

Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

**The Influences of Work Engagement and Intention to Turnover in Pilots and
Cabin Crew in a New Zealand based Airline organisation**

A thesis presented in partial fulfillment of the requirements for a degree of

Master of Science

in

Psychology

at Massey University, Palmerston North

New Zealand.

Emma Prouse

2010

ABSTRACT

The motivational process linking job resources with engagement and intention to turnover was investigated in a New Zealand based airline organisation using an online survey of pilots and cabin crew (n=132). This study integrated two previously developed models of engagement, by Schaufeli and Bakker (2004) and May, Gilson and Harter (2004). The job resources of autonomy, supervisor support, coworker support and procedural fairness were proposed to relate to engagement through the activation of the psychological experiences of work related meaningfulness and psychological safety.

Autonomy, coworker support and procedural fairness contributed significant explained variance to meaningfulness; while supervisor support, coworker support and procedural fairness contributed to psychological safety. Meaningfulness explained significant variance in engagement, which is consistent with the Job Demands-Resource theory of engagement where job resources are related to engagement via a motivational pathway. Meaningfulness was found to partially mediate the relationship between autonomy, supervisor support, procedural fairness and engagement, while psychological safety partially mediated the relationship between autonomy and engagement.

Consistent with Schaufeli and Bakker's (2004) model, engagement was found to be negatively related to intention to turnover. In addition both meaningfulness and psychological safety contributed significant variance to intention to turnover. This suggests that a motivational pathway, provided by meaningfulness, relates job resources to engagement, while psychological safety becomes important when addressing turnover intentions. This study has implications for practical application in organisations.

Acknowledgements

I would like to take this opportunity to thank all those people who have made this thesis possible. Firstly I give my sincere thanks to my supervisor Dr. Dianne Gardner for her support, guidance and wealth of knowledge. Thank you to my family and to my partner for your continued support and encouragement for my studies.

I would like to acknowledge the focus group of employees and the company liaison at the participating organisation for being encouraging of this research. Finally, a big thank you to the participants of this study, it has been amazing to work with you all and I wish you all the best from here.

TABLE OF CONTENTS

ABSTRACT	i
Acknowledgements	ii
List of Tables.....	vi
List of Figures	viii
Chapter One: Introduction.....	1
1.1 Definition of Engagement.....	1
1.2 Organisational interest in Engagement.....	1
1.3 The present study	3
1.3 Brief overview of the chapters	3
Chapter Two: Engagement and Job Resources	5
2.1 The Engagement Concept.....	5
2.2 Job Demands and Resources.....	5
2.3 Towards a Resource Framework of Engagement	9
2.4 Antecedent Resources	9
Chapter Three: Motivation and Engagement.....	11
3.1 Motivation.....	11
3.2 The Motivational pathway	13
3.3 Engagement and Intention to Turnover	15
3.4 Conditions for Engagement: Meaningfulness and Psychological Safety.....	16
3.4.1 Meaningfulness.	16
3.4.2 Psychological safety.	17
3.5 Summary.....	18
Chapter Four: The Engagement Model.....	19
4.1 Job Resources.....	19
4.2 Job related Autonomy	19
4.3 Social support.....	20
4.4 Procedural Fairness	22
4.5 Resources as Enablers of Meaningfulness and Psychological Safety.....	23
4.6 Resources as Enablers of Meaningfulness.....	23
4.7 Resources as Enablers of Psychological Safety.....	24

4.8 Mediation	25
Chapter Five: The Present Study	26
5.1 Characteristics of the airline industry in New Zealand during the study period 26	
Chapter Six: Method	29
6.1 Method.....	29
6.2 Participants	30
6.3 Variable Measures.....	30
6.4 Data Analysis	32
Chapter Seven: Results.....	34
7.1 Group differences	34
7.2 Correlations.....	34
7.3 Hypothesis testing	36
7.3.1 Job resources as contributors to meaningfulness.	36
7.3.2 Job resources as contributors to psychological safety.	36
7.3.3 Meaningfulness and psychological safety as contributors to engagement.	37
7.3.4 Engagement and intention to turnover.....	38
7.3.5 Job resources as contributors to engagement.	38
7.3.6 Meaningfulness and psychological safety as contributors to intention to turnover.....	39
7.3.7 Job resources as contributors to intention to turnover.	40
7.4 Mediation	40
7.4.1 Meaningfulness as a mediator of the relationship between job resources and engagement.	40
7.4.2 Psychological safety as a mediator of the relationship between the job resources and engagement.	43
Chapter Eight: Discussion and Conclusions	46
8.1 Discussion of the findings	46
8.2 Limitations	47
8.3 Importance of findings	48
8.4 Recommendations for future research.....	49
8.5 Conclusion	50
References	51
Appendix A: Information Sheet	56

Appendix B: Email Advertisement.....	57
Appendix C: Questionnaire	58

List of Tables

Table 1: Correlations	34
Table 2: Variance in Meaningfulness explained by Job Resources	35
Table 3: Variance in Psychological Safety explained by Job Resources	36
Table 4: Variance in Engagement explained by Meaningfulness and Psychological Safety	36
Table 5: Variance in Engagement explained by Intention to turnover	37
Table 6: Variance in Engagement explained by Job Resources	37
Table 7: Variance in Intention to turnover explained by Meaningfulness and Psychological Safety	38
Table 8: Variance in Intention to turnover explained by Job Resources	39
Table 9: Mediating role of Meaningfulness in the relationship between Autonomy and Engagement	39
Table 10: Mediating role of Meaningfulness in the relationship between Supervisor Support and Engagement	40
Table 11: Mediating role of Meaningfulness in the relationship between Coworker Support and Engagement	40
Table 12: Mediating role of Meaningfulness in the relationship between Procedural Fairness and Engagement	41
Table 13: Mediating role of Psychological Safety in the relationship between Autonomy and Engagement	41
Table 14: Mediating role of Psychological Safety in the relationship between	

Supervisor Support and Engagement	42
Table 15: Mediating role of Psychological Safety in the relationship between Coworker Support and Engagement	42
Table 16: Mediating role of Psychological Safety in the relationship between Procedural Fairness and Engagement	43

List of Figures

<i>Figure 1:</i> The model of engagement for the present study.	13
---	----

Chapter One: Introduction

This study investigates employee work engagement and intention to turnover among pilots and cabin crew in a New Zealand based airline. This study draws from Job Demands-Resource theory and integrates two models of engagement which were developed by previous research in order to explore the motivational process enabling employees to effectively engage with work.

1.1 Definition of Engagement

Engagement was originally conceptualized as the antithesis of burnout however, since then studies have focused on the positive value of engagement in its own right (Maslach & Leiter, 1997; Schaufeli & Bakker, 2004). Engagement is driven by both aspects of the individual, such as personality (Kahn, 1990), and the context of work including the social environment and the characteristics of the job tasks (Saks, 2006; Schaufeli and Bakker, 2004; Xanthopoulou, Bakker, Demerouti, Schaufeli & 2009).

As an emerging area of research, work engagement has multiple definitions in the literature. In the present study, engagement is defined as the energy and motivation for work. Being engaged is a positive state in which an individual is functioning optimally and experiencing interest, enjoyment and absorption in their work (Bakker, Schaufeli, Leiter & Taris, 2008). This involves aspects of thinking, feeling and doing (Zigarmi, Nimon, Houson, Witt & Diehl, 2009) and is the active involvement and investment of the self in work (Kahn, 1990). Engagement expresses itself as the application of personal energies and abilities, the application of mental processes and intellectual functions, the experience of positive emotions and feelings about work, and the desire to contribute and be involved in organisational outcomes (Zigarmi *et al.*, 2009).

1.2 Organisational interest in Engagement

Employees who are engaged with their work tend to be motivated, attached to their organisation, desire to do a good job and derive personal meaning from their work (Kahn, 1990). They are enthusiastic, energetic, engrossed and give extra contribution to their jobs (Saks, 2006). These outcomes and behaviours of engaged employees have prompted organisations to be interested in ways to effectively develop engagement in their employees (McLeod & Clarke, 2009).

Employee engagement has been linked with positive performance (Halbesleben & Wheeler, 2008). Salanova, Augut and Peiro (2005) found that highly engaged employees tended to give excellent customer service. In addition, engagement predicted levels of employee performance and customer loyalty in service industries (Salanova, Augut & Peiro, 2005), and performance among teachers (Bakker & Matthijs Bal, 2010).

Engagement is also related to proactive employee behaviours as engaged employees tend to be committed to the organisation, more satisfied with their jobs and exhibit organisational citizenship behaviours (Bakker & Matthijs Bal, 2010; Harter, Schmidt & Hayes, 2002; Saks, 2006; Salanova & Schaufeli, 2008). However, not only are engaged employees proactive, they are less likely to intend to leave their organisation and enhancing the employee engagement may therefore help to reduce the rates of turnover (de Lange, de Witte & Notelaers, 2008; Halbesleben & Wheeler, 2008; Hallberg & Schaufeli, 2006; Saks, 2006).

As a state of optimal functioning, engagement has been linked to employee health and well-being outcomes (Schaufeli, Bakker & van Rhenen, 2009; Schaufeli, Taris, & van Rhenen, 2008). Engaged employees are likely to derive pleasure and enjoyment from their work and tend to have greater coping ability in the face of demands (Bakker, Hakanen, Demerouti & Xanthopoulou, 2007) and greater ability to balance work and life (Parkes & Langford, 2008). Engaged employees influence the mood of those around them as their motivation and energy transfer to others (Bakker, van Emmerik & Euema, 2006). This suggests that facilitating engagement means a high performing and effective workforce and a happy and psychological

healthy place of work.

1.3 The present study

Research into psychological functioning has generally taken a disease/harm approach. However, this ignores investigation of well-being and positive outcomes. As such, studies which focus on the conditions which foster optimal functioning warrant particular attention. With multiple models of engagement in the literature, further research is important to establish the best explanatory variables for engagement and the mechanisms that influence engagement. Given the interest expressed in this topic by practitioners, there is value in investigating the application of engagement in a workplace setting to gauge how engagement is related to the nature of work.

This study aims to identify how job resources relate to engagement and how engagement in turn, relates to intentions to stay with the organisation. Key job resources are hypothesized to be positively related to engagement through the psychological experiences of work related meaningfulness and psychological safety. Engagement is proposed to be negatively related to intentions to leave the organisation. This study utilizes a survey methodology to sample the pilots and cabin crew in a New Zealand based airline organisation.

1.3 Brief overview of the chapters

The second chapter of this study elaborates on the historical context of engagement and introduces job resource theories of engagement which form the theoretical basis for this study. The Job Demands-Resources model proposes that job resources influence engagement through the activation of a motivational process. This study aims to investigate engagement as an outcome of motivation derived from job resources, which is discussed in chapter three.

This study then proposes that specific resources contribute to the meaningfulness of work, and the safety to be oneself and contribute to work (psychological safety), which form part of the ‘motivational process’ referred to by the Job Demands-Resources model. This forms chapter four.

Chapter five explains the characteristics of the airline industry, in which much of the workforce operates away from the base location. Chapter six describes the methodology of this study, which is followed by chapter seven, the results section. In chapter eight the results are discussed and the conclusions and limitations of the present study are presented.

This study investigates employee work engagement and intention to turnover among Pilots and Cabin Crew in a New Zealand based airline. This study draws from job resource theory and integrates two models of engagement which were developed by previous research in order to explore the motivational process enabling employees to effectively engage with work.

Chapter Two: Engagement and Job Resources

2.1 The Engagement Concept

There has been debate as to whether engagement is a previously defined construct that has simply been renamed (Macey & Schneider, 2008), as definitions of engagement overlap with those of other established constructs such as job satisfaction, job involvement, flow, organisational commitment and organisational citizenship behaviours (Hallberg & Schaufeli, 2006). Hallberg and Schaufeli (2006) investigated the relationships between engagement, job involvement and organisational commitment with health, job and personal factors. They found that work engagement had only a moderate relationship with job involvement and organisational commitment and they concluded that job involvement, organisational commitment and engagement were distinct constructs due to different associations with health, job and personal variables.

To address the overlap with previous constructs and the conclusion that engagement is related but different, Zigarmi *et al.* (2009) described engagement as a metaconstruct, in that engagement contains multiple constructs. There is evidence that engagement is related to the other constructs listed above (May, Gilson & Harter, 2004; Saks, 2006; Zigarmi *et al.*, 2009), however there is little empirical evidence to determine that it is a distinct construct. The value of engagement is evident by models such as that by Saks (2006) that identified that job involvement and organisational commitment were outcomes or consequences of being engaged with work. This suggests that being engaged with work is a prerequisite for these. Studies have then investigated the antecedents of engagement which include job related resources which are discussed in the sections to follow (Schaufeli & Bakker, 2004; Saks, 2006).

2.2 Job Demands and Resources

Resources provide the means to support functioning and to meet the challenges in our lives (Hobfoll, 2002). More specifically, job resources are working conditions, the characteristics of the job such as the task design and the distribution of work (Hackman & Oldham, 1976), or socioemotional such as support given by supervisors (Humphrey, Nahrganga & Morgeson, 2007). Resources are needed to effectively meet job demands and either provide value or are valued for their ability to bring other resources to the individual (Hobfoll, 2003).

The Job Demands-Resources (JD-R) theory proposes that employees gain and use job resources to meet demands in the workplace. Job demands are the “physical, psychological, social or organisational aspects of the job that require sustained physical and/or psychological effort or skills,” (Bakker & Demerouti, 2007, p.312). Job demands can be high pressure or demanding aspects of work, or unfavorable work environments (Bakker & Demerouti, 2007). Job resources are “functional in achieving work goals; reduce job demands and the associated physiological and psychological costs; stimulate personal growth, learning and development,” (Bakker & Demerouti, 2007, p.312). Job demands can lead to physical or psychological costs to employees when they have insufficient resources to meet these demands, and high demands can result in burnout; while sufficient job resources lead to employee well-being and optimal functioning (Schaufeli and Bakker, 2004). Studies have found connections between job resources and engagement.

The JD-R model of engagement as proposed by Schaufeli and Bakker (2004) assumed “(1) an energetic process of over taxing and wearing out in which high job demands exhaust the employee’s energy backup; (2) a motivational process in which lacking resources preclude dealing effectively with high job demands and foster mental withdrawal or disengagement,” (p.296). Primarily the JD-R model has been tested as an explanation of how resources, demands and engagement are related.

In their investigation of how the JD-R framework related to engagement and burnout, Schaufeli and Bakker (2004) found that engagement was almost exclusively predicted by job resources, while burnout was predicted by job demands. The study

concluded that engagement was a separate construct to burnout. Within the JD-R framework tested by Schaufeli and Bakker (2004), engagement was exclusively enabled by available resources, not job demands. Given this, the second premise (2) listed in the above paragraph from Schaufeli and Bakker's (2004) model could be altered. From a positive psychology perspective this should read that there is a motivational process operating where job resources enable engagement.

Given that job demands did not appear to influence engagement, and indications that it is available job resources rather than demands which are important, job demands will not be investigated in the present study. From resource theories as discussed above, job resources appear to have value as a source of motivation in their own right, and thus a key role in engagement. Therefore, an approach to research which focuses on identifying the process enabling engagement has value here. As a study of optimal functioning, the present study will therefore focus on the relationship between job resources and engagement.

The value of job resources therefore is in how they act as enablers of engagement. Schaufeli and Bakker (2004) also proposed that job resources and engagement were linked via a motivational process. The JD-R model is similar to other job resource theories such as Hackman and Oldham's (1976) job characteristics model where aspects of the job interact to form the motivational potential of the job. The job characteristics model has five core dimensions of the job which are: skill variety, task identity, task significance, autonomy and feedback, build to create motivation, satisfaction and performance outcomes (Hackman & Oldham, 1976). These job characteristics interacted to influence the amount of meaningfulness, responsibility and knowledge of the results of work efforts that the incumbent derived from their work, which then in turn created work outcomes of motivation, performance, satisfaction and lower turnover. This theory demonstrates how motivation is sourced from aspects of work.

That job resources have motivational potential, also agrees with Conservation of Resource theory (COR) where individuals are driven and motivated by the desire to

obtain and conserve resources (Hobfoll, 2002). The characteristics of a job are thought in this theory, to additively enrich or deplete an individual's resources, where an optimal accumulation of resources leads towards feelings and behaviors of motivation (Xanthopoulou, Heuven, Demerouti, Bakker & Schaufeli, 2008). Further, it has been noted that individuals who have resources easily gain more resources, a process referred to by Hobfoll (2002) as "resource caravans," (p.312) meaning that the obtainment of resources tends to bring further resources to the individual creating an upward spiral of resource gain. Alternatively, resource loss can occur in a loss spiral.

An additional theory which explains the motivational potential of job resources is Herzberg's two factor Motivator Hygiene theory (Herzberg, Mausner & Snyderman, 1959). This theory proposes that there are aspects of work which can encourage employee motivation and growth, which are referred to as motivators. Secondly, there are aspects of the job which when present, act to prevent dissatisfaction but are not promoters of motivation, these are hygiene factors. Herzberg, Mausner & Mausner (1959) found factors promoting motivation included: achievement, recognition, the work itself, responsibility, and growth or advancement. Hygiene factors were: company policy and administration, supervision, interpersonal relationships, working conditions, salary, status, and security (Herzberg, Mausner & Snyderman, 1959). Notably, both the motivators and hygiene factors are recognizable as factors considered as job resources by many studies (Hackman & Oldham, 1975; Saks, 2006).

Motivator and hygiene factors are thought to be two separate processes: one promoting motivation, the other preventing dissatisfaction but not contributing to motivation (Whitsett & Winslow, n.d.). However, there may not be a clear distinction between these as there is evidence that the factors can operate both as hygiene factors and motivators (Maidini, 1991). In fact, in Herzberg's (1987) influential report in the Harvard Business Review, the factors from twelve investigations of job attitudes were reported in a frequency format which suggested a slight continuum with a degree of overlap between the process of promoting

satisfaction and preventing dissatisfaction. Hence while the labels of motivator or hygiene factors are for the most part a useful distinction, there may be times when an aspect of work operates as both or switches from a motivator to a hygiene factors or vice versa role.

2.3 Towards a Resource Framework of Engagement

Job resources are thought to create conditions optimal for engagement and all of these theories establish that job resources are motivational. However this does not explain how job resources interact to produce engagement. One explanation is that it could be that a certain amount of resources are needed and additively accumulate to an optimal level where engagement occurs. However, drawing from the JD-R theory of engagement, it is proposed that resources operate to influence engagement through activating a motivational process. This is supported by COR theory and Herzberg's two factor theory of the way that resources act. For this an understanding of why some job resources have greater potential to influence motivation is important. This motivational pathway will be explored in the next chapter.

2.4 Antecedent Resources

Studies have explored the job resources which give rise to engagement. The job resources relating to engagement have been referred to as antecedent variables by Saks (2006) and include the characteristics of the job, organisational and supervisor support, and measures of organisational justice. Similarly to Saks (2006), Rich, Lepine and Crawford (2010) investigated how antecedent variables, including perceptions of organisational support, related to the outcomes of job performance through engagement. In this study engagement was found to account for the relationship between the antecedents and the outcomes of job performance and organisational citizenship behaviours. These models of engagement support the idea that engagement is an important part of the process between aspects of work and positive outcomes.

However using the term ‘antecedents’ infers a time dimension which is not in fact tested when cross-sectional methodologies are employed. Using the term antecedents implies by definition of the term, that the variables influence engagement over time which is a point that is not in fact established in such studies. With this in mind, the antecedent variables will be termed enablers in the present study. The specific job resources which are proposed to act as enablers of engagement will be presented in Chapter Four. The next chapter will explore how job resources act as motivators for engagement.

Chapter Three: Motivation and Engagement

3.1 Motivation

The theories in the previous chapter identify a motivational process theoretically linking job resources to motivation. That engagement is an outcome of the motivational process fits with the definition of engagement as the energy and motivation for work. This fits also with what has been found previously, that engaged individuals tend to exhibit behaviours that might be expected of motivated people, as they tend to be high performers, committed and undertake extra role behaviours (Halbesleben & Wheeler, 2008; Saks, 2006).

Motivation is thought to be driven by a combination of individual characteristics such as self esteem or optimism (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009) and the environmental context (Chalofsky & Krishna, 2009). However the present study will focus solely on job resources as, while there are documented influences of personal resources for engagement (Xanthopoulou *et al.*, 2009), in this study the interest is on how organisational factors operating in the workplace can impact on the development of motivation and thus engagement.

Motivation is described as being either intrinsic or extrinsic. Intrinsic motivation occurs from within the individual as they initiate their behaviour, they are motivated and pull themselves towards achieving an outcome, while extrinsic motivation occurs from a source external to the individual and is a push from environmental pressures and competition (Deci & Ryan, 1985).

Extrinsic motivation comes from stimulus-response theories which fall into the category of Mechanistic theories, where the behaviour is a response to environmental stimuli (Deci & Ryan, 1985). Extrinsic approaches to motivation can be likened to a carrot and stick analogy, where the individual is responding to either the offer of a reward, such as a carrot, or else to avoid punishment. The problem here is that the behaviour will exist as long as it is continually being reinforced, until the reward is

gained or the punishment discontinues. Over time greater and greater reward or punishment will be needed to be applied to continue the behaviour (Herzberg, 1987). Both these approaches become problematic for organisations, as they are expensive, time consuming and frustrating and these can be ineffective in encouraging sustained motivation.

Intrinsic forms of motivation are of interest as this motivation tends to be longer lasting than extrinsic motivation, which exists for the period of pressure or until the reward is gained (Herzberg, 1987; Meyer & Gagne, 2008). The interest here is on why the individual wants to do a task without outside reinforcement. That is why intrinsic motivation is considered a deeper form of motivation (Herzberg, 1987). Intrinsic motivation is described as the “natural propensity to engage one’s interests and exercise one’s capacities, and in so doing, to seek and conquer optimal challenges,” (Deci & Ryan, 1985, p.43). This is the idea that it is the internal experiences such as the feelings of successfulness and effectiveness that come with accomplishing goals that are the rewards or reinforcers which sustain behaviour (Deci & Ryan, 1985). Intrinsic motivation comes from within the individual and is effective in driving the behaviours of organisational commitment, extra role behaviours and high productivity which are observed in engaged persons (Chapter 1), as these are behaviours that are often done voluntarily without pressures or rewards.

A key theory of how intrinsic motivation can be developed is Self Determination theory. Self Determination theory addresses the psychological need for people to pursue self-development, learning and the attainment of goals (Deci & Ryan, 2000). Deci and Ryan (1985) noted that there are key factors leading to intrinsic motivation. These are the need for autonomy, competency, and relatedness. It follows then, that people will strive for contexts that support these conditions and seek job resources which support the development of these.

Intrinsic motivation is of interest for engagement. This is because the capacity to

engage or not engage, to be motivated, enthusiastic about work, and give extra contributions that are not a requirement, exists within the individual. Therefore there is value in understanding how engagement can be enabled through a process where job resources create conditions of motivation. While intrinsic motivation arises from within the individual, organisational factors operating in the workplace can have an impact how this motivation develops by fostering conditions which allow intrinsic expressions.

3.2 The Motivational pathway

The present study integrates two models of engagement and proposes that job resources relate to engagement via a motivational process. This is the Schaufeli and Bakker (2004) model where job resources are related to engagement and engagement is in turn, negatively related to intentions to leave the organisation. In this model, job resources and engagement are thought to be linked via a motivational process. The second model, that of May, Gilson and Harter (2004) found that job resources related to the conditions of meaningfulness and psychological safety and those in turn related to engagement. The present study integrates the two models and proposes that job resources will be related to engagement through the experiences of work related meaningfulness and psychological safety. Engagement will then be negatively related to intentions to turnover. The model proposed for the present study in Figure 1 will be built up in sections and presented as hypotheses in the sections that follow.

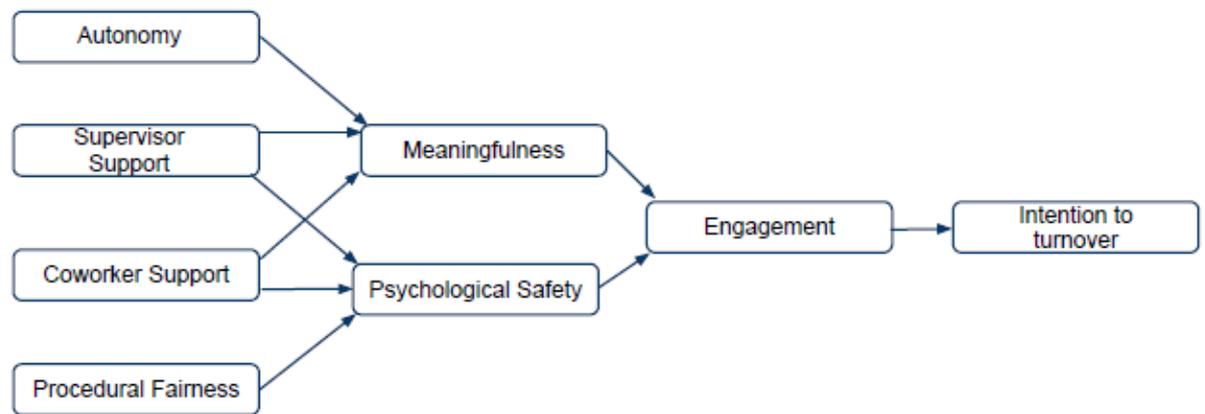


Figure 1: The model of engagement for the present study.

In an exploratory qualitative analysis to describe the experiences of employees at an architecture firm (n=16) and at an American summer camp for teenagers (n=16), Kahn (1990) detailed certain commonalities in the employees proposed to influence whether these employees were engaged or disengaged with work. These conditions were the extent to which the job provided a source of meaning and purpose to the individual and the extent to which they were able to contribute to work and bring unique aspects of themselves into their job role. Critically for engagement this second condition was thought to occur without the need to be concerned about possible negative consequences to themselves or their careers. These were referred to as job meaningfulness and psychological safety. Kahn concluded that these conditions acted as enablers of engagement to determine whether individuals were engaged or disengaged with their jobs.

May, Gilson and Harter (2004) empirically tested Kahn's model using a survey of employees in an insurance company (n=213). They found support for the relationships between the enabling variables identified by Kahn and engagement. In keeping with the antecedent model of engagement, May, Gilson and Harter (2004) identified that variables including coworker and supervisor relations and job resources related to engagement through the conditions of meaningfulness and psychological safety.

3.3 Engagement and Intention to Turnover

Firstly, to build the model of engagement in the present study (see Figure 1) the relationship between engagement and intention to turnover will be investigated. Schaufeli and Bakker (2004) found that engagement was negatively related to intentions to leave. This indicates that highly engaged employees are more likely to stay with their organisation, while those with low engagement are more likely to consider leaving.

In a longitudinal study in a sample of predominately private sector employees (n=871) with 16 months between measurement intervals of engagement levels, job resources, and job tenure, de Lange, Witte and Notelaers (2008) found that low amounts of resources was related to low engagement. This low engagement predicted transfer to another company (de Lange, Witte & Notelaers, 2008). This link is also supported by Halbesleben and Wheeler (2008). In a study of employees (n=587) from a wide variety of industries, Halbesleben and Wheeler (2008) found that engagement explained unique variance in intention to leave.

This fits with CoR theory in that less engaged workers would be less adaptive at improving their opportunity to gain resources as they are in a resource loss spiral (Wells, 1999). In terms of job resources, when the incumbent is focused on conserving resources and unable to engage fully with work, which is causing resource loss this provides a fundamental reason to withdraw ones motivation and energy for work.

Engagement is a fulfilling, satisfied and positive state and it follows that a reduction in this state would be followed by interest in seeking other avenues that better fulfill this optimal state of being. As Halbesleben and Wheeler (2008) noted, engaged employees have significant amounts of energy invested in their work. They are therefore less likely to seek other work. Further, by changing jobs the employees risk

losing the resources they have accumulated (de Lange, Witte & Notelaers, 2008). Hence engaged employees have a lower instance of reported turnover intentions. This forms the first hypothesis of the present study, that intention to turnover will be negatively related to engagement.

Hypothesis 1: intention to turnover will be negatively related to engagement.

3.4 Conditions for Engagement: Meaningfulness and Psychological Safety

May, Gilson and Harter (2004) found that job related meaningfulness and psychological safety were positively related to engagement. Considering Bakker and Demerouti's (2007) definition of job resources as the "physical, psychological, social or organisational aspects of the job," (p.312) meaningfulness and psychological safety are job resources as these are psychological aspects of the job. However these are not job resources in the traditional sense of the definition. For instance meaningfulness was identified by Hackman and Oldham (1976) not as a job characteristic or resource, but as a critical psychological state which was thought to be key for the attainment of positive outcomes through the formation of positive self reinforcing cycles of positive feelings and emotions (affect). Whether these are job resources or work conditions, these are factors that may act to influence engagement and so provide part of the motivational pathway that creates a climate for engagement.

3.4.1 Meaningfulness.

Meaningfulness is a source of motivation and involves feeling that work tasks have a sense of worth and purpose. The experience of job related meaningfulness has been found to be important for determining engagement and is positively related to engagement (Kahn, 1990; May, Gilson & Harter, 2004). Chalofsky and Krishna (2009) note that meaningfulness is a deep form of intrinsic motivation as it involves a personal connection and identification with tasks.

In addition it follows that a person who derived meaning and purpose from their work would be more likely to apply themselves to that work and therefore investing energy and motivation into work. This is inherent in the definition of engagement presented in the current study. Given the relationships between meaningfulness and engagement and the potential for meaningfulness to be an important source of intrinsic motivation, it is hypothesized that engagement occurs when work is meaningful.

Hypothesis 2: Meaningfulness will be positively related to engagement.

3.4.2 Psychological safety.

Psychological safety was defined by Kahn (1990) and then by May, Gilson and Harter (2004) as “feeling able to show and employ one’s self without fear of negative consequences to self-image, status, or career,” (Kahn, 1990, p.708). This definition has two aspects. The first includes the application of the self in the job role and being able to bring parts of the self into the job role. The second is that this occurs without fear of penalties, which was interpreted as the safety felt to express views and openly contribute to the organisations development and direction.

From this definition, psychological safety is a condition inherent in the social and political environment of work which can either provide a pathway or a barrier for engaging with work. It is reasonable to suggest that feeling unsafe to employ one’s self, energies and interests in work would provide a barrier to engagement. The alternative also holds, that a work environment that encourages psychological safety will in turn enhance engagement. This is supported by May, Gilson and Harter (2004) who found a relationship between psychological safety and engagement.

As engaged employees are interested in and active with their work, preventing them from contributing and having input into how that work is done may limit

engagement or provide a disincentive to engage. Further, an environment that encourages psychological safety allows the investment and application of the self in the job role, which could contribute to a motivational pathway between job resources and engagement. Hence, psychological safety is hypothesized to be positively related to engagement.

Hypothesis 3: Psychological safety will be positively related to engagement.

3.5 Summary

The chapter has introduced the motivational process thought to relate job resources to engagement. Further it was argued that those who were engaged with their work would be less likely to intend to leave the organisation. The first hypothesis, that engagement will be negatively related to intention to turnover. Secondly, meaningfulness and psychological safety were introduced as conditions of work which influence motivation for work. Meaningfulness and psychological safety were hypothesized to be positively related to engagement.

Chapter Four: The Engagement Model

4.1 Job Resources

The previous chapter introduced half of the model of engagement. Next the relationship of job resources will be added. Here it was necessary for both theoretical interest and for the need to have practical relevance to the participating organisation to identify specific resources of interest for engagement. The consultation process is described in further detail in Chapter six, however it is useful to note in this section that specific resources were identified and used based on their practical relevance to the airline context. JD-R theory and COR theory look at resources in a broad sense, however for engagement specific resources may be important. Resources can have a socio-cultural orientation with a value shared by those who occupy the same social context and environment, such as in a workplace (Hobfoll, 2002). With this in mind, and also for the need to establish face validity and construct validity for the needs of the participating organisation, specific resources rather than resources in a general sense are identified for the engagement model.

The understanding from the JD-R theory of engagement, that job resources relate to engagement via a motivational process, does not adequately explain why previous research has found that some resources seem to be more important for engagement than others. For this, understanding why people are motivated to engage is important.

4.2 Job related Autonomy

An important job resource for work engagement is autonomy. Autonomy is the perception that there is choice in deciding how and when to accomplish activities. Autonomy allows the individual to become involved and attached to their work as taking ownership of accomplishing tasks requires more self direction and responsibility. For this reason, autonomy has been well established as a key resource for motivation (Deci & Ryan, 1985).

Autonomy was a job characteristic in the Hackman and Oldham's (1976) model and a 'core' job dimension identified by Turner and Lawrence (1965). The experience of autonomy is an important element for intrinsic motivation and listed along with the need for competence and relatedness by Deci and Ryan (1985) in the foundations of Self-Determination theory. This is a resource which is theorized to drive people to accomplish work tasks, seek meaningful experiences and to be at their optimal potential. In terms of the Herzberg's two factor theory, autonomy fits the characteristics of a motivator. Autonomy is an aspect of the work itself, and a responsibility, which are two elements that Herzberg (1985) identified as motivators. This is because with autonomous work, the onus is on the employee to decide when and how to go about accomplishing work tasks. As such, the motivational drive to accomplish tasks initiates more within the individual rather from an external source. This is a reason why autonomy is a key job resource for motivation.

Studies have found a relationship between autonomy and engagement. Xanthopoulou *et al* (2009) found that job resources, including autonomy, to have a positive effect on daily rates of engagement in fast-food employees (n=42). In a study by de Lange, Witte and Notelaers (2008), job autonomy was related to levels of engagement over time, with employees who stayed with their organisation over the period of the study, experiencing higher levels of job resources, including autonomy. However, this effect could be caused by the tendency for longer servicing staff to have more responsibility and thus more autonomy, as giving autonomy infers that there is an amount of trust from supervisors in the ability and competence of the employee as a professional and capable staff member. Either directly by autonomy or via the relationship to responsibility, greater autonomy is related to engagement.

4.3 Social support

Social support is the second motivating job resource presented in this study. Social relationships, interpersonal connections and support are a basic human need (Deci &

Ryan, 1985) and are associated with well-being (Van Veldhoven, De Jonge, Broersen, Kompier & Meijman, 2002). It is important for people to feel valued and accepted by the group. This is not only observed in people who are functioning well, but also in what happens when interpersonal relationships at work go wrong. Bullying is an unpleasant experience in the workplace and a lack of social support can result in burnout (Varhama & Bjorkqvist, 2004), alienation and depression (Hobfoll, Johnson, Ennis & Jackson, 2003; Wells, Hobfoll & Lavin, 1999). In addition social support may act as a buffer, which prevents resource loss and enables people to function well in an environment with high demands and pressures (van der Doef & Maes, 1999).

It is not surprising then, that social support as a job characteristic has been found to contribute to work motivation (Humphrey, Nahrganga & Morgeson 2007). In addition, social support meets relatedness needs from Self Determination theory (Deci & Ryan, 1985) and as such is a source of intrinsic motivation. However, in terms of Herzberg's (1985) two factor model, social support fits the characteristics of a hygiene factor. Social support fits into Herzberg's (1985) category of 'supervision' for supervisor relationships and 'interpersonal relationships' for other support in the work place. If social support is a hygiene factor then it is interesting that it also acts as a motivator. As such, social support may act as both a hygiene factor and a motivator. For instance, when social support is missing this can become a source of dissatisfaction, as with a hygiene factor, but when the social environment is encouraging, positive and supportive, this could provide a source of work motivation.

The present study differentiates social support as job resources into two categories: supervisor support and coworker support. Supervisors provide a different kind of support from colleagues, and the two forms of support may have unique contributions to engagement, particularly considering the context and design of work in the airline industry which is a remote workforce (see Chapter Five). Supervisor support is the support provided by the employee's supervisor or immediate manager. Support from supervisors would tend to be task related and focused on effectively

facilitating the achievement of work goals and facilitating interpersonal acceptance (Pati & Kumar, 2010). Coworker support is the positive social connections within the workforce in which colleagues provide both social and task related support to each other (Saks, 2006). Coworkers play an important role in forming constructive attitudes (Ferres, Connell & Travaglione, 2001), which may be functional in creating feelings of motivation and engagement.

4.4 Procedural Fairness

Initial consultation with pilots, cabin crew, and management at the organisation (see Chapter six), identified concerns about the fairness and consistency in which policies and procedures were being applied. As this was important to this group, it was proposed that the perception that procedures were fair would be important for employee engagement.

The fairness and equal application of policies and procedures is a job resource (Bakker & Demerouti, 2007) as this enables work to be done. This concept is similar to organisational justice which is the subjective perceptions that the policies and procedures of an organisation are implemented in a way where the employees are treated fairly and equally (Colquitt, Conlon, Wesson, Porter & Yee Ng, 2001). In particular, organisational justice is concerned with the distribution and allocation of resources and rewards.

However, the traditional definition of organisational justice is narrow in scope. Previous studies have tended to use measures of justice which examine the perceptions of just one policy or procedure. It is useful to examine fairness in a more general way; to look at the general perceptions of how fair and equal the organisation is in implementing multiple policies and procedures. This general perception of how fair the organisation is, is referred to as procedural fairness.

In a meta-analysis of organisational justice research, Colquitt *et al.* (2001) identified

justice perceptions to be associated with withdrawal from work, which could be considered opposite to engaging with work; hence perceptions of unfairness may be a barrier to engagement. Saks (2006) found procedural justice and distributive justice which are two forms of organisational justice, to be positively related to engagement. These two studies suggest that the perception of adequate fairness leads to engagement, while unfairness may be a contributor to disengagement.

4.5 Resources as Enablers of Meaningfulness and Psychological Safety

The previous passages have listed the specific job resources that are of interest to engagement. However, a direct relationship between these and engagement was not proposed. According to the model by May, Gilson and Harter (2004), job resources influenced engagement through the relationship with meaningfulness and psychological safety. The next section proposes that autonomy, supervisor support and coworker support create conditions for job meaningfulness. While supervisor support, coworker support and procedural fairness create conditions for psychological safety.

4.6 Resources as Enablers of Meaningfulness

The first of the job resources presented above, autonomy, has been found previously to be related to meaningfulness (Hackman and Oldham, 1976). Individuals with high levels of autonomy are believed to invest more of themselves in work as they have more ownership and responsibility in their jobs (Kahn, 1990). This in turn leads to more perceived meaning in their work. This relationship was supported by May, Gilson and Harter (2004), who measured autonomy within a greater measure of job enrichment and found a moderate relationship with job meaningfulness.

Supportive supervisors, as well as providing the means by which work gets done effectively, can help employees feel valued and supported at work, which is inherent in Kahn's (1990) definition of meaningful work. Supervisor support can also foster

feelings of belonging and self identification with work, which enhance feelings of meaningfulness.

Supportive coworker relationships are important for building an environment that is encouraging and positive as supportive colleagues foster feelings of acceptance within the group, and feeling valued and appreciated (Kahn, 1990; May, Gilson & Harter, 2004). This resource has high intrinsic motivational potential, as social resources meet relatedness needs (Deci & Ryan, 2000) and as such, social support is an avenue through which employees could derive meaning from their work.

Hypothesis 4: Autonomy, supervisor support, and coworker support will be positively related to meaningfulness.

4.7 Resources as Enablers of Psychological Safety

For psychological safety, elements of the social nature of work create trust and openness in interpersonal relationships and group dynamics determine how accepted the person feels in their role and thus how comfortable they feel to be themselves and speak up. May, Gilson and Harter (2004) found positive relationships between supervisor relations, coworker relations and psychological safety. Given the interrelated nature of social relationships and perceptions of psychological safety, it is hypothesized that both supervisor and coworker support will contribute to psychological safety.

Perceptions of fairness or justice link strongly with psychological safety, as “in a safe environment, individuals understand the boundaries surrounding acceptable behaviours. However, unsafe conditions exist when situations are ambiguous, unpredictable, or threatening,” (May, Gilson & Harter, 2004, p.15). Fair and equal implementation of organisational procedures are ways in which psychological safety can be fostered. The creation of situations in the organisation that are “predictable, consistent, and nonthreatening,” (Kahn, 1990, p.705) reduces uncertainty and fear of

possible negative consequences to employees and their career. Given this, it is likely that there is a positive relationship between procedural fairness and psychological safety.

Hypothesis 5: Supervisor support, coworker support, and procedural fairness will be positively related to psychological safety.

4.8 Mediation

If job resources are related to engagement via a motivational pathway, as proposed by Schaufeli and Bakker's (2004) JD-R theory of engagement, then the amount of motivation will mediate the effects of the job resources on engagement. As outlined previously from May, Gilson and Harter (2004), the motivational process is thought to consist of the meaningfulness and psychological safety of work and the model of engagement which has been developed (see Figure 1), allows for potential mediation pathways.

There could be a direct pathway operating, where resources give rise to judgements about the meaningfulness and psychological safety that the work provides, which in turn gives rise to engagement. However May, Gilson and Harter (2004) found that meaningfulness and psychological safety had a mediation role in the relationship between job resource and engagement. It is proposed then, that the relationship between resources and engagement is mediated by meaningfulness (*H6*) and psychological safety (*H7*).

Hypothesis 6: Meaningfulness will mediate the relationship between engagement and autonomy, supervisor support and coworker support.

Hypothesis 7: Psychological Safety will mediate the relationship between engagement and supervisor support, coworker support, and procedural fairness.

Chapter Five: The Present Study

The present study aims to determine the variables which influence employee work engagement and intention to turnover in pilots and cabin crew at a New Zealand based airline company. Job resources, along with job meaningfulness and psychological safety are key determinates of engagement, and engagement contributes to employee retention. Meaningfulness and psychological safety are theorized, given the relationships found by previous research, to mediate the relationship between job resources and engagement.

5.1 Characteristics of the airline industry in New Zealand during the study period

The participating organisation is a New Zealand based airline company that operates both internationally and domestically. The civil aviation industry in New Zealand provides important services for freight and passenger transport that link the main population centres of the country. Tourism is an important part of the New Zealand economy and is the second largest export industry (The Beehive, n.d.). The aviation industry contributes \$10 billion to the economy and has grown at an estimated 9% per annum over the previous five years, employing an estimated 23,500 people (AIA, 2009), with an estimated 9,000 licensed pilots and 4,000 aircraft (The Treasury, n.d.a).

The New Zealand economy entered a recession in late 2008. This recession has been reported as having the largest and longest impact on global economies since the great depression of the 1930's, with GDP dropping an average of 5% globally (The Treasury, n.d.b). Consumer spending fell sharply during this time. New Zealand experienced a modest fall in GDP with slight growth resuming June 2009 (The Treasury, n.d.b). Labour market conditions were impacted by this recession, with the airline industry affected through less demand for travel as consumer spending dropped. With less demand for domestic and international travel, companies put off

hiring staff and there were fewer opportunities for staff to move to other positions within the industry. While the figures for the participating organisation were unavailable, it was expected that there would be a drop in the rates of voluntary employee attrition at the time of measurement due to the economic uncertainty of the financial market and the drop in the number of jobs available. The increase in unemployment in New Zealand also meant that there was increased competition for job positions that did become available.

The context is important for understanding the linkages between engagement and intentions to leave as employees who would have left under normal conditions may have stayed during this time. This may have influenced the relationship between engagement and intention to turnover, as previous research has shown disengagement to be related to intentions to leave, however in this economic context those individuals may remain in their current job role rather than leave.

Unlike many other industries, the airline industry operates with a distributed or remote workforce, in that the workforce operates away from base much of the time. The managers and administrative staff typically work at base locations, while the pilots and cabin crew work flight schedules which often involve rotating shift work and offsite overnight stopovers. Shift work is common, and staff are scheduled to operate in small teams for each shift, while for next shift they may work with a different group of people. The industry operates on a 24/7 flight schedule, so typical workday and weekend structures do not exist, for many staff potentially creating difficulties with family life and activities outside work (Ward, 1996). These differences provide a challenge when applying previous knowledge of how job resources, engagement and turnover interact in other sectors.

The work of pilots and cabin crew is highly time dependent, as tasks must fit into narrow windows of time, e.g. a one hour flight from the main cities of Wellington to Auckland. The job characteristics and work design for pilots and cabin crew must also fit the requirements of the physical environment and the need to comply with the requirements of the regulatory body. The specific job resources argued as

important enablers of work engagement were chosen to fit with job characteristics in this industry as well as for theoretical and empirical reasons. Some well researched workplace limitations such as work redesign were not considered appropriate for this study as there was little room for management to redesign job tasks. The resources included in this study are those which consultation indicated were relevant, and also amenable to change if required.

Employee engagement is of particular importance to the airline industry as fostering a workplace culture which maximizes engagement is a way in which staff retention and performance can be improved. Reductions in turnover keep knowledge within the organisation and reduce the cost of training and replacing new staff, while engagement places emphasis on developing an effective and positive workforce.

Chapter Six: Method

6.1 Method

The research design was an online survey. The questionnaire was designed to measure the employees' subjective attitudes and perceptions about the variables in this study. Questions about communication preferences were included in the questionnaire on the organisation's request and were not used as part of this investigation.

The study was conducted within one organisation in the New Zealand airline industry. An initial teleconference with management and a face to face meeting with representatives of the pilots and cabin crew took place and their feedback was considered when designing this study. The participants in this study were the pilots and cabin crew staff and excluded all higher management and administrative staff. The questionnaire was completed online when it was convenient for the participants to do so during work time. The questionnaire was estimated to take less than 20 minutes to complete. The online methodology ensured that the responses remained anonymous and confidential. Participation was voluntary. A copy of the report was presented to the participating organisation.

An email with the information sheet and link to the survey was sent to the work email accounts of all pilot and cabin crew, via the company liaison. Reminder emails were sent out at weekly internals. Data collection took place over a period of six weeks. Participants were offered the opportunity to go into a prize draw for one of three \$50 vouchers for their time. The data was collected using the website SurveyMonkey, a data file was downloaded and analyzed using SPSS version 17. The data was screened for inaccuracies and missing data. No inaccuracies were noted. Missing values were excluded from the analysis.

The study was approved by the participating organisation and this project was reviewed and approved by the Massey University Human Ethics Committee: Northern, Application 10/006.

6.2 Participants

All Pilots and Cabin Crew (n=378) were invited to take part. One hundred and seventeen employees fully completed the survey and 15 partially completed the survey, and represented a response rate of 35%. Fifty four percent (72) of the respondents were aged 34 and under, 33.4% (44) were aged 35 and older, 12.1% (12.1%) did not indicate age. Forty five percent (59) were female, 44% (58) were male, 11% (15) did not indicate gender. The average length of experience in the industry was 7.8 years. The ethnicity was reported as: NZ European 53.8% (71), NZ Maori 5.3% (7), Pacific Islander 9.1% (12), European 9.1% (12), Asian, 2.3% (3), Australian, 4.5% (6), and Other 4.5% (6), while 12.9% (17) did not indicate.

6.3 Variable Measures

Intention to turnover

Intention to turnover was assessed using the 3 items from Saks (2006) such as “I frequently think of quitting my job.” A 5 point Likert scale ranging from (1) strongly disagree to (5) strongly agree was used ($\alpha = .77$).

Engagement

Engagement was assessed using the 5 items of job engagement developed by Saks

(2006) such as “I am highly engaged in this job.” A 5 point Likert scale was used ranging from (1) strongly disagree to (5) strongly agree ($\alpha = .77$).

Meaningfulness

Meaningfulness was measured using 6 items “My job activities are personally meaningful to me” adapted by May, Gilson and Harter (2004) from Spreitzer (1995) and May (2003). A 5 point agreement-disagreement Likert format was used ($\alpha = .92$).

Psychological Safety

Psychology Safety was assessed by the 7 item measure of team psychological safety developed by Edmondson (1999) such as “Members of this organisation are able to bring up problems and tough issues.” This used a 5 point Likert format ranging from (1) very inaccurate to (5) very accurate. The 7 items yielded a low Cronbach’s alpha ($\alpha = .67$), removing items did not improve this value.

Autonomy

Autonomy was assessed using a shortened version of the three scale autonomy measure developed by Breugh (1999). This study used 3 items such as “I am allowed to decide how to go about getting my work done (the methods to use),” from the Method Autonomy scale. A 5 point Likert scale ranging from (1) strongly disagree to (5) strongly agree was used ($\alpha = .91$).

Supervisor support

Supervisor support was assessed by averaging 10 items developed by May, Gilson and Harter (2004) such as “My supervisor helps me solve work-related problems.”

The items were measured using a 5 point Likert scale ranging from (1) strongly disagree to (5) strongly agree. This scale had a good reported reliability ($\alpha = .95$).

Coworker support

Coworker support was measured using 10 items developed by May, Gilson and Harter (2004) such as “My interactions with my co-workers are rewarding.” The scale used was a 5 point Likert format ranging from (1) strongly disagree to (5) strongly agree and had a good reliability ($\alpha = .93$). The wording was modified to read “organisation” rather than “team.”

Procedural Fairness

Procedural fairness was assessed by averaging 3 items adapted by Schminke, Cropanzano and Ambrose (2000) such as “How much do the methods used to make decisions favor one person over another?” The 5 point Likert scale ranged from (1) not at all to (5) very much. The 3 items yielded a low Cronbach’s alpha ($\alpha = .68$). An item was removed giving a more reliable scale ($\alpha = .80$).

Demographics

Demographic items asked for the participant’s age group, gender, ethnicity, and length of experience in the industry.

6.4 Data Analysis

Scales were built by averaging the items. Independent sample *t*-tests were conducted to see if there were any significant differences between the respondents aged 34 or younger and 35 or older, and for gender differences. Bivariate Pearson’s *r*

correlations were conducted to determine the relationships among the study variables.

Linear regression analyses were conducted to determine the unique explained variance contributed by the study variables to the hypothesized pathways. The enter method was used for all analyses and missing data were excluded listwise. A second hierarchical linear regression analysis was conducted to test to potential mediation effects. According to Baron and Kenny (1986), a variable is a mediator when it meets the following three conditions: (a) variations in levels of the independent variable significantly account for variations in the presumed mediation, (b) variations in the mediator significantly account for variations in the dependent variable, and (c) when a and b are controlled, a previously significant relationship between the independent variable and the dependent variables is no longer significant. The following regression steps were used to determine mediation:

Step 1: regress the DV on the IV

Step 2: regress the mediator on the IV

Step 3: regress the DV on the IV and mediator together

Chapter Seven: Results

7.1 Group differences

Participants aged ≤ 34 had higher intentions to turnover than those aged ≥ 35 ($t(113)$, $=2.171$, $p < .05$, two tailed). No other significant differences between variables and the age means were found. No differences on scale variables for gender were found.

7.2 Correlations

As expected, the job resources correlated with meaningfulness and psychological safety (Table 1). Meaningfulness and psychological safety also correlated positively with engagement and engagement negatively correlated with intention to turnover, supporting *H1*, *H2* and *H3*. In addition, meaningfulness correlated positively with autonomy, supervisor support and coworker support. Psychological safety correlated positively with supervisor support, coworker support and procedural fairness. The basic bivariate pathways in the model were supported.

Following Cohen's (1992) effect size criteria for small ($.1 \leq r < .3$), medium ($.3 \leq r < .5$) and large ($r \geq .5$) statistically significant correlations effect sizes, the majority of the relationships represent medium effects. The largest effects were the correlations between psychological safety, supervisor support and procedural fairness. The correlation between meaningfulness and engagement had a large effect size, as did that between psychological safety and intention to turnover.

Table 1: Correlations

Variable	1	2	3	4	5	6	7	8
1 Autonomy	1							
2 Supervisor Support	.38**	1						
3 Coworker Support	.24**	.32**	1					
4 Procedural Fairness	.44**	.70**	.39**	1				
5 Meaningfulness	.40**	.29**	.37**	.44**	1			
6 Psychological Safety	.31**	.72**	.41**	.63**	.29**	1		
7 Engagement	.44**	.31**	.30**	.49**	.65**	.29**	1	
8 Intention to Turnover	-.25**	-.51**	-.37**	-.54**	-.52**	-.60**	-.47**	1
Mean (SD)	2.86(1.0)	3.28(0.8)	3.70(0.6)	2.63(1.0)	4.22(0.6)	2.99(0.6)	3.53(0.7)	2.31(1.0)
	4)	9)	3)	3)	3)	1)	0)	3)

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

7.3 Hypothesis testing

7.3.1 Job resources as contributors to meaningfulness.

In order to test hypothesis 4, that job resources would be related to meaningfulness regression analysis was conducted (Table 2). The predictors explained 26% of the variance in meaningfulness. Autonomy and coworker support contributed unique variance to meaningfulness, although supervisor support was not significant. This partially supports hypothesis 4. Although not originally a hypothesized relationship, procedural fairness was found by exploratory analysis to contribute slightly more explained variance than autonomy and coworker support and is included as a significant finding.

Table 2: Variance in Meaningfulness explained by Job Resources

Model	B	SE B	β	Adj. R ²
1 (Constant)	2.82	.33		.26
Autonomy	.14	.05	.25*	
Supervisor Support	-.04	.08	-.06	
Coworker Support	.21	.09	.22*	
Procedural Fairness	.16	.07	.28*	

Dependent Variable: Meaningfulness

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

7.3.2 Job resources as contributors to psychological safety.

Regression analysis was used to test hypothesis 5 that job resources would relate to psychological safety (Table 3). The job resources explained 56% of the variance in psychological safety. Supervisor support, coworker support and procedural fairness

contributed unique variance with supervisor support contributing the most. This supports hypothesis 5. Autonomy did not contribute significant variance to psychological safety.

Table 3: Variance in Psychological Safety explained by Job Resources

Model	B	SE B	β	Adj. R ²
1 (Constant)	.814	.26		.56
Autonomy	-.01	.04	-.01	
Supervisor Support	.31	.07	.44**	
Coworker Support	.20	.07	.21**	
Procedural Fairness	.16	.06	.27**	

Dependent Variable: Psychological Safety

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

7.3.3 Meaningfulness and psychological safety as contributors to engagement.

Hypothesis 2 and 3 that meaningfulness and psychological safety would relate to engagement were used using regression analysis (Table 4). The predictors explained 43% of the variance in engagement. Meaningfulness explained the most variance in engagement, and was statistically significant, supporting *H2*. Psychological safety did not explain a significant amount of variance in engagement and *H3* was not supported.

Table 4: Variance in Engagement explained by Meaningfulness and Psychological Safety

Model	B	SE B	β	Adj. R ²
1 (Constant)	-.10	.42		.43

Meaningfulness	.75	.10	.61**
Psychological Safety	.15	.90	.13

Dependent Variable: Engagement

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

7.3.4 Engagement and intention to turnover.

Hypothesis 1 that intention to turnover would be related to engagement was tested using regression analysis (Table 5). Engagement explained 22% of the variance in intention to turnover. This supports hypothesis 1.

Table 5: Variance in Intention to turnover explained by Engagement

Model	B	SE B	β	Adj. R ²
1 (Constant)	4.78	.44		.22
Engagement	-.70	.12	-.48**	

Dependent Variable: Intention to turnover

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

7.3.5 Job resources as contributors to engagement.

Although not an original hypothesis of this study, an exploratory regression analysis of job resources and engagement, found job resources explained 26% of the variance in engagement (Table 6). Procedural fairness and autonomy contributed significant amounts of variance, with procedural fairness contributing the most variance. Supervisor support and coworker support did not contribute significantly to engagement.

Table 6: Variance in Engagement explained by Job Resources

Model	B	SE B	β	Adj. R ²
1 (Constant)	2.28	.37		.26
Autonomy	.17	.06	.26**	
Supervisor Support	-.05	.09	-.06	
Coworker Support	.08	.10	.08	
Procedural Fairness	.24	.08	.36**	

Dependent Variable: Engagement

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

7.3.6 Meaningfulness and psychological safety as contributors to intention to turnover.

Although not an original hypothesis of this study, an exploratory regression analysis of meaningfulness and psychological safety as contributors to intention to turnover found that the predictors explained 47% of the variance in intention to turnover (Table 7). Both these variables contributed significant variance, with psychological safety contributing slightly more variance.

Table 7: Variance in Intention to turnover explained by Meaningfulness and Psychological Safety

Model	B	SE B	β	Adj. R ²
1 (Constant)	7.71	.59		.47
Meaningfulness	-.73	.14	-.40***	
Psychological Safety	-.77	.12	-.46***	

Dependent Variable: Intention to turnover

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

7.3.7 Job resources as contributors to intention to turnover.

Although not an original hypothesis, regression analysis of job resources and intention to turnover (Table 8) found that job resources explained 30% of the variance in intention to turnover. Procedural fairness and supervisor support contributed significant amounts of variance, with procedural fairness contributing the most variance. Autonomy and coworker support did not contribute significant variance.

Table 8: Variance in Intention to turnover explained by Job Resources

Model	B	SE B	β	Adj. R ²
1 (Constant)	4.69	.52		.30
Autonomy	.04	.09	0.4	
Supervisor Support	-.27	.13	-.23*	
Coworker Support	-.21	.14	-.13	
Procedural Fairness	-.32	.11	-.33**	

Dependent Variable: Intention to turnover

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

7.4 Mediation

7.4.1 Meaningfulness as a mediator of the relationship between job resources and engagement.

Hypothesis 6 that meaningfulness would mediate the relationship between job resources and engagement were tested using the 3 step method outlined in the previous chapter. Meaningfulness provided a significant partial mediation of the

relationship between autonomy and engagement (Table 9).

Table 9: Mediating role of meaningfulness in the relationship between autonomy and engagement

	Dependent variable	Independent variable	B	SE B	β	Adj. R ²	Sobel test ²
Hypothesis 6a							
Step 1	Engagement	Autonomy	.30	.05	.46***	.20	4.16***
Step 2	Meaningfulness	Autonomy	.17	.06	.27**	.06	
Step 3	Engagement	Autonomy	.23	.05	.34***	.37	
		Meaningfulness	.45	.08	.42***		

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

Regression analysis was conducted to test the role of meaningfulness in the relationship between supervisor support and engagement (Table 10). Meaningfulness provided a significant partial mediation of this relationship.

Table 10: Mediating role of meaningfulness in the relationship between supervisor support and engagement

	Dependent variable	Independent variable	B	SE B	β	Adj. R ²	Sobel test ²
Hypothesis 6b							
Step 1	Engagement	Supervisor Support	.25	.07	.32***	.09	2.66***
Step 2	Meaningfulness	Supervisor Support	.15	.07	.20*	.03	
Step 3	Engagement	Supervisor Support	.18	.07	.22**	.28	
		Meaningfulness	.49	.09	.45***		

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

Regression analysis was conducted to test the role of meaningfulness as a mediator of the relationship between coworker support and engagement (Table 11). As the

previously significant relationship between coworker support and engagement in Step 1 became not significant in Step 3, meaningfulness was found to fully mediate the relationship between coworker support and engagement. However this mediation was not significant according to the Sobel test statistic.

Table 11: Mediating role of meaningfulness in the relationship between coworker support and engagement

	Dependent variable	Independent variable	B	SE B	β	Adj. R ²	Sobel test ²
Hypothesis 6c							
Step 1	Engagement	Coworker Support	.32	.10	.29**	.08	1.24
Step 2	Meaningfulness	Coworker Support	.38	.10	.35***	.11	
Step 3	Engagement	Coworker Support	.17	.11	.14	.27	
		Meaningfulness	.50	.09	.47***		

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

Regression analysis was conducted to test the role of meaningfulness as a mediator of the relationship between procedural fairness and engagement (Table 12). Meaningfulness provided a significant partial mediation of this relationship.

Table 12: Mediating role of meaningfulness in the relationship between procedural fairness and engagement

	Dependent variable	Independent variable	B	SE B	β	Adj. R ²	Sobel test ²
Hypothesis 6d							
Step 1	Engagement	Procedural Fairness	.31	.05	.47***	.22	3.53***
Step 2	Meaningfulness	Procedural Fairness	.25	.04	.46***	.21	
Step 3	Engagement	Procedural Fairness	.16	.05	.24**	.44	
		Meaningfulness	.65	.10	.52***		

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

In summary, meaningfulness had a significant partial mediation of the relationship between the job resources autonomy, supervisor support and procedural fairness and engagement. Meaningfulness did not significantly mediate the relationship between coworker support and engagement. This partially supports hypothesis 6.

7.4.2 Psychological safety as a mediator of the relationship between the job resources and engagement.

Hypothesis 7 that psychological safety would mediate the relationship between job resources and engagement was tested using the 3 step method outlined in the previous chapter. Psychological safety provided a significant partial mediation of the relationship between autonomy and engagement (Table 13).

Table 13: Mediating role of psychological safety in the relationship between autonomy and engagement

	Dependent variable	Independent variable	B	SE B	β	Adj. R ²	Sobel test2
Hypothesis 7a							
Step 1	Engagement	Autonomy	.30	.05	.46***	.20	1.72*
Step 2	Psychological Safety	Autonomy	.21	.05	.35***	.11	
Step 3	Engagement	Autonomy	.24	.06	.36***	.20	
		Psychological Safety	.19	.10	.18		

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

Regression analysis was conducted to test the role of psychological safety as a mediator of the relationship between supervisor support and engagement (Table 14). Psychological safety was not a significant mediator of this relationship.

Table 14: Mediating role of psychological safety in the relationship between supervisor support and engagement

	Dependent variable	Independent variable	B	SE B	β	Adj. R ²	Sobel test ²
Hypothesis 7b							
Step 1	Engagement	Supervisor Support	.25	.07	.32***	.09	.99
Step 2	Psychological Safety	Supervisor Support	.49	.05	.69***	.47	
Step 3	Engagement	Supervisor Support	.16	.10	.20	.09	
		Psychological Safety	.18	.14	.16		

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

Regression analysis was conducted to test the role of psychological safety as a mediator of the relationship between coworker support and engagement (Table 15). Psychological safety was not a significant mediator of this relationship.

Table 15: Mediating role of psychological safety in the relationship between coworker support and engagement

	Dependent variable	Independent variable	B	SE B	β	Adj. R ²	Sobel test ²
Hypothesis 7c							
Step 1	Engagement	Coworker Support	.32	.10	.30**	.08	1.23
Step 2	Psychological Safety	Coworker Support	.44	.08	.46***	.20	
Step 3	Engagement	Coworker Support	.21	.11	.19	.10	
		Psychological Safety	.23	.12	.21*		

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

Regression analysis was conducted to test the role of psychological safety as a mediator of the relationship between procedural fairness and engagement (Table 16). Psychological safety was not a significant mediator of this relationship.

Table 16: Mediating role of psychological safety in the relationship between procedural fairness and engagement

	Dependent variable	Independent variable	B	SE B	β	Adj. R ²	Sobel test ²
Hypothesis 7d							
Step 1	Engagement	Procedural Fairness	.31	.05	.47***	.22	-.023
Step 2	Psychological Safety	Procedural Fairness	.37	.04	.63***	.39	
Step 3	Engagement	Procedural Fairness	.33	.07	.51***	.23	
		Psychological Safety	-.03	.13	-.03		

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

In summary, psychological safety provided a significant partial mediation of the relationship of autonomy with engagement. However no other relationships were significant. This partially supports hypothesis 7.

Chapter Eight: Discussion and Conclusions

8.1 Discussion of the findings

It was expected that the job resources would relate to meaningfulness and psychological safety. Autonomy, coworker support and procedural fairness were significant contributors to meaningfulness, while supervisor support was not significant. This partially supports the original model, as it was expected that supervisor support would be important for meaningfulness. Procedural fairness was an unexpected addition. For psychological safety, supervisor support, coworker support and procedural fairness were significant, supporting the original model.

For engagement, meaningfulness was important. This differs from the original model which proposed that both meaningfulness and psychological safety would be significant contributors to engagement. In addition, engagement was proposed to be negatively related to intention to turnover in the model, which was supported by the results. Additional analysis found that both meaningfulness and psychological safety were contributors to intention to turnover. This suggested that psychological safety becomes important for determining turnover intentions but is not key for engagement. The findings for meaningfulness is consistent with May, Gilson and Harter (2004) and Kahn (1990). However, the finding that psychological safety was more important for intentions to turnover than for engagement is an addition to previous research in this area. This suggests that psychological safety is still important in the engagement model but the action is not directly on engagement, but rather for the disengagement process of leaving the organisation.

Meaningfulness partially mediated the relationship between autonomy, supervisor support, procedural fairness and engagement. While psychological safety partially mediated the relationship between autonomy and engagement. This partially supports the mediation that was expected in the model, as it was expected that these

conditions would have more of a mediation influence. Consistent with May, Gilson and Harter (2004), this study found meaningfulness partially mediated the relationship between job resources and engagement. In addition, this is consistent with the motivational pathway linking job resources with engagement in Schaufeli and Bakker's (2004) JD-R theory of engagement. This finding indicates that engagement occurs when work provides a source of personal meaning and derived fulfillment from their work. However psychological safety was not found to be a significant mediator in comparison to meaningfulness, again suggesting that psychological safety does not have a key role in the motivational pathway linking job resources with engagement.

Additional analysis on the direct relationship between job resources and engagement found that autonomy and procedural fairness contributed directly to engagement supporting Schaufeli and Bakker's (2004) original model of a direct pathway between job resources and engagement. These results show that certain job resources can directly influence engagement; however the partial mediation role of meaningfulness on engagement suggests that the influence of job resources on meaningfulness is also important for engagement. Additional analysis on the direct relationship of job resources on intention to turnover found that supervisor support and procedural fairness were important. This suggests that job resources can have a direct influence on decisions to leave the organisation without the interaction of the motivation and engagement pathway.

8.2 Limitations

This study was conducted using a survey instrument and the findings were based on subjective self-report data of the respondents' perceptions rather than objective measurement, for example the perception of procedural fairness was measured rather than an objective analysis of the organisation's records. The survey methodology introduced uncontrolled confounding variables such as time of measurement effects

and possible distractions when the respondents were completing the survey.

This was a cross-sectional study, so the results are limited to the period of measurement as the responses could likely change over time. The findings may generalize to other airline organisations or distance workforces, however it is likely that these findings are specific just to the participants in this study. Care must be taken when applying these results to the whole population of pilots and cabin crew at the participating organisation as there may be differences between those who responded to the survey and the rest of the employee population. In addition the economic climate at the time of measurement may have impacted on response patterns as indicated in Chapter five. The relationships that were found could also be due to the sample size, the variable measures used, and the limited number of job resource variables that were measured.

8.3 Importance of findings

This study has practical and theoretical significance. The results show that there is not a simple direction relationship between engagement and intention to turnover, as indicated by Schaufeli and Bakker (2004). If engagement is considered to be a state of motivation and energy for work, then it is worth for both theoretical and practical significance to investigate the precursors of that motivation. Procedural fairness contributed to meaningfulness and psychological safety and also to intentions to turnover, suggesting that this variable is acting as a contributor for both motivation (thus engagement) and the disengagement process of leaving the organisation. This suggests that the role of job resources in contributing to engagement and intention to turnover is not straight forward. Therefore organisations looking to improve engagement may need different strategies than those for reducing turnover. This research identified that job resources can act as motivators for engagement and organisations should look at what is preventing engagement, removing barriers and encouraging motivators to enhance employee engagement.

This research has highlighted the importance of employees' attitudes and perceptions about work. For instance it was the perception that the policies and procedures were fair that was of importance for both engagement and intention to turnover in this research. Over time, if perceptions of unfairness are not addressed this may create a barrier to engagement and lead to intentions to leave.

The process of undertaking this research highlighted the issues of applying engagement research to non-typical workforces and that it must not be assumed that the relationships observed in typical populations will apply to those that are remote or distance workforces. This is of particular relevance in the modern and global work environment where employees and management work in separate locations, which has the potential to change the importance of particular job resources for engagement.

8.4 Recommendations for future research

Further research could investigate the role of Herzberg's (1987) motivation and hygiene variables to engagement and intention to leave processes. To the authors knowledge, this was the first study addressing the possibility of motivator and hygiene resources acting on engagement. Further studies could also investigate the interactions between job resources and personal resources, including the influence of individual differences in personality or emotional affect tendencies on engagement and also the influence of job demands on meaningfulness and psychological safety. Meaningfulness could relate to occupational choice and person-environment fit, which was not investigated here, and further research could investigate whether individuals with low job meaningfulness and high intentions to leave seek a new position within the same industry or look for a new occupation.

The present study was conducted cross-sectionally. Studies modeling the antecedents of engagement have largely used cross-sectional methods, obtaining data from one time interval of measurement. The use of longitudinal methodology would enable more accurate conclusions about how job resources influence engagement over time. Further studies could consider the potential for interventions to be developed to foster employee engagement in organisations.

Further research should investigate the generalizability of these results to other organisations and occupation types as the determinants of engagement may vary. For instance, coworker support may be more important in organisations with different structures and with long term teams. Organisational structure may influence the enablers of engagement, in particular the importance of co-worker support and supervisor support may vary with the size of the organisation, the team structure, and between strongly hierarchical and interdependent organisations.

8.5 Conclusion

This research integrated two previous models of engagement by Schaufeli and Bakker (2004) and May, Gilson and Harter (2004) and found that meaningfulness was important for engagement, while psychological safety was not important. The findings suggest that meaningfulness is part of the motivational pathway proposed to link job resources as motivators to engagement. Both meaningfulness and psychological safety were found to be important contributors to intentions to leave the organisation. Consistent with Schaufeli and Bakker's (2004) model, engagement was found to be negatively related to intention to turnover. This research highlights the role of job resources as contributors for employee engagement and the need to further investigate how resources act as enablers or inhibitors of engagement.

References

- Aviation Industry Association of New Zealand (2009). *Aviation a \$10Bn business*. Retrieved from: <http://www.aia.org.nz/News/Latest+News/Aviation++a+10Bn+business.html>, retrieved on 2/9/2010.
- Bakker, A. B., & Matthijs Bal, P. (2010). Weekly work engagement and performance: a study among starting teachers. *Journal of Occupational and Organisational Psychology*, 83, 189-206.
- Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: state of the art. *Journal of Managerial Psychology*, 22(3), 309-328.
- Bakker, A. B., Hakanen, J.J., Demerouti, E., & Xanthopoulou, D. (2007). Job resources boost work engagement, particularly when job demands are high. *Journal of Educational Psychology*, 99(2), 274-284.
- Bakker, A. B., Schaufeli, W.B., Leiter, M.P., & Taris, T.W. (2008). Work engagement: An emerging concept in occupational health psychology. *Work & Stress*, 22(3), 187-200.
- Bakker, A. B., van Emmerik, H., & Euwema, M.C. (2006). Crossover of burnout and engagement in work teams. *Work and Occupations*, 33, 464-489.
- Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-82.
- Breaugh, J. A. (1999). Further investigation of the work autonomy scales: two studies. *Journal of Business and Psychology*, 13(3), 357-375.
- Chalofsky, N., & Krishna, V. (2009). Meaningfulness, commitment, and engagement: the intersection of a deeper level of intrinsic motivation. *Advances in Developing Human Resources*, 11, 189-203.
- Cohen, J. (1992). Quantitative methods in psychology: A power primer. *Psychological Bulletin*, 112, 155-159.
- Colquitt, J. A., Conlon, D.E., Wesson, M.J., Porter, C.O.C.H., & Yee Ng, K. (2001). Justice at the millennium: a meta-analytic review of 25 years of organisational justice research. *Journal of Applied Psychology*, 86(3), 425-445.
- Deci, E.L., & Ryan, R.M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum Press: New York.
- Deci, E. L., & Ryan, R.M. (2000). The "what" and "why" of goal pursuits: human

- needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268.
- de Lange, A. H., de Witte, H., & Notelaers, G. (2008). Should I stay or should I go? Examining longitudinal relations among job resources and work engagement for stayers versus movers. *Work & Stress*, 22(3), 201-223.
- Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(2), 350-383.
- Ferres, N., Connell, J., & Travaglione, A. (2001). Co-worker trust as a social catalyst for constructive employee attitudes. *Journal of Managerial Psychology*, 19(6), 608-622.
- Hackman, J. R., & Oldham, G.R. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology*, 60(2), 159-170.
- Hackman, J. R., & Oldham, G.R. (1976). Motivation through the design of work: test of a theory. *Organisational Behavior & Human Performance*, 16, 250-279.
- Halbesleben, J. R. B., & Wheeler, A.R. (2008). The relative roles of engagement and embeddedness in predicting job performance and intention to leave. *Work & Stress*, 22(3), 242-256.
- Hallberg, U. E., & Schaufeli, W.B. (2006). "Same Same" but different? Can work engagement be discriminated from job involvement and organisational commitment? *European Psychologist*, 11(2), 119-127.
- Harter, J. K., Schmidt, F.L., & Hayes, T.L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: a meta-analysis. *Journal of Applied Psychology*, 87(2), 268-279.
- Herzberg, F. (1987). One more time: how do you motivate employees? *Harvard Business Review*.
- Herzberg, F., Mausner, B., & Snyderman, B.B. (1959). *The motivation to work 2nd ed.* John Wiley & Sons: Sydney.
- Hobfoll, S. E. (2002). Social and Psychological resources and adaptation. *Review of General Psychology*, 6(4), 307-324.
- Hobfoll, S. E., Johnson, R.J., Ennis, N., Jackson, A.P. (2003). Resource loss, resource gain, and emotional outcomes among inner city women. *Journal of Personality and Social Psychology*, 84(3), 632-643.
- Humphrey, S. E., Nahrganga, J.D., & Morgeson, F.P. (2007). Integrating motivational, social, and contextual work design features: a meta-analytic

- summary and theoretical extension of the work design literature. *Journal of Applied Psychology*, 92(5), 1332-1356.
- Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4), 692-724.
- Macey, W. H., & Schneider, B. (2008). The meaning of employee engagement. *Industrial and Organisational Psychology*, 1, 3-30.
- MacLeod, D., & Clarke, N. (2009). *Engaging for success: enhancing performance through employee engagement*: Department for Business, Innovation and Skills, Crown Copyright.
- Maslach, C., & Leiter, M.P. (2008). Early predictors of job burnout and engagement. *Journal of Applied Psychology*, 93(3), 498-512.
- May, D. R., Gilson, R.L., & Harter, L.M. (2004). The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational and Organisational Psychology*, 77, 11-37.
- Maidini, E.A. (1991). Comparative study of Herzberg's two-factor theory of job satisfaction among public and private sectors. *Public Personnel Management*, 20(4), 441-448.
- Meyer, J. P., & Gagne, M. (2008). Employee engagement from a self-determination theory perspective. *Industrial and Organisational Psychology*, 1, 60-62.
- Pati, S. P., & Kumar, P. (2010). Employee engagement: role of self-efficacy, organisational support and supervisor support. *The Indian Journal of Industrial Relations*, 46(1), 126-137.
- Parkes, L. P., & Langford, P.H. (2008). Work-life balance or work-life alignment? A test of the importance of work-life balance for employee engagement and intention to stay in organisations. *Journal of Management and Organisation*, 14, 267-284.
- Rich, B. L., Lepine, J.A., & Crawford, E.R. (2010). Job engagement: antecedents and effects on job performance. *Academy of Management Journal*, 53(3), 617-635.
- Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*, 21(7), 600-619.
- Salanova, M., Agut, S., & Peiro, J.M. (2005). Linking organisational resources and work engagement to employee performance and customer loyalty: the mediation of service climate. *Journal of Applied Psychology*, 90(6), 1217-

1227.

- Salanova, M., & Schaufeli, W.B. (2008). A cross-national study of work engagement as a mediator between job resources and proactive behaviour. *The International Journal of Human Resource Management*, *19*(1), 116-131.
- Schaufeli, W. B., & Bakker, A.B. (2004). Job demands, job resources, and their relationship with burnout and engagement: a multi-sample study. *Journal of Organisational Behavior*, *25*, 293-315.
- Schaufeli, W. B., Bakker, A.B., & van Rhenen, W. (2009). How changes in job demands and resources predict burnout, work engagement, and sickness absenteeism. *Journal of Organisational Behavior*, *30*, 893-917.
- Schaufeli, W. B., Taris, T.W., & van Rhenen, W. (2008). Workaholism, burnout, and work engagement: three of a kind or three different kinds of employee well-being? *Applied Psychology: An International Review*, *57*(2), 173-203.
- Schminke, M., Cropanzano, R.S., & Ambrose, M.L. (2000). The effect of organisational structure on perceptions of procedural fairness. *Journal of Applied Psychology*, *85*(2), 294-304.
- The Treasury, (n.d.a). *The economy of New Zealand: overview*. Retrieved from: <http://www.treasury.govt.nz/economy/overview/2010/04.htm>, retrieved on 2/9/2010.
- The Treasury, (n.d.b). *Special topic: recession and recovery in the OECD*. Retrieved from: <http://www.treasury.govt.nz/economy/mei/jan10/03.htm>, retrieved on 2/9/2010.
- Turner, A.N., & Lawrence, P.R. (1965). *Industrial jobs and the worker*. Harvard Graduate School of Business Administration: Boston.
- van der Deof, M.P., & Maes, S. (1999). The job demand-control(-support) model and psychological well-being: A review of 20 years of empirical research. *Work & Stress*, *13*, 87-114.
- van Veldhoven, M., de Jonge, J., Broersen, S., Kompier, M., & Meijman, T. (2002). Specific relationships between psychosocial job conditions and job-related stress: A three-level analytic approach. *Work & Stress*, *16*(3), 207-228.
- Varhama, L. M., & Bjorkqvist, K. (2004). Conflicts, workplace bullying and burnout problems among municipal employees. *Psychological Reports*, *94*, 1116-1124.
- Ward, R.H. (1996). *The effects of short-term repeated work-related separation on pilots, cabin crew, and their partners*. A thesis presented in partial fulfillment of the requirements for a degree of Doctor of Philosophy in Psychology.

Massey University: Palmerston North.

- Wells, J. D., Hobfoll, S.E., & Lavin, J. (1999). When it rains, it pours: the greater impact of resource loss compared to gain on psychological distress. *Personality and Social Psychology Bulletin*, 25, 1172-1182.
- Whitsett, D. A., & Winslow, E.K. (n.d.). An analysis of studies critical of the Motivator-Hygiene theory. *Personnel Psychology*, 391-415.
- Xanthopoulou, D., Bakker, A.B., Demerouti, E., & Schaufeli, W.B. (2009). Work engagement and financial returns: A diary study on the role of job and personal resources. *Journal of Occupational and Organisational Psychology*, 82, 183-200.
- Xanthopoulou, D., Heuven, E., Demerouti, E., Bakker, A.B., & Schaufeli, W.B. (2008). Working in the Sky: a diary study on work engagement among flight attendants. *Journal of Occupational Health Psychology*, 13(4), 345-356.
- Zigarmi, D., Nimon, K., Houson, D., Witt, D., & Diehl, J. (2009). Beyond engagement: toward a framework and operational definition for employee work passion. *Human Resource Development Review*, 8(3), 300-326.

Appendix A: Information Sheet**Experience of work research
INFORMATION SHEET**

My name is Emma Prouse and I am interested in work engagement in New Zealand organisations. I am a Masters student studying Industrial/Organisational Psychology with the School of Psychology, Massey University. My supervisor is Dr. Dianne Gardner from Massey University's Albany Campus.

All staff that work as Pilots and Cabin Crew at _____ are being invited to take part in this research, which will explore your experience of work at this company. This study aims to provide understanding into what makes a positive experience of work.

If you would like to take part, please click on the link which will take you to an online survey. The link is: <http://www.surveymonkey.com/s/WD2YBGZ> and you can also click on this link from the email. It will take less than 20 minutes to complete. In return for your time, you will be offered the opportunity to enter in to a prize draw for one of three \$50 vouchers.

The data will be analyzed and reported in my thesis and a report will also be given to _____. I can also provide you with a copy of the report; please email if you would like one. Participation is voluntary and all responses will be kept anonymous and confidential. Individual information will not be revealed to _____ management and _____ management does not have access to individual responses. _____ will not be named in the thesis or any publications arising from the thesis. Completion of the questionnaire implies you have consented.

You may withdraw from the study at any time prior to clicking the "Done" button and if there are questions that you do not wish to answer please leave those blank. If you have any questions or would like to know more about this study please contact myself: prouse_ra06@yahoo.com.au, or my supervisor Dianne: (09) 414 0800 x41244 d.h.gardner@massey.ac.nz.

This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application 10/006. If you have any concerns about the conduct of this research, please contact Dr. Denise Wilson, Chair, Massey University Human Ethics Committee: Northern, telephone 09 414 0800 x9070, email humanethicsnorth@massey.ac.nz.

Thank you for your support,
Emma Prouse and Dianne Gardner

Appendix B: Email Advertisement

My name is Emma Prouse and I am interested in engagement and work related outcomes in work places. I am a Masters student studying Industrial/Organisational Psychology with the School of Psychology, Massey University. I am interested in your experiences of work with this organisation. _____ has agreed to allow me to invite you to take part in this research.

All Pilots and Cabin Crew at _____ are being invited to take part in this research, which will explore your experience of work at this company. This study aims to provide understanding into what makes a positive experience of work.

Please read the information sheet about the study which is attached with this email. If you would like to take part, please click this link <http://www.surveymonkey.com/s/WD2YBGZ>. This will take you to the questionnaire. It takes less than 20min to complete.

Your answers will be completely anonymous so please don't put your name on the questionnaire.

A summary of the results will be sent out to you on your request. If you have any questions about this study, please contact me on prouse_ra06@yahoo.com.au or my supervisor Dianne Gardner (09) 414 0800 x41244.

Thank you for your support,

Emma Prouse

Appendix C: Questionnaire

Thank you for your taking part in this research. If at all possible, please try and answer all the questions in one sitting. You can decline to answer any question by leaving it blank. Do not spend too much time thinking about your answer; the first response that comes to mind is usually the most accurate for you. There are no right or wrong answers to these questions, please just respond with what is true for you.

The following questions are about your experience of work at this company.

1 Please indicate how much you agree or disagree with the following statements:	Strongly disagree	Disagree	Neither	Agree	Strongly agree
The work I do on this job is very important to me.	1	2	3	4	5
My job activities are personally meaningful to me.	1	2	3	4	5
The work I do on this job is worthwhile.	1	2	3	4	5
My job activities are significant to me.	1	2	3	4	5
The work I do on this job is meaningful to me.	1	2	3	4	5
I feel that the work I do on my job is valuable.	1	2	3	4	5
2 As an employee with this organisation.....	Not at all		Some		Very much
How much opportunity are you given to have input into decisions that affect you before they are made	1	2	3	4	5
How much influence do you have over the decisions that affect you that are made by your supervisor?	1	2	3	4	5
How much do the methods used to make decisions favor one person over another?	1	2	3	4	5

		Strongly disagree	Disagree	Neither	Agree	Strongly agree
3	Please indicate how much how agree or disagree with the following statements:					
	I am allowed to decide how to go about getting my work done (the methods to use).	1	2	3	4	5
	I am able to choose the way to go about my job (the procedures to utilize).	1	2	3	4	5
	I am free to choose the method(s) to use in carrying out my work.	1	2	3	4	5
		Very inaccurate	inaccurate	neither	accurate	Very accurate
4	Please indicate how accurate or inaccurate the following statements are for you:					
	If you make a mistake in this organisation, it is often held against you.	1	2	3	4	5
	Members of this organisation are able to bring up problems and tough issues.	1	2	3	4	5
	People here sometimes reject others for being different.	1	2	3	4	5
	It is safe to take a risk here.	1	2	3	4	5
	It is difficult to ask other members of this organisation for help.	1	2	3	4	5
	No one would deliberately act in a way that undermines my efforts.	1	2	3	4	5
	Working here, my unique skills & talents are valued and utilized.	1	2	3	4	5
		Strongly disagree	Disagree	Neither	Agree	Strongly agree
5	The following questions ask for your views about your interactions with your co-workers. Please indicate how much you agree or disagree with the following statements:					

My interactions with my co-workers are rewarding.	1	2	3	4	5
My co-workers value my input.	1	2	3	4	5
My co-workers listen to what I have to say.	1	2	3	4	5
My co-workers really know who I am.	1	2	3	4	5
I believe that my co-workers appreciate who I am.	1	2	3	4	5
I sense a real connection with my co-workers.	1	2	3	4	5
I feel a real 'kinship' with my co-workers.	1	2	3	4	5
My co-workers and I have mutual respect for one another.	1	2	3	4	5
I feel worthwhile when I am around my co-workers.	1	2	3	4	5
I trust my co-workers.	1	2	3	4	5
6 The following questions ask for your views about your interactions with your supervisor. Please indicate how much you agree or disagree with the following statements:	Strongly disagree	Disagree	Neither	Agree	Strongly agree
My supervisor helps me solve work-related problems.	1	2	3	4	5
My supervisor encourages me to develop new skills.	1	2	3	4	5
My supervisor keeps informed about how employees think and feel about things.	1	2	3	4	5
My supervisor encourages employees to participate in important decisions.	1	2	3	4	5
My supervisor praises good work.	1	2	3	4	5
My supervisor encourages employees to speak up when they disagree with a decision.	1	2	3	4	5

Employees are treated fairly by my supervisor.	1	2	3	4	5
My supervisor is committed to protecting my interests.	1	2	3	4	5
My supervisor does what he/she says he/she will do.	1	2	3	4	5
I trust my supervisor.	1	2	3	4	5

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

	Strongly disagree	Disagree	Neither	Agree	Strongly agree
I really “throw” myself into my job.	1	2	3	4	5
Sometimes I am so into my job that I lose track of time.	1	2	3	4	5
This job is all consuming; I am totally into it.	1	2	3	4	5
My mind often wanders and I think of other things when doing my job.	1	2	3	4	5
I am highly engaged in this job.	1	2	3	4	5

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

	Strongly disagree	Disagree	Neither	Agree	Strongly agree
I frequently think of quitting my job.	1	2	3	4	5
I am planning to search for a new job during the next 12 months.	1	2	3	4	5
If I have my own way, I will be working for this organisation one year from now.	1	2	3	4	5

9 Do you prefer to access information such as notices and memos via:

- | | |
|--|---|
| <input type="checkbox"/> Email to work accounts | <input type="checkbox"/> Newsletters via email to work accounts |
| <input type="checkbox"/> Intranet placement of newsletters | <input type="checkbox"/> Newsletters available in Crew rooms |

10 Given the following options, which would be your preferred method(s) of being communicated with?

- Email
- Daily notices
- The company intranet
- Newsletters
- Txt or SMS
- Notices in crew rooms
- Social networking sites (e.g. Facebook, Twitter)

11. Do you have any comments about how your organisation could improve its communication with you?

Gender: Male Female

Age: 24 or younger 25-34 45-54 55 or older

How many years have you worked in the industry? _____

Which ethnic group do you identify with:

- New Zealander of European decent European Pacific Islander
- New Zealander of Maori decent Asian Australian
- Other (please specify) _____

Thank you for your participation in completing this questionnaire.

After you have completed and sent in the survey. If you would enter the draw to win one of three \$50 vouchers, please send an email to:

prouse_ra06@yahoo.com.au