NZDF4U helpline service, text 8881 and EAP face to face support)?	○	○
31.	Are you aware of the Defence Health internet website?	○	○

Have you ever used the following resources:

		No	Yes (but didn't find it useful)	Yes (and found it helpful)
32.	The NZDF4U services (0800 NZDF4U helpline service, Text 8881 or EAP face to face support), prior to April 2019?	○	○	○
33.	The 0800 NZDF4U helpline/ text service since April 2019?	○	○	○
34.	The EAP / face to face counselling service since April 2019?	○	○	○

		Unlikely	Unsure	Likely
35.	How likely is it that you would you use these services in the future if you needed a helping hand?	○	○	○

		By Phone 0800 NZDF4U	Face to face	Text (8881)	Webchat (coming soon)
36.	If you would use the NZDF4U Wellbeing Support service, how would you prefer to engage?	◯	◯	◯	◯

	Where do you / would you prefer to access information on health and wellbeing? (Mark all that apply)		
37.	◯ Face to face with a professional ◯ Booklets and posters ◯ Forums and training sessions ◯ NZDF Intranet ◯ Internet ◯ Social media ◯ An APP on mobile device ◯ Wānanga / Hui ◯ Other (please specify) _____		

		No	Yes
38.	Have you attended NZDF resilience training?		
		◯	◯

		Not at all	Somewhat	Very
39.	If yes, how useful has this training been for you?			
		◯	◯	◯

40.	If NZDF offered health / wellbeing sessions, what areas would you be interested in attending? (Mark all that apply) ◯ I am not interested in attending ◯ Resilience ◯ Healthy Families ◯ Managing Finances ◯ Sleeping Well ◯ Managing stress ◯ Alcohol and drug education ◯ Maintaining peak performance ◯ Pilates / Yoga ◯ Looking after wellbeing from a holistic perspective - Te Whare Tapa Whā ◯ Relationships ◯ Mindfulness ◯ Other (please specify) _____
41.	What would you like to see the NZDF do differently with regard to supporting the health and wellbeing of our people?

Section 7: Demographic Characteristics

The following information will be used to view differences between groups, such as rank groups or units. Feel free to skip questions that you are not comfortable answering or that you believe may compromise your anonymity.				

1.	What is your gender?	Male	Female	Other
		○	○	○

2.	What is your age?						

	Less than 20 years	20- 24 years	25- 29 years	30 – 39 years	40 – 49 years	50 – 59 years	60 years and over
	○	○	○	○	○	○	○

3.	Which ethnic groups do you identify with? *(Mark all that apply)*	4.	If you selected more than 1 ethnicity, which do you most identify with? (Please select one)
○	New Zealand European/Pakeha	○	New Zealand European/Pakeha
○	Māori	○	Māori
○	Pacific Islander	○	Pacific Islander
○	Asian	○	Asian
○	Other European	○	Other European
○	Other (please specify)_____	○	Other (please specify)_____

5.	If you are Māori and you know your Iwi affiliation please enter it here_____

6.	Which of the following options best describes how you think of yourself?	○ Heterosexual or Straight ○ Gay or Lesbian ○ Bisexual ○ Don't Know ○ I prefer not to answer ○ Other (please state)_____

7.	Which of the following best describes your status?	Regular Force	Reserve	Civilian	Civilian ex-mil	Contractor
		○	○	○	○	○

8.	If you are **military**, what service do you belong to?	Navy	Army	Airforce
		○	○	○

9.	If you are **military**, which trade/corps do you belong to?				

	Navy		**Army**		**Air**
○	Chef	○	New Zealand Corps of Officer Cadets	○	Air Engineer Officer
○	Combat System Specialist	○	Royal Regiment of New Zealand Artillery	○	Air Loadmaster Officer
○	Communication Warfare Specialist	○	Royal New Zealand Armoured Corps	○	Air Warfare Officer
○	Communications Technician	○	The Corps of Royal New Zealand Engineers	○	Helicopter Loadmaster Officer
○	Diver	○	Royal New Zealand Corps of Signals	○	Parachute Instructor
○	Electronic Technician	○	Royal New Zealand Infantry Regiment	○	Pilot
○	Electronic Warfare Specialist	○	The New Zealand Special Air Service	○	Engineering
○	Helicopter Loadmaster	○	New Zealand Intelligence Corps	○	Supply Officer
○	Hydrographic Survey Technician	○	Royal New Zealand Army Logistic Regiment (The Duke of York's Own)	○	Chaplain
○	Marine Technician	○	Royal New Zealand Army Medical Corps	○	Communications And Information Systems Officer
○	Medic	○	Royal New Zealand Dental Corps	○	Intelligence Officer
○	Military Police	○	Royal New Zealand Chaplains Department	○	Learning And Development Officer
○	Musician	○	New Zealand Army Legal Service	○	Legal
○	Physical Training Instructor	○	The Corps of Royal New Zealand Military Police	○	Medical Officer
○	Seaman Combat Specialist	○	Royal New Zealand Army Education Corps	○	Operational Support Officer
○	Steward	○	New Zealand Army Physical Training Corps	○	Other Specialist
○	Logistics Supply Specialist	○	Royal New Zealand Nursing Corps	○	Psychologist
○	Weapon Technician	○	Other	○	Physical Fitness Officer
○	Writer			○	Security Forces Officer
○	Youth Development Instructor			○	Works Officer
○	Branch List Officer			○	Other
○	Chaplain				
○	General List - Engineering - Marine Engineering				
○	General List - Engineering - Weapon Engineering				
○	General List Ops Support				
○	General List – Aviation				
○	General List - Seaman				
○	General List - Supply				
○	Medical Officer				
○	Other				

10.	How many years service have you completed with the NZDF?	Less than 1	1 – 3	4 -5	6 - 10	11 - 15	16 - 20	21 - 25	26 or more
		◯	◯	◯	◯	◯	◯	◯	◯

11.	What is your current rank? *Please mark one:*

◯ Pte-Cpl / Ord–LH / LAC-Cpl (E)
◯ Sgt-WO1 / PO–WO / Sgt-WO (E)
◯ Ocdt-Capt / Mid–LT / PO-FLTLT (E)
◯ Maj / LTCDR / Sqnldr (E)
◯ LtCol/CDR/WG CDR (E)
◯ Col (E) & Above
◯ Not applicable

12.	Select the home situation that best describes you. *Please mark one:*

◯ Married or de-facto
◯ Married or de-facto with dependents (children or elderly adults)
◯ Single (never married)
◯ Single (divorced, widowed, separated)
◯ Single (including divorced, widowed, separated) with dependents (children or elderly adults)
◯ Other

13.	How many children do you have who are under the age of 5?	None	1 – 2	3 or more
		◯	◯	◯
14.	How many children do you have who are aged 5-16 years, or older if still financially dependent on you?	◯	◯	◯

14.	Are you currently in a commuting relationship? (your partner lives in a different geographic location to where you work)	No		Yes	
		◯		◯	

15.	If yes, how long have you been doing this?	0-3 months	4-6 months	7-12 months	12 months+
		◯	◯	◯	◯

16.	In which region do you work?	
		◯ Whangarei
		◯ Auckland
		◯ Tauranga
		◯ New Plymouth
		◯ Gisborne
		◯ Waiouru
		◯ Napier
		◯ Palmerston North
		◯ Ohakea
		◯ Wanganui
		◯ Upper Hutt – (JF NZ)
		◯ Upper Hutt (Trentham)
		◯ Wellington (HQ NZDF)
		◯ Wellington (Other)
		◯ Nelson
		◯ Woodbourne
		◯ Christchurch
		◯ Dunedin
		◯ Invercargill
		◯ Other (please specify)_____

Thank you for completing this survey.

We appreciate you having taken the time to do this survey, and for your honesty in answering the range of questions asked of you. We acknowledge it has taken time away from doing other things but your contributions will help ensure we have an accurate picture of how we are going and respond to any areas of need. We'll let you know the results as soon as we can.

Over the page you can check out how you are going based on how you scored yourself in two areas in the survey.

A list of health support resources is provided on the next page. Please detach and retain these pages if you would like to.

Future research and Anonymous Research Code

Finally, we invite you to select an anonymous research code. It is proposed to undertake a follow-up study in 2-3 years time to monitor changes in the health of our people over time, and the impact of events, support programmes and initiatives introduced across NZDF during this time.

Selecting an Anonymous Research Code will allow anonymity to be protected while permitting your survey response to be *compared across surveys.*

If you completed the 2016 survey please use the same ARC as you used for that survey. This is so we can monitor trends in risk and protective factors and how people are tracking over time.

Anonymous Research Code (ARC)

Your ARC will allow us to compare your responses from this survey with your responses on past/future surveys, while still respecting your anonymity. By using the ARC, you will be the only one who knows what your anonymous code is.

Spaces 1 & 2: **First two** letters of your mother's maiden name (e.g., For Smith, you would write <u>S</u> / <u>M</u>)
Spaces 3 & 4: The numbers corresponding to the **month your mother** was born (e.g., For April, you would write <u>0</u> / <u>4</u>)
Spaces 5 & 6: The **first two** letters of your father's first name (e.g., For John, you would write <u>J</u> / <u>O</u>)

e.g., <u>S</u> / <u>M</u> / <u>0</u> / <u>4</u> / <u>J</u> / <u>O</u>

Enter your ARC: ___ / ___ / ___ / ___ / ___ / ___
　　　　　　　　　1　　2　　3　　4　　5　　6

---

e.g. *S / M / 0 / 4 / J / O*　　　　　　　… you would enter *SM04JO* as your ARC

Please insert your ARC below (without spaces or slashes between the characters)

Anonymous Research Code:　　　X　X　X　X　X　X

Paper copies of the survey should be returned via the internal mail system to:

Health Check
Directorate of Health
Reserve Bank
Level 5
HQNZDF
Wellington

How Are You Doing? (Please detach and retain this page)

Below you can find information about how you scored on two of the health screens used in this survey. **Please use this information as a guide, no matter what your score, if you have any concerns about how you are going, seek help.**

K10 Psychological Wellbeing (page 4)

Please use this information as a guide, no matter what your score, if you have any concerns about how you are going, seek help. Scores can sometimes be influenced by particular life events, such as a recent change in circumstances (e.g. financial pressures, birth of a child, relationship breakdown), or a busy work period. These feelings may only last a short period of time, however if you are experiencing signs of distress that have endured over the last four weeks you are strongly encouraged to seek help. Seeking help will enable an earlier recovery and reduce the likelihood of longer term issues developing.

10-14 Low

Your score falls into the low range. This means you're doing pretty well! It's important to remember that this result is not a diagnosis. If you feel down, sad, stressed or anxious, you might want to speak to someone (eg. doctor or other health professional).

15-19 Moderate

Your score falls into the moderate range. Some people who score in this range have mild depression and/or anxiety.
We encourage you to see your doctor or health professional for a more personalised assessment.

20+ High

Your score falls into the high range. Many people who score in this range are experiencing depression and/or anxiety.
We strongly recommend that you see your doctor or health professional for a more personalised assessment.

AUDIT Alcohol Use (Page 13)

Score	Risk	Action
0-7	Low risk	This is the healthiest level of drinking, but check the additional risks below to make sure you are not at elevated levels of risk taking.
8-15	Medium	Your drinking has the potential to cause harm, consider low risk drinking, and try the tips below for change.
16 and above	High risk	This level of risk indicates that you are likely damaging your health and wellbeing with your drinking. Seriously consider changing these behaviours. Talk to your doctor or health professional for additional advice.

Low risk guidelines

Low-risk drinking to reduce the lifetime risk of harm from disease or injury for healthy men and women is:
- on any day no more than 2 standard drinks.

Low risk drinking to reduce the harm of injury or death on any one occasion of drinking is:
- no more than 4 standard drinks on any one day (on a special occasion, not regular drinking) – these drinks should be spread out over several hours;
- having regular alcohol-free days.

For women who are planning to become pregnant, or who are pregnant or breastfeeding, no alcohol is the safest option.

Additional risks
Caution:
- Do you have a health condition made worse by alcohol i.e. diabetes, hepatitis, pancreatitis etc.?
- Do you have heart disease, high blood pressure or are gaining weight?
- Are you on medication?
- Do you suffer from depression, anxiety, or PTSD?
- Do you experience mood swings or irritability?
- Do you have trouble sleeping?
- Are you over 65?

Even if you are in the low risk category you may need to drink less if you are in one of the above groups that are more susceptible to the effects of alcohol. Talk to your doctor or other health professional.

Health & Wellbeing
Survey / 23 Sep – 6 Oct

New Zealand
DEFENCE FORCE
Te Ope Kātua O Aotearoa

Support

If you find involvement in this survey distressing in any way you can talk to someone about it. If you have concerns about your mental health or that of someone else, there are a range of internal support options available including colleagues and leaders. Additionally, you can contact medical staff, chaplains, social workers, SAPRAs, psychologists for military personnel and external practitioners for civilians.

Alternatively there are a range of telephone helplines available:

NZDF4U Wellbeing Support
0800 693 348 or text 8881 or +64 9 414 9914 if calling from overseas.
All members of NZDF and the Defence community can contact NZDF4U for 24/7 confidential support spanning both telephone and face-to-face support. This includes Regular Force, Civilians, Reserve Force, families and veterans.

VANZ 0800 4838372
A confidential helpline for veterans

SAPRA 0800 693 324
Support for sexual assault or other harmful sexual behaviour

Lifeline 0800 543 354
Confidential counseling service for the general population

Depression helpline 0800 111 757

Women's Refuge 0800 733 843
(24 hour crisis line for women dealing with violence in their life)

Mensline 0800 636 754
Confidential helpline for men formatting line

Alcohol and Drug helpline 0800 787 797

Youthline 0800 376 663 (or text 234)

OUTLine NZ 0800 6885463 (0800 OUTLINE)
support for sexuality or gender identity issues

IN AN EMERGENCY CALL 111
More information about mental health and available support can be found on the following sites:

NZDF

NZDF Defence Health website
health.nzdf.mil.nz/

NZDF HR toolkit
(includes a list of your regional support contacts (social workers, AHAs, SAPRAs, Chaplains)

NZDF Force4Families site
nzdf.mil.nz/families/default.htm

NZDF Mental Health
orgs/sites/nzdf-mh/default.aspx (Intranet)

NZDF Sexual Assault Support
nzdf.mil.nz/personnel-records/sart/about/default.htm

General mental health information, stories and tools:

mentalhealth.org.nz
Mental Health Foundation – information, stories, tools and support

thelowdown.co.nz
Information, stories, and interactive site designed for young people

moh.govt.nz/moh.nsf/indexmh
Useful self-help resources for recognising and managing stress (Ministry of Health)

hpa.org.nz
Health Promotion Agency – range of health information for NZers

livingwell.org.au
Practical resources and support for men

depression.org.nz
Information, resources and support

alac.org.nz
Information, resources and support (drugs and alcohol)

beyondblue.org.au
Anxiety and depression (Australian site)

skylight.org.nz
Offers services to those facing tough times due to change, loss, trauma and grief – whatever the cause, and whatever their age (including for children)

likeminds.org.nz
Aims to address stigma and discrimination sometimes associated with mental illness, contains resources, help options and stories from people with mental illness

livemoreawesome.com
Information and support for those dealing with depression

veteransaffairs.mil.nz
Site for veterans (NZ)

at-ease.dva.gov.au
Site for veterans (Aus)

supportingfamilies.org.nz
Support, info and resources for those supporting family members with mental illness

militaryonesource.mil
Support for the military community (US)

sesamestreet.org/parents/topicsandactivities/toolkits/tlc#
Resources to support military families including deployments, homecomings, grief, injuries, and self-expression (US)

sparx.org.nz
Online tool for young people sponsored by MoH

leva.co.nz
Resources, tools, information and support for Pacifika people

teraumatatini.com
Information about Māori workforce training, education and capability-building solutions

General health information, stories and tools:

authoritynutrition.com/about
Evidence based healthy eating advice

heartfoundation.org.nz
Healthy-living

A FORCE FOR NEW ZEALAND

Appendix B: New Zealand Defence Force Organisational Research Approval

HEADQUARTERS NEW ZEALAND DEFENCE FORCE
Organisational Research
MINUTE

APPROVED ~~the~~ creighton 3/3/20
AC DHR
for KOS

5000/PB/5/3

2 March 2020

APPROVAL TO CONDUCT RESEARCH: DEMANDS AND RESOURCES: FLOURISING IN THE NEW ZEALAND DEFENCE FORCE (ORG RESEARCH 2020/04)

References:
A.   DFO 3, Chap 5, Part 14: Authority to Conduct Human-related Research

Background

1.   In accordance with Ref A, Brooke Hopkinson, a Masters student from Massey University, has requested approval to conduct research on the Demands and Resources required to flourish in the NZDF using the 2019 Health and Wellbeing Survey.

2.   The aim of the research is to investigate how job demands influence flourishing, wellbeing, and job satisfaction. The research will investigate if both personal and job resources moderate or mediate the relationship between job demands and flourishing, wellbeing, and job satisfaction.

3.   The expected benefit from this research is to provide a greater understanding of what contributes to wellbeing and flourishing in relation to job demands within the NZDF. It is important to recognise the necessity of good mental health and wellbeing, and the factors that influence this.

4.   This project is sponsored by COL Clare Bennett (Chief Mental Health Officer).

5.   The researcher is undertaking the project as part of a Masters of Arts in Psychology with Massey University and the study will be supervised by Dr Dianne Gardner, Senior Lecturer, School of Psychology, Massey University.

Methodology

6.   The intended approach is to utilise the existing NZDF 2019 Health and Wellbeing Survey dataset

7.   The data will be analysed using SPSS software to conduct structural equation modelling, and analysis of variance (ANOVA) and regress analyses will be used to determine the statistical relationship between job demands (perceived workload,

hours worked, days spent away, and shift work) and flourishing, wellbeing, and job satisfaction.

8.   An investigation into whether personal resources and job resources (relationship, resilience, supportive superiors and colleagues) mediates or moderates these relationships will also be looked at. The model will also be used to investigate group level differences between Army, Navy, Air Force and Civilian groups.

Confidentiality and Ethics

9.   Participation in the survey was voluntary.

10.   The Health and Wellbeing survey was anonymous and any identifying variables will be removed before analysis.

Release and Reporting

11.   The output will be a thesis that forms the basis of a Masters.

12.   The researcher is also to provide a copy of the research report to Organisational Research upon completion for inclusion in the HEARR.

13.   Any substantive variations to previously approved research must have the written consent of AC DHR.

Endorsement and Approval

14.   The NZDF Research Ethics Committee reviewed this application and endorsed at their meeting on the 19th February 2020.

15.   In my role as Chair, NZDF Research Ethics Committee, I have reviewed this project and am satisfied that all ethical and scientific requirements required by Ref A are adequately met.

16.   It is therefore recommended that AC DHR:

    a.   **Approve** the proposed research project.

J.K. HUGHES
Principal Advisor Organisational Research

DTelN Phone: +64 4 496 0141
Email: Joanne.Hughes@nzdf.mil.nz

Appendix C: Massey University Low Risk Ethics Approval

Date: 11 March 2020

Dear Brooke Hopkinson

Re: Ethics Notification - **4000022330** - **Demands and Resources: Flourishing in The New Zealand Defence Force**

Thank you for your notification which you have assessed as Low Risk.

Your project has been recorded in our system which is reported in the Annual Report of the Massey University Human Ethics Committee.

The low risk notification for this project is valid for a maximum of three years.

If situations subsequently occur which cause you to reconsider your ethical analysis, please contact a Research Ethics Administrator.

Please note that travel undertaken by students must be approved by the supervisor and the relevant Pro Vice-Chancellor and be in accordance with the Policy and Procedures for Course-Related Student Travel Overseas. In addition, the supervisor must advise the University's Insurance Officer.

A reminder to include the following statement on all public documents:
"This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher(s) named in this document are responsible for the ethical conduct of this research.

If you have any concerns about the conduct of this research that you want to raise with someone other than the researcher(s), please contact Professor Craig Johnson, Director - Ethics, telephone 06 3569099 ext 85271, email humanethics@massey.ac.nz."

Please note, if a sponsoring organisation, funding authority or a journal in which you wish to publish requires evidence of committee approval (with an approval number), you will have to complete the application form again, answering "yes" to the publication question to provide more information for one of the University's Human Ethics Committees. You should also note that such an approval can only be provided prior to the commencement of the research.

Yours sincerely

Professor Craig Johnson
Chair. Human Ethics Chairs' Committee and Director (Research Ethics)   ffice, Research and Enterprise
Massey University, Private Bag 11 222, Palmerston North, 4442, New Zealand **T** 06 350 5573; 06 350 5575 **F** 06 355 7973
E humanethics@massey.ac.nz **W** http://humanethics.massey.ac.nz

Appendix D: Invitation Email Sent to Participants

Below you will find a link to participate in the NZDF Health and Wellbeing Survey.
As we draw near to the end of another very successful but busy year, it's timely we pause to take a temperature check of how we are all going. Being physically and mentally healthy underpins how we perform as an individual, family member, and member of our Defence community.   So it is important our resources are invested in the right places to keep us all healthy and well, and to ensure that we have the support we need to navigate through whatever challenges life can sometimes throw at us. The 2016 survey gave us useful insights about how our people were going and priority areas for focus. It's timely now to check in again to help shape areas for future action.

You can complete this survey by:
- Clicking on the link to the survey link here (this will take you to the approved survey platform hosted on a secure external website)
- Emailing or pasting this link (xxx) to your phone or personal email address to access from there.
- Emailing healthcheck@nzdf.mil.nz and requesting a PDF version that you can print and return to the Health Directorate if you would prefer to complete a paper copy.
- Pick up a paper copy of the survey from your local Defence library or Defence Health Centre.

The survey will help to build an in depth picture about how we are going, but only if we are honest, and only if we get a good participation rate. That is why this survey is **anonymous**. We appreciate that it means taking time out from your usual work commitments but please do so to help us make health and wellbeing our priority and continue to keep our people safe and well. The survey will take most people between 15-25 minutes to complete. There is an additional section on deployments that will require a little extra time if you have been deployed.

Thank you for your support.

Brigadier Andrew Gray
Director Defence Health/Surgeon General