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# Workaholism and Employee Well-Being

A thesis submitted in partial fulfilment  
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of  
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*Te Whare Wānanga o Waikato*

## Abstract

The term *workaholism*, patterned after the word *alcoholism*, first appeared in a book by Oates (1971) in which he described workaholism as a compulsive or uncontrollable need to work incessantly, resulting in negative consequences. Research has yielded mixed results in relation to the impact workaholism can have on people's lives. Some authors view workaholism in positive terms (Machlowitz, 1980), while others view it in negative terms (Robinson, 1998). This study focused on the relationship between workaholism and health and well-being. An online, self report questionnaire, which included the Workaholism Battery (Spence & Robbins, 1992), was completed by 136 employees throughout New Zealand. Additional measures included work→family conflict, family→work conflict, family satisfaction, anxiety/depression, social dysfunction, positive psychological well-being, negative psychological well-being and physical health symptoms. Participants were classified into one of six groups, consisting of the enthusiastic workaholics, unenthusiastic workaholics, unengaged workers, disenchanted workers, work enthusiasts and relaxed workers. The unenthusiastic workaholics and the enthusiastic workaholics made up the “workaholic” group, and the unengaged workers, disenchanted workers, work enthusiasts and relaxed workers made up the “non-workaholic” group.

The main finding of this study was that there were few differences between workaholics and non-workaholics in relation to family→work conflict, family satisfaction, positive psychological well-being, negative psychological well-being, anxiety/depression, social dysfunction and physical health symptoms. The only difference between the workaholics and non-workaholics was that enthusiastic workaholics reported significantly higher levels of work→family conflict compared to relaxed workers. Another important finding of this study was that different types of workaholics reported significantly different levels of psychological well-being. Unenthusiastic workaholics reported significantly lower levels of positive psychological well-being, and significantly higher levels of negative psychological well-being compared to the enthusiastic workaholics. These results suggest that, with the exception of the comparatively low levels of psychological well-being the unenthusiastic workaholics reported in relation to the enthusiastic workaholics,

workaholism may not be as harmful as previously thought. They also provide support for the continued differentiation of multiple types of workaholics, as the unenthusiastic workaholics and the enthusiastic workaholics differed significantly on their reported levels of psychological well-being.

Having an excessive drive to work was significantly associated with poor health and well-being, whereas enjoyment of work was associated significantly with high positive levels of health and well-being. Work involvement was much more inconsistently related to health and well-being. On this basis, it may be inferred that excessive drive to work may be the harmful element in workaholism as it produces negative health and lifestyle outcomes, while enjoyment may be a productive factor.

Finally, a number of significant relationships were found between the health and well-being variables, suggesting that an individual's physical, mental and emotional health might be related to one another. The present data suggests that differentiation between different types of workaholics is important. The present data also challenges the negative stereotype of workaholism, and emphasises the importance of developing strategies to better manage workaholism within the workplace.

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# Table of Contents

Abstract .....	ii
Acknowledgements .....	iv
Table of Contents .....	v
List of Tables.....	vii
Chapter One .....	1
Introduction .....	1
Definitions of Workaholism.....	1
The Spence and Robbins Typology .....	2
Theoretical Rationale .....	4
The Present Study .....	6
Criteria Variables .....	7
The Relationship between WorkBAT Components and Criteria Variables .....	8
The Relationships between Criteria Variables .....	10
Previous Literature Relating to Worker Types and Well-being.....	13
The Relationship between Worker Types and Criteria Variables.....	19
Summary of Hypotheses .....	23
Chapter Two.....	26
Method .....	26
Participants .....	26
Measures .....	26
Procedure.....	32
Analysis.....	32
Chapter Three.....	34

Results .....	34
Descriptive Statistics.....	34
Hypothesised Relationships between the WorkBAT Subscales and Criteria Variables .....	36
Hypothesised Relationship between Criteria Variables .....	40
Hypothesised Relationships between Worker Types and Criteria Variables.....	42
Conclusion .....	47
Chapter Four .....	49
Discussion .....	49
Hypothesised Relationships between the WorkBAT Subscales and Criteria Variables .....	50
Relationship between Criteria Variables.....	55
Hypothesised Relationships between Worker Types and Criteria Variables.....	57
Summary .....	61
Limitations .....	62
Practical Implications.....	63
Future Research.....	64
Conclusions .....	65
References .....	66
Appendix A: Questionnaire.....	70
Appendix B: Letters of Introduction.....	75
Appendix C: Pattern Matrices.....	77

## List of Tables

Table 1.1 Workaholism Types.....	14
Table 1.2 Summary of Empirical Research Comparing WorkBAT with Well-being Variables.....	17
Table 2.1 Prevalence of Workaholism Types.....	33
Table 3.1 Descriptive Statistics for All Variables.....	34
Table 3.2 Correlations of Criteria Variables.....	39
Table 3.3 Means (Standard Deviations) of Criteria Variables for Workaholic Types and Degrees of Freedom ( <i>Df</i> ) and F Ratio from One-Way ANOVAs.....	45



# Chapter One

## Introduction

The term workaholism originated in 1971 when Oates (1971) published his book titled *Confessions of a Workaholic*. Oates (1971) equated workaholism with alcoholism, and described workaholism as an excessive compulsion to work which resulted in negative outcomes brought about by an addiction to work. In contrast to Oates' (1971) original definition, Machlowitz (1980) found that workaholics were very satisfied, healthy and productive individuals. This early research on workaholism painted a very confused picture, portraying workaholics as being either tragic or unhappy (Oates, 1971), or fulfilled and productive (Machlowitz, 1980). Since that time, the term workaholism has become a widely referred to phenomenon within both the academic literature and the popular press.

One of the first steps in establishing a systematic programme of research into a phenomenon is to develop, refine and validate a measure and then use it to explore the parameters of the construct itself. Unfortunately, however, the issue of measurement validation is one that has plagued research. The only common element in discussions of defining workaholism is that the individual is highly committed to work, devoting a good deal of time to it (Burke, Richardsen & Mortinussen, 2004).

### Definitions of Workaholism

While numerous definitions of workaholism have been proposed, they can be broadly categorised into one of three types: *dynamic*, *characteristic* and *operational* (McMillan, O'Driscoll, Marsh & Brady, 2001).

*Dynamic* definitions identify the effect of the behaviour and imply that workaholism is a method of avoiding personal responsibility to family and friends while earning acclaim from employers and colleagues (McMillan et al., 2001). The most frequently cited dynamic definition of workaholism is the original description: "an addiction to work, the compulsion or the uncontrollable need to work incessantly" (Oates, 1971, p. 1).

*Characteristic* definitions specify the structure and magnitude of behaviour and often include implicit value judgments such as 'irrational,' 'excessive,' or 'neglectful.' (McMillan et al., 2001) The most frequently cited characteristic definition of workaholism has been described by Machlowitz (1980) as "a desire to

work long and hard (where) work habits always exceed the prescriptions of the job . . . and the expectations of the people with whom . . . they work” (Machlowitz, 1980, p. 1). Machlowitz (1980) defined workaholic people as those “who always devote more time and thought to their work than the situation demands...what sets workaholics apart from other workers is their attitude toward work, not the number of hours they work” (p.11).

*Operational* definitions specify the exact components or behaviours that are essential for workaholism to occur. The most frequently cited operational definition of workaholism (Spence & Robbins, 1992) specifies high work involvement (psychological involvement with work in general), high drive (an inner pressure to work), and low work enjoyment (work related pleasure) (McMillan et al., 2001).

The Spence and Robbins (1992) definition of workaholism, based on the three components, was adopted for the present study because it not only provides a practical theory from which the exact components that are essential for workaholism to occur are stipulated, but it is also based on a theory which has been widely validated and supported by previous research (Burke, 2000; McMillan, 2001).

### **The Spence and Robbins Typology**

One of the most widely used and validated measures of workaholism was developed by Spence and Robbins (1992) and is called the Workaholism Battery or WorkBAT (see Table 1.1). Numerous studies have used the WorkBAT (Bonebright, Clay and Ankenmann, 2000; Burke, 2000; McMillan, 2002), which is a 25 item questionnaire that is used to define both workaholic and non workaholic worker types. Spence and Robbins (1992) distinguish three characteristics in their model of workaholism: work involvement, drive and work enjoyment.

#### ***Work Involvement***

Work involvement is defined as a generalised attitude relating to psychological involvement with work in general, which reflects the degree to which a person wants to be engaged in work (McMillan, 2002). The work involvement component from the WorkBAT has acceptable but sometimes marginal internal consistency, with Cronbach’s alpha values ranging from .67 to .71 (Bonebright et al., 2000; Spence & Robbins, 1992).

Some studies have supported the use of all three components of the Spence and Robbins (1992) typology. Bonebright et al., (2000) examined the relationship between workaholism and various well-being variables, and found support for the use of the three factor model. However, other studies have excluded the work involvement component of the WorkBAT. Kanai, Wakabayashi and Fling (1996) examined the WorkBAT in a large sample of predominantly male Japanese workers. A factor analysis revealed that the workaholism scales produced only a two-factor solution and as a result the work involvement dimension was dropped from the study. Similarly, Andreassen, Ursin and Eriksen (2007) examined the WorkBAT with 235 bank employees in Norway, with a subsequent factor analysis revealing a two-factor model of workaholism, drive and work enjoyment. These failures to replicate work involvement could be due in part to its frequently marginal alpha values (e.g. .67, .71). Because of these mixed results in relation to the three-factor model developed by Spence and Robbins (1992), further research needs to be conducted in order to gain a better understanding of the validity of this subscale in the WorkBAT. In terms of the relationship work involvement has had with health and well-being, research has been mixed. While some studies have shown the work involvement component to be negatively correlated with high levels of health and well-being (Spence & Robbins, 1992), other studies have found non-significant results in relation to well-being variables (Bonebright et al., 2000).

### *Drive*

Drive reflects internal motivation for work and how often the individual thinks about work (Andreassen et al., 2007). This drive to work is characterized as being excessive, and is often referred to as the addictive side to workaholics. A differentiation must be made between drive to work and type A behaviour. Type A individuals are characterized as being ambitious, aggressive, controlling and highly competitive, and researchers have also found measures of type A behavior and workaholism to be significantly and positively correlated (Robinson, 1998). In contrast, drive to work, as defined by Spence and Robbins (1992) is characterised by only an internal pressure to work excessively.

The drive subscale has yielded both high and low internal consistencies across studies, with alpha values (for males and females respectively) of .67 and .81 in the

original sample of social workers (Spence & Robbins, 1992) and .72 and .51 in a Japanese sample (Kanai et al., 1996). Previous research has shown that the drive subscale is associated with high levels of health complaints and poor well-being (Bonebright et al., 2000).

### ***Work Enjoyment***

The work enjoyment component measures the level of excitement or pleasure that individuals experience with respect to their work (McMillan, 2002). Work enjoyment has repeatedly demonstrated high internal consistency: Cronbach's alpha values across different studies range between .85 and .86 (Bonebright et al., 2000; Spence & Robbins; 1992). Previous research has shown that work enjoyment is associated with positive health and well-being outcomes (Burke, 2000; Spence & Robbins, 1992).

### ***Relationship between the Workaholism Components***

Previous research conducted on the relationships between the components of the WorkBAT have generally shown low but positive correlations between all of the variables. The literature has shown a low positive correlation between drive and work involvement of 0.25 (Burke, 2000) and 0.30 (Andreassen, Hetland & Pallesen, 2010). The relationship between drive and work enjoyment is extremely low, with reports of 0.09 (Burke, 2000) and 0.03 (Andreassen et al., 2010). A similar low correlation between work enjoyment and work involvement has also been found (0.14 to 0.22; Andreassen et al., 2010, Burke, 2000). This suggests that while they are somewhat related to one another, they are also very much distinct subscales.

### **Theoretical Rationale**

The theoretical rationales for the hypotheses of this study are divided into two elements. The first element is related to how the WorkBAT components are related to well-being. As discussed earlier, previous research has shown that an excessive drive to work, as defined by Spence and Robbins (1992), has been related negatively to health and well-being. Andreassen et al., (2007) examined the relationship between workaholism and health using Spence and Robbins (1992) WorkBAT. The drive subscale correlated positively with subjective health complaints. Similarly, Burke et al., (2004) found that the drive component of Spence and Robbins (1992) typology was negatively correlated with psychological well-being. In contrast, previous

research has shown that the enjoyment of work subscale has been correlated negatively with subjective health complaints (Spence & Robbins, 1992) and positively correlated with psychological well-being (Burke et al., 2004). The relationship between the work involvement subscale of the WorkBAT and health and well-being is less clear cut. Spence and Robbins (1992) found a mixed relationship between men and women in relation to work involvement and subjective health complaints. For women, work involvement was significantly positively correlated with subjective health complaints, whereas for men, there was no relationship found. This suggests that although work involvement has been significantly associated with poor health and well-being outcomes, more research is needed to clarify this relationship.

Burke (2000) conducted a study examining the relationship between the WorkBAT and extra-work satisfactions, including family, friends and community satisfaction. Drive was significantly negatively correlated with family, friends and community Work enjoyment was significantly positively correlated with family, friends and community satisfaction. This evidence suggests that drive is positively correlated with health complaints and associated with significantly low levels of family, friends and community satisfaction and work enjoyment is negatively correlated with health complaints and positively correlated with extra-work satisfaction. This is the first element of the theoretical rationale, which is based upon the premise that drive and work involvement are associated with poor levels of well-being, and work enjoyment is associated with high levels of well-being.

The second element to the theoretical rationale is related to the workaholic and non workaholic groups that are defined by Spence and Robbins (1992) typology, which are discussed in a later section of this literature review. These six groups include the unenthusiastic workaholics, enthusiastic workaholics, relaxed workers, disenchanted worker, unengaged workers and work enthusiasts. They are all characterized by either high or low levels of work involvement, drive and work enjoyment.

Because an excessive drive to work has been previously shown to be consistently related to low levels of well-being, and enjoyment of work has been associated previously with high levels of well-being, this evidence suggests that

unenthusiastic workaholics and the disenchanted workers would report poorer health and well-being outcomes, as they are both characterised by an excessive drive to work and low work enjoyment. A review of the literature has shown that excessive drive can have a negative impact on a person's well-being, because excessive drive is related to the more addictive aspect of workaholism, when an individual is innately compelled to work excessively, to the detriment of other areas of life, including health and family. The literature also provides evidence that the relaxed worker and the work enthusiast, who are both characterised by high work enjoyment and low drive, would report higher levels of health and well-being. Because the unenthusiastic workaholics and the disenchanted workers are predicted to report the poorest levels of well-being, and the relaxed workers and work enthusiasts are predicted to report the highest levels of well-being, the enthusiastic workaholics and unengaged workers would occupy positions between these two pairs of types.

### **The Present Study**

The present research focused on the relationship between one of the most widely used and validated measures of workaholism, the WorkBAT, and measures of health and well-being. Because of the differing results surrounding workaholism and well-being, measures relating to health, well-being and work→family conflict and family satisfaction were included in the present study. A bi-directional scale of work-family conflict was included in the present research, which measured both work→family conflict and family→work conflict, in order to see whether different worker types experienced different levels of conflict. A measure of family satisfaction was included in order to examine the impact workaholism has on peoples' family life. Three different measures were included to gain a better understanding of overall health and well-being: psychological well-being, physical health symptoms and psychological strain.

The hypotheses for the present research are separated into three sections. The first section includes the hypothesised relationships between all three subscales of the WorkBAT and the criteria variables. The second section includes the relationships among all of the well-being variables. The third section includes the relationships between each worker type, as derived from the WorkBAT, and all of the well-being variables.

## **Criteria Variables**

In order to understand the relationship between the criteria variables and workaholism, a good understanding of the definition of these criteria variables is first needed.

### ***Work → Family Conflict and Family → Work Conflict***

Work → family conflict is defined as the degree to which work interferes with family life (Frone & Yardley, 1996). Frone and Yardley (1996) stated that family → work conflict is associated with negative work outcomes like job dissatisfaction, poor work performance, and work-related withdrawal, whereas work → family conflict is associated with negative family outcomes like family dissatisfaction, poor family performance and family-related withdrawal. Taken together, prior research suggests that family demands affect job outcomes indirectly via family → work conflict, whereas work demands affect family outcomes indirectly via work → family conflict. Frone and Yardley (1996) stated that “prior research on work-family conflict suggests that a relatively large proportion of employed adults with family responsibilities report that their work and family roles interfere with one another” (p. 354).

### ***Family Satisfaction***

Family satisfaction is defined as the degree to which a person is satisfied with their family life (Edward & Rothbard, 1999). Edward and Rothbard (1999) describe family satisfaction as being a domain-specific well-being, which refers to “outcomes that are particular to a life domain, for example...family satisfaction represents affective dimensions of well-being particular to family...in contrast, overall well-being refers to the general mental and physical health of the person” (p.100).

### ***Psychological Well-being***

Psychological well-being is defined as the psychological well-being of an individual in relation to their job (Warr, 1990). The construct psychological well-being was a global concept relating to constructs such as depression, anxiety and coping in relation to an individual’s job.

### ***Physical Health Symptoms***

Physical health is defined as the number of somatic symptoms experiences. Physical health was included in this study because of the effect excessive working

and stress can have on the physical health of people. Lin and Ensel (1989) stated that “psychological stress/strain...increases or exacerbates health problems (and) it has commonly been referred to as psychological vulnerability which may lead to the onset of an actual physical illness” (p.382). The Physical Health questionnaire asks respondents whether they have experienced a number of physical symptoms and which of these symptoms have been severe enough to warrant medical attention. The symptoms assessed are somatic in nature, in that they are presumably physical manifestations that a person can perceive, such as nausea or pain. The higher the PSI score the larger the number of health complaints reported.

### ***Psychological Strain***

Psychological strain was intended to assess the psychological health of individuals. Psychological strain is related to the presence of psychological morbidity, and is intended to detect non-psychotic psychiatric disorders in community settings and non-psychiatric settings.

### **The Relationship between WorkBAT Components and Criteria Variables**

The relationship between the subscales of the WorkBAT and the criteria measures is important to examine in order understand the differences between drive, work involvement and work enjoyment, and how these impact on health and well-being. This information will also help gain a better understanding of the characteristics associated with negative health complaints.

### ***Drive***

Evidence suggests that the drive subscale of the WorkBAT is positively correlated with health complaints. Andreassen et al., (2007) examined the relationship between the WorkBAT and health. Results showed that the drive subscale correlated positively with subjective health complaints. Spence and Robbins (1992) conducted a study to validate the WorkBAT and to examine the relationship between the WorkBAT and several health and well-being factors. Spence and Robbins (1992) were interested in the differences between men and women in relation to health and well-being, as so results were only reported with men and women separated. The results found that drive was significantly positively correlated with health complaints for both men and women. Another related measure used in the Spence and Robbins (1992) study was job stress, which has been shown to be related to physical health



(DeLongis et al., 1988). The results showed that drive was significantly positively correlated with job stress for both men and women. In examining the relationship between the WorkBAT and extra-work satisfactions, Burke (2000) found that that feeling driven to work was significantly negatively correlated with family, friends and community satisfaction.

This evidence suggests that drive can have a negative impact on one's health and wellbeing, and can lead to interference of satisfaction with family life. On the basis of this evidence, the predicted relationship between drive and the outcome measures were as follows:

H1: Drive is predicted to be

- a) Positively correlated with work → family conflict
- b) Positively correlated with family → work conflict
- c) Negatively correlated with family satisfaction
- d) Positively correlated with physical health symptoms
- e) Positively correlated with psychological strain
- f) Negatively correlated with psychological well-being

### ***Work Involvement***

Evidence suggests that the work involvement subscale of the WorkBAT is positively correlated with health complaints. Spence and Robbins (1992) study revealed that work involvement was significantly positively correlated with health complaints for men, but for women this correlation was not significant. Work involvement was significantly positively correlated with job stress for both men and women. Burke (2000) conducted a study examining the relationship between the WorkBAT and extra-work satisfactions, including family, friends and community satisfaction. The results showed that there was no significant relationship between work involvement and family, friends and community satisfaction.

Evidence is mixed in terms of the relationship work involvement has with health and well-being, and this relationship is not as clear cut as the relationship drive has been shown to have with health and well-being. Work involvement has shown to be correlated with the drive component of the WorkBAT (Spence & Robbins, 1992), and drive is associated with poor health and well-being.

This evidence suggests that work involvement can have a negative impact on one's health and wellbeing. On the basis of this evidence, the predicted relationship between work involvement and the criteria variables were as follows:

H2: Work Involvement is predicted to be

- a) Positively correlated with work → family conflict
- b) Positively correlated with family → work conflict
- c) Negatively correlated with family satisfaction
- d) Positively correlated with physical health symptoms
- e) Positively correlated with psychological strain
- f) Negatively correlated with psychological well-being

### ***Work Enjoyment***

Andreassen et al., (2007) examined the relationship between workaholism and health using Spence and Robbins (1992) WorkBAT. The enjoyment of work subscale correlated negatively with subjective health complaints. Spence and Robbins (1992) conducted a study to validate the WorkBAT and to examine the relationship between the WorkBAT and several health and well-being factors. Work enjoyment was significantly negatively correlated with health complaints for both men and women. Burke (2000) conducted a study examining the relationship between the WorkBAT and extra-work satisfactions. The results showed that work enjoyment was significantly positively correlated with family, friends and community satisfaction.

On the basis of this evidence, the predicted relationships between drive and the criteria variables were as follows:

H3: Work enjoyment is predicted to be

- a) Positively correlated with work → family conflict
- b) Positively correlated with family → work conflict
- c) Positively correlated with family satisfaction
- d) Negatively correlated with physical health
- e) Negatively correlated with psychological strain
- f) Positively correlated with psychological wellbeing

### **The Relationships between Criteria Variables**

The relationships among all of the well-being variables are treated as being supplementary to the main aims of the current study. They are important to examine

in order understand the relationships between different types of well-being, including both physical and mental well-being.

### ***Family Satisfaction***

Previous research has shown that family satisfaction is correlated with a number of health and well-being variables. Edward and Rothbard (1999) found that family satisfaction was significantly negatively correlated with anxiety and significantly negatively correlated with depression. Family satisfaction was also found to be significantly positively correlated with family relationships and family security (0.63). Family security was the belief that membership in a role within the family is stable and likely to continue (p.94). Family relationships were defined as the personal connections with other people (p. 93). Family satisfaction was also significantly negatively correlated with somatic symptoms.

Previous research has also shown that family satisfaction is positively correlated with psychological well-being, and negatively correlated with work-family conflict, psychological strain and physical health symptoms. O'Driscoll, Brough and Kalliath (2004) conducted a survey of employed workers during two time periods to assess the relationship between several variables including work-family conflict, family satisfaction, work → family interference, family → work interference and psychological strain. Family satisfaction was negatively correlated with work → family interference and family → work interference. Family satisfaction was negatively correlated with psychological strain and negatively correlated with physical health. Mills, Grasmick, Morgan and Wenk (1992) examined the relationship between family satisfaction and psychological wellbeing (N = 197). Results showed that family satisfaction was positively correlated with psychological well-being.

On the basis of this evidence, hypotheses relating to family satisfaction and work → family conflict, family → work conflict, physical health and psychological well-being were as follows:

H4: Family satisfaction will be negatively correlated with work → family conflict and family → work conflict

H5: Family satisfaction will be negatively correlated with psychological strain

H6: Family satisfaction will be negatively correlated with physical health symptoms

H7: Family satisfaction will be positively correlated with psychological well-being  
***Psychological Well-being***

Previous research has shown a relationship between psychological well-being and work-family conflict. Karimi, Karimi and Nouri (2010) examined the relationship between employees' well-being, work-family conflict and job strain among various occupations and industrial organizations in Iran. Work interference with family was negatively correlated with psychological well-being, and family interference with work was also negatively correlated with psychological well-being. Research has also shown that psychological well-being is related to physical symptoms. Mechanic and Hansell (1987) collected longitudinal data from 1,057 adolescents in 19 public schools, examining the relationship between psychological well-being, physical health and adolescent competence. Psychological well-being was measured using two separate measures, which included depressed mood and self esteem. Depressed mood was positively correlated with physical health, and self esteem was negatively correlated with physical symptoms.

Oliver, Mansell and Jose (2010) conducted a longitudinal study of the role of negative affectivity on the work-stressor-strain process. The GHQ-12 was included in this study, and both negative affectivity and job stress were measured. Scores on the GHQ-12 were positively correlated with negative affectivity and job stress. Previous research has shown that negative affectivity and psychological well-being are closely related to one another. Oliver and Brough (2002) examined the relationship between negative affectivity and psychological strain. Psychological strain was measured using the GHQ-12. Multiple regression analysis revealed that negative affectivity was found to be significantly predictive of psychological strain and accounted for approximately 21% of the variance in this criterion.

On the basis of this evidence, hypotheses relating to psychological well-being, work→family conflict, family→work conflict, psychological strain and physical health were as follows:

H8: Psychological well-being will be negatively correlated with physical health symptoms

H9: Psychological well-being will be negatively correlated with work→family conflict and family→work conflict

H10: Psychological well-being will be negatively correlated with psychological strain  
*Physical Health Symptoms, Work → Family Conflict, Family → Work Conflict and Psychological Strain*

Studies have shown that physical health symptoms, work → family conflict and psychological strain were positively correlated with one another. O’Driscoll, Brough and Kalliath (2004) examined the relationship between physical health, work → family conflict, family → work conflict and psychological strain. Physical health was positively correlated with work → family conflict and family → work conflict. Physical health was positively correlated with psychological strain. Work → family conflict and family → work conflict were both positively correlated with psychological strain. On the basis of this evidence, hypotheses relating to family satisfaction and all four negatively worded outcome measures were as follows:

H11: Physical health symptoms will be positively correlated with work → family conflict and family → work conflict

H12: Physical health will be positively correlated with psychological strain

H13: Work → family conflict and family → work conflict will be positively correlated with psychological strain

### **Previous Literature Relating to Worker Types and Well-being**

Spence and Robbins (1992) define three components within the WorkBAT: an excessive drive to work, work involvement and work enjoyment. From these three components, six worker types are derived (see Table 1.1). The unenthusiastic workaholics and the enthusiastic workaholics make up the “workaholic” group, and the unengaged workers, disenchanted workers, work enthusiasts and relaxed workers make up the “non-workaholic” group (see Table 1.1). It must be noted that, although a total of eight possible worker groups can be derived from the workaholism triad, previous research using cluster analysis has supported the use of a six factor solution (Spence & Robbins, 1992). Spence and Robbins (1992) compared three, four, five and six clusters and report that the six-cluster solution led to the most conceptually distinct and easily interpretable profiles. They did not mention trials with seven or eight clusters, although theoretically by combining three characteristic at two levels (high, low) there should be eight types.

**Table 1.1 Workaholism Types**

	<b>Worker Type</b>	<b>Work Involvement</b>	<b>Drive</b>	<b>Work Enjoyment</b>
<b>Workaholic</b>	Unenthusiastic workaholics	High	High	Low
	Enthusiastic workaholics	High	High	High
<b>Non-workaholic</b>	Work enthusiasts	High	Low	High
	Unengaged workers	Low	Low	Low
	Relaxed workers	Low	Low	High
	Disenchanted workers	Low	High	Low

Unenthusiastic workaholics are highly involved in work, feel driven to work due to an internal pressure, and experience low degree of work enjoyment.

Unenthusiastic workaholics feel depressed when not working, are compulsive and lack work enjoyment (Spence & Robbins, 1992). Enthusiastic workaholics are also highly driven, highly involved in their work but also have a high level of work enjoyment. Enthusiastic workaholics are highly involved with their work, and experience a great deal of satisfaction in doing so (Spence & Robbins, 1992)

Work enthusiasts are highly involved in their work and have high work enjoyment, but do not possess an excessive drive to work. What distinguishes enthusiastic workaholics from work enthusiasts is that enthusiastic workaholics have both high work involvement and high levels drive, whereas the work enthusiast is highly involved in their work and enjoys their work, however, they lack the excessive, compulsive drive to work. Unengaged workers are not very involved in their work, have little drive and have low work enjoyment. Relaxed workers also have low work involvement and low drive, but have high levels of work enjoyment. Disenchanted workers have low levels of work involvement, a high drive to work but are low on work enjoyment.

While the research area of defining and measuring workaholism is continuing to develop, examining the effects of excessive working on a person's health, well-being and family life is another important research area that is helping to shed light on the consequences of workaholism. Research differs in relation to health and well-being and workaholism types. Some researchers have found workaholics to be both satisfied and productive (Machlowitz, 1980) while others have viewed workaholism

negatively. These writers equate workaholism with other addictions, and depict workaholics as unhappy, tragic figures (Oates, 1971). Understanding the impact that workaholism can have on a person's family life as well as their physical and mental health is an important research area which has received increased attention.

Few empirical studies have examined the relationship between workaholism types and health and well-being, using Spence and Robbins (1992) Workaholism Battery. A summary of previous empirical research comparing the WorkBAT with well-being variables can be found in table 1.2. Research regarding the relationship between health complaints and workaholism are contradictory, varying largely from sample to sample. As yet, therefore, the relationship remains unclear.

The first study to use the WorkBAT was Spence and Robbins (1992), who conducted a study to test and validate their measure of workaholism. A sample of 134 male and 157 female social workers with academic positions completed the questionnaire. A number of variables were measured, including job stress, time commitment to job, perfectionism, non-delegation and health complaints. Results showed that unenthusiastic workaholics scored higher than work enthusiasts (among other groups) on measures of perfectionism, non delegation of responsibility and job stress. Within all six worker types tested in this study, both the unenthusiastic workaholics and the disenchanting workers reported high scores for health complaints. These results showed that both the unenthusiastic workaholics and several other worker types appeared to have high health complaints.

Bonebright et al., (2000) examined differences between two types of workaholics (enthusiastic and unenthusiastic) and four types of non-workaholics (work enthusiasts, relaxed workers, unengaged workers and disenchanting workers) based on Spence and Robbins (1992) typology using a sample of 171 salaried employees of a high technology organization. The relationship of workaholism to work-life conflict, life satisfaction and purpose in life was examined. Unenthusiastic workaholics (high drive, high work involvement, low work enjoyment) were found to have significantly more work-life conflict and significantly less life satisfaction and purpose in life than three of the four types of non workaholics (work enthusiast, unengaged worker, relaxed worker). Enthusiastic workaholics were found to have significantly more life satisfaction and purpose in life than unenthusiastic

workaholics and significantly more work-life conflict than three of the four non workaholics (work enthusiast, unengaged worker, and relaxed worker). The odd one out of the non-workaholics was the disenchanted worker, who differed significantly from the other worker types, in that they had higher work-life conflict and lower life satisfaction and purpose in life. Because of these significant differences, Bonebright et al., (2000) removed the disenchanted worker type from the non-workaholic group for the hypothesis testing.

A summary of these two large studies reveals that both the unenthusiastic workaholic and the enthusiastic workaholic suffer negative health complaints, and out of the four non workaholic worker types, the disenchanted worker appears to suffer the most negative health complaints.

Buelens and Poelmans (2004) examined the generalisability and validity of the Spence and Robbins (1992) workaholism triad in a sample of 5,858 full-time workers in Belgium. Their sample comprised an educated professional working population. Workaholics and non-workaholic types were then compared on measures of health/stress complaints and work → family conflict. The unenthusiastic workaholic reported the highest levels of work → family conflict and health/stress complaints compared to both the enthusiastic workaholic and the non workaholics.

Kanai et al., (1996) conducted a study with 962 Japanese businessmen from 10 private enterprises using Spence and Robbins (1992) measure of workaholism. A factor analysis revealed that the workaholism scales produced only a two-factor solution and as a result the work involvement dimension was dropped from the study. As a consequence, the number of worker types was reduced to four. These four were called enjoying work, (which was not a worker type in the WorkBAT), workaholics, work enthusiasts and unengaged workers. Results showed that workaholics reported the highest number of health complaints, but the difference was significant only when compared to two of the three other groups (unengaged workers and enjoying workers). The difference between workaholics and work enthusiasts was not significant.



**Table 1.2 Summary of Empirical Research Comparing WorkBAT with Well-being Variables**

Authors	Year	N	Participant	Country	Variables	Findings
Spence & Robbins	1992	291	Social workers	US	Health complaints	Out of all six worker types: UW had highest health complaints for females, second highest for males. DW had highest health complaints for males, second highest for females
Kanai, Wakabayashi & Fling	1996	962	Businessmen from 10 private enterprises	Japan	Health complaints	Factor analysis confirmed only Drive and Work Enjoyment subscale; as a result, four worker types were derived. Workaholics reported the highest number of health complaints compared to “unengaged worker” and “enjoying worker”. The difference between “workaholics” and “work enthusiasts” was not significant.
Bonebright, Clay & Ankenmann	2000	171	Employees of a high technology organization	US	Work-life conflict Purpose in life Life satisfaction	UW found to have significantly more work-life conflict than three out of the four non-workaholics (RW, UW, WE). DW had highest work-life conflict, lowest life satisfaction and purpose in life out of non-workaholics. EW found to have more life satisfaction and purpose in life than UW. Both EW and UW had high levels of work-life conflict.
Burke	1999 c	530	MBA University graduates	Canada	family, friends and community satisfaction	Unenthusiastic workaholic reported lowest levels of extra work satisfactions compared to EW, DW, RW, UW and WE.
McMillan & O’Driscoll	2004	421	Range of job sectors	New Zealand	Range of health measures	Overall, workaholics had similar mental health levels to non-workaholics, but consistently poor social health.
Buelens & Poelmans	2004	5,853	Full-time workers	Belgium	Health complaints	Unenthusiastic workaholics reported more health complaints than did the enthusiastic workaholics and work enthusiasts.

Key: UW = Unenthusiastic Workaholic; EW = Enthusiastic Workaholic; DW = Disenchanted Worker; RW = Relaxed Worker; UW = Unengaged worker; WE = Work Enthusiast

Burke (1999c) examined the relationship between workaholism and extra-work satisfactions (family, friends and community satisfaction). Mail questionnaires were sent to MBA graduates of a single university in Canada. Results showed a negative relationship between workaholism and extra work satisfactions, with the unenthusiastic workaholic reporting the lowest level of extra work satisfaction. However, the results did show different levels of extra-work satisfaction among enthusiastic workaholics, unenthusiastic workaholics, and work enthusiasts. These results are consistent with the notion that different types of workaholics likely exist, and that these different types have different experiences.

McMillan and O'Driscoll (2004) conducted a quantitative study within a range of job sectors throughout New Zealand. This study examined the relationship between workaholism and a range of health measures including mental, emotional, physical, social and general health and physical discomfort, work-specific problems, general vitality and health trends over time. Based on their previous findings, McMillan and O'Driscoll (2004) used a revised version of the WorkBAT named the WorkBAT-Revised, which consisted of only work enjoyment and drive. The workaholic and non-workaholic were compared to each other on all of the health measures. McMillan and O'Driscoll (2004) found that "the data indicated in many instances that workaholic health levels were equal to, or in places, better than non-workaholics health" (p. 515). Overall, workaholics had similar mental health levels to non-workaholics, but consistently poor social health. The results showed that while workaholics reported slightly poorer social functioning, role functioning and more frequent pain, they reported similar vitality, general health and psychological health to non-workaholics.

The findings from this study that workaholics appear to function relatively well, without many negative health outcomes supports those of Burke (2000). Burke (2000) observed that enthusiastic workaholics had fewer psychosomatic symptoms and more favourable physical well-being than many other workers. His data indicated that enthusiastic workaholics' and non-workaholics' physical health scores were very similar.

### ***Summary of Previous Literature***

This review of the literature provides evidence for the expected differences that the workaholic and non workaholic groups might have in the present study in relation to health and well-being. The evidence suggests that the disenchanted worker might report similarly low levels of family satisfaction, psychological well-being and physical health compared to the unenthusiastic workaholics. Previous research has shown that drive is associated with poor psychological well-being and physical health, while work enjoyment has been associated with positive well-being and family satisfaction. Both the disenchanted worker and the unenthusiastic workaholic share both high drive and high work enjoyment. Hence, this evidence would suggest that the unenthusiastic workaholic and the disenchanted worker would report the poorest health and well-being. In contrast, the relaxed worker and the work enthusiast have previously reported the highest levels of psychological well-being, family satisfaction and physical health. Both the relaxed worker and the work enthusiast share the characteristics of high work enjoyment and low drive.

### **The Relationship between Worker Types and Criteria Variables**

The relationship between the worker types derived from scores on the WorkBAT and the criteria variables is important to examine in order gain a better understanding of the characteristics associated with work excessively. This information will also help gain a better understanding of the differences between the different WorkBAT groups, and to also gain a better understanding of the validity of the WorkBAT worker types.

Brady, Vodanovich, and Rotunda (2008) assessed the impact of workaholism on work-family conflict, job satisfaction, and perceptions of leisure time. Data were collected from university employees and Society for Human Resource Management (SHRM) members. High drive scores were found to significantly positively relate to work-family conflict. Work Enjoyment scores were associated with less work-family conflict, as well as greater scores indicative of satisfaction with the job and the work itself.

Bonebright et al., (2000) examined the relationship between the WorkBAT worker types and work-life conflict. Results showed that there was no significant difference between the workaholic groups and the disenchanted workers in work-life conflict. The disenchanted workers also reported very high levels of work-life conflict.

Based on the premise that both the relaxed workers and the work enthusiasts share the characteristic of low drive and high work enjoyment, and disenchanted workers and the unenthusiastic workaholics share the characteristic of high drive and high work enjoyment, the hypotheses for all six worker types in relation to work-family conflict were as follows:

H14: Disenchanted workers and unenthusiastic workaholics will report higher levels of (a) work→family conflict and (b) family→work conflict than unengaged workers and enthusiastic workaholics

H15: Unengaged workers and enthusiastic workaholics will report higher levels of (a) work→family conflict and (b) family→work conflict than work enthusiasts and relaxed workers

Buelens and Poelmans (2004) examined the relationship between the WorkBAT and family satisfaction ( $N=5,858$ ). Both the disenchanted workers and the unenthusiastic workaholics reported the lowest levels of family satisfaction compared to the other four worker groups. In contrast, relaxed workers and work enthusiasts were shown to have extremely high levels of family satisfaction. The results also showed that drive was negatively correlated with family satisfaction, and work enjoyment was positively correlated with family satisfaction. Both the relaxed worker and the work enthusiasts share the characteristic of high work enjoyment and low drive. In contrast, the unenthusiastic workaholic and the disenchanted worker have high drive and low work enjoyment.

On the basis of this evidence, the hypotheses for all six worker types in relation to family satisfaction were as follows:

H16: Disenchanted workers and unenthusiastic workaholics will report lower levels of family satisfaction than unengaged workers and enthusiastic workaholics

H17: Unengaged workers and enthusiastic workaholics will report lower levels of family satisfaction than work enthusiasts and relaxed workers

### ***Psychological Well-being***

Bonebright et al., (2000) conducted a study using the WorkBAT and examined the relationship between workaholism and psychological well-being. Psychological well-being was measured using three measures of well-being: work-life conflict, life satisfaction and purpose in life. While these measures of psychological well-being are not the same for the present study, both work-life conflict and work-family conflict are closely related constructs. Both the relaxed workers and work enthusiasts reported the highest levels of life satisfaction and purpose in life out of all six worker groups.

Results also showed that the unenthusiastic workaholics and the disenchanted workers were found to have significantly more work-life conflict and significantly less life satisfaction and purpose in life compared to the other four worker groups. Bonebright et al., (2000) state that their study indicated that the “disenchanted worker is also associated with poorer psychological outcomes when compared to other non-workaholics types...the disenchanted worker shares the characteristic of a high drive to work and low enjoyment of work with the unenthusiastic workaholic” (p.474). In contrast, both the relaxed worker and the work enthusiasts share the characteristic of high work enjoyment and low drive.

On the basis of this evidence, the hypotheses for all six worker types in relation to psychological well-being were as follows:

H18: Disenchanted workers and unenthusiastic workaholics will report lower levels of psychological well-being than unengaged workers and enthusiastic workaholics

H19: Unengaged workers and enthusiastic workaholics will report lower levels of psychological well-being than work enthusiasts and relaxed workers

### ***Physical Health Symptoms***

Spector and Jex (1998) examined the relationship between physical health symptoms and a number of organizational and well-being correlates. The results showed that high PSI scores were positively related to anxiety ( $r = 0.48$ ) frustration ( $r=0.28$ ) and intent to quit ( $r = 0.33$ ) but negatively related to job satisfaction ( $r=-0.23$ ). Unfortunately, the physical symptom indicator scale used in the present study has not been used in a study with the WorkBAT. However, other studies have examined the relationship between the WorkBAT and physical health using similar measures to Spector and Jex (1998).

One such study that measured physical health was Buelens and Poelmans (2004) who used a measure developed for their study. Under the heading of well-being, respondents were asked to indicate how frequently over the last year they experienced symptoms such as diminished energy, sleep disorders, depression and nervous exhaustion using a list of 10 items. The unenthusiastic workaholics and the disenchanted workers scored the highest in health complaints, and the relaxed workers and the work enthusiasts reported low levels of health complaints. Although Buelens and Poelmans (2004) used a different measure of physical health, this does give an indication of the relationship between physical health and the WorkBAT.

Burke (2000) examined the relationship of workaholism type to indicators of psychological and physical well-being. Data were collected from male and female managers and professionals using anonymous questionnaires. Psychosomatic symptoms were measured, in which respondents indicated how often they experienced each physical condition (e.g. headaches) in the past year. The results showed that drive was positively correlated with psychosomatic symptoms, and work enjoyment was negatively correlated with psychosomatic symptoms. In contrast, work involvement had an extremely low negative correlation with psychosomatic symptoms that was almost at zero (-0.08). From these results, it is clear that drive is positively associated with physical health complaints, and work enjoyment is negatively associated with physical health complaints.

Based on the premise that the unenthusiastic workaholics and the disenchanted workers share high drive and low work enjoyment, and the relaxed workers and work enthusiasts share low drive and high work enjoyment, the hypotheses for all six worker types in relation to physical health symptoms were as follows:

H20: Disenchanted workers and unenthusiastic workaholics will report higher levels of physical health symptoms than unengaged workers and enthusiastic workaholics

H21: Unengaged workers and enthusiastic workaholics will report higher levels of physical health symptoms than work enthusiasts and relaxed workers

### ***Psychological Strain***

Gillian (2009) examined the relationship between the WorkBAT subscales and general health, using the GHQ-12 ( $N=80$ ). High scores represented high

psychological strain, and low scores represented low psychological strain. Drive was significantly negatively correlated with scores on the GHQ-12, indicating the high drive is associated with psychological strain. Work involvement was also negatively correlated. Work enjoyment was positively correlated with the GHQ-12, indicating that high work enjoyment is associated with low psychological strain. This evidence showed that high drive and low work enjoyment were associated with high levels of psychological strain. Both the unenthusiastic workaholics and the disenchanted workers share the characteristics of high drive and low work enjoyment. Based on this evidence it would be expected that both of these worker groups would report high levels of psychological strain. In contrast, the work enthusiast and relaxed worker are characterised by low drive and high work enjoyment, which is associated with low levels of psychological strain. Based on this evidence it would be expected that both of these worker groups would report low levels of psychological strain.

On the basis of this evidence, the hypotheses for all six worker types in relation to psychological strain were as follows:

H22: Disenchanted workers and unenthusiastic workaholics will report higher levels of psychological strain than unengaged workers and enthusiastic workaholics

H23: Unengaged workers and enthusiastic workaholics will report higher levels of psychological strain than work enthusiasts and relaxed workers.

### **Summary of Hypotheses**

H1: Drive is predicted to be

- a) Positively correlated with work→family conflict
- b) Positively correlated with family→work conflict
- c) Negatively correlated with family satisfaction
- d) Positively correlated with physical health symptoms
- e) Positively correlated with psychological strain
- f) Negatively correlated with psychological well-being

H2: Work involvement is predicted to be

- a) Positively correlated with work→family conflict
- b) Positively correlated with family→work conflict
- c) Negatively correlated with family satisfaction
- d) Positively correlated with physical health symptoms
- e) Positively correlated with psychological strain

f) Negatively correlated with psychological well-being

H3: Work enjoyment is predicted to be

a) Positively correlated with work → family conflict

b) Positively correlated with family → work conflict

c) Positively correlated with family satisfaction

d) Negatively correlated with physical health symptoms

e) Negatively correlated with psychological strain

f) Positively correlated with psychological well-being

H4: Psychological well-being will be negatively correlated with physical health symptoms

H5: Psychological well-being will be positively correlated with family satisfaction

H6: Family satisfaction will be negatively correlated with physical health symptoms

H7: Psychological well-being will be negatively correlated with work → family conflict and family → work conflict

H8: Psychological well-being will be negatively correlated with psychological strain

H9: Family satisfaction will be negatively correlated with work → family conflict and family → work conflict

H10: Family satisfaction will be negatively correlated with psychological strain

H11: Physical health symptoms will be positively correlated with work → family conflict and family → work conflict

H12: Physical health symptoms will be positively correlated with psychological strain

H13: Work → family conflict and family → work conflict will be positively correlated with psychological strain

H14: Disenchanted workers and unenthusiastic workaholics will report higher levels of work → family and family → work conflict than unengaged workers and enthusiastic workaholics

H15: Unengaged workers and enthusiastic workaholics will report higher levels of work → family and family → work conflict than work enthusiasts and relaxed workers

H16: Disenchanted workers and unenthusiastic workaholics will report lower levels of family satisfaction than unengaged workers and enthusiastic workaholics



H17: Unengaged workers and enthusiastic workaholics will report lower levels of family satisfaction than work enthusiasts and relaxed worker.

H18: Disenchanted workers and unenthusiastic workaholics will report lower levels of psychological well-being than unengaged workers and enthusiastic workaholics

H19: Unengaged workers and enthusiastic workaholics will report lower levels of psychological well-being than work enthusiasts and relaxed workers

H20: Disenchanted workers and unenthusiastic workaholics will report lower levels of physical health symptoms than unengaged workers and enthusiastic workaholics

H21: Unengaged workers and enthusiastic workaholics will report lower levels of physical health symptoms than work enthusiasts and relaxed workers

H22: Disenchanted workers and unenthusiastic workaholics will report higher levels of psychological strain than unengaged workers and enthusiastic workaholics

H23: Unengaged workers and enthusiastic workaholics will report higher levels of psychological strain than work enthusiasts and relaxed workers.

## Chapter Two

### Method

A questionnaire was sent to eight companies throughout New Zealand. 136 employees participated in the present study by completing the online questionnaire. The companies recruited included a law firm, a university, an accounting firm, a bank, an information technology firm, two scientific research companies and an electrical distribution company. These companies were based throughout New Zealand including Hamilton, Auckland, Christchurch and Wellington.

### Participants

The sample comprised 136 participants, of which 53% were males and 47% were females, aged between 17 and 66 ( $M = 43$  years,  $SD = 11.8$ ). A majority of the sample were NZ European (81%), 2% of the sample were Maori, 1% Asian, 1% Pacific Peoples, 8% other European, and 7% were classified under "Other". The average job tenure was 7.8 years and 5 months ( $SD = 7.5$ ). In relation to job title, 14% of the sample was executive/senior managers, 23% were managers, 7% were supervisors and 56% were employees.

### Measures

The questionnaire measured workaholism, as well as a number of well-being variables including psychological wellbeing, physical health symptoms, psychological strain, work→family conflict, family→work conflict, and family satisfaction. Demographic information was also collected including gender, age, ethnicity, job tenure and job title. Please refer to Appendix A for the hardcopy questionnaire.

### *Workaholism*

Workaholism was measured using the Workaholism Battery (WorkBAT) measure developed by Spence and Robbins (1992) which consists of 25 items. This measure consisted of three independent subscales that measured the components of the workaholic triad: (a) Drive, (b) Work Involvement, and (c) Work Enjoyment. Each item was answered on a seven-point Likert type scale anchored from 1 = *strongly agree* to 7 = *strongly disagree*. All items except for items one, four, seven, 10 and 11 were reverse scored so that high scores represented high work involvement, high work enjoyment and high drive.

### ***Work Involvement***

The work involvement scale consisted of eight items and measured the extent to which a person devotes himself or herself to productive projects and constructive uses of time (Bonebright, Clay & Ankenmann, 2000). Sample items include: “Between my job and other activities I’m involved in, I don’t have much free time” and “I get bored and restless on vacations when I haven’t anything productive to do”, with previous Cronbach’s internal  $\alpha$  values ranging from .67-.71 (Bonebright et al., 2000; Spence & Robbins, 1992; ). Item 19, “between my job and other activities I’m involved in I don’t have much free time” was deleted from the work involvement subscale due to cross loadings on other factors. Item analysis was conducted in order to examine whether deletion of any other items might improve the Cronbach’s internal  $\alpha$  value but this did not improve the alpha value at all. This resulted in a subscale of seven items for subsequent data analysis. A Cronbach’s internal  $\alpha$  value of 0.68 was obtained, which was considered low as it was below Nunnally’s (1978) recommended minimum level of internal consistency of .70.

### ***Drive***

The drive scale consisted of seven items and measured a person’s internal pressure to work that is maintained by internal fulfilment rather than external pressure (Spence & Robbins, 1992). A distinction must be made between being driven to work, defined by an internal pressure, and a generally “driven” personality type, for example Type A personality, which is associated with being ambitious, controlling and highly competitive (Griffiths & Dancaster, 2000). Sample items for the drive subscale include: “I feel obligated to work hard, even when it’s not enjoyable” and “I often feel there’s something inside me that drives me to work hard”. Cronbach’s internal  $\alpha$  values range from .67-.81 (Bonebright et al., 2000; Spence and Robbins, 1992). Exploratory factor analysis revealed that two items from the drive subscale had to be deleted due to cross loadings with other factors. Item 12 “I seem to have an inner compulsion to work hard” and item 15 “I often feel there is something inside me that drives me to work hard”. This resulted in a subscale of five items for data analysis. Item analysis was conducted in order to examine whether deletion of any other items might improve the Cronbach’s internal  $\alpha$  value but this did not improve the alpha

value. Based on the five items of the drive subscale, a Cronbach's internal  $\alpha$  value of 0.73 was obtained, which was within acceptable levels

### ***Work Enjoyment***

The work enjoyment scale consisted of 10 items and measured the level of pleasure derived from work. Sample items include: "I lose track of time when I'm engaged on a project" and "Most of the time my work is very enjoyable".

Cronbach's internal  $\alpha$  values have been found to be high ( $\alpha = .85$ , Bonebright et al., 2000;  $\alpha = .86$ , Spence and Robbins; 1992). Two items from the work enjoyment subscale had to be deleted because of cross loadings with other factors. These two items consisted of item 14 "I lose track of time when I'm not involved on a project" and item 17 "Sometimes I enjoy my work so much I have a hard time stopping". This resulted in a total of eight items in the work enjoyment subscale of subsequent data analysis. A Cronbach's internal  $\alpha$  value of 0.87 was obtained which was within acceptable levels.

### ***Factor Structure of the Workaholism Battery***

Exploratory factor analysis was performed on the 25-item WorkBAT in order to explore the factor structure of the WorkBAT. The results showed support for a three factor model of the WorkBAT, however, on examination of the pattern matrix, five items had to be deleted on account of multiple loadings. This resulted in the WorkBAT consisting of 20 items in total, with seven items in work involvement ( $\alpha=0.68$ ), five items within the drive component ( $\alpha=0.73$ ) and eight items within the work enjoyment component ( $\alpha=0.87$ ). Please refer to Appendix C for the pattern matrix of the exploratory factor analyses.

### ***Classification of Respondents***

Based on the tripartite model of the WorkBAT, consisting of drive, work involvement and work enjoyment, participants were classified into one of the six work profiles of unenthusiastic workaholics, enthusiastic workaholics, work enthusiasts, relaxed workers, unengaged workers, and disenchanted workers based on either high or low scores on the three workaholism components. The midpoint used to determine whether a participant had a high score or low score on all three subscales was based on the midpoint of the Likert scale, which is four. The rationale behind this method is explained further in the subsection below titled 'Analysis'.

The pattern of scores used to identify each worker type is indicated in Table 1.1. The unenthusiastic workaholics and the enthusiastic workaholics

comprise the workaholic group, and the work enthusiasts, relaxed workers, unengaged workers and disenchanted workers comprise the non workaholic group.

### ***Work → Family Conflict and Family → Work Conflict***

Work → family conflict and family → work conflict were measured using a bi-directional scale developed by Frone and Yardley (1996). This 12-item scale measured both work conflict with family (six items) and family conflict with work (six items). Work → family conflict items measured the degree to which a respondent's job interferes with his or her home life and family → work conflict items measured the degree to which a respondent's home life interfered with his or her job. There was a five point response scale ranging from 1 = never to 5 = very often. Respondents were asked to indicate the response which best described their feelings to each of the 12 statements. Sample items for work → family conflict include "after work, I come home too tired to do some of the things I'd like to do" and "my work takes up time that I'd like to spend with family/friends". Sample items for family → work conflict include "I'm too tired at work because of things I have to do at home" and "my personal life takes up time that I'd like to spend at work". Coefficient alphas for these measures were  $\alpha = .87$  for work → family conflict and  $\alpha = .79$  for family → work conflict (Frone & Yardley, 1996). An exploratory factor analysis was conducted on the present data, which revealed a clear two factor solution, separating the work → family conflict items on one factor from the family → work conflict items on the second factor. The Cronbach's alpha for work → family conflict in the present study was 0.91 and the Cronbach's alpha for family → work conflict in the present study was 0.88. Exploratory factor analysis was conducted in this measure which revealed a two factor solution consisting of work → family conflict and family → work conflict as originally proposed by Frone and Yardley (1996).

### ***Family Satisfaction***

Family satisfaction was measured using a three item scale developed by Edwards and Rothbard (1999), which measured the degree to which a person is satisfied with their family life. The response scale for these three items was a seven-point Likert scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*. The three items were "In general, I am satisfied with my family/home life"; "All in all, the family/home life I have is great"; "My family/home life is very enjoyable". Coefficient alphas for this scale have been shown to be high ( $\alpha = .89$ ,

Edward & Rothbard, 1999). The results of this study found an internal alpha value of 0.96 which is very high. An exploratory factor analysis revealed a clear one factor.

### ***Psychological Strain***

Psychological strain was measured using the 12-item General Health Questionnaire (GHQ-12) (Goldberg & Williams, 1991; Goldberg, 1972). The GHQ-12 was designed to detect the prevalence of minor psychiatric disorder in samples. Respondents were asked to evaluate their psychological well-being over the previous 30 days. The GHQ-12 consists of six positively worded items (e.g. 'felt capable of making decisions about things?') and six negatively worded items (e.g. 'been feeling unhappy or depressed?'). Scores were reversed on the positively worded items, so that high scores represented high psychological strain. The GHQ-12 has four response options for each question: not at all, no more than usual, rather more than usual, much more than usual (Martin & Newell, 2005; Whaley, Payne, Fritschi & Wall, 2005). Internal consistencies have ranged from  $\alpha = 0.84$  to  $\alpha = 0.91$  (Kalliath, O'Driscoll & Brough, 2004; Noor, 2004).

One-dimensional, two-factor and three factor conceptualisations of the GHQ-12 have been supported (Banks, Clegg, Jackson, Kemp, Stafford & Wall, 1980; Werneke, Goldberg, Yalcin & Ustun, 2000; Graetz, 1991). Kalliath, O'Driscoll and Brough (2004) assessed the adequacy of the factor structure of the GHQ-12 for one-factor, two-factor and three-factor solutions. The results of Kalliath et al., (2004) study favoured a two-factor model consisting of a *social dysfunction* factor and an *anxiety/depression* factor measured by four items each. An exploratory factor analysis was conducted on the present data which revealed a distinct two factor solution. Items two, five, six, nine, 10 and 11 loaded highly onto factor one, labelled *anxiety/depression*. The *anxiety/depression* factor produced by Kalliath et al., (2004) consisted of items six, nine, 10 and 11. Hence, these findings are comparatively similar to each other. In the present study, items one, three, four, seven, eight and 12 loaded highly onto factor two, labelled *social dysfunction*. The social dysfunction factor produced by Kalliath et al., (2004) consisted of items four, seven, eight and 12. A comparison of these results with the present study suggests that similar results were found between the two studies. Similar results were found by Kalliath et al., (2004) who Cronbach's alpha values for the anxiety/depression scale and social dysfunction scale were 0.88 and 0.76 respectively.

### ***Psychological Well-being***

Psychological well-being was measured using a 12 item scale developed by Warr (1990). These 12 items measured global job related affective wellbeing. Acceptable Cronbach's alpha values have been reported for this measure, ranging from (0.76, Warr, 1990). These 12 items were preceded by the question "over the past 30 days, how much of the time has your job made you feel each of the following". Responses were measured using a six-point occurrence scale which ranged from 1 = *never* to 6 = *all of the time*.

An exploratory factor analysis on the research data revealed a two factor solution, separating ten items into positive and negative wellbeing. Two items had to be deleted from the measure. Item one "relaxed" and item four "calm" had multiple loadings and had to be deleted. This left ten items within the measure. The items labelled "worried", "depressed", "gloomy", "miserable" and "uneasy" loading highly onto factor one which was labelled *negative wellbeing*. Items "contented", "optimistic", "enthusiastic" and "cheerful" loaded highly onto factor two which was labelled *positive wellbeing*. The Cronbach's alpha for negative wellbeing and positive wellbeing were 0.90 and 0.91 respectively.

### ***Physical Health Symptoms***

Physical health symptoms were measured using the Physical Symptoms Inventory (PSI) (Spector & Jex, 1998), an 18 item self report measure which asks respondents whether they have experienced a number of physical symptoms across a 30 day time period and if so, which of these symptoms have been severe enough to warrant medical attention (refer to Appendix A). The PSI asks respondents whether they have had any of the symptoms listed over the past 30 days, and if so, whether they saw a doctor about any of these symptoms. The PSI has three response options: *No I did not*; *Yes I did but I did not see a doctor*; *Yes I did and I saw a doctor*. Sample items of symptoms include: "*an upset stomach or nausea*" and "*acid indigestion or heartburn*".

If a person responded with either "*Yes I did but I did not see a doctor*" or "*Yes I did and I saw a doctor*" then their response for that item was given a score of 1. If a person responded with "*No I did not*" then they were given a score of zero. Scores ranged from zero to 18. Spector and Jex (1998) stated that the PSI is considered to be a "causal indicator scale, meaning the items are considered to be indicators of separate, albeit related, constructs...they can be summed, but internal

consistency is not a meaningful measure of scale reliability” (p. 360). This meant there would be no Cronbach’s alpha for this measure.

## **Procedure**

The Research and Ethics Committee of the School of Psychology of the University of Waikato granted ethical approval for this research. Companies were contacted first by phone and invited to participate in this research. Upon approval by phone, an email was sent which contained an outline of the research and the requests. Two documents were attached to this email. The first document was addressed to all potential participants and contained the web-link to complete the questionnaire and also highlighted the research topic and the participant’s rights (refer to Appendix B). The second attachment to this email was a hard copy version of the online questionnaire (refer to Appendix A). Respondents could complete either a hard copy or an online version of the questionnaire. Only the online questionnaire was utilised. The software used to create the online questionnaire was Qualtrics. This software created an online link by which all participants could access and complete the questionnaire. All companies were contacted within a couple of weeks after the distribution of the questionnaire in order to request a follow up reminder to staff be sent.

## **Analysis**

Descriptive statistics were computed and a correlation matrix of all inter item correlations were produced. Finally, a MANOVA and one-way ANOVAs were conducted in order to examine whether there were any significant differences between the workaholic and non workaholics groups in relation to the criteria variables. The statistical software used to analyse the data was SPSS version PASW 18. The first step in analysing the current research data was to assign each participant into one of six worker types in accordance with the WorkBAT. Although the three WorkBAT subscales can be combined to form a total of eight possible combinations of worker types, cluster analysis from previous research has shown that a six cluster solution is the most valid (Spence & Robbins, 1992). The unclassified category was for participants who do not fall into any of these six categories.

The first step was to calculate each participant’s mean score on each subscale, ranging from one to seven. Based on each respondents’ mean score, they would be assigned into either a high or low category on each subscale, for example, a participant that was classified as scoring high on work involvement,



high on drive and high on work enjoyment would be classified into the worker type of 'enthusiastic workaholic'. A midpoint needed to be determined in order to classify participants into a high or low category. Because the Likert response scale ranged from one to seven, the theoretical midpoint would be four because this was the true midpoint of the scale. Participants were first assigned as high scorers if their mean score on each subscale was four or higher. If a participant had a mean score of less than four then they were classified as scoring low. Table 2.1 illustrates the prevalence of workaholism types based on this method of classification.

**Table 2.1 Prevalence of Workaholism Types**

<b>Worker Type</b>	<b><i>N</i></b>	<b>Percentage</b>
Unenthusiastic workaholics	18	13
Enthusiastic workaholics	58	43
Work enthusiasts	5	4
Relaxed workers	5	4
Unengaged workers	7	5
Disenchanted workers	15	11
Unclassified	28	21

Although this method did result in some groups consisting of low numbers, this method was chosen for its theoretical basis. Although other methods could be used to increase the number of respondents in some of the groups, these would compromise the validity of the results, in that they would not represent the true responses elicited by the participants.

## Chapter Three

### Results

The results of the study are discussed in four sections: (a) descriptive statistics, (b) hypothesised relationships between the WorkBAT subscales and the criteria measures, (c) hypothesised relationships among all of the criteria measures, and (d) hypothesised relationships between worker types and criteria measures.

#### Descriptive Statistics

Descriptive statistics for the study variables are presented in Table 3.1. Participants' scores on the drive scale were negatively skewed ( $skew = -0.59$ ), indicating an asymmetry of distribution, with a mean value (4.9) that was slightly above the midpoint of 4.0 and the highest standard deviation of the three workaholism scales ( $SD = 1.18$ ). Scores on work involvement were more normally distributed ( $skew = -0.09$ ) with a mean value of 4.0 and a relatively uniform distribution ( $SD = 1.0$ ). Scores on the work enjoyment scale were negatively skewed ( $skew = -0.09$ ), with a mean value (4.5) that was slightly above the midpoint of 4.0, and a standard deviation of 1.15. Of the three scales, work enjoyment had the highest internal consistency ( $\alpha = 0.87$ ), and drive was also acceptably reliable ( $\alpha = 0.73$ ). However, the work involvement scale showed less internal consistency ( $\alpha = 0.68$ ). An analysis was conducted with all of the individual items to see if alpha values could be improved, but this did not improve any of the Cronbach's alpha values.

**Table 3.1 Descriptive Statistics for All Variables**

Measure	<i>M</i>	<i>SD</i>	<i>Skew</i>	<i>Kurtosis</i>	$\alpha$
Drive	4.9	1.18	-0.59	0.20	0.73
Work Involvement	4.0	1.00	-0.09	-0.63	0.68
Work Enjoyment	4.5	1.15	-0.07	-0.33	0.87
Work → Family Conflict	2.7	0.95	0.38	-0.54	0.91
Family → Work Conflict	1.7	0.70	1.21	1.60	0.88
Family Satisfaction	6.1	1.10	-1.83	4.10	0.96
Social Dysfunction	2.8	0.33	-1.50	3.10	0.76
Anxiety/Depression	1.8	0.59	1.18	1.64	0.88
Negative Wellbeing	2.3	0.91	1.18	1.10	0.90
Positive Wellbeing	3.1	1.04	0.20	-0.43	0.91
Physical Health Symptoms	5.2	3.60	0.91	0.53	NA

Work→family conflict and family→work conflict had a 5-point response scale ranging from 1 = never to 5 = very often. High scores represented high work→family and family→work conflict. Work→family conflict was positively skewed (0.38), with a mean score of 2.7, which was slightly above the midpoint of 2.5, and standard deviation of 0.95. Family→work conflict was positively skewed (1.21) with a mean score of 1.7, which was slightly below the midpoint of 2.5, and standard deviation of 0.70. Family satisfaction had a 7-point Likert type response scale ranging from 1 = strongly disagree to 7=strongly agree, with high scores representing high family satisfaction. The mean score for this measure was 6.1, with a standard deviation of 1.10 and a very high negative skew of -1.83, indicating that the majority of respondents felt they had a high satisfaction with family life.

Psychological strain was divided into two factors as a result of the exploratory factor analysis conducted. The 4-point response scale for this measure ranged from 1 = not at all to 4 = much more than usual. High scores represented high psychological strain. The first factor was labelled social dysfunction, which had a mean score of 2.8, a standard deviation of 0.33 and a negative skew of -1.50, indicating that a majority of the respondents scored themselves high on social dysfunction. The mean score for anxiety/depression was 1.8, with a standard deviation of 0.59 and a positive skew of 1.18, indicating that a majority of respondents had low anxiety/depression.

Psychological well-being was split into two factors as a result of the factor analysis conducted (see appendix C). These two factors were labelled positive psychological well-being and negative psychological well-being. The response format for this measure ranged from 1 = never to 6 = all of the time. The mean score for negative well-being was 2.3, with a standard deviation of 0.91 and a positive skew of 1.18, indicating that a majority of respondents scored low on negative well-being. The mean score for positive well-being was 3.1, with a standard deviation of 1.04 and a positive skew of 0.20, indicating that the scores for positive well-being were evenly distributed.

Finally, physical health symptoms was measured using a symptom indicator scale asking respondents if they had the symptom, and if so, did they see a doctor about it. Responses were summed to yield a total score which ranged from 0-18. The mean score for this measure was 5.2, with a positive skew of 0.91. Because of the high skews and kurtosis values obtained within this study,

transformations were performed on the values; however, these did not make a substantial difference to the values. Cronbach's alpha was used to measure the internal consistency of the variable scales. All variables, except for work involvement (0.68), met Nunnally's (1987) recommended minimum level of internal consistency (0.70). Because of the high skew and kurtosis values obtained, transformations on these values were conducted; however, these did not improve the normality of the distributions.

### **Hypothesised Relationships between the WorkBAT Subscales and Criteria Variables**

The results of the Pearson Product Moment correlations between the subscales of the WorkBAT and the criteria variables are listed in Table 3.2. Note that although Table 3.2 contains the correlations between *all* of the study variables, including the relationships between the criteria variables, the correlations between all of the criteria variables are left out of this section and addressed in the section relating to criteria measures.

#### ***Hypothesis 1***

Hypothesis 1 (a) predicted that drive would be positively correlated with work→family conflict. This hypothesis was supported ( $r=0.55$ ,  $p<0.05$ ).

Hypothesis 1 (b) predicted that drive will be positively correlated with family→work conflict. This hypothesis was supported ( $r=0.19$ ,  $p<0.05$ ).

Hypothesis 1 (c) predicted that drive will be negatively correlated with family satisfaction. This hypothesis was supported ( $r=0.24$ ,  $p<0.05$ ).

As stated in hypothesis 1 (d), drive was positively and significantly correlated with physical health symptoms ( $r=0.32$ ,  $p<0.05$ ). Hypothesis 1 (e) predicted that drive would be positively correlated with psychological strain. As a result of the factor analysis, psychological strain was divided into two factors: social dysfunction and anxiety/depression. The results showed that social dysfunction was not significantly negatively correlated with drive ( $r=-0.10$ ), which does not confirm hypothesis 1 (e). However, anxiety/depression was found to be positively and significantly correlated with drive ( $r=0.34$ ). These results show partial support for hypothesis 1 (e). Hypothesis 1 (f) predicted that drive would be negatively correlated with psychological well-being. As a result of the factor analysis, psychological well-being was divided into two factors: positive psychological well-being and negative psychological well-being. Drive was positively and significantly correlated with negative psychological well-being

( $r=0.38$ ), thus confirming hypothesis 1 (f). However, in contrast, drive was not found to be significantly negatively correlated with positive psychological well-being ( $r=-0.12$ ,  $p<0.05$ ). Thus, these results show partial support for hypothesis 1 (f).

### ***Hypothesis 2***

Hypothesis 2 (a) which predicted that work involvement would be positively correlated with work → family conflict, was confirmed ( $r=0.31$ ,  $p<0$ ), Hypothesis 2 (b) predicted that work involvement would be positively correlated with family → work conflict, this hypothesis was not supported. Hypothesis 2 (c) which predicted that work involvement would be negatively correlated with family satisfaction was not supported.

Hypothesis 2 (d) predicted that work involvement would be positively correlated with physical health symptoms. The results did not show support for this hypothesis. Hypothesis 2 (e) predicted that work involvement would be positively correlated with psychological strain. The results did not confirm this hypothesis also. The variable anxiety/depression was not found to be significantly correlated with work involvement ( $r=0.03$ ,  $p<0.05$ ). Hypothesis 2 (f) predicted that work involvement would be negatively correlated with psychological well-being. The results showed partial support for this hypothesis. While positive psychological well-being was found to be significantly and positively correlated with work involvement, negative psychological well-being was not.

### ***Hypothesis 3***

Hypothesis 3 (a) predicted that work enjoyment would be positively correlated with work → family conflict. This hypothesis was not supported. Hypothesis 3 (b) predicted that work enjoyment would be positively correlated with family → work conflict. The results did not show support for this hypothesis, as a non-significant negative correlation was found between work enjoyment and family → work conflict ( $r=-0.07$ ,  $p<0.05$ ). Hypothesis 3 (c) predicted that work enjoyment would be positively correlated with family satisfaction. This hypothesis was not confirmed. Overall, the results showed that there was no significant relationship between work enjoyment and work → family conflict, family → work conflict and family satisfaction. Hypothesis 3(d) predicted that work enjoyment would be negatively correlated with physical health symptoms. The results did not confirm this hypothesis, as a non-significant negative correlation was found ( $r=0.14$ ). Hypothesis 3 (e) predicted that work enjoyment

would be negatively correlated with psychological strain. The results showed full support for this hypothesis. Both anxiety/depression ( $r=-0.24$ ) and social dysfunction ( $r=-0.23$ ) were significantly negatively correlated with work enjoyment. Finally, hypothesis 6 (f) predicted that work enjoyment would be positively correlated with psychological well-being.

. The results showed full support for this hypothesis. Work enjoyment was found to be significantly positively correlated with positive psychological well-being, with a noteworthy high correlation of  $r=0.65$ . Work enjoyment was also found to be significantly negatively correlated with negative psychological well-being ( $r=-0.38$ ) thus confirming this hypothesis.

**Summary:**

The results showed that drive was associated with high work → family and family → work conflict, high anxiety/depression, negative well-being and physical health symptoms, and low family satisfaction. Drive had the most consistent pattern of correlations among the criteria variables. There was partial support for the correlations between work enjoyment and the criteria variables. Although work enjoyment was found to be significantly positively correlated with positive well-being, and significantly negatively correlated with social dysfunction, anxiety/depression and negative well-being, the variables work → family conflict, family → work conflict, family satisfaction and physical health symptoms did not reach significance levels.

Work involvement had the most inconsistent results in relation to the hypothesised relationships. While work involvement was significantly positively correlated with work → family conflict and positive well-being, the other criteria variables including family → work conflict, family satisfaction, social dysfunction, anxiety/depression, negative well-being and physical health symptoms did not reach significance.

These results show a clear relationship between drive and negative well-being, and some support for the relationship between work enjoyment and positive health and well-being, however, the correlations in relation to work involvement were not consistent and most of the criteria variables relating to work involvement did not reach significance levels.

**Table 3.2 Correlations of Criteria Variables**

<b>Measure</b>	<b>Drive</b>	<b>WI</b>	<b>WE</b>	<b>WFC</b>	<b>FWC</b>	<b>FS</b>	<b>SD</b>	<b>A/D</b>	<b>NW</b>	<b>PW</b>
<b>WI</b>	0.24**	-								
<b>WE</b>	0.16	0.27**	-							
<b>WFC</b>	0.55**	0.31**	0.16	-						
<b>FWC</b>	0.19**	0.05	-0.07	0.29**	-					
<b>FS</b>	-0.24**	-0.14	0.15	-0.36**	-0.23**	-				
<b>SD</b>	-0.10	-0.12	-0.23**	0.06	0.10	-0.13	-			
<b>A/D</b>	0.34**	0.03	-0.24**	0.47**	0.43**	-0.32**	0.19**	-		
<b>NW</b>	0.38**	0.13	-0.38**	0.45**	0.37**	-0.37**	0.16	0.78**	-	
<b>PW</b>	-0.12	0.17**	0.65**	-0.19**	-0.28**	0.24**	-0.36**	-0.48**	-0.56**	-
<b>PHS</b>	0.32**	0.12	-0.14	0.39**	0.37**	-0.35**	0.13	0.63**	0.59**	-0.36**

WI=Work Involvement; WE = Work Enjoyment; WFC =Work→Family Conflict; FWC =Family→Work Conflict;  
 FS=Family Satisfaction; SD=Social Dysfunction; A/D=Anxiety/Depression; NW=Negative; Psychological Well-being;  
 PW=Positive Psychological Well-being; PH=Physical Health Symptoms \*\* Correlation is significant at the 0.05 level (2-tailed)

## **Hypothesised Relationship between Criteria Variables**

The relationships among all of the criteria variables were hypothesised in order to gain a better understanding of how different types of well-being are related to one another.

### ***Hypothesis 4***

The results confirmed hypothesis 4, which predicted that psychological well-being would be negatively correlated with physical health symptoms. Positive psychological well-being had a significant negative correlation with physical health symptoms ( $r=-0.36$ ,  $p<0.05$ ), and negatively psychological well-being also had a significant positive correlation with physical health symptoms ( $r=0.59$ ,  $p<0.05$ ).

### ***Hypothesis 5***

Hypothesis 5 predicted that psychological well-being will be positively correlated with family satisfaction. The results confirmed this hypothesis. Positive psychological well-being was found to be positively and significantly related to family satisfaction ( $r=0.24$ ,  $p<0.05$ ). Negative psychological well-being was also found to be negatively and significantly related to family satisfaction ( $r=-0.37$ ,  $p<0.05$ ).

### ***Hypothesis 6***

Hypothesis 6 predicted that family satisfaction will be negatively correlated with physical health symptoms. The results confirmed this hypothesis, and family satisfaction as found to be significantly negatively correlated with physical health symptoms ( $r=-0.35$ ,  $p<0.05$ ).

### ***Hypothesis 7***

Hypothesis 7 predicted that psychological well-being will be negatively correlated with work  $\rightarrow$  family conflict and family  $\rightarrow$  work conflict. The results confirmed this hypothesis. Positive psychological well-being was found to be significantly negatively correlated with work  $\rightarrow$  family conflict ( $r=-0.19$ ,  $p<0.05$ ) and negative psychological well-being was found to be positively correlated with work  $\rightarrow$  family conflict ( $r=0.45$ ,  $p<0.05$ ). Positive psychological well-being was found to be significantly negatively correlated with family  $\rightarrow$  work conflict ( $r=-0.28$ ,  $p<0.05$ ). Negative psychological well-being was found to be significantly positively correlated with family  $\rightarrow$  work conflict ( $r=0.37$ ,  $p<0.05$ ).



### ***Hypothesis 8***

Hypothesis 8 predicted that psychological well-being will be negatively correlated with psychological strain. The results showed that positive psychological well-being was significantly negatively correlated with both social dysfunction ( $r=-0.36$ ,  $p<0.05$ ) and anxiety/depression ( $r=-0.48$ ,  $p<0.05$ ). Negative psychological well-being was found to be significantly positively correlated with anxiety/depression, with a noteworthy high correlation of  $r=0.78$ . However, negative psychological well-being was not found to be significantly positively correlated with social dysfunction ( $r=0.16$ ,  $p<0.05$ ) although this correlation was close to significance level.

### ***Hypothesis 9***

Hypothesis 9 predicted that family satisfaction will be negatively correlated with work→family conflict and family→work conflict. The results confirmed this hypothesis. Family satisfaction was found to be significantly negatively correlated with work→family conflict ( $r=-0.36$ ,  $p<0.05$ ) and family→work conflict ( $r=-0.23$ ,  $p<0.05$ ).

### ***Hypothesis 10***

Hypothesis 10 predicted that family satisfaction will be negatively correlated with psychological strain. The results showed partial support for this hypothesis. While family satisfaction was found to be significantly negatively correlated with anxiety/depression ( $r=-0.32$ ,  $p<0.05$ ), the correlation between family satisfaction and social dysfunction did not reach significance level ( $r=-0.13$ ,  $p<0.05$ ).

### ***Hypothesis 11***

Hypothesis 11 predicted that physical health will be positively correlated with work→family conflict and family→work conflict. The results confirmed this hypothesis. Physical health was found to be positively and significantly correlated with work→family conflict ( $r=0.39$ ,  $p<0.05$ ) and family→work conflict ( $r=0.37$ ,  $p<0.05$ ).

### ***Hypothesis 12***

Hypothesis 12 predicted that physical health symptoms will be positively correlated with psychological strain. The results showed partial support for this hypothesis. While physical health symptoms was found to be significantly positively correlated with anxiety/depression ( $r=0.63$ ,  $p<0.05$ ), the positive

correlation between physical health symptoms and social dysfunction was not significantly correlated ( $r=0.13$ ,  $p<0.05$ ).

### ***Hypothesis 13***

Hypothesis 13 predicted that work→family conflict and family→work conflict will be positively correlated with psychological strain. The results showed partial support for this hypothesis. The results showed that both work→family conflict and family→work conflict were significantly and positively correlated with anxiety/depression ( $r=0.47$ ,  $r=0.43$ ; respectively). However, the correlation for work→family conflict and family→work conflict for social dysfunction both were not significant ( $r=0.06$ ,  $r=0.10$ ; respectively).

### ***Summary***

Overall, the majority of the hypotheses relating to the criteria variables were confirmed in this study. Significant relationships were found between physical, mental and emotional health variables, as well as those relating to family balance and satisfaction. However, a consistent finding within the hypotheses was the relationship that social dysfunction, a variable derived from psychological strain, and the other criteria variables. As hypothesised, social dysfunction was significantly negatively correlated with positive psychological well-being, however, there were no significant relationships found between social dysfunction and family satisfaction, work→family conflict, family→work conflict, negative psychological well-being and physical health symptoms, thus disconfirming those hypotheses.

## **Hypothesised Relationships between Worker Types and Criteria**

### **Variables**

#### ***MANOVA***

The first step in data analysis to find out whether there were any significant differences between the workaholic and non workaholic groups in relation to the criteria variables was to perform a MANOVA. In examination of the Levene's Test of Equality of Error Variances, none of the dependent variables were significant at a  $p<.001$  level. However, the multivariate tests revealed a significant result, with the Pillai Trace significance level  $p<.001$ . This suggests that there are overall differences between the groups, hence it was appropriate to proceed to perform separate one-way ANOVAs on all eight dependant variables in order to examine where these differences lie.

### ***One-way ANOVAs***

Table 3.3 outlines the means and standard deviations of the outcome measures for the workaholic types. The results of the one-way ANOVAs are shown in Table 3.3. The results showed that there was a significant difference among the worker types derived from the WorkBAT in relation to work→family conflict, positive psychological well-being and negative psychological wellbeing. One-way ANOVAs found that family→work conflict, family satisfaction, physical health symptoms, anxiety/depression and social dysfunction did not show a significant difference among worker types.

### ***Post-hoc Comparisons***

Having obtained a significant result from the ANOVAs, the next step in analysing the data was to determine, using Tukey's HSD test, where the significance lies. These post-hoc comparisons are described in hypothesis 14 through to hypothesis 23.

### ***Hypothesis 14***

Hypothesis 14 predicted that disenchanted workers and unenthusiastic workaholics will report higher levels of work→family conflict and family→work conflict than unengaged workers and enthusiastic workaholics. The results did not confirm this hypothesis, revealing that the disenchanted workers, unenthusiastic workaholics, unengaged workers and enthusiastic workaholics all reported similar levels of work→family conflict, family→work conflict and family satisfaction.

### ***Hypothesis 15***

Hypothesis 15 predicted that the unengaged workers and enthusiastic workaholics will report higher levels of work →family conflict and family →work conflict than work enthusiasts and relaxed workers. One significant difference was found between the groups relating to work→family conflict. The enthusiastic workaholics reported significantly higher levels of work→family conflict compared to the relaxed worker, thus partially confirming hypothesis 15. However, the predictions that the unengaged workers and the enthusiastic workaholics would report significantly higher levels of work→family conflict and family→work conflict compared to the work enthusiasts were not confirmed in this study. The hypothesis that the unengaged workers would report significantly higher levels of work→family conflict and family→work conflict compared to the relaxed workers was also not confirmed.

### ***Hypothesis 16***

Hypothesis 16 predicted that the disenchanted workers and unenthusiastic workaholics will report lower levels of family satisfaction than unengaged workers and enthusiastic workaholics. The results did not confirm this hypothesis. There were not significant differences found between the disenchanted workers, unenthusiastic workaholics, unengaged workers and enthusiastic workaholics in relation to family satisfaction.

### ***Hypothesis 17***

Hypothesis 17 predicted that the unengaged workers and enthusiastic workaholics will report lower levels of family satisfaction than work enthusiasts and relaxed workers. The results did not confirm these hypotheses. The results showed that there were no significant differences between the unengaged workers, enthusiastic workaholics, relaxed workers and work enthusiasts in relation to family satisfaction.

### ***Hypothesis 18***

Hypothesis 18 predicted that the disenchanted workers and unenthusiastic workaholics will report lower levels of psychological well-being than unengaged workers and enthusiastic workaholics. As a result of the factor analysis performed, psychological well-being was divided into two factors: positive psychological well-being and negative psychological well-being. The results showed partial support for this hypothesis. The unenthusiastic workaholics reported significantly higher levels of negative psychological well-being, and significantly lower levels of positive psychological well-being, compared to the enthusiastic workaholics.

### ***Hypothesis 19***

Hypothesis 19 predicted that unengaged workers and enthusiastic workaholics will report lower levels of psychological well-being than work enthusiasts and relaxed workers. The results showed no support for these hypotheses. The results showed that there were no significant differences between the unengaged workers, enthusiastic workaholics, relaxed workers and work enthusiasts in relation to positive psychological well-being and negative psychological well-being.

**Table 3.3 Means (Standard Deviations) of Criteria Variables for Workaholic Types and Degrees of Freedom (Df) and F Ratio from One-Way ANOVAs**

	<b>Unenthusiastic Workaholics</b>	<b>Enthusiastic Workaholics</b>	<b>Work Enthusiasts</b>	<b>Relaxed Workers</b>	<b>Unengaged Workers</b>	<b>Disenchanted Workers</b>	<b>Df/F Ratio</b>
<b>Work → Family Conflict</b>	3.02(0.96)	3.02(0.95)	2.00(0.59)	1.60(0.63)	2.00(0.83)	2.30(0.78)	F=5.420**
<b>Family → Work Conflict</b>	1.97(0.92)	1.67(0.58)	1.40(0.64)	1.43(0.66)	1.60(0.32)	1.50(0.72)	F=1.325
<b>Family Satisfaction</b>	5.33(1.63)	6.03(0.92)	6.50(0.31)	6.10(0.60)	6.21(1.22)	6.4(0.70)	F=2.194
<b>Social Dysfunction</b>	2.94(0.26)	2.80(0.34)	2.70(0.34)	3.00(0.08)	3.02(0.24)	2.94(0.42)	F=2.134
<b>Anxiety/Depression</b>	2.14(0.44)	1.80(0.60)	1.40(0.38)	1.70(0.22)	1.86(0.94)	1.77(0.73)	F=1.701
<b>Negative Psychological Wellbeing</b>	3.06(1.00)	2.22(0.85)	1.7(0.65)	1.6(0.35)	2.26(1.39)	2.56(0.89)	F=3.906**
<b>Positive Psychological Wellbeing</b>	2.28(0.72)	3.54(1.00)	3.95(1.02)	3.15(1.55)	2.71(0.94)	2.53(0.81)	F=7.093**
<b>Physical Health Symptoms</b>	5.94(3.19)	5.54(3.98)	4.2(4.09)	2.8(2.59)	5.14(3.49)	4.96(3.75)	F=0.709

\*\* Correlation is significant at the  $p < 0.05$  level

### ***Hypothesis 20***

Hypothesis 20 predicted that the disenchanted workers and unenthusiastic workaholics will report higher levels of physical health symptoms than unengaged workers and enthusiastic workaholics. None of the results found any significant differences between the disenchanted workers, unenthusiastic workaholics, unengaged workers and enthusiastic workaholics on the measure of physical health symptoms, thus disconfirming this hypothesis.

### ***Hypothesis 21***

Hypothesis 21 predicted that the unengaged workers and enthusiastic workaholics will report higher levels of physical health symptoms than work enthusiasts and relaxed workers. None of the results found any significant difference between the unengaged workers, enthusiastic workaholics, work enthusiasts and relaxed workers on the measure of physical health symptoms. Thus, disconfirming this hypothesis also.

### ***Hypothesis 22***

Hypothesis 22 predicted that the disenchanted workers and unenthusiastic workaholics will report higher levels of psychological strain than unengaged workers and enthusiastic workaholics. As a result of the factor analysis performed on this variable, psychological strain was divided into two factors: anxiety/depression and social dysfunction. No support was found for this hypothesis, as there were no significant differences found between these groups in relation to the hypotheses, both anxiety/depression and social dysfunction.

### ***Hypothesis 23***

Hypothesis 23 predicted that the unengaged workers and enthusiastic workaholics will report higher levels of psychological strain than work enthusiasts and relaxed workers. The results disconfirmed this hypothesis, as there were no significant differences found between these groups in relation to the hypotheses for both anxiety/depression and social dysfunction. Overall, the results showed that both the workaholics and non workaholics reported similar levels of anxiety/depression and social dysfunction.

## ***Summary***

Overall, the majority of the hypotheses relating to the differences between the workaholics and non workaholics in relation to the criteria variables were not confirmed. Although the enthusiastic workaholics reported significantly higher levels of work → family conflict compared to the relaxed worker, as predicted, there were otherwise no significant differences found between the workaholics and non workaholics. As hypothesised, the unenthusiastic workaholics reported significantly higher levels of negative psychological well-being, and significantly lower levels of positive psychological well-being compared to the enthusiastic workaholics. Therefore, significant differences between the two workaholic groups were found. There were no significant differences found between the non workaholics in relation to all of the criteria variables, thus disconfirming those hypotheses.

## **Conclusion**

The relationships between the components of the WorkBAT (drive, work involvement and work enjoyment) and the criteria variables were hypothesised. As hypothesised, drive was significantly associated with high levels of work → family conflict, family → work conflict, anxiety/depression, negative psychological well-being and physical health symptoms, and significantly associated with low levels of family satisfaction. Disconfirming the hypotheses, there were no significant relationships found between drive and social dysfunction and positive psychological well-being. As hypothesised, work enjoyment was significantly associated with low levels of social dysfunction, anxiety/depression and negative psychological well-being, and significantly positively associated with high levels of positive psychological well-being. Hypotheses relating to work involvement and work → family conflict, family → work conflict, family satisfaction and physical health symptoms were not confirmed in the present study. Even less hypotheses relating to work involvement were confirmed in the present study. As hypothesised, while work involvement was significantly associated with high levels of work → family conflict, family → work conflict and positive psychological well-being, there were no relationships found between work involvement and family satisfaction, social dysfunction, anxiety/depression, negative psychological well-being and physical health symptoms.

The majority of the relationships between the criteria variables were confirmed. Significant relationships were found between physical, mental and emotional health variables as well as family satisfaction and family balance. As hypothesised, social dysfunction was significantly negatively correlated with positive psychological well-being, however, there were no significant relationships found between social dysfunction and negative psychological well-being, work→family conflict, family→work conflict, family satisfaction, and physical health symptoms, thus disconfirming those hypotheses.

The relationships between the workaholics and non workaholics in relation to the criteria variables were hypothesised. Overall, there were no significant differences found between the non workaholics in relation to the criteria variables, with all four non workaholics reported similar levels of health and well-being. As hypothesised, the unenthusiastic workaholics reported significantly higher levels of negative psychological well-being, and significantly lower levels of positive psychological well-being compared to the enthusiastic workaholics. Apart from the significant hypothesised finding that the enthusiastic workaholics reported significantly higher levels of work→family conflict compared to the relaxed workers, there were no significant differences found between the workaholics and non workaholics in relation to the criteria variables.



# Chapter Four

## Discussion

The main aim of this study was to examine the relationship between workaholism and health and well-being. The most widely validated measure of workaholism (WorkBAT) was used in this study in order to examine the relationships workaholism had with health and well-being variables, which included measures of psychological strain, psychological well-being, physical health symptoms, work → family conflict, family → work conflict and family satisfaction.

Workaholism is a topic which has yielded mixed results in relation to the impact it can have on people's lives. Some authors view workaholism in positive terms (Machlowitz, 1980). For instance, McMillan and O'Driscoll (2004) conducted a study comparing workaholics to the non-workaholics and found that "the data indicated in many instances that workaholic health levels were equal to, or in places, better than non-workaholics health" (p. 515). Others view workaholism in negative terms (Robinson, 1998). Spence and Robbins (1992) found evidence that both enthusiastic and unenthusiastic workaholics suffered from a higher number of health complaints compared to non workaholics. Hence, research on workaholism has differed substantially in relation to the outcomes associated with workaholism.

Spence and Robbins' (1992) typology distinguishes six profiles, including two workaholic profiles and four non-workaholic profiles. The workaholic groups include enthusiastic workaholics and the unenthusiastic workaholics. While both enthusiastic workaholics and unenthusiastic workaholics were characterised by a high drive to work, and a high involvement in work, enthusiastic workaholics were characterised by a high enjoyment of work, whereas unenthusiastic workaholics were characterised by a low enjoyment of work. The non-workaholic groups included the relaxed workers, disenchanting workers, work enthusiasts and the unengaged workers. All participants were classified on the basis of Spence and Robbins (1992) WorkBAT, into one of these six groups, and the differences between these groups in relation to the criterion variables were examined. This enabled comparison between these six groups on health and well-being, and provided evidence about whether distinguishing between the different types of workaholics was useful.

The relationships between the WorkBAT subscales, which consisted of drive to work, work involvement and work enjoyment, and the criterion variables psychological strain, psychological well-being, physical health symptoms, work→family conflict, family→work conflict and family satisfaction were also examined in this study. Several studies have found support for the use of only the drive and work enjoyment subscales of the WorkBAT, excluding the work involvement subscale from the measure (Andreassen et al., 2007; Kanai, Wakabayashi & Fling, 1996). It was important to examine the relationship between the WorkBAT subscales and the criterion variables in order to gain a better understanding of whether these subscales related to the criterion variables in a predictable way. Previous research has found that drive has been consistently associated with poor health outcomes (Burke, 2000). In contrast, work enjoyment has been associated with positive health outcomes (Bonebright et al., 2000). Relationships between work involvement and health outcomes have shown mixed results (Burke, 2000; Spence & Robbins, 1992).

This study also provided the opportunity to examine the relationships between the criterion variables, which could help gain a better understanding of the relationship between mental strain and stress and psychological well-being, and whether this was related to a person's physical health. The following discussion relating to the results of the present study are divided into three sections: (a) hypothesised relationships between the WorkBAT subscales and criterion measures, (b) relationship between health and well-being variables and (c) hypothesised relationships between worker types and criterion measures

### **Hypothesised Relationships between the WorkBAT Subscales and Criteria Variables**

This section discusses the hypothesised relationships between the WorkBAT subscales and the criteria measures. Based on previous research findings, both drive to work and work involvement were hypothesised to be associated with poor health and well-being, whereas work enjoyment was hypothesised to be associated positively with health and well-being.

## *Drive*

Drive to work was defined as the more addictive and compulsive aspect of workaholism, related to a person's inner drive to work. A differentiation must be made between one component of the WorkBAT, drive to work, which was defined as a person's internal pressures or intrinsic drive to work, and type A behaviour. Type A individuals are characterized as being ambitious, aggressive, controlling and highly competitive, and researchers have also found measures of type A behavior and workaholism to be significantly and positively correlated (Robinson, 1998). However, drive to work, as defined by Spence and Robbins (1992) is characterised by only an internal pressure to work excessively.

Drive was hypothesised to be positively correlated with work→family conflict, family→work conflict, physical health symptoms, and psychological strain and negatively correlated with family satisfaction and psychological well-being. The rationale for these hypotheses was based on previous research findings, which have found drive to be associated with poor health and well-being (Spence & Robbins, 1992). These hypotheses were also based on the premise that an excessive compulsive drive to work could result in the individual devoting a great deal of time to work, both on and off the job, which results in neglect of other areas of life, including health, well-being and family.

The results showed that drive to work was significantly and positively correlated with work→family conflict and family→work conflict. These results suggest that an excessive drive to work may have a negative impact upon a person's family life. Because drive was also significantly associated with high family→work conflict, this also suggests that when a person is driven to work excessively, they may feel like their family life is impinging on their work life as well, and may impact upon the balance of their family life in relation to their work. Drive was significantly associated with poor family satisfaction. This result could also be related to work→family conflict, because if a person is experiencing a poor balance of work to family life, then they could be more likely to have low satisfaction with their family life also. The results showed that drive was significantly positively associated with anxiety/depression, negative well-being and physical health symptoms, suggesting

that a high drive to work could impact upon a person's psychological well-being, as well as their mental health and physical health.

Social dysfunction was not found to be significantly correlated with drive to work. One possible explanation for these findings may be because many studies have shown that a person's ability to function successfully within the workplace is related to a number of other factors not related to being driven to work. Mikulincer and Shaver (2007) suggested that attachment style can influence individual's functioning at work. Mikulincer and Shaver (2007) reported that anxiety and avoidance were correlated with lower levels of prosocial actions. These findings are supported by the present study, which has also shown that social dysfunction was significantly positively correlated with anxiety/depression. The finding that drive to work is not significantly related to positive psychological well-being is one finding that is not supported by the majority of research. Previous studies have shown drive to be significantly negatively correlated with well-being factors (Andreassen et al., 2007).

These results relating to drive and well-being variables suggest that there is a reasonably clear pattern of relationships resulting from drive, which suggest that drive is associated with negative health and well-being outcomes. These results also support previous research findings that drive is associated with negative health and well-being. Spence and Robbins (1992) found that drive was significantly correlated with subjective health complaints. Even job stress had a high correlation with drive. Bonebright et al, (2000) also showed that drive is significantly positively correlated with work → life conflict and significantly negatively correlated with life satisfaction and purpose in life. Burke (2000) found that drive was negatively correlated with family satisfaction. This study has shown that, with the exception of positive psychological well-being, drive was reasonably consistently associated with poor health and well-being.

### ***Work Involvement***

Work involvement is the extent to which a person devotes himself or herself to productive projects and constructive uses of time (Bonebright et al., 2000). Previous research has shown a mixed relationship between work involvement and health and well-being variables. While some studies have shown work involvement to be positively correlated with health and well-being (Spence & Robbins, 1992), other

studies have found non-significant results in relation to well-being variables (Bonebright et al., 2000).

The results of the current study showed that, as hypothesised, work involvement was significantly positively correlated with work → family conflict and positive psychological well-being. These results appear to contradict one another, as work → family conflict was significantly negatively correlated with positive psychological well-being. One explanation for these findings could be that when an individual is highly involved in their work, they may spend much of their time, both on and off the job, being involved in their work projects and also thinking about work. This could explain why someone who experiences high work involvement may feel their work life is impinging on their family life. In contrast, work involvement was significantly positively associated with positive psychological well-being. A possible reason for these results might be because a person may feel a sense of self-worth when they are highly involved in their work and may feel they have more of a sense of purpose, when they are highly involved in projects.

There was no significant relationship between work involvement and family → work conflict, family satisfaction, social dysfunction, anxiety/depression, negative psychological well-being and physical health symptoms. Scott et al., (1997) proposed that traditional conceptualisations of work involvement are similar to the Protestant Work Ethic (McMillan, 2002). Thus, a person may be highly involved in their work, yet not feel an excessive need to work all of the time (Scott et al., 1997). For example, those workers who value work as central to their life, but “switch off” and go home at the end of an eight-hour day without thinking about work again that day, illustrate this point. In contrast, someone who is highly driven would be expected to repeatedly think about work, even after returning home. This may be why work involvement was not associated with low levels of health and well-being within this study. A possible explanation for these non-significant results might be because the work involvement component might not be internally consistent, as evidenced by the Cronbach’s alpha value obtained in the study ( $\alpha=0.68$ ). These results suggest that caution must be made in relation to consistency of the items of work involvement, and further research is needed to improve this.

The results in previous literature in relation to work involvement and health and well-being have also not been consistent. Previous research has shown that work involvement had no significant relationship with family satisfaction (Burke, 2000). In contrast, Spence and Robbins (1992) showed that work involvement was significantly associated with poor health complaints for men, but not for women. These previous research findings are similar to those found in the present study which showed that while work involvement was associated with high work→family conflict and positive well-being, work involvement was also not significantly related to a number of other health and well-being measures.

### ***Work Enjoyment***

It was predicted that work enjoyment would be positively correlated with work→family conflict, family→work conflict, and psychological well-being and negatively correlated with physical health symptoms and psychological strain. As hypothesised, there was a significant correlation between positive psychological well-being and work enjoyment. Perhaps when an individual experiences a great deal of pleasure from work, then this could have an impact upon their psychological well-being, or vice versa. As hypothesised, work enjoyment was significantly associated with low levels of social dysfunction, anxiety/depression and negative psychological well-being. Previous research supports the findings in the current research, which has shown that work enjoyment is associated with positive health and well-being outcomes. Spence and Robbins (1992) examined the relationship between the work enjoyment subscale and subjective health. A significant negative correlation was found between work enjoyment and subjective health complaints. Andreassen et al., (2007) conducted a study examining the relationship between the WorkBAT and health, and found a significant positive correlation between work enjoyment and health.

There were no significant relationships between work enjoyment and work→family conflict, family→work conflict, family satisfaction and physical health symptoms. One common theme with these non-significant relationships was that many of them were related to family life. One explanation for these findings could be because of the contrast of work life to home life. An individual can enjoy their work,

but many other factors influence an individual's satisfaction with family life, most importantly of all, the quality of the relationships between family members.

### **Relationship between Criteria Variables**

Overall, there was a clear pattern of significant relationships found between the different measures of health and well-being. As hypothesised, positive psychological well-being was negatively correlated with physical health symptoms. Negative psychological well-being was significantly positively correlated with physical health symptoms. These results suggest that a person's psychological well-being might be related to their physical health symptoms. Perhaps when a person has a high degree of positive well-being, this may not only have a spill-over effect on their physical health, but they may also be more likely to seek out positive solutions to health care, or vice versa. Similarly, when a person has poor psychological well-being, they may be more likely to neglect their physical health.

Positive psychological well-being was significantly positively correlated with family satisfaction, which confirmed the hypothesis. Negative psychological well-being was also found to be significantly negatively correlated with family satisfaction. One explanation for these findings could be that when a person has a high sense of positive psychological well-being, and is feeling happy and content, then this could result in other areas of the family life being positive too, or vice versa.

As hypothesised, family satisfaction was significantly negatively correlated with physical health symptoms. These results suggest that as a person's satisfaction with family life increases, the number of physical health symptoms they report decreases, or vice versa. As hypothesised, positive psychological well-being was negatively correlated with work → family conflict and family → work conflict. Negative psychological well-being was also positively correlated with work → family conflict and family → work conflict. It is likely that when a person feels they have a high degree of work → family conflict, then this may affect their psychological well-being, because this study has also shown that high work → family conflict is related to other areas of health, including a higher number of physical health symptoms and higher levels of anxiety/depression.

Positive psychological well-being, which was hypothesised to be significantly negatively correlated with both social dysfunction and anxiety/depression, was

confirmed in this study, suggesting that when an individual has a high degree of positive psychological well-being then they may also feel less depressed and anxious. Negative psychological well-being was found to be significantly positively correlated with anxiety/depression. However, negative psychological well-being was not found to be significantly positively correlated with social dysfunction.

Family satisfaction was hypothesised to be significantly negatively correlated with work→family conflict and family→work conflict, which was confirmed in this study. These results could suggest that when work impinges on family life, or family life impinges on work life, this may result in a feeling of low satisfaction with the family life. Family satisfaction was hypothesised to be negatively correlated with psychological strain. The results showed partial support for this hypothesis. While family satisfaction was found to be significantly negatively correlated with anxiety/depression, the correlation between family satisfaction and social dysfunction did not reach significance. These results suggest that when satisfaction with family life increases, anxiety/depression decreases. However, there was no relationship found between social dysfunction and family satisfaction. These results suggest that other variables might have a larger impact on satisfaction with family life compared to social dysfunction, for example, when a person experiences a high level of work→family conflict or family→work conflict, then this may have an impact on satisfaction with family.

Work→family conflict and family→work conflict were hypothesised to be significantly positively correlated with physical health symptoms. This was confirmed in this study, suggesting that a poor work to family balance might have a physical impact upon a person's health. As hypothesised, physical health symptoms were found to be significantly positively correlated with anxiety/depression. The results have shown a clear pattern of relationships between physical health and mental health. This suggestion that physical illness is related to mental illness is one which is widespread in the literature. Taylor (1990) suggested that "trait anxiety increases vulnerability to physical illness" (p.177). The finding that physical health symptoms were not significantly correlated with social dysfunction suggests that a person's ability to function within the workplace on a daily basis might not be related to more personal aspects of a person's life, like physical health. A similar result was



found with social dysfunction and other criterion variables. As hypothesised, work→family conflict and family→work conflict were significantly and positively correlated with anxiety/depression. However, the correlations for work→family conflict and family→work conflict in regards to social dysfunction did not reach significance.

The social dysfunction component of psychological strain was not significantly associated with many of the other health and well-being variables. Social dysfunction is related to a person's ability to cope within the workplace setting. One could speculate that maybe social dysfunction could also be related to a person's ability to uphold productive working relationships with colleagues. One could also speculate a possible reason why work related social dysfunction might not be related to a person's health and well-being, which may be because many workplace cultures might encourage employees to keep their person issues at home, and to focus on work related issues while they are at work, for example, in the interest of maintaining a "professional" image at work.

### **Hypothesised Relationships between Worker Types and Criteria Variables**

The present study examined differences between the workaholic and non workaholic groups in relation to several health and well-being variables. This section is divided into three sections: (a) differences between workaholic groups, (b) differences between non-workaholic groups, and (c) differences between workaholics and non-workaholics.

#### ***Differences between Workaholic Groups***

Unenthusiastic workaholics and enthusiastic workaholics differed significantly on their reported levels of positive and negative psychological well-being. The unenthusiastic workaholics reported significantly lower levels of positive psychological well-being and significantly higher levels of negative psychological well-being compared to the enthusiastic workaholics. One possible explanation for this finding could be derived from the characteristics associated with the enthusiastic workaholics and the unenthusiastic workaholics. While the unenthusiastic workaholics and the enthusiastic workaholics share both high drive and high work involvement, the unenthusiastic workaholics are characterised by low enjoyment of

work, whereas enthusiastic workaholics are characterised by a high enjoyment of work. One could speculate that the differences between the enthusiastic workaholics and the unenthusiastic workaholics may be partially attributed to the difference in enjoyment of work. This suggestion could also be supported by the results of this study that showed that work enjoyment was significantly negatively associated with low levels of anxiety/depression, social dysfunction and negative psychological well-being, and significantly positively associated with positive psychological well-being. These results suggest that when a person is highly driven to work, and highly involved in their work, but is also low on work enjoyment, then their levels of psychological well-being could be lower, compared to someone who enjoys their work but is also highly driven and involved in their work. These findings also suggest that low enjoyment in work could be the critical factor that leads to poor health outcomes, as many studies reporting poor health outcomes for workaholics have conceptualised workaholism as comprising low enjoyment (Spence & Robbins, 1992). Enjoyment of work is also known to be related to health enhancing constructs, such as life satisfaction and purpose in life (Bonebright et al., 2000). Conversely, drive is known to be related more strongly to harmful correlates, as this study has shown drive to be significantly correlated with high level of anxiety/depression and physical health symptoms. On the basis of this, it is feasible to hypothesise that drive may be the toxic element in workaholism, while enjoyment may be the protective factor that buffers the influence of drive (McMillan et al., 2004). It is also possible, as Spence and Robbins (1992) proposed, that it is a combination of high-drive/low work enjoyment that is problematic, rather than being high or low on either individual aspect.

Another finding was that the unenthusiastic workaholics and the enthusiastic workaholics did not differ significantly on their levels of work → family conflict, family → work conflict and family satisfaction. These findings support those of Buelens and Poelmans (2004), who observed that the workaholic profiles did not differ significantly from one another on a measure of work → family conflict. Bonebright et al., (2000) also reported that there was no significant difference between the two workaholic profiles in relation to work → life conflict, a similar measure to work → family conflict. It seems that regardless of whether the individual

enjoys their work, if they are both driven to work and involved in their work, then this devoted time may result in a neglect of other areas of the person's life, including health, well-being and family.

These results provide justification for the continued distinction between the two types of workaholics in relation to future workaholism research. Bonebright et al., (2000) stated that "studies using measures that fail to discriminate the two types will likely confound research in this area and limit the generalizations that can be drawn" (p. 475).

### ***Differences between Non-Workaholic Groups***

The results showed that the four non-workaholic groups reported similar levels of family satisfaction, work→family conflict, family→work conflict, psychological strain, psychological well-being and physical health symptoms. These findings support those of Bonebright et al., (2000). Specifically, Bonebright et al., (2000) observed that the work enthusiasts, relaxed workers and the unengaged workers did not differ significantly on their reported levels of psychological well-being. Spence and Robbins (1992) also found that the relaxed worker, work enthusiasts and the unengaged workers did not differ significantly on their reported levels of physical health complaints. Spence and Robbins (1992) and Bonebright et al., (2000) found evidence that supported the differentiation among non-workaholics. Specifically, disenchanted workers reported similar high levels of poor health compared to the workaholics. This may be based on the notion that the disenchanted worker (as well as the unenthusiastic workaholic) was characterised by Spence and Robbins (1992) as having a high drive to work and low work enjoyment. The present study found no evidence to support the differentiation among the non-workaholic groups, because they all reported similar levels of work→family conflict, family→work conflict, family satisfaction, physical health symptoms, psychological strain and psychological well-being. These results support the notion that differentiating between non workaholics profiles may not be as useful as previously thought.

### ***Differences between Workaholics and Non-Workaholics***

An important aspect within this study was the examination of differences between the workaholics and non workaholics in relation to health and well-being.

Although the results showed that the enthusiastic workaholic reported significantly higher levels of work→family conflict compared to the relaxed worker, there were no other significant differences found between the workaholic and non workaholic groups in relation to family satisfaction, family→work conflict, social dysfunction, anxiety/depression, positive psychological well-being, negative psychological well-being and physical health symptoms. Thus, contrary to some research suggesting that workaholics report higher levels of stress (Bonebright et al., 2000; Spence & Robbins, 1992), the present data suggest that this does not necessarily translate into poor health outcomes.

The present research findings are supported by McMillan and O’Driscoll (2004) who observed that workaholics and non workaholics reported “similar vitality, general health and psychological health (compared) to non-workaholics” (p. 509). McMillan and O’Driscoll’s (2004) findings suggested that overall, workaholics tended to have similar mental health levels to non-workaholics, and similar general and physical health.

One possible explanation the present findings could be that the overall sample was reasonably healthy. This can be illustrated with the overall mean scores for some of the health and well-being variables. The overall sample mean for family satisfaction, which had a range from 1-7, with high scores representing high family satisfaction, was 6.1, suggesting the overall sample reported high levels of family satisfaction. The overall sample mean for anxiety/depression was 1.8, with a range between 1-6, with low scores representing low levels of anxiety/depression, which suggests that a majority of the sample reported a low level of anxiety/depression. This suggests that, based on the participants self reports, the overall sample was reasonably healthy, which could be one possible reason for the non-significant differences found between the workaholics and non workaholics.

There are several potential explanations for these “no-harm” findings in relation to the differences between workaholics and non workaholics. It is feasible that, because the present research studied workaholics that were high in enjoyment (“enthusiastic workaholics” in Spence and Robbins (1992)) terminology), inadvertently “peak performers” were also studied (well-balanced workers who are high in fulfilment; Garfield, 1986). Garfield (1986) described peak performers as

people who have “intense commitment to work that is balanced by careful attention to physical and mental health” (p.184). This notion of integration was proposed by Staines (1980) who suggested that people’s jobs teach them social and organisational skills that facilitate involvement in non-work, enabling them to excel in both worlds. Hence, the social and organisational skills that workaholics develop and learn at work may transfer to the home life as well, which could explain why, with the exception of work→family conflict, there were no significant differences found between the workaholic groups and non-workaholic groups.

### **Summary**

The present research found some significant differences between the unenthusiastic workaholics and the enthusiastic workaholics, but few differences between the workaholics and non workaholics. Because unenthusiastic workaholics are characterised by high drive and low work enjoyment, it is suggested that drive may be the harmful element in workaholism while enjoyment may be a protective factor that buffers the influence of drive. These results also provided support for the continued differentiation between workaholic profiles in relation to future workaholism research.

The results also showed that, with the exception of work→family conflict, there were no significant differences between the workaholics and non workaholics in relation to health and well-being. One possible reason for this could have been that the overall sample reported comparatively high levels of health and vitality overall. There is also the possibility that in studying enthusiastic workaholics, “peak performers” were also inadvertently studied, who are defined by Garfield (1980) as being well-balanced workers who are high in fulfilment. There is also the notion of “integration” proposed by Staines (1980) who suggested that “people’s jobs teach them social and organisational skills that facilitate involvement in non-work, enabling them to excel in both worlds” (p.184). These findings support those by McMillan and O’Driscoll (2004) who also found that workaholics reported similar levels of health and vitality compared to non-workaholics.

The present study found that all four non workaholic groups reported similar levels of family satisfaction, work→family conflict, family→work conflict, psychological well-being, psychological strain and physical health symptoms. Similar

findings were also observed by Buelens and Poelmans (2004) who found that there were no significant differences between all four non workaholic groups on a measure of work → family conflict. These results showed that perhaps differentiation among non-workaholics might not be useful.

### **Limitations**

This study was subject to a number of limitations. Participant numbers were low (N=136) which limits the generalisability of the results of this study. A higher number of participants could have increased the validity of the results and increased the ability to generalise the results across a wider range of people. The cross sectional nature of this study was another limitation. With surveys at only one point in time, there was no possibility of drawing cause and effect conclusions in relation to the workaholic and non workaholic groups and the health and well-being measures. The use of longitudinal data would also increase understanding of the stability of the levels of health and well-being across time which would give more information about the differences between workaholic and non workaholic groups.

Another limitation was that workaholism was evaluated solely from the employee's perspective. Distributing questionnaires to family and friends of the participants, and asking them about the working patterns of the participant could have helped gain a more detailed and balanced viewpoint of the participant's behaviour.

Another limitation was the low Cronbach's alpha obtained for work involvement. Previous research has also shown a variation in the level of internal reliability found for work involvement, with levels ranging from acceptable to low (Burke, 2000; Spence & Robbins, 1992), which does suggest some caution must be made with this measure in relation to its internal reliability.

The categorisation method used to group participants into the workaholic and non workaholic groups, based on the three subscales of the WorkBAT (drive, work involvement and work enjoyment) was also a limitation. Although it was a theoretically valid method to use, and resulted in an accurate representation of the responses by the participants, it also resulted in low numbers of participants into some of the worker groups. Because the drive subscale had a high negative skew, this meant that a high number of participants scoring high on drive and being unevenly distributed among the six worker groups. Other methods of classification could have

been used instead, for example, the overall median score of each subscale, however this would have resulted in an inaccurate representation of participants responses.

### **Practical Implications**

One of the main findings of this study was that, with the exception of work→family conflict, the workaholics and non workaholics reported similar levels of family→work conflict, social dysfunction, anxiety/depression, negative well-being, positive well-being and physical health. In terms of applied usefulness, the present data do challenge the negative stereotype of workaholism. The data certainly support the notion that workaholics should not be typecast as unhappy work-slaves, as they appear to enjoy comparable levels of health to others. These results also emphasise the importance of developing strategies on how to better manage workaholism within the workplace.

Another finding was that the unenthusiastic workaholics reported significantly lower levels of positive psychological well-being, and significantly higher levels of negative psychological well-being compared to the enthusiastic workaholics. The unenthusiastic workaholics are characterised by high drive and low work enjoyment. It is important to draw attention to the possibility that perhaps low enjoyment in work is the critical factor that leads to poor health outcomes. Enjoyment is also known to relate to health enhancing constructs, such as life satisfaction and purpose in life (Bonebright et al., 2000). Conversely, drive is known to relate more strongly to harmful correlates, as this present study has shown. Spence and Robbins (1992) proposed that it is a combination of high-drive/low enjoyment that is problematic, rather than being high or low on either individual aspect. Therefore, employees who are observed to be highly driven yet lacking in enjoyment of work may be targeted for interventions in the workplace, as these results show that they are susceptible to experiencing poorer health and well-being, including higher levels of anxiety/depression and negative psychological well-being.

Practical implications of this finding are illustrated by Burke (2000) who suggested that “employers should pay attention to the performance and work habits of employees and be alert to warning signs of workaholism...they should not reward addictive behaviour, but recognize those employees who are productive but who also lead balanced lives” (p. 361). The association of work enjoyment with positive health

and well-being outcomes also suggests that increasing levels of satisfaction one experiences in the workplace could improve a person's health and well-being.

Finally, the relationship between all of the health and well-being variables suggests that different types of well-being indicators are associated with one another. For example, work → family conflict was significantly correlated with a number of criterion variables including anxiety/depression, negative well-being and social dysfunction. This suggests that improvement in one area of a person's mental well-being, for example, reduced work → family conflict, may have an effect on other areas, for example, psychological well-being.

### **Future Research**

Future research needs to focus on increasing the number of studies conducted across a range of times on health outcomes and workaholism. Longitudinal data are needed in order to gain a better understanding of the cause and effect relationships between the different workaholic and non workaholic groups. Ongoing cross-sectional sampling across occupational types would also indicate whether some occupations have greater incidence of workaholism. Because there were few significant differences between the workaholics and non workaholics in relation to health and well-being, future research could focus on the management of workaholism within the workplace. The present study has shown that an excessive drive to work was related to poor health and well-being variables, and enjoyment of work and to some extent work involvement was associated with positive health and well-being variables. The management of excessive drive, which has been shown to be associated with poor health and well-being, and the promotion of work enjoyment might result in enhancement of health and well-being.

Qualitative research is also needed to understand workaholism in depth. The majority of the research in the literature is quantitative and employs questionnaires. Using a range of methods, both quantitative and qualitative, would increase the understanding of workaholism. Ethnographic studies could also be used to gain a much more in-depth perspective of the definition of workaholism and how it is characterised. The results of this study show that the WorkBAT and the validity of the work involvement subscale needs to be examined in more detail in order to develop a valid measure of workaholism. Ongoing research on the validity of the



WorkBAT would increase the validity of the measure and help increase consistent results across studies. The relationship between the workaholic and non-workaholic profiles of the WorkBAT is still unclear, and more research is needed in order to understand these differences.

## **Conclusions**

The finding that there were no significant differences between the workaholic and non workaholic profiles in relation to family→work conflict, social dysfunction, anxiety/depression, negative psychological well-being, positive psychological well-being and physical health symptoms challenges previous research which has shown the workaholics to suffer high levels of ill health (Spence & Robbins, 1992). This study also showed that drive was significantly associated with poor health outcomes, while work enjoyment was associated with positive health and well-being outcomes. The unenthusiastic workaholics, who are characterised by high drive and low work enjoyment, reported significantly poorer psychological well-being compared to the enthusiastic workaholics, suggesting that it might be a combination of high-drive and low-work enjoyment, rather than high or low on either individual aspect, that could be problematic.

The results of this study also showed that there were no significant differences between the non workaholic profiles in relation to the criterion variables. These results question the differentiation of non workaholic groups within the WorkBAT. This study has also shown the relationships between different health and well-being variables. Results included the findings that work→family and family→work conflict was significantly correlated with anxiety/depression, negative psychological well-being and physical health symptoms. The present data challenges the negative stereotype of workaholism. Because an excessive drive to work was associated with poor health and well-being, and enjoyment of work was associated with health enhancing variables, these results emphasise the importance of developing strategies on how to better manage workaholism within the workplace.

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## Appendix A: Questionnaire

### Section A – Your Work

*Please rate how strongly you agree or disagree with each of the following statements  
By selecting the response that best describes you.*

	Strongly Agree	Moderately Agree	Slightly Agree	Not Sure	Slightly Disagree	Moderately Disagree	Strongly Disagree
When I have free time I like to relax and do nothing serious	1	2	3	4	5	6	7
Most of the time my work is very pleasurable	1	2	3	4	5	6	7
I feel guilty when I take time off work	1	2	3	4	5	6	7
Wasting time is as bad as wasting money	1	2	3	4	5	6	7
I often wish I weren't so committed to my work	1	2	3	4	5	6	7
I like to relax and enjoy myself as often as possible	1	2	3	4	5	6	7
I like my work more than most people do	1	2	3	4	5	6	7
I feel obliged to work hard even when it's not enjoyable	1	2	3	4	5	6	7
I really look forward to the weekend – all fun, no work	1	2	3	4	5	6	7
I seldom find anything to enjoy about my work	1	2	3	4	5	6	7
I seem to have an inner compulsion to work hard	1	2	3	4	5	6	7
I spend my free time on projects and other activities	1	2	3	4	5	6	7
I lose track of time when I'm involved in a project	1	2	3	4	5	6	7
I often feel there is something inside me that drives me to work hard	1	2	3	4	5	6	7
I like to use my time constructively, both on and off the job	1	2	3	4	5	6	7
Sometimes I enjoy my work so much I have a hard time stopping	1	2	3	4	5	6	7
It's important to me to work hard, even when I don't enjoy what I'm doing	1	2	3	4	5	6	7
Between my job and other activities I'm involved in, I don't have much free time	1	2	3	4	5	6	7
My job is so interesting that it often doesn't feel like work	1	2	3	4	5	6	7
I often find myself thinking about work, even when I want to get away from it for a while	1	2	3	4	5	6	7
I get bored and restless on vacations when I haven't anything productive	1	2	3	4	5	6	7
Sometimes when I get up in the morning I can hardly wait to get to work	1	2	3	4	5	6	7
I do more work than is expected of me strictly for the fun of it	1	2	3	4	5	6	7
When I get involved in an interesting project its hard to describe how exhilarated I feel	1	2	3	4	5	6	7

## Section B – Your Health

During the past 30 days did you have any of the following symptoms? If you did have the symptom, did you see a doctor about it?

During the past 30 days did you have?	No I didn't	Yes I did but I did not see a doctor	Yes I did and I saw a doctor
An upset stomach or nausea	1	2	3
A backache	1	2	3
Trouble sleeping	1	2	3
A skin rash	1	2	3
Shortness of breath	1	2	3
Chest pain	1	2	3
Headache	1	2	3
Fever	1	2	3
Acid indigestion or heartburn	1	2	3
Eye strain	1	2	3
Diarrhoea	1	2	3
Stomach cramps (not menstrual)	1	2	3
Constipation	1	2	3
Heart pounding when not exercising	1	2	3
An infection	1	2	3
Loss of appetite	1	2	3
Dizziness	1	2	3
Tiredness or fatigue	1	2	3

Thinking of the 30 days, how much of the time has your job made you feel each of the following: *(please select one response for each question)*

	Never	Occasionally	Some of the time	Much of the time	Most of the time	All of the time
Relaxed	1	2	3	4	5	6
Worried	1	2	3	4	5	6
Depressed	1	2	3	4	5	6
Calm	1	2	3	4	5	6
Contented	1	2	3	4	5	6
Gloomy	1	2	3	4	5	6
Optimistic	1	2	3	4	5	6
Tense	1	2	3	4	5	6
Enthusiastic	1	2	3	4	5	6
Cheerful	1	2	3	4	5	6
Miserable	1	2	3	4	5	6
Uneasy	1	2	3	4	5	6

*We want to know how your health has been in general over the 30 days.  
Please read the questions below and each of the six possible answers.  
Select the response that best applies to you. Have you recently:*

	Never	Occasionally	Some of the time	Much of the time	Most of the time	All of the time
Been able to concentrate on what you're doing?	1	2	3	4	5	6
Lost much sleep over worry?	1	2	3	4	5	6
Felt that you are playing a useful part in things?	1	2	3	4	5	6
Felt capable of making decisions about things?	1	2	3	4	5	6
Felt constantly under strain?	1	2	3	4	5	6
Felt you couldn't overcome your difficulties?	1	2	3	4	5	6
Been able to enjoy your normal day to day activities?	1	2	3	4	5	6
Been able to face up to your problems?	1	2	3	4	5	6
Been feeling unhappy or depressed?	1	2	3	4	5	6
Been losing confidence in yourself?	1	2	3	4	5	6
Been thinking of yourself as a worthless person?	1	2	3	4	5	6
Been feeling reasonably happy, all things considered?	1	2	3	4	5	6



## Section C – Work and Family

*Please select the response which best describes your feelings*

	Never	Seldom	Sometimes	Often	All the time
After work, I come home too tired to do some of the things I'd like to do	1	2	3	4	5
My job I have so much work to do that it takes away from my Personal interests	1	2	3	4	5
My family/friends dislike how often I am preoccupied with my work while I am at home	1	2	3	4	5
My work takes up time that I'd like to spend with family/friends	1	2	3	4	5
My job or career interferes with my responsibilities at home, such as yard work, cooking, cleaning, repairs, shopping, paying the bills, or child care	1	2	3	4	5
My job or career keeps me from spending the amount of time I would like to spend with my family	1	2	3	4	5
I'm too tired at work because of the things I have to do at home	1	2	3	4	5
My personal demands are so great that it takes away from my work	1	2	3	4	5
My superiors and peers dislike how often I am preoccupied with my personal life while at work	1	2	3	4	5
My personal life takes up time that I'd like to spend at work	1	2	3	4	5
My home life interferes with my responsibilities at work, such as getting to work on time, accomplishing daily tasks, or working overtime	1	2	3	4	5
My home life keeps me from spending the amount of time I would like to spend on job- or career-related activities	1	2	3	4	5

*The following items ask you to reflect on how satisfied you are with your family/home life. Using the response scale below, please select which option best describes you.*

	Strongly disagree	Moderately disagree	Slightly disagree	Not sure	Slightly agree	Moderately agree	Strongly agree
In general, I am satisfied with my family/home life	1	2	3	4	5	6	7
All in all, the family/home life I have is great	1	2	3	4	5	6	7
My family/home life is very enjoyable	1	2	3	4	5	6	7

*Below are several demographic questions which will help better understand the overall sample being surveyed for this research. The information from these questions is strictly confidential.*

**How old are you?**

\_\_\_\_\_years

**What is your gender?**

Female

Male

**What ethnicity are you?**

NZ European

Maori

Other European

Pacific Peoples

Asian

Other \_\_\_\_\_

**Which title best describes your position in the company?**

Executive/Senior Manager

Manager

Supervisor

Employee

**How long have you been in your current job?**

\_\_\_\_\_years \_\_\_\_\_months

## Appendix B: Letters of Introduction

May 2010  
Tanya Horton  
University of Waikato  
Hamilton

Dear HR Manager,

I am a psychology masters student from the University of Waikato, and I am in the process of conducting my thesis research on workaholism and its relationship to health including levels of stress, satisfaction with family life, physical health, work-family conflict and psychological wellbeing. I am seeking your approval for your employees to complete the online questionnaire. Participating is easy, and only involves employees filling out a simple, confidential online questionnaire that takes 15 minutes to complete. The criteria for participation are that employees must be within a professional standing in the company, i.e. supervisor/manager. This research has been approved by the Psychology Department Ethics Committee of the University of Waikato.

If your organization agrees to participate in my research I will provide you with information which may benefit you. This information will be beneficial for your company because this research is aiming to answer questions such as – what type of workers have the most health complaints? what type have low satisfaction with their family life? This research aims to find out whether there are types of workaholics that are both beneficial to the company while at the same time having good health, wellbeing and work-family balance. Initial research on workaholism viewed it as being a phenomenon that resulted in the person working very hard to the detriment of their family and their health. New research has shown that there may be different types of workaholics who may report different health symptoms compared to the stereotypical workaholic. This research is exploring this relationship between workaholism and its consequences. This research will also give you insight into the general health and wellbeing of workers which is a very important issue in relation to worker productivity.

Attached is a hard copy of the questionnaire for you to view, as well as a prepared email that would be sent to participants, on my behalf, which explains what the research is about, their rights as a participant and the web link that will take them to the questionnaire. I look forward to hearing from you shortly and would greatly appreciate your support. You can contact me by email: [tey2@waikato.ac.nz](mailto:tey2@waikato.ac.nz) or by phone: 027 680 7886.

Yours Sincerely

Tanya Horton  
BSocSc (Hons) (Psychology)

May 2010  
Tanya Horton  
University of Waikato  
Hamilton

I am a master's student at the University of Waikato, researching New Zealanders' work attitudes and I would like to hear from you.

The link below takes you to a simple, voluntary questionnaire which is *entirely confidential* and takes only 15 minutes to complete. This questionnaire asks about your attitudes about work, physical health, psychological wellbeing, stress in relation to work and work-family balance. When your response is received, it will be coded to protect your privacy and will be analysed with all the other responses.

**Link to questionnaire:**

[http://waikatopsych.qualtrics.com/SE?SID=SV\\_6A5YUilXaNYSWU&SVID=](http://waikatopsych.qualtrics.com/SE?SID=SV_6A5YUilXaNYSWU&SVID=)

Your participation is greatly appreciated as it will help contribute to a greater understanding of work attitudes in New Zealand. A summary of the results will be posted to <http://www.waikato.ac.nz/wfass/subjects/psychology/research/> by the 28<sup>th</sup> February 2011 . These results would give you an interesting insight into the subject of work attitudes that you would have helped contribute to.

This research has been approved by the Psychology School Ethics Committee of the University of Waikato, and is supervised by Professor Mike O'Driscoll and Dr Donald Cable of Waikato University. The only people who will see this information are myself, and my two supervisors.

If you have any questions or require further information, you can contact me at [tey2@waikato.ac.nz](mailto:tey2@waikato.ac.nz).

If you have any concerns about this project, please contact the ethics convenor Dr Robert Isler, phone (07) 838 4466 ext 8401, email [r.isler@waikato.ac.nz](mailto:r.isler@waikato.ac.nz).

**Thanks so much** for your time

Tanya Horton  
BSocSc (Hons) (Psychology)

## Appendix C: Pattern Matrices

*Exploratory Factor Analysis Pattern Matrices for all criteria variables*

### Workaholism Battery

<b>Pattern Matrix<sup>a</sup></b>			
	Factor		
	1	2	3
WB_1_WI	-.103	.093	.540
WB_2_E	-.126	-.710	-.048
WB_3_D	.595	-.039	-.037
WB_4_WI	.049	-.055	.415
WB_5_E	-.137	-.814	.049
WB_6_D	.549	.003	-.055
WB_7_WI	.135	.140	.437
WB_8_E	.062	-.742	-.044
WB_9_D	.663	.174	-.068
WB_10_WI	-.134	-.145	.397
WB_11_E	-.139	-.484	-.111
WB_12_D	.379	-.123	.432
WB_13_WI	-.102	.026	.529
WB_14_E	.191	-.099	.191
WB_15_D	.436	-.086	.522
WB_16_WI	.051	-.136	.565
WB_17_E	.483	-.407	.061
WB_18_D	.628	.065	-.030
WB_19_WI	.422	-.056	.145
WB_20_E	.043	-.782	.097
WB_21_D	.470	-.110	.113
WB_22_WI	.144	.018	.509
WB_23_E	.160	-.657	.132
WB_24_E	.212	-.609	.222
WB_25_E	.219	-.455	-.004

## Psychological Well-being

Pattern Matrix <sup>a</sup>		
	Factor	
	1	2
PsyWell_1_Relaxed	.303	-.361
PsyWell_2_Worried	.810	.050
PsyWell_3_Depressed	.661	-.173
PsyWell_4_Calm	.323	-.377
PsyWell_5_Contented	.190	-.718
PsyWell_6_Gloomy	.577	-.171
PsyWell_7_Optimistic	-.037	-.873
PsyWell_8_Tense	.884	.159
PsyWell_9_Enthusiastic	-.072	-.889
PsyWell_10_Cheerful	-.015	-.880
PsyWell_11_Miserable	.691	-.114
PsyWell_12_Uneasy	.810	.008

## Psychological Strain

Pattern Matrix <sup>a</sup>		
	Factor	
	1	2
GHQ-1	-.058	.540
GHQ-2	.560	.002
GHQ-3	.005	.636
GHQ-4	-.175	.712
GHQ-5	.670	.000
GHQ-6	.738	-.106
GHQ-7	.267	.610
GHQ-8	-.040	.605
GHQ-9	.821	.034
GHQ-10	.823	.065
GHQ-11	.800	-.044
GHQ-12	.290	.412

Work → Family Conflict and  
Family → Work Conflict

Pattern Matrix <sup>a</sup>		
	Factor	
	1	2
WFconflict_1	.523	.054
WFconflict_2	.917	-.163
WFconflict_3	.803	-.039
WFconflict_4	.902	-.029
WFconflict_5	.753	.169
WFconflict_6	.823	.072
FWconflict_7	.103	.706
FWconflict_8	.026	.814
FWconflict_9	-.043	.569
FWconflict_10	.004	.646
FWconflict_11	-.093	.860
FWconflict_12	.074	.798

Family Satisfaction

Factor Matrix <sup>a</sup>	
	Factor
	1
FamSat_1	.932
FamSat_2	.970
FamSat_3	.943