WORKAHOLISM:

HOW DOES IT IMPACT ON PEOPLE'S LIVES?

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Abstract

Although there appears to be considerable popular interest in workaholism, scientific understanding of the construct is very limited. Paradoxically, although many argue that the personal cost of workaholism to workers, families and friends is enormous, these people's perspectives do not appear to have been analysed using formal scientific paradigms (Scott, Moore, Miceli, 1997). The present research considers the construct of workaholism in its impact on people's lives. The thesis comprises six chapters that outline data from three separate studies. The theoretical perspective involves interaction theory, where workaholism is hypothesised to arise from a personal tendency toward workaholic behaviour that is activated and maintained by reinforcing stimuli. The epistemological perspective involves applied research in a naturalistic setting, using triangulated, quantitative data within a contrasted-group design (i.e., workaholics, non-workaholics). Time diaries were used to assess the impact of workaholism on the allocation of time to 'outside-work' activities such as sleeping and exercising. Together, the data validated the two-factor measure of workaholism, corroborated the theoretically based definition, and showed that workaholism was distinct from four generic ethics (work, achievement, leisure, and time) and three specific constructs (obsessive thinking, compulsive finishing and delayed gratification). Workaholism scores were stable across time and held a consistent temporal relationship to work and leisure behaviours and intrapersonal and interpersonal well-being. Additionally, while workaholics evidenced differing work and leisure patterns to non-workaholics, they experienced similar health status, pleasure and relationship satisfaction. Thus, workaholism impacted on peoples' choices about time allocated to work and non-work activities, but it was not necessarily harmful.

These data are congruent with interaction theory, support the inductively generated definition of workaholism, and thereby provide a conceptual springboard for evolving future research designs. In sum, the research advances contemporary knowledge about workaholism in five ways (a) by providing one of the first systematic analyses of workaholism using data from multivariate sources, (b) by generating longitudinal New Zealand data from contrasted groups, (c) by analysing significant others' perceptions of workaholism, (d) generating an empirically based operational definition, and (e) by adapting innovative measurement methods from other fields (e.g., time diaries) for use in workaholism research.

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CHAPTER 1

Social and Historical Context of Workaholism

Workaholism involves difficulty disengaging from work, a strong drive to work, intense enjoyment of work and a differing use of leisure time than others. As both work and leisure trace to the heart of our kinship with other humans, their struggle for primacy is an historical one that has its roots as early as the fourteenth century. Up until this time, with the exception of the Roman era, people generally worked until they had enough food and then rested and played in the remainder of their time (Preece, 1981). Thus, the nature and structure of the working day varied depending on the season, the weather and the availability of food (Schor, 1991). Families worked as units that comprised several generations, from the very small and very elderly who contributed best they could, to the physically able who carried most of the workload. In 1335, however, the invention of the mechanical clock provided an independent measure of people's working hours. This catalysed a move away from the cycles of nature (where work and leisure were intertwined) to an artificial dichotomy of 'work' and 'leisure'.

The following half-century brought the advent of cloth manufacture, the birth of industry, the invention of 'fashion' and the start of contract labour, with many families 'putting out' (contracting their services to the textile industry: Preece, 1981). By the time the printing press was developed in 1450, employers had begun to push for 12-hour working days, with the less scrupulous among them hiding clocks to surreptitiously extract more working time (Schor, 1991). The

Protestants, who disparaged luxury and exalted hard work, supported this new 'mean-ness' with time. By 1600, the arrival of the British middle class sparked a new demand for leisure and extravagance. Soon thereafter the first factories opened and the Puritans began a crusade to 'purge the disorder of leisure' from the world. And so the battle oscillated between work and leisure for another one hundred and fifty years (Cross, 1990).

Paradoxically, as the industrial revolution began in 1780, the concept of holiday resorts took hold, which forged a wider chasm between work and leisure. In 1866 employees fought for an eight-hour day, but the introduction of the light bulb in 1880 perpetuated the employers' over-ride of nature's patterns and enabled a 24-hour working day. Thus, it was not until 1938 that the general workforce was allowed weekends, paid holidays and a 40-hour week (Robinson & Godbey, 1992). Subsequently, a new 'time consciousness' evolved that catalysed an avalanche of timesaving technological inventions, a rush toward the cities, and a new flush of spending (Schor, 1991). In the mid 1960's, however, a critical juncture occurred; while parents marched to the beat of extensive consumerism, their children began to join the antithetical hippie movement that rejected the parental work ethic in favour of 'lifestyle.' It is against this backdrop of societal vacillation between valuing work and alternately leisure that in 1968 the word 'workaholism' evolved.

Subsequently, as technological inventions such as mobile phones, computers, faxes and e-mails have mobilised the workforce, the boundary between work and home has blurred, which has resulted in workaholism gaining

prominence in the public arena. Today in addition to a plethora of media articles, there are multitudinous websites concerning workaholism, Workaholics Anonymous groups, residential treatment centres, books, therapists and counsellors that purport cures for workaholism. Thus, a ready audience of research consumers and stakeholders exists. Employers and organisational consultants are curious about the organisational value of workaholism, therapists are interested in how is it measured and treated, and the working public is keen to maximise benefits and minimise costs. Paradoxically, however, international communication and globalisation of culture have only recently brought workaholism to the attention of academic researchers.

Originally, the word workaholism was created as a deliberate poke at working too hard in an alcoholic-like manner, and was intended to connate all the problems that addiction brings (Oates, 1968). However, to this day, while most academics agree that work is healthy, desirable and in fact protective from many illnesses, debate has continued over the merits of workaholism. Early research suggested that it was desirable (Machlowitz, 1978) while later studies disagreed (Robinson, 1996a), although most contemporary researchers agree that workaholism has two, possibly *three components*: enjoyment, drive, and work involvement. However, some argue that his last factor saturates the other two, and is therefore redundant. (It is important to iterate that in the present context, the term 'work involvement' is workaholism-specific and not intended to be confused with the more traditional industrial psychology construct of work involvement. To retain consistency with other workaholism literature, this workaholism-specific convention will be continued in the remainder of the thesis).

The term 'workaholism' was derived in 1968, based on the assumption that excessive working stemmed from an underlying addiction, with the term 'work' used to denote the activity, and 'ism' (taken from alcoholism) to denote the addiction (Oates, 1968). The context surrounding this neologism is important; an American professor of religion created the word in jest while working with hospitalised alcoholics and attempting to describe his own addiction to work (Oates, 1968). Additionally, it occurred in a time of fierce public debate about the loss of the American work ethic (Oates, 1971). Later, Oates conceptualised workaholism as an excessive and uncontrollable need to work incessantly that disturbs health, happiness, and relationships (Oates, 1971). Oates' book, which was purely speculative, continued to draw parallels with alcoholism, and came to form the basis of both the workaholic stereotype and much of the ensuing academic endeavour into workaholism. Subsequently, the word 'workaholic' has gained a place in common parlance and today invokes a stereotype of someone who is driven, works extremely long hours, and as a result suffers tremendously in their personal life (McMillan, O'Driscoll, Marsh & Brady, 2001).

This stereotype, however, is not necessarily based in fact; a recent literature search yielded fewer than 50 empirical articles, none of which had tested the link between workaholism and addiction (McMillan & O'Driscoll, 2000). In addition, the majority of the data is United States based, widely dispersed among psychology, business, health and medicine, and characterised by a continued tendency to write authoritatively about workaholism without referring to data. Additionally, the lack of theoretical integration has encouraged research to

develop in small pockets of 'one-off' designs, rather than as a conceptually systematic programme of research. Thus, the stereotype has been perpetuated without challenge, while progress toward establishing a consensual definition, a meaningful theory, and an *empirically based* picture of workaholism has been fraught by the utilisation of relatively homogeneous methodologies. It is timely therefore, to generate empirical data that has strong links to theory and robust methodological underpinnings.

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, 2000). Dynamic definitions specify the effect of behaviour and generally imply that workaholism is a method of avoiding personal responsibility to family and friends while earning acclaim from employers and colleagues (Killinger, 1991). 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), which has become so excessive that it creates "noticeable disturbance or interference with his (sic) bodily health, personal happiness, and interpersonal relations, and with his (sic) smooth social functioning" (Oates, 1971, p.4). Other dynamic definitions include "craving for working night and day even when not necessary" (Goldenson, 1984, p. 800), "no off buttons" (Thorne, 1987, p. 71) and "regarding leisure as valueless time where nothing is achieved" (Klaft & Kleiner, 1988, p. 37).

In contrast, characteristic definitions specify the structure and magnitude of behaviour and often include implicit value judgements, such as 'irrational', 'excessive' or 'neglectful' (McMillan & O'Driscoll, 2000). The most frequently cited characteristic definition is "a desire to work long and hard (where) work habits almost always exceed the prescriptions of the job...and the expectations of the people with whom...they work (Machlowitz, 1980, p.1). The magnitude of workaholism has also been loosely defined as an "irrational commitment to excessive work" (Cherrington, 1980, p. 257), and an "excessive involvement with work (as) evidenced by neglect in other areas of life ... (which is not) based on the requirements of the job or organisation" (Porter, 1996, p.70).

Finally, operational definitions specify *how* to generate a variable and are relatively scarce in the workaholism literature. The most widely used operational definition of workaholism specifies comparably high work involvement (psychological involvement with work in general), high drive (an inner pressure to work) and low work enjoyment (work-related pleasure; Spence & Robbins, 1992). However, several recent studies have been unable to replicate Spence and Robbins' work involvement dimension (Kanai, Wakabayashi & Fling, 1996; McMillan, Brady, O'Driscoll & Marsh, in press). Additionally, the definition does not encompass incessant thinking about work, which appears to be a defining characteristic of workaholism (Machlowitz, 1978; Scott, Moore & Miceli, 1997). On this basis, it appears feasible to adopt the definition of McMillan, et al., (2001), who argued that a definition including drive, enjoyment and thinking about work but excluding work involvement, relates most closely to contemporary

empirical and theoretical literature. Accordingly, their definition will be utilised in the present thesis: Workaholism involves a personal reluctance to disengage from work involving drive and enjoyment, that is evidenced by a tendency to work or think about work anytime and anywhere.

Theoretical Explication

As the majority of workaholism research has taken part on an 'ad hoc' basis without explicitly linking the data to theory, the theoretical underpinning of much of the literature remains uncertain. Generally, however, most writing can be related back to one of seven theories: addiction theory, learning theory, trait theory, cognitive theory, family systems theory, psychodynamic theory and interaction theory. The present section will outline each theory, apply each to workaholism, and critique the level of support provided by the existing body of data for each perspective.

Addiction Theory

While almost all workaholism researchers have alluded to addiction at some level (Porter 1996), a direct and explicit link has not been drawn between empirical data and psychological theory. Addiction theories are generally considered to fall within one of two general models, the *medical model* or the *psychological model* (Eysenck, 1997).

Medical model of addiction. The medical model proposes that a person becomes physically addicted to chemicals that are either ingested (e.g., drugs), or

produced internally (e.g., dopamine; Di Chiara, 1995). This means that isolation of a specific exogenous or endogenous chemical in workaholism is a prerequisite for accepting the model. While some researchers propose that working long hours produces excessive adrenalin which is pleasurable, addictive, and perpetuates an ongoing cycle (Fassel, 1992), the multifarious mechanisms for producing adrenaline (e.g., drinking coffee, rushing, exercising) make testing this proposition extremely complex. Although relevant blood and urine tests exist, the results are often confounded by the act of taking blood, dietary intake, and even varying times of the day, each of which modulates fluctuations in adrenaline (Di Chiara, 1995). Thus, the medical model provides an invitingly simple conceptualisation of workaholism that would ostensibly require a complex set of longitudinal methodologies to substantiate. Unsurprisingly several authors have skipped this gap and gone on to draw parallels between workaholism and the 'classic' biological symptoms of substance addiction, such as tolerance, craving and withdrawal (Robinson, 1998c). Paradoxically, while behavioural measurement of these symptoms would seem relatively simple (using a baseline and alternating treatments design with independently trained observers, for instance) the model has been widely postulated, but not tested. Thus, the utility of medical addiction theory remains unclear.

Psychological model of addiction. The psychological model proposes that continued substance abuse occurs, despite having relatively overt distal disadvantages such as health problems, as it confers short-term benefits such as feeling elated (Eysenck, 1997). Thus, individuals begin to believe that they cannot function without the addictive behaviour, and psychological dependence develops.

This model suggests that workaholics perceive excessive working as beneficial at some level, perhaps in terms of prestige or promotions (Rohrlich, 1980), so they engage in work behaviour despite negative side effects such as tiredness and family problems. Thus the behaviour arises from the belief (i.e., psychological addiction) that they cannot function adequately without constantly working. Conversely, the model implies that if the same benefit (e.g., prestige) could be 'earned' by an alternate mechanism (e.g., being elected on to an important community group), then workaholism could be replaced by an alternate, more adaptive behaviour. Again, however, there are currently no data to test this theory.

Summary. Given the dearth of empirical data, it is arguably too premature to develop a comprehensive addiction theory of workaholism. Methodological difficulties also constrict progress. Medical models are constrained by work, and the associated endogenous chemicals, being more difficult to isolate and measure than the chemicals involved in drug and alcohol addictions. Additionally, fitting workaholism into an addiction model would require researchers to conceptually substitute the independent variable 'excessive work' for 'addictive substance', which is logically a difficult leap to make. Therefore, addiction models appear appropriate for generating hypotheses about workaholism, but until more empirical data are available, the models are unable to be further developed into a comprehensive theory.

Learning Theory

Learning theory generally refers to one of three dominant models: *classical conditioning*, *social learning theory* and *operant learning*.

Classical conditioning. Within this model, learning is defined as a relatively durable change in behaviour that is due to experience, which means that workaholism is regarded as a collection of response tendencies (Weiten, 1992). Classical conditioning accounts for workaholism as a previously neutral stimulus, (e.g., working a few extra hours) which has acquired the capacity to evoke a response, (e.g., pleasure), that was originally evoked by another stimulus (e.g., peer approval). Unfortunately, there are insufficient data to test this model.

Social learning theory. Social learning theory accounts for workaholism as a form of learning that is based on the role modelling of an influential workaholic. Specifically the behaviour would occur where a worker observes workaholism in a role model who appears to be successful, then processes this information through a schema of high self efficacy (i.e., belief they are capable of success) and imitates it (Weiten, 1992). Thus, workaholism would be more prevalent where there are workaholic parents, siblings, extended family, colleagues and employers. Unfortunately, while some have proposed that workaholism 'clusters' in some organisations and families (e.g., Killinger, 1991), there are no data to test this model.

Operant learning. Operant learning proposes that relatively durable behaviours occur when a voluntary response earns a desired outcome, and therefore comes under the control of its consequences (Skinner, 1974). Thus, workaholism is a voluntary act of working a few extra hours, which leads to peer approval and therefore increases the likelihood of further workaholic behaviour

whenever the recognition positively reinforces working extra hours. Alternatively, the reinforcing event may be an unpleasant event (such as conflict at home) that the individual is trying to escape or avoid. For example, excessive working may arise to compensate for an unsatisfying home life, especially if non-work activities such as intimate relationships are on a relatively lean reinforcement schedule (i.e., a low ratio of reinforcers are delivered). Alternately, workaholism may arise where busy-ness generalises and therefore spills over from home into the workplace (Cohen, 1995).

Interestingly, learning theory predicts that workaholism could be shaped into anyone given adequately potent and idiopathically suitable reinforcers. Conversely, it also implies that workaholism could be trained out of people's repertoires, and would be more prevalent where it lead to desired outcomes (e.g., high income, high status, unsatisfying leisure). However, as with the previous two learning theories, while intuitively sound, operant conditioning is unable to be tested due to a lack of relevant workaholism data.

Summary. Learning theories are inherently optimistic as they consider workaholism to be relatively easily trained out of people's repertoires. Additionally, each individual's behavioural context is considered on its own merit, which makes provision for nuances in personal history and individual differences. Because learning theories avoid invoking reified explanatory fictions that are not directly observable or measurable (such as personality), they reduce the number of variables needing to be measured and therefore provide parsimony. However, learning theories do not easily account for temporal factors such as childhood or

previous employment experiences that may contribute to workaholism. Overall, however, they provide demonstrable generality (they explain a large number of individual variances in workaholism), parsimony (they avoid invoking unobservable variables), and pragmatism (they stimulate multiple hypotheses). While the majority of empirical data certainly have not contradicted operant learning (e.g., Robinson and Post, 1995b), current research designs have not explicitly tested the theory.

Trait Theory

Trait theory conceptualises stable patterns of behaviour as dispositional (i.e. they occur in the person as opposed to the environmental or biological substrates). This model considers workaholism as an underlying trait that is activated in late adolescence, stable across multiple employment situations and exacerbated by environmental stimuli such as stress. Thus, workaholism would develop as a result of a person-environment interaction, through one of two mechanisms: a *trait-specific model* (workaholism arises from an 'obsessive-compulsive trait') or a *generic personality model* (workaholism is a derivative of higher order 'conscientious personality').

Trait-specific models. Trait specific models focus on narrow behavioural patterns that may vary among individuals (e.g., an obsessive trait directed toward completing tasks) but explain a relatively restricted range of phenomena (e.g. they cannot explain a generic work ethos). The most probable underlying traits in workaholism are obsessiveness, compulsiveness or high energy (Clark, Livesley, Schroeder & Irish, 1996), each of which pertains to life in general, rather than

specifically to the work domain. A broad range of data produced by psychometrically-validated measures support the trait theory of workaholism, especially regarding intrapersonal variables such as obsessiveness, non-delegation, perfectionism, and hypomania (Clark, McEwen, Collard & Hickok, 1993; Spence & Robbins, 1992). For instance, obsessive-compulsive personality disorder has correlated with workaholism-drive at .35, while high energy levels (i.e., hypomania) have correlated between .19 and .27 (Clark, et al., 1993; McMillan, Brady et al., in press). Thus it appears clear that a combination of underlying traits may provide a feasible explanation of workaholism.

Generic personality models. Generic personality models explain more diffuse phenomena than trait-specific models. For instance, they can account for values and habits (e.g., a generic work ethos) but sacrifice individual variability (e.g., differing level of motivation) in the process. Clark, et al., (1996) conceptualised workaholism as a pathological personality dimension and found it related positively to compulsiveness and even more strongly to the higher order trait (i.e., a 'big five' trait) of conscientiousness. Thus, workaholism may be a lower order trait that relates in a hierarchical manner to higher order 'personality.'

Predictions based on trait theory. Because trait theory contends that personality consolidates in late adolescence, it therefore predicts that workaholism also has its onset at this stage when an underlying workaholic predisposition is triggered by environmental stimuli. Secondly, the theory predicts that workaholism is a stable personal variable that occurs in some individuals within *all* societies. Thirdly, it predicts that workaholism has a lifetime duration across

jobs and life events, and demonstrates an inelastic tendency that is not easily removed from an individual's repertoire of behaviour. Finally, trait theory implies that workaholism occurs despite subjective pleasantness or unpleasantness, as it is a core aspect of the individual's repertoire. Thus, it may have either positive merits, or negative features, or both.

Summary. While trait theory is pessimistic in regarding workaholism as part of personality and therefore relatively resistant to change, it offers a wide variety of explanations of workaholism. These range from simple obsessive traits to broader 'big five' personality factors. Thus trait theory is pragmatic, can be generalised, holds broad scientific utility and has support from the current research data.

Cognitive Theory

An important new development in workaholism research is the analysis of antecedent beliefs. This is based in cognitive theory, which proposes that people hold schemata (conceptual frameworks about the world) that are based in core beliefs, assumptions about causality and automatic thoughts (expressed as verbal self-statements; Beck, 1995). The theory predicts that workaholism arises from a core belief (e.g., "I am a failure"), consequent assumptions (e.g., "If I work hard then I will not fail") and automatic thoughts (e.g., "I must work hard"). Thus, the beliefs, assumptions and thoughts activate workaholic behaviour, become abbreviated over time to 'work equals worthiness,' and maintain high levels of workaholism. Burke (1999f), in an empirical investigation of the role of cognitions in workaholism, found that thoughts about striving against others,

moral principles and proving oneself predicted levels of workaholism. This holds important implications for workaholism, because if the data continue to support the theory, there are well-validated therapeutic interventions that modify such core beliefs (Beck, 1995). While it is premature to develop the theory further until further data emerge, this is a promising new development that warrants continued focus.

Family Systems Theory

A second new theoretical development arises from family systems research. Family systems and, in particular, structural family theory, consider that all behaviour occurs in a context of interpersonal networks and dynamics, with a problem located within a system, as opposed to a person (Hayes, 1991). Thus, workaholism is regarded as a family problem that arises from, and is maintained by, unhealthy dynamics. These dynamics may include blurred parent-child boundaries, over responsibility, parentified children, circularity (everyone perpetuates the problem), enabling, concealment, and triangulation (parent-child alliances against the working partner; Robinson, 1998b, 2000b). For instance, an over-responsible person may express protectiveness for their family by over-working. The family, in turn, might enable the behaviour by cushioning the stress and hushing children when the worker arrives home. However, over time the family may also perceive work as a tactic of distancing as opposed to protectiveness, and may respond by triangulating against the working partner. While these dynamics hold a small degree of face validity they make numerous assumptions and have not yet been subjected to empirical investigation. Clearly, before the theory can be further developed, we require empirical data and

appropriately stringent research designs with which to test the theory's accuracy and appropriateness for workaholism.

Psychodynamic Theory

While some authors have proposed that workaholism is activated during evolution of the self (e.g., Axelrod, 1999), this theoretical perspective is largely undeveloped. A preliminary explication (Haymon, 1992) suggested that workaholism arises from improper identification (substituted love for a parent), an overdeveloped superego (moralised self punishment), developmental fixation (over-independence) or a defense mechanism (denial, displacement, repression or projection of a problematic childhood experience). Thus, workaholism is believed to defend against emotional pain and reflects an inhibited self-development. However, while psychodynamic theory can describe workaholism and its effect on peoples' lives (Rohrlich, 1981), it accounts only vaguely for how workaholism develops. Unfortunately, there are no empirical data to allow a further critique of this theory.

Interaction Theory

From the preceding review, it appears that trait and learning theories provide *equally concise* predictions and have *equally convincing* support from the theoretical literature. Thus, it seems that workaholism may be adequately explained by *two different theories:* Trait and learning theories. Furthermore, when combined, these theories provide a more comprehensive and persuasive account of workaholism than when they are considered singularly. (However, it remains prudent to caution that other theories may hold relevance for

workaholism, but their utility is constrained until more data are obtained). This proposition, that two different theories considered in tandem can more ably explain the same topography than when considered singularly is not new, and has its basis in the historical hereditary-environment debate (Weiten, 1992). This debate, over whether biological or learning theory has primacy in explaining behaviour, gave rise to a new model; interaction theory. Interaction Theory proposes that an hereditary tendency toward behaviour (i.e., a trait) and a set of reinforcing learning contingencies (i.e., environmental stimuli) interact to initiate, perpetuate and strengthen behaviour.

With respect to workaholism, interaction theory predicts that a personal trait toward workaholic behaviour is *activated* some time in late adolescence then *maintained* by environmental contingencies and learning experiences. Such contingencies may include positive reinforcement (e.g., pay, promotions, recognition), negative reinforcement (escape from the pressure of establishing intimate relationships), and possibly, role modelling. These specific hypotheses are outlined in diagrammatic format in Figure 1.1. This interaction theory-based model accounts for workaholism as a malleable characteristic that exhibits individual variation depending on personal growth, insight, and opportunities for learning of alterative repertoires of behaviour. Given that it explains both the genesis and maintenance of workaholic behaviour, the interaction-based conceptualisation offers face validity, generality (it explains numerous phenomena), parsimony (it integrates disparate variables into a single framework) and pragmatism (it assists in generating hypotheses). On this basis, interaction

theory was adopted as the paradigm of choice in formulating the present research design.

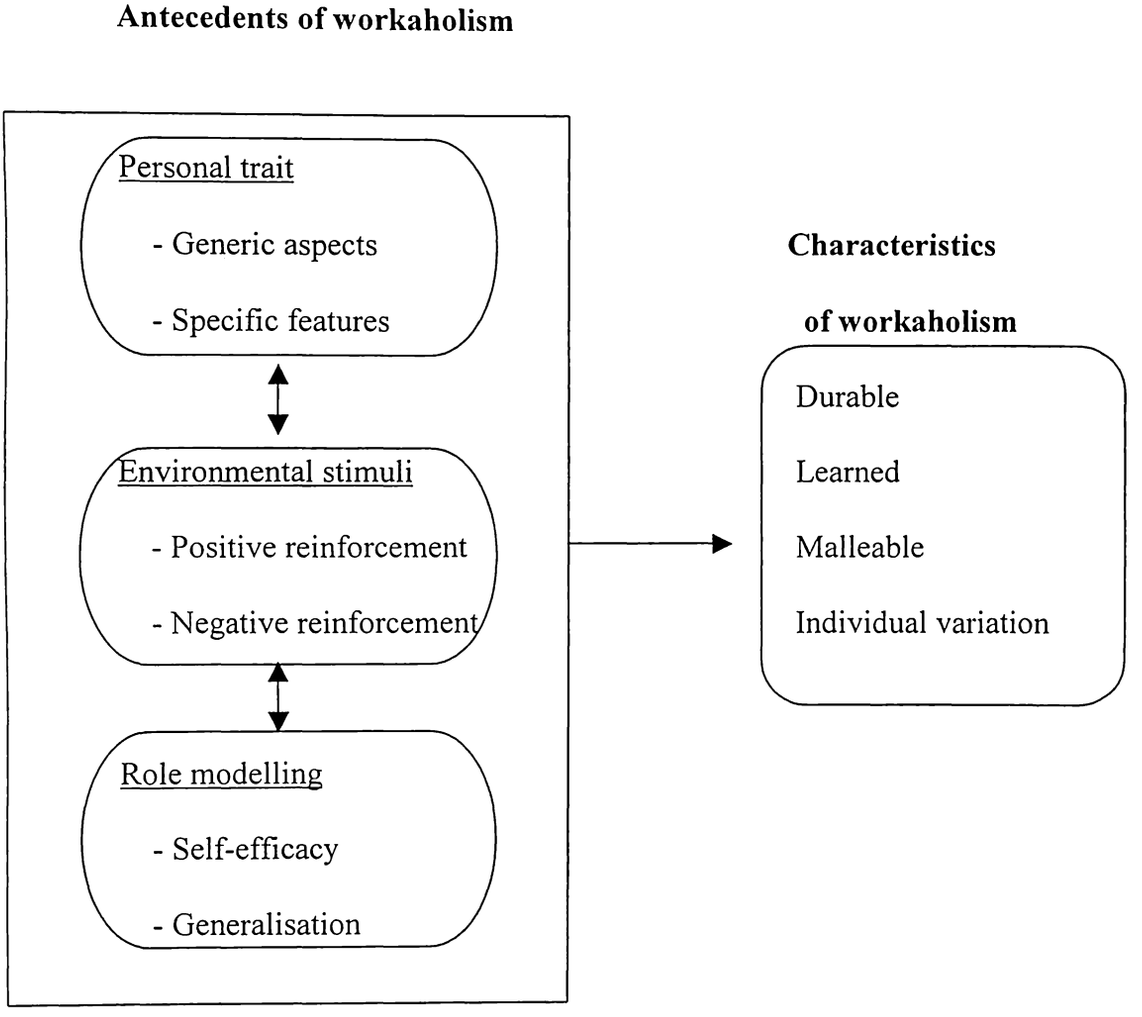

Figure 1.1 An hypothetical model of workaholism based on interaction theory.

Summary

The word workaholism is a relatively recent social construction that has its roots in the 14th century invention of the mechanical clock that catalysed a move

from nature's cycles toward a new dichotomy of 'work' and 'leisure'. Modern technological inventions such as mobile phones and emails have blurred the boundary between work and home and promoted the prominence of workaholism in the public arena. Today, while theoretical explication and development are still in their infancy, it is clear that trait theory has the foremost empirical support and learning theories provide the most convincing scientific utility. Overall, given that workaholism appears to represent a complex set of behaviours that have multiple origins and multiple maintaining factors, a combination of trait and learning theories (i.e., interaction theory) provides the most pragmatic basis for its explanation and consequent exploration. This theoretical perspective proposes that workaholism is most convincingly explained as a personal trait that is activated and then maintained by environmental circumstances. However, it is prudent to accentuate that the remaining theories may still provide valid explanations of the behaviour, but that their utility is constrained until more data are obtained. Thus, the present research assumed the following paradigms:

Definition: Workaholism involves a personal reluctance to disengage from work involving drive and enjoyment that is evidenced by a tendency to work or think about work anytime and anywhere.

Theory: Interaction theory – workaholism reflects a relatively stable personal trait that is activated and maintained by environmental stimuli.

CHAPTER 2

Review of the Literature

While research interest in workaholism has mushroomed over the last five years, most of the literature remains dispersed between multiple disciplines and poorly integrated into theoretical frameworks. Whilst these weaknesses are inherent in all new research endeavors, the recent surge in academic interest and resultant publications regarding workaholism suggest it is timely to adopt more coherent, rigorous and theoretically based methodologies. The present chapter therefore presents a précis of current methods of assessing workaholism, a summary of contemporary research data, a critique of recent research designs and an overview of the present research.

Contemporary Assessment Methods

Currently, the range of methods used for measuring workaholism is very narrow. With the exception of some anecdotal data (Robinson, 1998c), most research has employed quantitative paradigms. Additionally, sampling techniques have relied on convenience methods that have yielded largely homogeneous samples of students or degree qualified professionals. Finally, virtually all the designs have been cross-sectional, with the vast majority of data generated from self-reports using Likert-based pencil and paper methods. Thus most analyses are multivariate and predominantly correlational. (Specific measures of workaholism are outlined in detail in chapter three, which addresses measurement validation).

Briefly, as mentioned in chapter one, the most commonly used measure of workaholism has three scales; enjoyment, drive and work involvement, the latter of which is disputed. Currently therefore, as most data are generated from relatively simple 'one off' designs from homogeneous convenience samples, it is prudent remain mindful of these limitations while reading the next section on empirical data, particularly where the controversial work involvement factor of the Workaholism Battery is concerned.

The Nature and Characteristics of Workaholism

Given that workaholism research has generally progressed on an ad-hoc basis, it is imperative that researchers start creating meaningful frameworks for summarising and critiquing the increasing volume of data. The most parsimonious starting point is to use conventional psychological distinctions (e.g., antecedents, behaviour and consequences) as a preliminary framework then move beyond those to more specific areas as the field matures. However, it is worth noting that these three divisions are somewhat arbitrary and contain an implicit degree of overlap. Given this qualification, the following review will prepare for the rationale of the present research by summarising workaholism data in three sections; antecedents, workaholism behaviour and consequences.

Antecedents of Workaholism

As the majority of research has focused on describing rather than explaining workaholism, antecedents are currently the least understood aspect of workaholism. Traditionally, hypomania, obsessive-compulsive personality and

type A behaviour were thought to precipitate workaholism. For instance, workaholics were described as extremely afraid of inactivity and behaving in a manner that is intense, energetic, and characterised by an overwhelming zest for life (Klaft & Kleiner, 1988; Machlowitz, 1980; Naughton, 1987; Oates, 1971), that may be attributable to hypomania. Hypomania is a psychiatric disorder that involves an abnormally elevated mood, decreased sleep, flight of ideas and increased involvement in goal directed activities (American Psychiatric Association [APA], 1994). However, two separate studies have found only moderate correlations with hypomanic energy (r = .19 to .27), suggesting that it explains a much smaller proportion of workaholism than first thought (Clark et al., 1993; McMillan, 1998).

Workaholics have also been described as compulsive, with workaholism widely written about as a variant of obsessive-compulsive personality disorder. This psychiatric disorder involves preoccupation with perfectionism and control, at the expense of flexibility and efficiency, and is associated with stress and excessive work (APA, 1994; Naughton, 1987). However, given that the correlations with the disorder are not as high as the literature predicts (r_s = .25 with Drive, and a non-significant relationship to Enjoyment: McMillan, Brady et al, in press), it is more feasible that workaholism is better explained by *either* obsessiveness *or* compulsiveness: a proposition that remains untested.

Early research also implied that Type A behaviour, which involves excessive time urgency that results in increased cardiac risk, is an antecedent of workaholism. However, this may be a relatively tenuous proposition (Perez-Prada,

1996). Empirical data suggest that correlations vary widely from .16 to .50 (Perez-Prada, 1996; Robinson, 1996a). This disparity may be explained by the use of global indicators of Type A behaviour, which are now regarded as outdated by most researchers. In contrast, the contemporary conceptualisation of Type A behaviour suggests it contains two discrete elements - Achievement Striving and Impatience-Irritability (Spence et al., 1987; Spence, Pred & Helmreich, 1989).

In one of the first studies to concentrate on cognitive antecedents in workaholism, Burke (1999f, 2001b) investigated the predictive role of beliefs, fears, and perceptions. Burke proposed that there are two wellsprings of workaholism: individual differences (demographics, personality, family dynamics) and organisational characteristics (values that endorse work-personal life imbalance). The study utilised hierarchical regression analyses for three groups of predictors: a) individual antecedents (beliefs and fears, perceived organisational support), b) demographics (age, gender and relationship status) and c) work factors (seniority, size of organisation, and tenure at the organisation and in the role). The beliefs included striving against others, moral principles, and proving oneself. Each belief corresponded to a fear (e.g., "I believe there can only be one winner in any situation": fear of failure). Personal demographics did not predict workaholism components, and the (disputed) work involvement factor was unable to be predicted by any variable. Cognitive antecedents, such as beliefs, fears, and low perceptions of organisational support for work-home balance produced significant increments in drive. Cognitive antecedents, such as weaker beliefs and fears, and higher perceptions of organisational support for work-home balance

produced significant increments in enjoyment. Thus, cognitions appear to contribute to the development of the drive and enjoyment aspects of workaholism.

The second study to explore predictors of workaholism evaluated the role of job stressors in predicting workaholism. Kanai, Wakabayashi & Fling, (2001) proposed that workaholism was a mode of adapting to a stressful work environment (i.e., a learned response). The study utilised hierarchical regression analyses of scores on the Japanese version of the Workaholism Battery, which has two scales, enjoyment and drive (Kanai, et al., 1996). Participants were predominantly blue-collar Japanese males. Four groups of predictors were considered; a) demographics (age, education, marital status, company size, change of job), b) involvement variables (job time, job involvement, family time, family involvement), c) job stressors (work overload quantity and quality, role conflict and role ambiguity) and d) work-related behaviours (perfectionism and non delegation). Regression analyses showed that drive was predicted by demographics (company size, and marital status), two of the involvement variables (job time, job, family), job stressors (work overload, role ambiguity) and work-related behaviours (perfectionism and non-delegation). Enjoyment was predicted by age, all of the above involvement variables, workload, and role ambiguity. The data supported the hypothesis that workaholism represents a learned *attempt to adapt* to job stressors, in particular quality and quantity of work overload.

In addition to the empirical data, several theorists have speculated about the antecedents of workaholism. Scott, et al., (1997) suggested that workaholism

might be comprised of different subtypes, each of which may be related to a different set of antecedents. They also proposed several hypotheses, including adrenaline addiction, addictive genetic predisposition, inadequate personal control, and learning 'opportunities' that strengthen underlying predispositions (Scott et al., 1997). In addition, workaholism may also trace to poverty, conflict at home (negative reinforcement), a voluntary phase of working a few extra hours (positive reinforcement), or an underlying trait (e.g., compulsiveness) activated in late adolescence. However, while several parcels of research have confirmed the trait based links with workaholism, all used correlation statistics and failed to trace the relationship adequately to establish whether they were indeed antecedents, or rather, consequences of workaholism. More recently, Axelrod (1999) delineated the antecedents of workaholism as a developmental transition linked to the psychoanalytic process of the 'evolving self'; another concept that remains untested.

Behavioural Topography

Behavioural topography refers to the overt characteristics, structure and magnitude of behaviour. For example, the most frequently cited topographical definition of workaholism is "a desire to work long and hard (where) work habits almost always exceed the prescriptions of the job...and the expectations of the people with whom...they work (Machlowitz, 1980, p.1). However, while the topography of workaholism has been frequently discussed, this appears to be anecdotally rather than scientifically based, especially given the apparent lack of behaviour-observation studies. For instance, while early writers described workaholics as white-collar males who exhibited extremely poor balance between

work and homes, and worked extremely long hours (Oates, 1971), there appears to have been no subsequent attempts to actually quantify the overt behaviour in an objective manner. However, studies are starting to emerge which evaluate the topography in at least a correlational manner. Specifically, the empirical studies that have emerged over the last five years have focused on gender and work-life balance.

The issue of gender differences in workaholism has been an interesting one; while the stereotype generally purports workaholics to be males, most studies have contradicted this (e.g., Burke, 2000b). The Canadian study of managers described earlier took this a step further and investigated the relationship between workaholic behaviour and well being within genders. Females reported higher levels of perfectionism and job stress that related to lower levels of satisfaction and well-being, but were similar to males in terms of the three workaholism components (work involvement, drive and enjoyment; Burke, 1999d). This study involved a relatively large sample size, virtually equal gender split and an homogenous sample (across ethnicity, occupation and education).

The relationship between workaholism and the rest of life has been, until recently, the subject of much speculation, but little empirical testing. Bonebright, Clay & Ankenmann, (2000), proposed that workaholism upsets the balance between work and personal time, and conducted one of the first empirical studies into workaholism and work-life balance. They adopted Spence and Robbins' (1992) typology of workaholism, which is based on the controversial work involvement scale. The scale produced three profiles. Firstly, enthusiastic

workaholics (high work involvement / high enjoyment / high drive), work enthusiasts (high work involvement / high enjoyment / *low drive*) and, non-enthusiastic workaholics (high work involvement / *low enjoyment* / high drive). Three groups of dependant variables were considered; a) work-life conflict, b) life satisfaction c) purpose in life. Importantly, the data showed that the work involvement component related unpredictably to all three variables. Drive demonstrated stronger trends while enjoyment had a non-significant relationship with work-life conflict, but related significantly to life satisfaction and life purpose. Enthusiastic workaholics had higher scores for life satisfaction and purpose in life than the other types of workaholic. Although the authors argued that this provides persuasive evidence for continuing subtype distinctions in further research, given the ongoing debate concerning the validity of the work involvement component, it is important to stress that the accuracy and validity of these subtypes remains dubious. Thus, it is prudent to regard the findings as merely heuristic, rather than definitive, until further validation studies of Spence and Robbins' (1992) measure are published.

Porter (2001) proposed that a work addict is willing to sacrifice personal relationships to derive satisfaction from work, and compared people who derive high joy from work to perfectionists across three groups of variables; a) perceptions about organisational demands, b) perception of risk taking and c) beliefs about co-workers. In the sample of predominantly male, university-educated employees, there was no relationship between either group and demographics or perceptions of organisational demands, with only enjoyment relating (negatively) to risk taking. Those high in work enjoyment had consistently

positive, team-focused beliefs about co-workers. These data provide some interesting challenges to the negative conception of enthusiastic workaholics that was implied by Spence and Robbins (1992).

While empirical data have been slow in evolving, hypothetical speculation has not. For instance, Robinson postulated that 'abusive workers' (which he equated with workaholics) differ from 'healthy workers' by the degree that work interferes with health, happiness, and relationships, as they lack the key attributes of optimal performers (warmth, outgoing-ness and collaboration; Robinson, 1997b, 2000b). He has also claimed that workaholism involves 10 consistent patterns, three progressive 'stages' and four distinct subtypes (Robinson, 1996a, 1996c, 1997b, 2000a), none of which have been empirically validated. Based on a thorough review, comparison, contrast and critique of the literature, Scott et al., (1997) proposed three sub-types of workaholism; Compulsive Dependent (high stress; low job performance), Perfectionist (high psychological problems; low job satisfaction) and Achievement Oriented (low stress; high performance). The authors provided an extensive theoretical analysis of the typology and inherent conceptual issues, but the construct and external validities of their model remain unexplored. It is critical to emphasise that none of these propositions have been empirically tested. As Burke (2001a) and Robinson (2000a) both observed, we need a substantial body of investigative studies, using multiple techniques and tighter validation data before these ideas can be taken as fact.

Consequences of Workaholism

The consequences of workaholism have also been the focus of much conjecture, but limited scientific investigation. In general, however, the impact of workaholism is believed to extend to personal well-being, stress, health complaints, hours worked and family functioning. The corresponding research is addressed in detail below.

Well-being relates differently to the individual components of workaholism (Burke, 2000c). In a study of Canadian managers, the work involvement component was unrelated to any of the measures. Drive related positively to psychosomatic symptoms and job stress but negatively to lifestyle behaviour and emotional well being. Enjoyment related positively to lifestyle behaviour and emotional well-being and negatively to psychosomatic symptoms and job stress. Perhaps unsurprisingly, the workaholic subtypes (based on work involvement scores) experienced differing levels of well-being. In a more complex analysis of the same data set, Burke (1999c) found that the three components consistently accounted for significant increments in explained variance on psychological well-being and even stronger amounts of variance in work outcomes and extra-work satisfactions. However, enjoyment and drive appeared to have the most influence, with enjoyment fostering satisfaction and well-being, and drive yielding negative affect (Burke, 1999c). This trend was similarly evident in the female subset of the sample (Burke, 1999b).

Stress levels also appear to relate unpredictably with workaholism, depending on which component is measured (i.e., drive, enjoyment or work

involvement) and which measure is used. Spence and Robbins' (1992) research with social workers, and Elder's (1991) research with MBA graduates both found high positive correlations between drive and stress (r_s = .66 [male], .64 [female]). The relationship was slightly weaker, however, in two more recent samples (r = .42 [Perez Prada, 1996], r = .57 [Kanai et al., 1996]). Enjoyment currently holds an indeterminate relationship with stress; one study reported a negative relationship (Spence & Robbins, 1992), another has completely contradicted this (Perez-Prada, 1996), and two further studies have reported that the relationship did not approach statistical significance (Elder, 1991; Kanai et al., 1996). Attempts to explain these contradictions in terms of demographics (gender, occupation, ethnicity) do not reveal a consistent pattern. However, stress has related positively and significantly to the work involvement dimension in virtually all populations in which it has been measured (Elder, 1991; Perez-Prada, 1996; Spence & Robbins, 1992). Using a different measure, Robinson (1996a) reported a moderate, positive correlation between anxiety and workaholism (r = .40). Overall, therefore, workaholism and stress appear related, but the direction and magnitude of the relationship requires further investigation.

Data regarding the relationship between health complaints and workaholism are contradictory, varying largely from sample to sample and from country to country. As yet, therefore, the relationship remains unclear. For instance, health complaints appear to be consistently and positively related to drive across all of the samples and all of the countries studied, ranging from .23 (Burke, 1999a) to .38 (Spence & Robbins, 1992). Thus, workaholics particularly high in drive seem to suffer increased health problems. Data on the relationship

between health complaints and enjoyment however, are less clear. In the North American samples, health complaints were more evident in those with low work-enjoyment (Burke, 1999a; Spence & Robbins, 1992) but in a Japanese sample the relationship did not approach significance (Kanai et al., 1996). While it is possible that the issue lies with either cultural variables or the statistical validity of the scale, work involvement appears to have an unclear relationship with health complaints. Male social workers with high work involvement have also reported low health complaints although females have reported moderate levels (Spence and Robbins, 1992). Clearly, these data are contradictory, and given the small number of studies, could be attributable to cultural differences or spurious measurement error. Further exploration of the relationship is required before the direction and magnitude of the relationship with workaholism can be determined. In terms of health risk, however, workaholism does not relate significantly to other known health risks such as smoking and drinking (Kanai et al., 1996).

Hours worked, albeit an agreed criterion for the concurrent criterion validity of workaholism, are also the focus of substantial controversy. In particular, the magnitude of the relationship remains contested. Two key articles have stressed working hours as the critical defining feature of workaholism (Scott, et al., 1997; Spence & Robbins 1992). Conversely, qualitative data indicate that most workaholics strive to spend more time at home, which implies that time spent working is a misleading indicator of workaholism (Machlowitz, 1978). For instance, Spence and Robbins (1992) measured time commitment using a seven-item composite scale and reported significant correlations with workaholism (range = .28 - .63). However, the sole New Zealand-based study into workaholism

reported particularly low correlations between hours worked and enjoyment (.16), and drive (.22; McMillan, Brady et al., in press). Although the magnitude of the relationship between hours worked and workaholism remains uncertain, hours worked has consistently demonstrated significant positive correlations with workaholism across several other studies.

Robinson & Post (1997) proposed that workaholism leads to poor family functioning, which they measured with members of Workaholics Anonymous from conferences on workaholism. Dependant variables included family problem solving, communication, roles, affective responsiveness and involvement, behaviour control and general functioning. Overall, the group of high-risk workaholics reported significantly worse functioning in almost every aspect than the low and medium risk groups (Robinson & Post, 1997). A further investigation with female counselors revealed that workaholism had a negative impact on marital cohesion (Robinson, Flowers & Carroll, 2001). Outcome variables included marital disaffection (loss of emotional attachment, caring and desire for emotional intimacy), positive feelings, and physical attraction. Data were fitted to a structural equation model, which supported anecdotal observations of workaholism undermining marital stability. However, further testing is required to confirm the direction of this relationship; marital cohesion may be affecting workaholism (Robinson, et al., 2001). In fact, Burke (1999b, 2000a) found that workaholism is unrelated to divorce, but does result in lower extra-work satisfactions (family, friends, community).

Robinson (1998a, 2001b), in a review of family systems-workaholism literature, cited negative interaction in family dynamics as a consequence of workaholism and outlined the nature of these dynamics from a structural perspective (Robinson, 1998b). He also hypothesised that spouses become extensions of the workaholics' ego, pseudo-single parents, and become aggressing partners in a pursuer-distancer dynamic (1998a). Specifically, the spouse may approach the worker for more intimacy, the worker may retreat as they already feel overloaded, the spouse makes a further approach (pursuit) and the worker makes another retreat (distancing), and thus the cycle perpetuates itself. Again, these hypotheses have arisen from anecdotal experience gained in counseling self-nominated workaholic families and remain scientifically untested. Finally, in a broader systems analysis, Robinson (2000b) proposed that workaholics' spouses have ten characteristics. They feel: a) ignored, b) lonely, c) second-rate, d) subsumed to workaholics' demands, e) controlled, f) a need to seek attention, g) their relationships are too serious, h) guilty, i) defective and j) uncertain about their sanity. Given that these descriptions appear somewhat value-laden, they warrant further empirical attention, lest they become 'taken as fact' by the general public without prior scientific verification.

Summary

Overall, the data indicate that workaholics have moderate levels of obsessive compulsiveness and hypomania, and varying degrees of Type A behaviour. Known antecedents of workaholism include cognitions and workplace stressors. Workaholism behaviour is relatively evenly distributed between genders, with drive more strongly associated with work-life balance and

enjoyment associated with team-focused beliefs. The negative consequences, such as psychosomatic symptoms, stress and health complaints, are also more strongly associated with drive, and appear to affect children of workaholics and family functioning. Overall, the enjoyment factor appears associated with more positive outcomes. However, these data are constrained by some important strategic weaknesses that are addressed in the next section.

Critique of the Current Literature

The current research findings are limited in their generality by four important strategic constraints. These are: (a) homogeneous sampling (b) a narrow repertoire of methodologies, (c) the nature of variables studied, and (d) number of variables studied. Each of these constraints is outlined in more detail below.

Homogeneity of Sampling

Our scientific understanding of workaholism appears to be relatively restricted. The majority of data has been collected by, and pertains to, samples of North Americans. Furthermore, the majority of research designs have employed homogeneous samples, largely students, members of Workaholics Anonymous, or degree qualified professionals (Clark et al., 1993; Robinson & Post, 1995a; Robinson & Post, 1997; Spence & Robbins, 1992). Naturally, these biases confound generality; the experiences of the tertiary qualified (and therefore presumably high earning, with challenging jobs) are unlikely to be relevant to manual workers (who presumably earn less and have more repetitive jobs). Furthermore, student populations exhibit unique characteristics (such as extremely

low income and late-adolescent maturation crises), while populations of Workaholics Anonymous are self-selected and likely to be highly skewed toward workaholism. Presently, therefore, generalisation from these data remains dubious.

Repertoire of Methodologies Employed

With the exception of Machlowitz' (1978) unpublished doctoral study which used a qualitative methodology that incorporated a small number of semi-structured telephone interviews, research designs have been largely limited to questionnaire-based assessment of convergent constructs. Consequently, contemporary scientific knowledge is limited to largely uni-dimensional self-reports. Unfortunately this is a method notorious for incorporating systemic bias. We do not know, for instance, how much of workaholic behaviour occurs outside of the structured employment environment (e.g., thinking about work while watching the television at the end of the day), as these behaviours would not have been captured by the current measurement methods.

Importantly, there are no reported studies that utilise multiple informants (such as spouses and colleagues) or multiple methods (such as questionnaires and time diaries). It is unclear, therefore, how the person doing the behaviour regards workaholism, and whether partners and colleagues are more affected than the workers. Finally, given that workaholism is widely written about as an addictive disease, the lack of contrasted groups and longitudinal data is quite remarkable. Thus, while both popular and academic literature point to the adverse impact of workaholism, the direction and magnitude of the effect remains poorly explicated and without empirical validation.

Nature of Variables Studied

Whilst many correlates of workaholism have been investigated, much of the potentially relevant data are fragmented throughout multiple disciplines. Accordingly, the data is characterised by a fundamental weakness: lack of construct validation of 'workaholism' itself, and of its utility in describing behaviour. The range of variables that have been studied is relatively restricted, which has hindered scientific parsimony and operational clarity. For example, it is feasible (but as yet unexplored) that workaholic behaviour may be more *parsimoniously* defined as an expression of a basic behavioural repertoire such as habitually delaying gratification, or more *accurately* defined as a variant of a broader response category such as competitiveness.

It is also remiss, given the implicit connotation that workaholism involves more time spent working than formally required, that research has not addressed the impact of workaholism on time 'outside of work' (i.e., 'lifespace'). We do not know for instance, how much of workaholic behaviour occurs outside of the structured employment environment (e.g., thinking about work while watching the television). Nor do we know whether workaholics allocate less time to factors such as diet and exercise. Consequently, researchers are not equipped with an integrated, concise theoretical conceptualisation of workaholism and what it *includes* and *excludes*. Thus, there is a need for more diverse data regarding work patterns, leisure patterns, intrapersonal well-being and interpersonal relationships.

Number of Variables Studied

Generally, research has focused on only three to four variables at a time, typically a combination of anxiety, depression and workaholism. Thus, the field is equipped with few multivariate analyses of the nature and parameters of workaholism, particularly with respect to behaviour *outside of work.* Furthermore, the relative lack of theoretical integration means that many of these variables and the data concerning them have not been integrated into cohesive theoretical frameworks. These factors suggest that the adoption of innovative research designs (which have been used successfully in many other disciplines within psychology) could allow a broader range of variables to be studied and quantify the parameters of workaholism more comprehensively than the present questionnaire-based measures do.

Overview of the Present Research

As outlined, workaholism research has arisen in a relatively haphazard manner, largely based on hypothetical writings and stereotypical views. The empirical literature remains scant and limited in its scope, with only one New Zealand based study (McMillan, Brady et al., in press). Importantly, there is also a lack of essential scientific tools, such as a consensual and empirically validated operational definition, while the number and nature of variables studied have been narrow and poorly integrated into theoretical frameworks. Thus, the present research aimed to address some of these weaknesses by commencing with a feasible theoretical explication then adapting well-validated measurement paradigms from other aspect of scientific research to examine the nature of

workaholism in New Zealand. The broad research question was; How does workaholism impact on a person's life?

From hereon, the thesis comprises four remaining chapters: (a) a précis of psychometric measures and convergent constructs followed by the method, results and summary of the data from study one, (b) a précis of the impact of workaholism followed by the method, results and summary of study two data, (c) a précis of the longitudinal stability of workaholism followed by the method, results and summary of study three data and the content analyses, and (d) a discussion that contextualises the results within the current literature and proposes future research directions. The entire document therefore comprises six chapters that investigate the impact of workaholism on peoples' lives using the following paradigms:

Objective: The research aims to quantify the impact of workaholism on people's lives in a manner that redresses the existent homogeneous sampling bias, employs innovative methodologies, and studies diverse, multiple variables.

Variables: The impact of workaholism will be measured across four categories of variables (work patterns, leisure patterns, intrapersonal well-being and interpersonal relationships) as detailed in subsequent chapters.

Methodology: Repeated measures using triangulated data and time diary data with contrasted groups over a longitudinal timeframe.

CHAPTER 3

Study One: Measurement Validation

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 (Clark & Watson, 1995). Unfortunately, however, the issue of measurement validation is one that has plagued the early development of workaholism research and substantially restricted generality. Given that accuracy is a basic scientific tenet based on the principle of 'philosophic doubt', it is imperative for scientists to explore alternative explanations for the behaviours that they observe and systematically eliminate plausible alternatives (Cooper, Heron & Heward, 1987). Consequently, both logically and scientifically it is prudent to ensure that workaholism cannot be explained by *more generic* socially or culturally mediated constructs. Currently, however, the literature does not indicate whether workaholism is merely a sub-set of a more generic behaviour or an independent construct.

Given that parsimony is a basic tenet of science, it is accordingly imperative for scientists to rule out the simplest explanations first (Cooper et al., 1987). Logically, therefore, it is also important to ensure that workaholism cannot be more parsimoniously defined as a *more specific* basic behavioural repertoire (e.g., obsessive thinking) that acts as a 'building block' for the syndrome. However, the literature does not indicate whether workaholism is a 'catch-all' for more discrete behaviours, or a separate construct. Accordingly, the present chapter

commences with a review of current workaholism measures and an in-depth critique of the main measure used in the present research, followed by a review of the relevant generic and specific constructs, then the method, results and a preliminary discussion of the data from study one.

Review of Workaholism Measures

While the first empirical measure was developed more than 20 years ago by Machlowitz (1978), neither it, nor four of the subsequent measures by Haymon, (1992), Killinger, (1991), Minirth, Meier, Wichern, Brewer and Skipper (1981), or Stewart (1986) has been scientifically validated. These measures will not be discussed further in the current context. Currently, therefore, there are four scientifically based measures: The Work Addiction Risk Test, the Schedule for Adaptive and Nonadaptive Personality, the Mudrack & Naughton Behavioural Scales, and the Workaholism Battery.

Work Addiction Risk Test

The oldest of the three empirically confirmed measures is the Work Addiction Risk Test (Robinson, Post & Khakee, 1992a). The test is a family therapy based, 25-item measure that is rooted in the addiction paradigm, and taps predominantly Type A behaviours (i.e., *life in general,* as opposed to *work-specific* behaviour). Typical items include things never moving fast enough, needing to be in control, forgetting important personal events, and spending a lot of time thinking about the future. While the test appears to have substantial reliability (Robinson & Post, 1995a) and reasonable consistency ($\alpha = .85$),

psychometric precision has not yet been convincingly established (distributions are narrow and positively skewed). In particular, despite copious brief reports of the test's psychometric properties, almost all data are contaminated by sample bias. This has arisen from using non-normative samples, predominantly students and members of Workaholics Anonymous recruited from workaholism conferences, during validation (Robinson, 1996a; Robinson & Post, 1994; Robinson, Post & Khakee, 1992). Additionally, items suggest that face validity and construct validity are problematic, especially with respect to the assumed degree of overlap with Type A behaviour ($r = .50$), and the untested assumption that the measure comprises four distinct sub-scales (Robinson, Flowers & Carroll, 2001). Furthermore, convergent validity is weakened by the failure to empirically substantiate the links to conventional addiction criteria (such as the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition [*DSM-IV*]; APA, 1994). Importantly, given the test purpose of identifying those at *risk* of developing work addiction, there have been no reports into the criterion validity of the test. Thus, validity has not been convincingly established.

The Schedule for Nonadaptive and Adaptive Personality Workaholism Scale

The Schedule for Non Adaptive and Adaptive Personality Workaholism Scale is an 18-item forced-choice (true / false) instrument that assumes a degree of overlap with obsessive-compulsive personality disorder (Clark, et al., 1993). Typical items include driving oneself hard, pushing oneself to the limits, neglecting other aspects of life, enjoying work more than play and aiming at perfection. The scale appears to have substantial face validity and has been tested on student, counselee and inpatient populations (Clark, et al., 1993; Clark et al.,

1996). The scale was developed using classically based iterative, psychometric validation. Construct validity has been rigorously tested using psychological experts, principal components and varimax rotated factor analyses, with a clear espousal of the links to the *DSM-IV* criteria for Obsessive Compulsiveness, and thus trait theory. The scale has high internal consistency (α = .76 - 85; Clark, et al., 1996), good split-half reliability and demonstrates convergence with an alternate measure of workaholism, the Workaholism Battery (McMillan, Brady et al., in press). However, convergent and discriminant psychometric specificity have not been reported, and the use of a dichotomous format to assess a construct that is widely regarded as having a dimensional structure contradicts the majority of the literature on workaholism (Scott, et al., 1997). Perhaps due to this, the measure is not widely used by researchers. Given the constraints imposed by the resultant lack of empirical data, the measure was not considered further in the present research.

The Mudrack and Naughton Behavioural Scales

On the presumption that other workaholism scales measure attitude and affect rather than overt behaviour, Mudrack and Naughton (2001) have recently developed two new scales to measure the behavioural aspects of workaholism. They proposed that workaholism comprises two key elements; non-required work and interpersonal control. A confirmatory factor analysis supported the structure of the measure, while relations with external criterion supported the empirical utility of the scales. However, some qualifications apply. The sample worked excessive hours, were well educated, 46% had management-type roles and therefore more likely to assert control at work, and methodologically independent

criterion were not used (e.g., direct observation). Thus, a promising start was made, but further validation is required. As the measure was published after the present research had concluded, it is not discussed further in the present context.

The Workaholism Battery

The most widely utilised instrument is the Workaholism Battery (Spence and Robbins, 1992), which is a 25-item self-report questionnaire comprising three scales that are described in more detail in the upcoming section. Typical items include spending free time on projects and activities, having an inner compulsion to work hard and enjoying work so much it is hard to stop. The measure has relatively convincing psychometric properties (α = .75 – 85), including adequate content validity, considerable face validity, acceptable convergent validity (e.g. job involvement, hours worked), and broad cultural applicability (e.g., America, Japan, Canada, Australia and New Zealand; Burke 2001b; Kanai et al., 1996; McMillan, Brady et al., in press; Spence & Robbins, 1992. However, a degree of controversy exists over the internal factor structure. The first two scales have been replicated in two separate factor analyses (Kanai, et al., 1996; McMillan, Brady et al., in press) and have repeatedly demonstrated acceptable alpha coefficients across a broad range of populations. Conversely however, the work involvement scale appears more problematic; two separate factor analyses have not replicated the factor (Kanai, et al., 1996; McMillan, Brady et al., in press). However, as the scales are supported by the broadest range of empirical data and continue to be used in research, they are discussed in more detail in the next section.

Summary

It is clear from the preceding review, that there is no 'gold standard' measure in workaholism research. Both the Work Addiction Risk Test and the Mudrack and Naughton Behavioural scales require more sophisticated validation analyses, while the Schedule for Non-adaptive and Adaptive Personality Workaholism Scale is under-utilised, and therefore difficult to gauge. Therefore, while the Workaholism Battery certainly has some drawbacks, it is supported by the broadest range of data and is generally the instrument of choice in contemporary workaholism research. On this basis, the Workaholism Battery was elected for use in the present research, although one of the primary aims was to conduct further analyses to ascertain the internal structure before proceeding to the remaining research questions. Thus, the properties of the Workaholism Battery (hereon referred to as the WorkBAT) are outlined in more detail below.

Psychometric Properties of the Workaholism Battery

Conceptual Basis

To date, Spence and Robbins (1992) have conducted the most comprehensive and widely cited empirical investigation into a workaholism measure. Firstly, they conceptualised workaholism as a stable trait which involves (a) a high degree of commitment to work, (b) a good deal of time spent working, and (c) a compulsion to work even when it is not necessary. Secondly, they deductively generated a tripartite model of workaholism that involved three core variables: Work Involvement (WI), Work Enjoyment (E), and Drive (D). They

then operationally defined workaholism as comprising *comparatively* high WI and D combined with low E scores and deductively developed a corresponding 3-scale measure (the Workaholism Battery [WorkBAT] Spence & Robbins, 1992). The measure was then used to profile workaholics (without prior validation to confirm that the scores actually clustered or factored into three distinct scales).

Importantly, they created cluster analyses by participant groups (to test profiles), rather than *items* (to test subscales), which means that the construct validity of the measure remained unconfirmed. Essentially, therefore, elaborative validity (i.e., generalisation validity) was tested before representational validity (i.e., construct validity) had been established (Foster & Cone, 1995). It is important to iterate that cluster analysis is most reliably used as a simple heuristic for creating profiles and grouping individuals with similar characteristics (Jackson 1983), but relies heavily on subjective interpretation and establishment of 'cut-off' points in interpreting the clusters. Consequently, and perhaps not surprisingly, the profiles that the scales generated have been the subject of much debate, and have not been replicated in some subsequent analyses (McMillan, O'Driscoll & Burke, in press). Only one previous New Zealand based study exists which was unable to confirm the three-factor structure (McMillan, 1998). Given that a fundamental goal of scale development is to maximise validity rather than merely reliability, a systematic construct validation of the WorkBAT was therefore a vital pre-requisite to further research.

Existing Validation Data

In general, however, the broad psychometric properties of the WorkBAT are relatively convincing. Content validity is supported in part by the design process: The measure was deductively constructed from literature reviews, trialled on 130 students, and validated on a group of 140 students and a sample of 291 employed social workers (Spence & Robbins, 1992). Face validity is considerable, especially given the 5-point likert response format, which allows a dimensional response to indicate behaviour that appears to exist on a continuum (McMillan & O'Driscoll, 2000). In addition, internal consistency is generally adequate ($\alpha = .67$ to .86; Spence & Robbins, 1992) and convergent validity has been established with job involvement, health complaints, hours worked, perfectionism and non-delegation of tasks (Spence & Robbins, 1992).

While a reasonable body of reliability data supports the Battery, however, confirmatory analyses investigating construct validity have not yet been reported. Additionally, two of the initial studies on the WorkBAT involved a reasonable gender mix, but contained only university educated participants (Elder, 1991; Spence & Robbins, 1992), and while the studies that have involved random levels of education they contained at least 85% males in each (Kanai et al., 1996; Kanai & Wakabayashi, 2001). Thus, there is also a need for validity data on the WorkBAT that is based on a representative sample in terms of gender, range of education and breadth of occupation.

The Three Workaholism Battery Scales

Work Involvement

WI is a generalised attitude relating to psychological involvement with *work in general* (Elder, 1991), which reflects the degree to which a person wants to be engaged in work (Kanungo, 1982; Warr, Cook, & Wall, 1979). It is important to reiterate the qualification from chapter one, that in the context of the WorkBAT this is a workaholism-specific definition that is not intended to be confused with the more traditional industrial and organisational psychology construct of work involvement. The WI scale has yielded only relatively moderate internal consistency, with Cronbach's alpha values ranging from .67 - .81 (Burke, 1999e; Elder, 1991; Perez-Prada, 1996; Spence & Robbins, 1992). While Spence and Robbins hypothesised that WI was high in all forms of workaholism, its role in workaholism, as previously outlined, is not so clear-cut. Kanai et al (1996) examined the WorkBAT in a large sample of predominantly male Japanese workers where there was a substantial overlap between WI and D, and found that WI was unable to be produced by a factor analysis (Kanai et al., 1996). A second study on a nationally based New Zealand sample (n = 320) replicated the Japanese findings, with factor analyses producing only two factors; E and D (McMillan, Brady et al., in press).

These failures to replicate WI are perhaps not surprising, given its frequently low alpha values (e.g., .69, .67 [Spence & Robbins, 1992], .67 [Burke, 1999a], .68 [Perez Prada, 1996], .81, .68 [Elder, 1991]), and conceptual vagueness. In a comprehensive review, Scott et al. (1997), proposed that workaholism represents a pattern of behaviour specific to work, whereas

traditional conceptualisations of work involvement refer to an overarching attitude or normative belief that is similar to the Protestant Work Ethic. Thus a person may be highly involved in work, yet not necessarily workaholic (Scott et al., 1997). For instance, 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, a workaholic would be expected to work, or think repeatedly about work, even after returning home. It appears, therefore, that the WI scale does have some relevance to workaholism, as correlations with drive are typically in the .40-.55 range, with enjoyment up to .40 (Burke, 1999a; Elder, 1991; McMillan, 1998; Perez-Prada, 1996; Spence & Robbins, 1992). However, the magnitude of these correlations suggests that it is feasible that WI may approach conceptual redundancy in operationally defining workaholism, especially as the correlations reported were not corrected for measurement error.

Work Enjoyment

The E scale measures the level of excitement or pleasure that individuals experience with respect to their work. E has repeatedly demonstrated high internal consistency: Cronbach's alpha values across different studies range between .84 and .89 (Elder, 1991; Kanai, et al., 1996; Perez-Prada, 1996; Spence & Robbins, 1992). Spence and Robbins (1992) proposed that E was low in one sub-type of workaholics, but high in two other two sub-types of workaholism. However, the conceptualisation of any form of workaholism as involving low enjoyment is rather a contentious position. For instance, despite being at *opposing extremes* on their E scores, two of Spence and Robbins' (1992) workaholic subtypes were associated with relatively high levels of job stress, non-delegation of tasks, health

complaints and time commitment to work (Spence & Robbins, 1992). Furthermore, Machlowitz (1980) observed very high levels of enjoyment among workaholics, while anecdotal evidence suggests only *some* workaholics have low enjoyment in their work (Scott et al., 1997).

Interestingly, E was unable to be confirmed by factor analysis in a study of predominantly male manufacturing employees whose occupations ranged from factory staff to internal management (Perez-Prada, 1996). Factor analyses from previous New Zealand research on workaholism suggest that E is *high*, not low, in that particular sample (McMillan, Brady et al., in press). Thus, contrary to Spence and Robbins' (1992) contentions, it is feasible that high, rather than low E is characteristic of workaholism. In sum, given the literature regarding positive correlations between work commitment and work enjoyment, it would seem logical to assume that many workaholics do indeed derive high enjoyment from their work.

Drive

The D scale reflects an inner pressure to work that is maintained by internal factors such as fulfilment, rather than external pressures such as money (Elder, 1991; Porter, 1996), and is proposed to be high in Work Addict sub-types (Spence & Robbins, 1992). This position has support from the scientific research and from the overwhelming majority of popular press articles on the phenomenon. The scale has yielded variable internal consistency, with alpha values (for males and females respectively) of .67 and .81 in the original sample of social workers (Spence & Robbins, 1992), .78 and .75 in a sample of MBA graduates (Elder,

1991), .77 in manufacturing employees (Perez-Prada, 1996) and .72 and .51 in a Japanese sample (Kanai et al., 1996).

Operational Specificity of the Workaholism Construct

As mentioned, it is imperative to first clarify the operational specificity of the workaholism construct before generalising from the data gained via the measure. Currently there are four *generic constructs* (which represent a socially mediated or cultural ethos) and three more *specific constructs* (which represent a trait-based approach) that influence work behaviour and could explain workaholism. These alternative explanatory constructs are discussed below.

Generic Explanatory Constructs

Specifically, it may be viable to conceptualise workaholism as an ethos, or set of values that influence behaviour, such as a *general* attitude toward work, leisure, achievement or time. Each is discussed separately below.

Work Ethic

The Protestant Work Ethic is a set of values involving the importance of work over leisure, frugality with money, productivity, self discipline, loyalty, honesty and 'good character' (Furnham, 1990) that has underpinned much of the American work ethic, the puritan ethic and the spirit of capitalism (Cherrington, 1980). There is substantial literature suggesting that workaholism and the work ethic may overlap. Cherrington (1980), for instance, proposed that workaholism occurs when a person has a distorted (extreme) work ethic arising from an

uncontrollable compulsion. The work ethic also relates positively with many of the correlates of workaholism such as job involvement (.38), organisational commitment (.42), work involvement (.44), occupational commitment (.25) and hours worked (.12; Furnham, 1990).

However, there may be some important differences between the work ethic and workaholism. Firstly, the work ethic refers to a set of beliefs, encompasses all facets of a person's life, and acknowledges *socio-political influences*. In contrast, workaholism refers to work-specific behaviours that are *individually based.* As Cherrington, (1980) noted, neither is the work ethic characterised by the elements that typify workaholism, such as compulsion, an irrational commitment, or excessive work. Additionally, the work ethic is a set of beliefs that pervade the whole of life whereas workaholism is a psychological variable that is specific to work (Furnham, 1990). While all people who are workaholic are likely to have a strong work ethic, not all people with are strong work ethic are necessarily workaholic. Thus, the work ethic would be expected to relate positively to workaholism but not totally overlap with it, and thus fall within the bounds of convergence (Furnham, 1990).

Leisure Ethic

Both scientists and business authors have both suggested that workaholism may arise to compensate for unsatisfying leisure (Evans & Bartolome, 1980; Staines, 1980). For instance, Oates (1971) suggested the best way to identify a workaholic is to look at how they spend their leisure time, while Machlowitz (1981) proposed that workaholics avoid leisure until they 'forget' how to do it.

Other authors have suggested that workaholics had forgotten how to play (Dart & Tucker, 1990; Topolnicki, 1989), and perceive leisure as a burdening, valueless time in which nothing is achieved (Klaft & Kleiner, 1988). Some contend that workaholics are unable to find rewards or leisure outside of working life (Anthony, 1994), as they become married to work and divorced from other realms of life (Ishiyama & Kitayama, 1994). However, as Trueman (1995) observed, workaholics have little time for leisure but participate in diverse leisure activities. Machlowitz, 1980, also observed that workaholics tackle leisure with the same passion as work, and thus blur the boundaries until play *is* work. In the main, however, the majority of the literature suggests that workaholism would relate negatively to a measure of leisure satisfaction.

Achievement Ethic

An alternative explanation of workaholism is that it may arise from an achievement ethic that propels people to work excessively. Fassel (1992) argued that accomplishments are the primary way workaholics use to know who they are. Robinson (1998c) also argued that workaholics only feel as good as their last achievement and seek their identity through accomplishments. Moreover, some have argued that a capitalist focus on competition for jobs and occupational achievements, breeds workaholics and creates an unending drive toward success (Cantarrow, 1979). Klaft and Kleiner (1988), however, contended that workaholics are addicted to *work* itself, not the physical results (i.e., achievements) of work. Thus it is feasible that all workaholics are achievement oriented, but not all achievement-oriented people are workaholic. On this basis, the achievement ethic would be expected to relate strongly to workaholism.

Time Ethic

Robinson (1989, 1998c) has written extensively about workaholics' attitude toward time, proposing that they are intolerant of waiting and are impatient and irritable when delayed. Oates (1971) observed that children of workaholics described their parents as irritable, while Machlowitz (1980) noted that many of her workaholic participants were 'most impatient.' Haymon (1992) has also reported a tendency for workaholics to be intolerant and emotionally irritable. While Robinson's data repeatedly demonstrate a strong relationship between time-related impatience and workaholism, this might be due to conceptual overlaps with Type A behaviour in his measure. It appears likely, therefore, that an underlying belief about the primacy of time and impatience about wasting it may underlie workaholism. Thus a measure of Impatience-Irritability could be expected to relate positively to workaholism.

Specific Explanatory Constructs

Contemporary data suggest it is also feasible that workaholism may also be explained by more *specific* constructs. In particular, it may be explained by *either* obsessiveness *or* compulsiveness, as it correlates positively with obsessive-compulsive personality disorder (McMillan, O'Driscoll, et al., in press; Naughton, 1987). This disorder involves a preoccupation with perfectionism and control at the expense of flexibility and efficiency, and is associated with stress and excessive work (APA, 1994; Machlowitz, 1980; Naughton 1987; Seybold & Salomone 1987). However, while obsessive compulsiveness appears to be one of the most frequently hypothesised correlates of workaholism, only two empirical

studies each of which noted only moderate correlations with workaholism, have been conducted (Clark et al., 1993, McMillan, Brady et al., in press). Thus it is feasible that specific subset behaviours of obsessive-compulsiveness (obsessive thinking, compulsive finishing and delayed gratification) could better explain workaholism. Each of these is addressed individually below.

Obsessive Thinking

Obsessiveness (perpetual thinking about work) may explain the 'psychological absence' shown by some workaholics after working hours (Machlowitz, 1980). Obsessive thinking about work after-hours may provide a simple, succinct and adequately scientific explanation for workaholism. For instance, workaholics apparently think about work a disproportionate amount of time, even during social and leisure activities (Robinson, 1998c), perhaps because they take unfinished work home inside their heads (Farrar, 1992). Some authors have suggested that workaholics have trouble staying in the here and now, because they are either in the past or future inside their heads (Fassel, 1992). Others have argued that workaholics have trouble falling asleep at night as they are thinking about work (Alpert, 1994), start thinking about work immediately the alarm rings (Farrar, 1992) and appear motionless even though their heads are racing (Fassel, 1992). This theme of obsessive thinking has been particularly strong, with the more extreme views including that it is the inability to *stop* thinking about work that differentiates workaholics from others (Killinger, 1991) and that workaholics learn to think about work in order to 'sneak' in a little work on the side (Oates, 1968). On this basis, the literature suggests that obsessive thinking should relate positively to workaholism.

Compulsive Finishing

Compulsiveness (the habitual completion of work tasks each day before leaving) may also explain excessive working. Compulsive finishing of work related tasks might provide a succinct and pragmatic explanation of the behaviour. Farrar (1992), for instance, contended that workaholics have tremendous difficulty with unfinished tasks, as they cannot leave work without completing things first. Other authors have re-iterated this, suggesting that workaholics insist desks are clear and in-trays empty before going home (Killinger, 1992; Robinson, 1998). Perhaps the strongest viewpoint has been that of Engstrom and Juroe (1979), who contended that workaholics have difficulty leaving tasks unfinished due to a neurotic need to finish what is started that gives rise to an unhealthy and compulsive ritual of task completion. Clark et al., (1996) reported a correlation of .41 between compulsivity and the SNAP-Work measure of workaholism across two different samples. Thus, compulsive finishing would be expected to relate positively to workaholism.

Delayed Gratification

Delayed gratification refers to the degree to which people defer an immediate reward in favour of waiting to earn a better, but more distant reward (Ray & Najman, 1985). Examples of this include saving money for future use, planning in advance and waiting for rewards. Delayed gratification may explain some of the excessive preoccupation with work involved in workaholism, especially as the tendency to hoard resources for later (i.e., delayed gratification) is typical of obsessive compulsive personality disorder. Workaholism, for instance,

may be explained by delaying leisure, in favour of working now. Several authors have argued that workaholics delay family meals, holidays, and even retirement by continually telling themselves that when the current activity is finished they will slow down (Alpert, 1994; Engstrom & Juroe, 1979; Machlowitz, 1980; Robinson, 1998c). Others have suggested that workaholics begin to sacrifice leisure and pleasure in the early years in favour of work, but it later becomes a habit (Klaft & Kleiner, 1988). Compulsive postponement of reinforcers has also been implicated as one of the causal mechanisms underlying workaholism (Naughton, 1987). On this basis, delayed gratification may explain a significant proportion of workaholism and would be expected to converge positively with workaholism.

Design Issues

Currently, scientific knowledge about workaholism is characterised by some important shortcomings. Firstly, there is a need for additional data that are sourced from a representative sample to justify the abbreviation of the original 25-item WorkBAT to its 14-item counterpart proposed by McMillan, Brady et al (in press). Specifically, performing a further factor analysis on another New Zealand data set would provide substantive evidence for the construct validity of using the WorkBAT in its revised form (i.e., the WorkBAT-R). If the confirmatory factor analysis replicated the previous McMillan, Brady et al (in press) and Kanai et al (1996) findings, this would provide a definitive basis for rejecting the tripartite WorkBAT structure, and in particular the WI factor. Secondly, there is a need for broad sampling techniques to address homogeneity biases. Specifically, utilising a heterogeneous sample that was full-time employed (rather than students), not

necessarily degree qualified and nationally based would address these concerns. Thirdly, the operational specificity of the construct needs clarification. Researchers would benefit from an analysis of the overlap (and potential redundancy) between workaholism and broader categories of responding, such as the Protestant Work Ethic. Lastly, we need empirical data regarding the parsimony of the construct by eliminating plausible alternatives, such as obsessive thinking.

The present study therefore aimed to fulfil four requirements: (a) to ascertain statistical confidence in the WorkBAT on a representative sample of New Zealand employees, (b) to provide baseline data for the longitudinal studies, (c) to provide a sample from which to purposively select research participants for study two and (d) to determine the operational specificity of the workaholism construct. Overall, therefore, the following predictions were made:

(a) The two-factor structure of the WorkBAT would be replicated in a representative sample.

(b) The generic constructs would converge with workaholism, but as workaholism is a discrete construct the correlations would be only moderate. Specifically, it was expected that the Protestant Work Ethic, achievement ethic and time ethic would relate positively to workaholism and that the leisure ethic would relate *negatively* to workaholism.

(c) That the specific constructs would converge with workaholism, but as workaholism is a discrete construct the correlations would be low (because workaholism is composed of an aggregate of behavioural repertoires). Specifically, it was expected that obsessive thinking, compulsive finishing and delayed gratification would relate positively to workaholism.

Method

Sample

Five companies consented for questionnaires to be distributed to their staff, meaning that the sample comprised only people who were of working age. The companies included a private hospital, plastics manufacturer, financial services institution, mobile communications distributor and a dairy industry manufacturer. Questionnaires were distributed to all employees (n = 1000), with 421 returned, which yielded a response rate of 42%. Participants self selected by voluntarily returning written questionnaires.

The sample included 228 males and 191 females aged between 17 and 63 (M = 35 years, SD = 10.1), which on a proportional basis was comparable to census data taken on the New Zealand population (Statistics New Zealand, 1996). There were more people in long-term relationships (65%) than the Census population (57%), but this was expected given that only working age people were sampled. Demographically, the sample was representative of employed New Zealanders in terms of gender, age, highest qualification, and, with the qualification that Maori were slightly under-represented, ethnicity. As summarised in Appendix A, participants reported working slightly less hours per week on average (M =38.2, SD = 6.38) than the census population (M = 39.2 hours). Importantly, they earned considerably more income. Specifically, 18% earned more than $70,001, while only 5% of the full-time employed Census population earned at that level.

Measures

Workaholism

The WorkBAT is a 25-item self-report questionnaire that had a 5-point likert (disagree/agree) response scale (Spence & Robbins, 1992). Anchor points were extended to 7-points to provide greater discrimination between responses, and mean scores were calculated for each scale to facilitate comparisons across the disparate measures used in the research. The three WorkBAT scales are described with accompanying psychometric data below. Specific items are listed in Appendix B (see Section B, titled 'Your Work').

Work involvement. The WI scale had eight items, which typically referred to using time constructively, getting bored on vacation and having difficulty relaxing. Three items were reverse scored (B1, B6, B8). Responses were summed then reversed so high scores reflected high levels of WI. The alpha value was .60, split half reliability .54 and average interitem correlation .17. The mean score was near the midpoint (4.0) of the scale ($M = 4.09$, $SD = .87$), with the scores normally distributed (skew= -.02, $w = .99$, $p = .62$). Whilst the theoretical range of mean scores item was 1-7, the actual range was 1.38 to 6.63.

Work enjoyment. The E scale had 10 items, which typically referred to losing track of time when involved on a project, enjoying work so much it was difficult to stop and liking work more than most people. One item (B11) was reverse scored. Responses were summed, and then reversed so that high scores reflected high levels of E. The alpha value was .87, split half reliability .81 and

average interitem correlation .41. The mean score was slightly above the midpoint (4.0) of the scale ($M = 4.95$, $SD = 1.11$), with scores negatively distributed (skew = -.41, $w = .96$, $p = .00$). Whilst the theoretical range of mean scores per item was 1-7, the actual range was 1.30 to 6.90.

Drive. The D scale contained seven items that typically referred to feeling obliged to work hard and thinking about work even when wanting to get away from it. Responses were summed, and then reversed so that high scores reflected high levels of drive. The alpha value was .73, split half reliability .67 and average interitem correlation .29. The mean score was slightly above the midpoint (4.0) of the scale ($M = 4.86$, $SD = 1.03$), with the scores negatively distributed (skew = -.62, $w = .96$, $p = .00$). Whilst the scale had a theoretical mean range of 1 - 7, the actual range was 1.29 to 7.00.

Work Ethic

The work ethic was measured with the Protestant Work Ethic scale, which assessed the degree to which individuals tended to see work as character building, desirable activity in its own right, and felt uneasy when there was little work to do (Mirels & Garrett, 1971). The scale comprised 19 questions with a 7-point response scale ranging from strongly agree to strongly disagree (see questions 1-19 in subsection D of Appendix B). Responses were summed and a mean score calculated, where high scores indicated high levels of Protestant Work Ethic. The alpha coefficient was .76, the mean score was 4.36 ($SD = .70$), and the scales were normally distributed (skew = -.08, $w = .99$, $p = .76$). While the scale had a theoretical mean range of 1-7 per item, the actual range was 1.74 - 6.26.

Achievement Ethic

The achievement ethic was measured with the Achievement Striving Scale, which assessed the degree to which people were hard driving, competitive, achievement oriented and took work seriously (Spence, Helmrich & Pred, 1987). The scale consisted of seven questions based on a 5-point likert scale ranging from much less to much more than most people (see questions 12-18 in subsection A of Appendix B). Two items were reverse scored. Responses were summed, and an overall mean score calculated, where high scores indicated a high tendency to strive for achievement. The alpha coefficient was .77, the mean score was 3.72 (SD = .61), and the scales demonstrated a negative distribution (skew = -.33, w = .97, p =. 00). While the scale had a theoretical mean range of 1-5 per item, the actual range was 1.57 - 5.00.

Time Ethic

The time ethic was measured with the Impatience-Irritability Scale, which assessed the degree to which individuals expressed impatience, irritability, anger and hostile behaviours such as refusing to wait, interrupting others, doing things in a hurry and having difficulty controlling their temper (Spence, et al., 1987). The scale contained five questions based on a 5-point likert scale ranging from much less to much more than most people (see questions 1-5 in subsection E of Appendix B). One item was reverse scored. Responses were summed and mean scores calculated where high scores indicated high levels of impatience and irritability. The alpha coefficient was .66, the mean score was 2.89 (SD = .68), and the scales demonstrated a very slight negative distribution (skew = -.02, w = .97,

p =. 00). While the scale had a theoretical mean range of 1-5 per item, the actual range was 1.20 - 4.60.

Leisure Ethic

The leisure ethic was measured with the Leisure Satisfaction Scale (Beard & Ragheb, 1980) which assessed the degree to which people felt satisfied with the psychological, educational, social, relaxational, physiological and aesthetic qualities of their leisure. The scale comprised 24 questions with a 5-point response scale ranging from almost always true to almost never true (see questions 1-24 in subsection C of Appendix B). Responses were summed to give a mean overall score where high scores indicated high satisfaction with leisure activities. The alpha value was .92, the mean score was 3.85 (SD = .55), and the scales demonstrated a normal distribution (skew = -.10, w = .98, p =. 03). While the scale had a theoretical mean range of 1-5 per item, the actual range was 2.08 - 5.00.

Obsessive Thinking

Obsessive thinking was measured with the Obsessive Thinking Scale, which was newly developed for the present study to assess the frequency with which people thought about work outside of work hours. The scale was designed to tap the obsessive component of the *DSM-IV* criteria for Obsessive Compulsive Personality Disorder with respect to workaholism (APA, 1994). The scale comprised eight items that required a numerical response ranging from zero to seven days over the last week. Typical items asked how many days each week a person thought about work first thing in the morning, first thing upon wakening, in the middle of the night, and in the evenings (see Appendix C). The scale yielded

an alpha value of .81, split half reliability of .77 and an average inter-item reliability of .36 in the current study. Responses were summed and then mean scores calculated where high scores indicated obsessive thinking about work across a variety of different situations. The mean score was 1.80 (*SD* = 1.2), with the scores positively skewed (skew = .74, *w* = .96, *p* =. 00). Whilst the theoretical range was 0 -7, the actual range was slightly restricted (0-6).

Compulsive Finishing

Compulsive finishing was measured with the Compulsive Finishing Scale, which was newly developed for this study to assess the degree to which people felt a compulsion to finish every work-related task they started. The scale was designed to tap the compulsive component of the *DSM-IV* criteria for Obsessive Compulsive Personality Disorder with respect to workaholism (APA, 1994). The scale comprised six forced-choice items (yes / no) that were scored numerically (yes = 1, no = 0). Typical items referred to feeling upset at leaving a task incomplete, tendency to delay starting a task until it could be completed, and finishing all available tasks before going home (see Appendix D). The scale had an alpha coefficient of .74, split half reliability of .71 and an average inter-item correlation of .32 in the current study. The mean score was .54 (*SD* = .31), and the scales demonstrated a very slight positive skew (skew = .02, *w* = .93, *p* =. 00). Responses were summed to provide a mean score, where high scores indicated compulsive finishing of work tasks across a variety of circumstances. Both the theoretical and actual ranges of scores were 0-1.

Postponed Gratification

Postponed gratification was measured using the Postponed Gratification Scale, which assessed the degree to which people deferred an immediate reward in favour of waiting to earn a larger, but temporally more distal reward (Ray & Najman, 1985). The scale consisted of a 12-item forced-choice format (yes / not sure / no), which was scored numerically (i.e., 2,1,0). Typical items referred to thoughts of saving money for future use, planning in advance and waiting for rewards (see questions 20-31 in subsection D of Appendix B). The scale had an alpha coefficient of .66 and mean score of 2.08 (SD = .53), and a negatively skewed distribution (skew = -.38, w = .96, p =. 00). Responses were summed to provide a mean score, where high scores indicated a strong tendency to delay rewards. While the scale had a theoretical mean range of 0-3 per item, the actual range was 0.33 - 3.00.

Demographic Questions

Participants were asked to specify their age, gender, income bracket, ethnicity, education levels and hours worked. Hours worked were measured by two items. The first item asked, "What is the minimum number of hours your employer requires you to work each week?" The mean response was 38.2 hours per week (range = 0-60, SD = 6.38) and scores were negatively skewed (skew = -2.88, w = .55, p =. 00). The second item was based on the New Zealand Census; " How many hours each week have you actually worked (on average) over the last six months?" (Statistics New Zealand, 1996). The mean response was 43.3 hours per week (range = 8-85, SD = 8.81) and scores were negatively skewed

(skew = -.69, w = .89, p =. 00). The minimum number required (by the employer) was then subtracted from the actual number worked (by the employee) to calculate a 'gap' in discretionary hours worked, where higher scores indicated a larger proportion of discretionary time was being spent at work. The mean response was 5.3 hours per week (range = - 8 to 35, SD = 5.83) and scores were positively skewed (skew = 1.49, w = .80, p =. 00). It is important to caution, however, that these types of self-report measures typically overstate the actual number of hours worked (Robinson & Godbey, 1997).

Procedure

Each measure used was pre-tested on a pilot sample. The pilot group comprised five full-time employees (2 male, 3 female) who were asked to highlight ambiguities and critique the general face validity and layout of the measures. In particular, each participant was asked to pay specific attention to the new Obsessive Thinking Scale and Compulsive Finishing Scale, especially where items appeared to overlap, or read ambiguously. Measures were amended accordingly and re-tested, with an average completion time for the composite questionnaire of 19 minutes (see Appendix B). Prior to approaching research participants and key stakeholders in the present and subsequent two studies, ethical approval was obtained from the University of Waikato Psychology Department Ethics Committee.

To recruit the research sample, two acquaintances of the researcher (a consultant physician and distribution manager) were asked to recommend senior executives from five major companies who might be amenable to the research

being conducted in their organisation. The companies were selected based on three criteria. These were: (a) Their business practices were typical of the New Zealand market, (b) they employed a diverse range of ethnic groups, occupations and skill levels, and (c) each operated in a different market sector. The researcher then approached each company's chief (or most senior available) executive and invited them to consider participating in the research. After providing preliminary consent, each executive was mailed a letter confirming the meeting and the purpose and nature of the research. The following week, each of the five executives was individually presented with a research proposal that outlined the context, general purpose, and broad aims of the research in non-technical, business-friendly language. Particular care was taken to discuss the research in terms of 'attitudes to work' (as opposed to workaholism) in order to prevent contamination of subsequent data. Upon consenting for their employees to participate, each executive was asked to recommend a 'liaison person' to oversee the research process, and to give feedback about the face validity and cultural-organisational appropriateness of the draft questionnaire. Both the executives and liaison people were requested not to personally complete any subsequent research questionnaires.

In the week prior to distributing questionnaires, fluorescent flyers advertising the upcoming research were posted in prominent places in each work environment. Four days prior to commencement of the research, a letter written by the employer, which announced the research and clearly outlined confidentiality and voluntary participation issues, was also given to every employee, either in hard-copy, or by email. Every employee was then distributed a research package,

either by internal mail (Financial Services and Communication companies), or in person (Dairy Industry, Hospital and Manufacturer). Each package contained an: (a) flyer (see Appendix E), (b) explanatory letter (see Appendix F) (c) questionnaire (see Appendix B), (d) ballpoint pen, (e) 'thank you' label attached to a small lollipop, and (f) an envelope for collection. All questionnaires were returned to a sealed central collection box at each workplace, which was emptied daily by the researcher for the subsequent five working days. Seven working days later, the liaison people sent reminders to employees and assisted the researcher to collect overdue questionnaires in person.

One month after data collection, thank you letters were sent to all employees (see Appendix G) and summary findings posted on notice boards, tailored so as not to bias results of the further two studies. After one further month, formal presentations were made to executives, managers and directors in each company. To prevent contamination of the ensuing research, particular care was taken to ensure that this feedback centred on data that were peripheral to the core aims of the research. Thus, this feedback encompassed general demographic patterns presented in non-technical, business-friendly language. At this stage, every company provided consent for a selected number of their employees to participate in a more time intensive manner in the following two studies.

Statistical Treatment of the Data

Three procedures were utilised in analysing the data to reduce the likelihood of Type 1 errors (Nunnally & Bernstein, 1994). These errors tend to occur where multiple measures are administered simultaneously, and spurious

false positive (i.e., significant) results arise from running multiple correlations. Firstly, the criterion significance level for all correlations was increased to .01. Secondly, non-parametric statistical analyses were employed as the WorkBAT-R scales had large negative skews and several of the criterion scales were also skewed. Thirdly, given the relatively low alpha coefficient reliabilities on some of the criterion measures (which tend to attenuate correlations between measures), alpha reliability statistics were used to calculate 'corrected' correlations for each of the discriminant correlations. The data were analysed using 'STATISTICA ©1995' software. Specific analyses included descriptive statistics (distributions, means, standard deviations and alpha coefficients), factor analyses (confirmatory and exploratory analyses) and multivariate analyses (Spearman-Brown correlations and multiple regression). Regressions were used to establish the variance in workaholism explained by the convergent constructs, having first controlled for the co-relationships among the respective external constructs.

Results

Descriptive Statistics

Participants' scores on the E scale were negatively skewed (skew = -.41, $w = .98, p = .00$), with a mean value (4.95) that was slightly above the midpoint of 4.0 and the highest standard deviation of the three scales (1.10). Scores on the D scale were even more negatively skewed (skew = -.62, $w = .97, p = .00$), with a mean value (4.86) that was nearer the midpoint of 4.0 ($SD = 1.02$). Conversely, scores on the WI scale were normally distributed (skew = -.02, $w = .99, p = .66$), with a mean value of 4.09 and a relatively uniform distribution ($SD = .87$). Of the

three scales, E had the strongest internal consistency ($\propto$ = .87, Split Half r = .81, mean inter-item r = .41), and D was also acceptably reliable ($\propto$ = .73, split half r = .68, mean inter-item r = .29). However, the WI scale held considerably less internal consistency ($\propto$ = .60), as reflected by its split half reliability (r = .54, average inter-item r = .17).

Factor Analyses

Confirmatory factor analysis. The construct validity of the WorkBAT was examined using a confirmatory factor analysis. This was performed using a Generalised Least Squares-Maximum Likelihood discrepancy function restricted to a maximum of three factors (which represented the tripartite factors of the WorkBAT) and a minimum eigenvalue of 1.00. As Spence and Robbins (1992) reported positive inter-scale correlations, the analysis was based on oblique factors, meaning each factor was specified to load onto a single item, with covariances among residuals restrained to zero (Tabachnick & Fidell, 1989). The resultant analyses showed poor 'goodness of fit' (χ^2 [df = 272] = 979, $p < 0.00$), indicating that the three-factor solution was not an adequate representation of the data (Floyd & Widaman, 1995). Further analyses revealed a Goodness of Fit Index (GFI) of .815, an Adjusted Goodness of Fit Index (AGFI) of .779, and a Bentler's Comparative Fit Index (CFI) of .771. Each of these was below the desired threshold of .90, and indicated a poor fit between the data and the three-factor model (Floyd & Widaman, 1995).

Exploratory factor analysis. An exploratory factor analysis was then undertaken, using the principal axis method of extraction to determine the

subscale structure of the WorkBAT (McMillan, Brady et al., in press). The three distinct Spence and Robbins' (1992) scales were not apparent. Using Floyd and Widaman's (1995) combined criteria of eigenvalues greater than one and a scree test, a two-factor solution emerged which explained 32% of total variance. The factors had eigenvalues of 5.75 and 2.19 respectively. Given the body of literature concerning the separate domains of workaholism (e.g., Kanai et al., 1996, Kanai, & Wakabayashi, 2001; Scott et al., 1997) the two extracted factors were rotated orthogonally, using varimax normalised factor analysis. Three criteria were used for retaining items in subsequent rotations: (a) each had a primary loading of at least .40, (b) each was free of complex loadings (i.e., secondary loadings greater than .30), and (c) each displayed item-total correlations of at least .25 (Floyd & Widaman, 1995). On this basis, 10 items were deleted and the remaining 15 rotated. Item 15, which referred to using time constructively on and off the job had a complex loading (.26, .36) and was dropped after the second rotation. The third rotation therefore involved 14 items and yielded two factors (eigenvalues = 3.65, 2.43; see Table 3.1) that explained 43% of the variance. The 11 redundant items and the reasons for their deletion are presented in Table 3.2.

Properties of the Revised Scales

The factor loadings for the revised measures are provided in Table 3.1. Factor 1 accounted for 26% of the total variance and contained the same seven of Spence and Robbins' Enjoyment items as the previous validation study (McMillan, Brady, et al., in press). This factor will herein be referred to as the Enjoyment-Revised (Enjoyment-R) factor (McMillan, Brady et al., in press). The Enjoyment-R scale was not normally distributed (skew = -.36, w=. 96, p=. 00),

with mean scores covering 98% of the possible range ($M = 4.40$, $SD = 1.21$). Enjoyment-R did not correlate significantly with gender ($r_s = .08, p = .09$), ethnicity ($r_s = .05, p = .31$), hours worked ($r_s = .08, p = .11$), discretionary time worked, ($r_s = .11, p = .03$), income ($r_s = .10, p = .05$), or qualifications ($r_s = -.06, p = .22$), but related weakly and significantly to age ($r_s = .17, p < .01$).

Table 3.1
Varimax Rotated Common Factors Analysis of the WorkBAT

Item	Item Content	Scale [a]	Factor 1	Factor 2
	Enjoyment-Revised			
7	My job is so interesting that it often doesn't seem like work	J[d]	.83	.13
4	My job is more like fun than work	J[d]	.75	.02
10	Most of the time my work is very pleasurable	J[d]	.80	.04
17	Sometimes when I get up in the morning I can hardly wait to get to work	J[d]	.66	.23
2	I like my work more than most people do	J[d]	.76	.14
11	I seldom find anything to enjoy about my work [b]	J[d]	.45	.02
9	I do more work than is expected of me strictly for the fun of it	J[d]	.57	.21
	Drive-Revised			
25	I seem to have an inner compulsion to work hard	D[d]	.14	.77
18	It's important to me to work hard, even when I don't enjoy what I'm doing	D[d]	.06	.58
22	I often feel there is something inside me that drives me to work hard	D[d]	.33	.67
14	I feel obliged to work hard even when it's not enjoyable	D[d]	-.08	.53
20	I often find myself thinking about work, even when I want to get away from it for a while	D[d]	.23	.43
21	Between my job and other activities I'm involved in I don't have much free time	WI[d]	.04	.53
24	I get bored and restless on vacations when I haven't anything productive to do[c]	WI	.10	.43
	Eigenvalue		3.65	2.43
	Proportion of Total Variance		26.04	17.35

Note. Statistics that load >.40 are typed in boldface. J= Enjoyment items, D = Drive items, W = Work Involvement. [a] Spence and Robbins' (1992) subscale classification. [b] Item was reverse scored. [c] Newly retained item, previous loadings in McMillan, Brady et al (in press) =.07,.38. [d] Item loaded onto the same scale in the McMillan, Brady et al (in press) factor analysis.

Table 3.2
Items Deleted from the WorkBAT

Item	Content	Scale[a]	Reason for deletion
1	When I have free time I like to relax and do nothing serious [b]	WI	L < .20; I-t <.20
5	I often wish I weren't so committed to my work	D	L < .35; I-t <.20
6	I like to relax and enjoy myself as often as possible [b]	WI	L < .20; I-t <.25
8	I really look forward to the weekend - all fun, no work [b]	WI	L < .25; I-t <.20
12	Wasting time is as bad as wasting money	WI	L < .40
13	I spend my free time on projects and other activities	WI	L < .40
15	I like to use my time constructively, both on and off the job	WI	L < .40
16	I lose track of time when I'm involved on a project	J	L < .35
19	When I get involved in an interesting project it's hard to describe how exhilarated I feel	J	Complex loadings (.50, .35)
23	Sometimes I enjoy my work so much I have a hard time stopping	J	Complex loadings (.59, .46)
3	I feel guilty when I take time off work	D	L < .40

Note. Criterion for removing items was : Low item total correlation (<.25), Low loading (<.40) and complex loading (>.30 on two factors). [a] Spence and Robbins' (1992) subscale classification [b] Items was reverse scored. L= loadings, I-t = item-total.

Factor 2 accounted for 17% of the variance, and comprised seven of Spence and Robbins' (1992) original items; two WI and five D items. There were two changes in the items compared to the McMillan, Brady et al., (in press) validation study however. Item 3, which referred to feeling guilty when taking time off work, was dropped after the first rotation as it had weak loadings (.16 for factor one, .36 for factor two). Item 24, in contrast, which referred to getting bored and restless on vacation, was added as it had distinct and acceptable loadings after the first rotation (.10, .44), which reduced only slightly in the final rotation (see Table 3.2). It is worth note that both of these items had borderline loadings in the

previous study (McMillan, Brady, et al., in press). Item 22, which referred to feeling driven to work hard, had a complex loading (.33, .67) is of particular note. Firstly, the overlap of the secondary lading was only .03 above the criteria for deletion, secondly the differential between the two loadings was relatively large (.34), in fact larger than the secondary loading itself (i.e., .33), and finally, the item met the criteria for having a primary loading of >.40 and an item-total of >.25 and led to a more interpretable structure when retained. On this basis, it decided to leave the item in the final rotation. Given that the retained items generally concerned working hard and having difficulty stopping work, Factor 2 was referred to as Drive-Revised (Drive-R) in the remainder of the study. The Drive-R scale was not normally distributed (skew = -.65, w = .96, p = .00), although mean scores covered the entire possible range (M = 4.84, SD = 1.07). Drive-R did not correlate significantly with age (r_s = .06, p = .26), gender (r_s = .00, p = .99), ethnicity (r_s = .04, p = .37), income (r_s = .12, p = .01), or qualifications (r_s = .00, p = .91). However, Drive-R related significantly with hours worked (r_s = .25, p = .00) and discretionary time worked (r_s = .25, p = .00).

Given the clear degree of replication between the present and the McMillan et al. (in press) and Kanai et al., (1996) studies, the remainder of the analyses focused on the revised and shortened WorkBAT. The measure will be hereon referred to as the WorkBAT-R.

Internal Consistency

Enjoyment-R and Drive-R were relatively independent (r_s = .29) and had internal consistency values comparable with Spence and Robbins' original scales.

The new 7-item Enjoyment-R scale, for instance, had an identical Cronbach's alpha (.87) to the original 10- item scale, stronger split half reliability (.88 compared to .81) and stronger inter-item correlations (.49 compared to .41). The new 7-item Drive-R scale had a higher Cronbach's alpha (.76) than the original 7-item measure (.73), identical split half reliability (.68), and much stronger mean inter-item correlations (Drive-R = .33, D = .17).

External Convergence

As summarised in Table 3.3, the achievement ethic related strongly to both Enjoyment-R (.44; .54 corrected) and Drive-R (.42; .55 corrected), while the work ethic related more strongly to Drive-R (r_s = .40; .53 corrected) than to Enjoyment-R (r_s = .27, r_s =33 corrected). In contrast, the time ethic (impatience-irritability) demonstrated only a weak relationship with Drive-R (r_s = .17), and no relationship with Enjoyment-R (r_s = -.06, p = .23). However, the leisure ethic related significantly to neither Enjoyment-R (r_s = .05, p = .30) nor Drive-R (r_s = .04, p = .38).

Table 3.3
Correlations with Criterion Variables Hypothesised to be Convergent with the WorkBAT

Construct	r_s with Enjoyment-R		r_s with Drive-R	
Work ethic	.27*	(.33)	.40*	(.53)
Leisure ethic	.05		.04	
Achievement ethic	.44*	(.54)	.42*	(.55)
Time ethic	-.06		.17*	(.24)
Obsessive thinking	.14*	(.17)	.39*	(.50)
Compulsive finishing	.14*	(.17)	.28*	(.37)
Delayed gratification	.15*	(.21)	.18	

Note. *p < .01. Figures in brackets are adjusted for unreliability using alpha values, and were not calculated where the original correlations were not significant.

Obsessive thinking was related significantly, albeit weakly to Enjoyment-R (r_s = .14) and significantly and more strongly to Drive-R (r_s = .39). Compulsive finishing also related significantly to Enjoyment-R (r_s = .14) and to Drive-R (r_s = .28). In contrast, however, postponed gratification evidenced weaker relationships, being significantly but only weakly related to the Enjoyment scale (r_s =. 15), and not significantly related to Drive-R (r_s = .08, p = .12). When corrected for unreliability attenuation, the strongest significant relationships between workaholism and obsessive compulsiveness occurred between Drive-R and obsessive thinking (r_s =. 50) and Drive-R and compulsive finishing (r_s =. 37).

Given the strong degree of correlation between some of the convergent constructs and workaholism, a multiple regression was undertaken to further elucidate the relationships. Following procedures outlined in Nunnally and Bernstein (1994), multiple regression analyses were conducted for Enjoyment-R and Drive-R onto the seven predictor variables (i.e., work ethic, leisure ethic, achievement ethic, time ethic, obsessive thinking, compulsive finishing and delayed gratification). This method enters the variables in the block one at a time based on entry criteria (tolerance level = 0.0001, with variables not entered if they cause the tolerance of another variable in the model to drop below .0001) and examines whether the variables in the block at each step meet significance values for fitting a single model. Thus, Drive was included as a predictor variable for the Enjoyment analysis and vice versa.

As outlined in Table 3.4, only three variables accounted for significant amounts of explained variance in Enjoyment-R. These were the achievement ethic (β = .45), work ethic (β = .21) and time ethic (β = -.16). The remaining four constructs and Drive-R were dropped from the analysis at the third step as they were below the threshold tolerance level. Only three variables accounted for significant amounts of explained variance in Drive-R. These were the achievement ethic (β = .26), work ethic (β = .28) and obsessive thinking (β = .23). The remaining four constructs and Enjoyment-R were dropped from the analysis at the third step as they were below the threshold tolerance level. Thus, while the achievement and work ethics had some impact in explaining workaholism, the majority of the workaholism construct remained unexplained by other variables.

Table 3.4
Regression Summary for Enjoyment and Drive onto Generic and Specific Predictor Variables

Predictor Variable	*β* weight	Standard error of *β*	*t* (365)	*p*
For Enjoyment-R				
Achievement ethic				
Work ethic	.45	.05	9.71	.00
Time ethic	.21	.05	4.72	.00
	-.16	.05	-3.65	.00
Multiple R= .53, R^2= .28, F (3,365)=48.24, p <. 00				
For Drive-R				
Achievement ethic				
Work ethic	.28	.05	6.30	.00
Obsessive thinking	.31	.04	7.11	.00
	.25	.04	5.52	.00
Multiple R= .59, R^2= .35, F (3,365)=66.33, p < .00				

Summary and Preliminary Discussion

The present study aimed to perform a confirmatory analysis of the WorkBAT on a representative sample, create a baseline measure of workaholism for the later studies and determine the discriminant validity of the WorkBAT from generic and specific related constructs. Five key findings have arisen from the present data; (a) this was the third study unable to replicate the tripartite model of workaholism developed by Spence and Robbins (1992), (b) common factor analysis endorsed the two-factor Enjoyment-Drive model of workaholism, (c) workaholism cannot be more fully explained by leisure, or time ethics, (d) it appears that OCPD substrates do not wholly explain workaholism, and (e) the data supported Machlowitz' (1978) observation that many workaholics enjoy their work and refuted Perez-Prada's (1996) suggestion that E was non-essential to workaholism. Thus the data endorse results found by Kanai et al. (1996) and McMillan, Brady et al. (in press).

Specifically, the WI factor was unable to be reproduced using either a confirmatory or an exploratory factor analysis. Subsequent analyses indicated the presence of only two factors (Enjoyment-R and Drive-R), each of which was shortened to seven items without subsequent loss of reliability. These results replicate the previous New Zealand based study by McMillan, Brady et al (in press), who also studied a heterogeneous sample (n = 320) and suggest that the shortened 14-item WorkBAT-R is a valid measure of workaholism. Finally, both scales correlated strongly with the work and achievement ethics, with Enjoyment-R also relating strongly to the time ethic and Drive-R relating strongly with obsessive thinking. Importantly, however, multiple regression analyses indicated

that 72% of enjoyment-R and 65% of Drive-R remain unexplained by the seven convergent constructs.

The present factor analytic findings are particularly important, as the tripartite structure was unable to be replicated. Together, Enjoyment-R (which contained 80% of the original items) and Drive-R (which contained 86% of the original items) shared a total variance of 43% and provide some interesting findings. Reducing the number of items increased internal reliability and did not adversely affect convergent validity. Importantly, sensitivity and reliability remained adequate, eigenvalues (3.65 and 2.43) suggest that the scales are robust, and correlations between them (r_s = .29) suggest they are relatively independent. Taken with the previous findings, these data endorse previous suggestions (c.f., Kanai et al., 1996) that eliminating the WI scale and shortening the E and D scales would substantially improve the measure. Specifically, reducing the number of items from 25 to 14 did not adversely affect internal consistency. However, distributions, remained attenuated, which is unsurprising given a working population was studied, most of whom would be likely to behave more positively toward work than non-working populations, and many whom were high earners.

Given that Spence and Robbins seemed to regard WI as the core indicator of workaholism, however, WI was perhaps the most important of the three scales *not* to have replicated. Although the original WI scale showed adequate reliability, its construct validity was not replicated. Importantly, our sample shared several parallels with Kanai et al., (1996) and McMillan, Brady et al., (in press) samples, where WI was also unable to be replicated. Specifically, (a) all included

participants with a range of education levels, (b) two were based on national samples, while the geographical area the participants were sourced from in the present study covered 76% of the national population, and (c) all three were of the widely accepted size of at least 300 participants, or five participants per item, to perform satisfactory factor analyses (Gorsuch, 1974). The concurrence of results therefore is likely to be more than coincidence, especially considering that the three samples comprised differing biases, yet concurred across eastern and western cultures in two countries that speak entirely different languages. Furthermore, features of the present design that provide convincing support for these propositions include the stringent .01 significance level, the sample size and high response rates (42%) which make it extremely unlikely that systematic measurement error could explain the magnitude of the results.

With respect to the revised enjoyment scale, it appears that Enjoyment-R is unrelated to leisure satisfaction. Furthermore, Enjoyment-R appears to reflect a value system about the importance of both working and achieving, as demonstrated by the present relationships with the achievement ethic (.54) and work ethic (.33). The relationship with hours worked however has been consistently weak; it was .16 in the previous New Zealand study (McMillan, Brady et al., in press) and unrelated in the present study (r = .11). Importantly, the factor analytic findings between these two New Zealand studies are very similar; the alpha value increased slightly in the present study (.85 to .87), as did the proportion of explained variance (24.36% to 26.04%) and the interitem correlation (.47 to .49). While the negative skew remained, interestingly, given the lesser degree of sample bias, it was less marked in the present study, moving from -.51

to -.36 (M = 4.87, SD = 1.13; M =4.40, SD =1.21, respectively). These statistics indicate the scale is consistent and relatively reliable.

The drive scale evidenced a relatively strong relationship with obsessive compulsiveness, relating strongly to obsessive thinking (r = .50) and compulsive finishing (.37). Drive-R appears to reflect strong work and achievement values, evidenced by high correlations with the achievement ethic (.55). Drive also related most strongly to the number of hours worked (.22 in the previous study, .25 in the present study), and was the only scale to relate positively to the heart disease risk factor Impatience-Irritability (.24). Interestingly, Drive-R was unrelated to the leisure ethic. Importantly, the factor analytic findings between the two studies are very similar; the alpha value increased slightly in the present study (.75 to .76), as did the proportion of explained variance (17.07% to 17.35%) and the interitem reliability (.31 to .33). While the negative skew remained, interestingly, given the lesser degree of sample bias, it was less marked in the present study, moving from -.55 to -.33 (M = 5.06, SD = 1.08; M = 4.84, SD = 1.07, respectively). Given that the present Drive-R contained two minor item changes from the previous study, the improved reliability and consistency and lesser skew indicate the decision to make the changes is logically defensible.

In summary, the study met its goals. The data established the construct validity of the workaholism measure, recruited a diverse enough sample from which to select groups for the upcoming studies, and ascertained that the majority of workaholism remains unexplained by convergent constructs. Thus, the present study was concluded and the research moved into study two.

CHAPTER 4

Study Two: The Impact Variables Involved in Workaholism

As previously outlined, the data concerning the impact of workaholism (whether positive or negative) are inconclusive and has been gathered without reference to four important design strategies. These include the use of control groups, third-party reports, triangulated data collection methods and behaviourally based time diary analyses. In general terms however, researchers concur that the impact extends to work patterns, leisure patterns, and well-being. The present chapter therefore reviews the relevant data for each of these domains, reviews the aforementioned design issues, and presents the hypotheses, method and results of study two. The chapter concludes with a preliminary discussion of the present data.

Domains that Workaholism is Hypothesised to Affect

Work Patterns

In general, the literature concurs that people who are workaholic have three consistent habits; they work longer hours, work off-site more frequently and think about work more frequently than others (Burke, 2001a; Scott, et al., 1997). Given the dominance of these contentions in the literature (they are central to virtually all discussions of workaholism), the present research aimed to test each separately.

Hours worked. While it is undisputed that the number of hours worked is a suitable criterion for assessing the concurrent validity of workaholism (c.f., Scott, et al., 1997), there is substantial controversy over the magnitude of the relationship. Firstly, two key articles have stressed that the number of hours worked is the critical defining feature of workaholism (Scott, et al., 1997; Spence & Robbins 1992). For instance, Spence and Robbins (1992) measured time commitment with a seven-item composite scale where items focused on how spare time was spent and reported significant correlations with workaholism, ranging between .28 and .63. However, the data from study one demonstrated a non-significant relationship between Enjoyment-R and hours worked (r_s = .08, p = .11) while the relationship with Drive-R was only .25. Qualitative data have also indicated that most people classified as workaholic make conscientious attempts to spend *more* time at home to address the work-home imbalance, which implies that time spent working may be a misleading measure of workaholism (Machlowitz, 1980). Thus, the magnitude of the relationship between hours worked and workaholism remains uncertain, but it could certainly be expected to differentiate workaholics from other workers.

Hypothesis I. People classified as workaholic work longer hours than non-workaholics.

Working off-site. Although workaholism was originally regarded as highly correlated with working long hours *at the workplace* (Oates, 1971, Machlowitz, 1978), it is feasible that the advent of portable technology has subsequently changed the topography (i.e., behavioural features) of workaholism. For instance, mobile phones, portable laptop computers, personal pagers, internet and email

sites in public places and text messaging all allow a person to work after hours *away from the workplace*. Additionally, many New Zealand employers are moving toward 'family friendly' policies and telecommuting, where employees are permitted, and sometimes encouraged to work from home for at least part of the week. If workaholics work longer hours at the workplace as the literature suggests, it follows that they may also work longer hours off-site than other people. Thus, working long hours at the workplace may be supplemented by working long hours off-site through the enabling of portable technology. Therefore, a measure of time working off-site may differentiate workaholics from other workers.

Hypothesis II. People classified as workaholic work off-site more than non-workaholics.

Thinking about work. Given that workaholism is related to obsessive compulsive personality disorder and obsessive thinking, people classified as workaholic are likely to spend more time spent thinking about work *after working hours* than others. Several theoretical writers, including Robinson (1998c), Oates (1981) and Killinger (1991) support this contention. However, while this hypothesis was tested in part in study one, the measure used (the Obsessive Thinking Scale) was retrospective, which may have biased the accuracy of reporting. Thus, a simple measure of frequency of thinking about work taken *at the time* that the behaviour occurs (i.e., concurrent) would be expected to differentiate between workaholics and other workers.

Hypothesis III. People classified as workaholic think about work more frequently when they are away from the workplace (i.e., not actively working) than non-workaholics do.

Leisure Patterns

While much has been written about how workaholics spend their time, no one has actually measured time usage behaviour and whether it differs from non-workaholics. Despite this, workaholics are purported to spend less time on leisure and less time with families (i.e., exhibit a different topography of leisure usage) than others. These concepts are discussed in detail below.

Duration of non-work activities. Some authors have argued that workaholics engage in spill-over (Garfield, 1986) a phenomenon where focus in one area of life spills into other areas, so that both work and play overlap. However, most authors in the workaholism field have argued just the opposite; that work is used to *compensate* for a poor leisure life. Machlowitz (1980) suggested that the job might *be* the hobby, where workaholics prefer labour to leisure, reporting that the workaholics in her sample took little sleep, had quick meals and overlapped work with leisure. Some writers have also argued that, whereas for most people work ends and 'real life' begins, for workaholics 'real life' *is* work, as they overindulge in work to the exclusion of most other life activities (Cantarrow, 1979; Robinson, 1997a). If, as Porter (1996) suggested, workaholism is characterised by excessive involvement in work and evidenced by neglect in other areas of life, it is likely that workaholics would engage in a low frequency of non-work activities. Thus, the time devoted to work may 'rob' time

from leisure activities; meaning workaholism would be expected to relate negatively to the duration of outside-of-work-activities. This suggests it may be more accurate to identify a workaholic not through work behaviour, but through low frequencies of *non-work* behaviour such as leisure (Machlowitz, 1978). The most logical way to measure this would be to use an independent and continuous measure, such as a time diary, that captured both work and leisure activities.

Hypothesis IV. Workaholism is inversely related to outside-of-work activities.

Topography of non-work activities. If, as Machlowitz (1980) contended, workaholics prefer labour to leisure, and they work long hours and spend little time with family (Robinson, 1997a), their overall time usage should differ significantly from people who are not workaholic. Ostensibly, workaholics could be expected to spend *more* time working, on chores, and community projects, and *less* time interacting with family than other workers do. This interesting prediction, which has become part of the stereotype of workaholism, has not yet been tested. If the proposition is accurate, leisure patterns could be expected to differentiate workaholics from other workers.

Hypothesis V. People classified as workaholic spend significantly more time of their leisure time on tangibly productive activities (such as chores) than non-workaholics.

Intrapersonal Well-being

While the vast majority of research indicates that workaholic behaviour relates closely to levels of personal well being, the findings are contradictory. For

instance, workaholism is purported to interfere with bodily health to the degree of producing stress, physical and psychological problems (Oates, 1968; Scott, et al, 1997). Conversely, workaholism is also proposed to occur in some of the healthiest people (Fassel, 1992). In general, however, the data can be categorised into two themes. Firstly, workaholics have a differing health status than others. Secondly, workaholics are purported to experience less pleasure from non-work activities than others. Each of these concepts is addressed individually below.

Health status. A physician seeing workaholics in general practise noted that workaholics tend to deny the existence of fatigue and push themselves beyond reason, before physical complaints stop them working long hours and lead them to seek help (Rhoads, 1977). Robinson (1996b) endorsed this, suggesting that self-neglect was a hallmark of workaholism, and reiterating previous contentions that workaholics are susceptible to chronic fatigue, mental fatigue and anxiety (Bartolome, 1980; Killinger, 1991). As outlined in chapter two, the empirical data are contradictory. It is difficult to ascertain whether workaholism causes health problems, whether health problems precipitate an underlying tendency toward workaholism, or whether health and workaholism are linked through a third, moderating variable such as personality. Given the small number of studies that have focused on health issues, the results could be attributable to a multitude of factors, including cultural differences or spurious measurement error. In general, it appears that a measure of health status should differentiate workaholics from other workers.

Hypothesis VI. People classified as workaholic experience poorer physical and mental health than non-workaholics.

Pleasure from non-work activities. Oates (1968) and Rohrlich (1980) both propose that workaholics are unhappy and unable to experience much pleasure. Specifically, Rohrlich (1980) suggests that pleasure is passive, receptive, and therefore less attractive, whereas work is active and therefore more attractive. Workaholism has also been described as an excessive devotion to work to the *exclusion* of pleasure (Pietropinto, 1986). Additionally, others have reported that both workaholism and infrequent engagement in pleasant events relate positively and significantly with depression (Dart & Tucker, 1990; Lewinsohn & Libet, 1972; Rhoads, 1977). Thus it would be feasible, based on both the theoretical and empirical literature to expect workaholics to experience less pleasure from everyday non-work events than nonworkaholics. As such, a measure of non-work pleasant events would be expected to differentiate between a group of extreme workaholics and a control group.

Hypothesis VII. People classified as workaholic report less frequent engagement in non-work-related pleasant events than non-workaholics.

Interpersonal Relationships

The relationship between workaholism and interpersonal relationships is widely discussed in the literature, but, unfortunately, usually without reference to substantiating data. For instance, Porter (2001b) proposed that a work addict is willing to sacrifice personal relationships to derive satisfaction from work. Robinson (1997a) postulated that workaholics lack warmth and allow work to interfere with their relationships. Much of the literature is characterised by themes

of addiction, which include denial and relationship distress. Each of these is addressed in detail below.

Denial of workaholism. More than two decades ago, Machlowitz (1978) cautioned that measuring significant others' viewpoints was essential to understanding workaholics' views of their behaviour. Subsequently, while data have not been forthcoming, both psychodynamic and family therapy oriented writers have stated that workaholics have an innate tendency to deny their workaholism (Robinson, 1998c; Rohrlich, 1980). Others have also predicted that responses from workaholics might not agree with significant others' views because of the denial tendency (Porter, 1996). In general, these propositions appear to arise from addiction theory, in which drug addicts and alcoholics tend to deny they are addicted and thus become very resistant to treatment (Porter, 1996). Because addiction theory has been generalised to workaholism without being first tested however, the 'denial-hypothesis' has been given more weight than it perhaps deserves. If the hypothesis is true, however, workaholics could be expected to rate their workaholism as much lower than either their partners' or colleagues' ratings. Thus, the present study aimed to test hypothesis eight:

Hypothesis VIII. Workaholics' self-ratings of workaholism (i.e., their WorkBAT-R scores) are lower than the ratings of their workaholism provided by significant others.

Relationship distress. The negative impact of workaholism on families and relationships has been written about at length. Oates (1971) observed that workaholics exhibit social inadequacy at home that interferes with personal

relationships. Robinson (1989) proposed that difficulty with relationships is a key marker for workaholism, as excessive work prevents workaholics from forming and maintaining intimate relationships. Intimacy also appears to be a difficulty; workaholism is hypothesised to involve a lack of intimacy, minimal intimacy with spouses, a fear of intimacy and an escape from intimacy because the job is a substitute for all other relationships (Dart & Tucker, 1990; Engstrom & Juroe, 1979; Farrar, 1992; Fassel, 1992; Killinger, 1991). Consequences of this single-minded dedication to work and lack of intimacy are purported to include divorce, forgotten friendships (Klaft & Kleiner, 1988; Topolnicki, 1989), less frequent sexual intercourse (Pietropinto, 1986), poor ability to love and play (Siegel, 1974) and 'tone deafness' to the feelings of others (Engstrom & Juroe, 1979). Interestingly, Machlowitz (1980) observed that it is not necessarily the workaholics, but the people who live with them that suffer. Unfortunately, there are scant data to resolve these contentions. However, Jackson (1992) reported increased emotional irritability in workaholics, but not poorer intimacy in their relationships. Generally, the majority of the literature indicates that a measure of relationship satisfaction would be expected to differentiate between workaholics and other workers.

Hypothesis IX. People classified as workaholic experience greater disturbances in close relationships than non-workaholics.

Design Issues

Overall, the data concerning the impact of workaholism are inconclusive, perhaps because they have been gathered without reference to control groups, third-party reports, triangulated data collection methods or behaviourally based time diaries. In particular, triangulated designs, where data is gathered from more than one source or with more than one mode of measurement to reduce measurement error, would be of substantial benefit. Additionally, triangulated methodologies would provide substantive evidence about the nature of workaholism, and address the contention that workaholics deny and therefore under-report their workaholic behaviour. Triangulated informants (i.e., workers, spouses and colleagues) would enable the veracity of the claims about workaholism having a negative impact on relationships to be tested (Oates, 1968) and provide insight into how workaholism is regarded by different parties. Finally, triangulated measurement methods (i.e., time diaries, workaholism questionnaires, and retrospective reports) would also allow an analysis of the degree to which workaholic behaviour occurs *outside* the structured employment environment.

Thus, a triangulated methodology (informants and measures) would provide a scientifically robust framework for assessing the impact of workaholism. Additionally, contrasted group designs, which compare antitheses or polar opposites, would provide valuable information about how workaholic behaviour differs from other workers' behaviour in the workplace and in the community. This approach would also assist researchers to quantify whether workaholics are at a disadvantage in terms of negative symptoms compared to

other workers. Thus, the present study aimed to incorporate these four design strategies in the research methodology.

Summary and Aims of Study Two

The present study aimed to contribute to the literature in four ways. These were; (a) to provide a systematic study of workaholism, (b) to provide triangulated empirical data regarding significant others' perceptions (c) to collect longitudinal New Zealand data and (d) to generate an empirically based definition of workaholism. The epistemological perspective involved applied research in a naturalistic setting, using quantitative data from a contrasted group design and data gathered from multivariate sources (i.e., triangulated data) in order to establish a warranted degree of assertion about workaholism. As outlined, workaholism was expected to relate significantly with work patterns, leisure patterns, well-being, and interpersonal relationships. These propositions are expressed as hypotheses below:

Hypothesis I. People classified as workaholic work longer hours than non-workaholics.

Hypothesis II. People classified as workaholic work off-site more than non-workaholics.

Hypothesis III. People classified as workaholic think about work more frequently when they are away from the workplace (i.e., not actively working) than non-workaholics do.

Hypothesis IV. Workaholism is inversely related to the duration of outside-of-work activities.

Hypothesis V. People classified as workaholic spend significantly more time of their leisure time on tangibly productive activities (such as chores) than non-workaholics.

Hypothesis VI. People classified as workaholic experience poorer physical and mental health than non-workaholics.

Hypothesis VII. People classified as workaholic report less frequent engagement in non-work-related pleasant events than non-workaholics.

Hypothesis VIII. Workaholics' self-ratings of workaholism (i.e., their WorkBAT-R scores) are lower than the ratings of their workaholism provided by significant others.

Hypothesis IX. People classified as workaholic experience greater disturbances in close relationships than non-workaholics.

Method

Sample

The sample comprised three participant groups. These were workers (both workaholic and non-workaholic), their colleagues, and their partners. In total, 100 workers were purposively selected from the sample in study one to participate in

the research. As part of their participation, each worker was asked to give questionnaires about their work habits to a colleague (n=100) and, where applicable, their partner (n=46). Overall therefore, 246 questionnaires were distributed (100 workers, 100 colleagues and 46 partners) and 206 (84 %) returned. Response rates were relatively high; 88 workers (88%), 77 colleagues (77%) and 40 partners (87%) returned questionnaires. 81 diaries were returned. The demographics of each group were as follows:

Workers. Workers from study one were selected using the following purposive selection rationale. Firstly, respondents who lived outside metropolitan Auckland, had incomplete WorkBAT data, worked shift-work, or less than 30 hours per week, were excluded from the sample, which left a potential pool of 292 workers. The Enjoyment-R and Drive-R scores were then ranked, and the workers were divided into two contrasted groups. Given that some extreme scores were obtained for workaholics, selection of this group was non-problematic. However, for the non-workaholic group, scores were less extreme: In fact, due to the negative skews on both WorkBAT scales, there were very few extreme low scores. Therefore, rather than using straight percentile-splits, the following criterion for group membership using cut-off scores was developed:

Workaholic workers (extreme high scores). Workers who met *both* of the following criteria (n=50) were approached to participate; (a) Their score on at least one of their WorkBAT-R Enjoyment-R or Drive-R scales was *more than* 5.0 (i.e., an extreme score) and, (b) Their score on the remaining WorkBAT-R scale was *greater than* the mean score for all workers invited to participate in study two

(Enjoyment-R> 4.4, Drive-R>4.8). Thus the mean Enjoyment-R score for the group was 5.72, and the range of scores spread from 4.43 (.36 *SD* above the study one mean) to 6.71 (1.91 *SD* above the study one mean). The mean Drive-R score for the group was 5.94, ranging from 4.86 (.02 *SD* above the study one mean) to 7.00 (2.02 *SD* above the study one mean).

Non-workaholic workers (extreme low scores). Workers who met the following criteria (n =50) were approached to participate; (a) Their score on at least one of their WorkBAT-R scales was *less than* 3.5 (i.e., below the midpoint) and their score on the remaining WorkBAT-R scale was *less than* the mean score mean score for all workers invited to participate in study two (i.e., Enjoyment-R< 4.4, Drive-R<4.8). However, due to the skew on the scales, this yielded only 27 workers, which was not enough to match the number of participants in the extreme high group. In order to expand the non-workaholic group size, the criteria were extended to include: (b) workers whose scores were below the group mean on *either* Enjoyment-R (i.e., < 4.4) *or* Drive-R (i.e., < 4.8). This yielded a further 34 workers and created a potential pool of 61 workers, 50 of whom were approached to participate. Thus the mean Enjoyment-R score for the group was 3.25, with scores ranging from 1.57 (2.34 *SD* below the study one mean) to 4.43 (.36 *SD* above the study one mean). The mean Drive-R score for the group was 3.82, ranging from 1.57 (3.06 *SD* below the study one mean) to 5.14 (.28 *SD* above the study one mean). It is important to reiterate that due to the constraints in accessing a large enough sample, *only one* score was required to be sub-mean. Thus, some participants had *either* an Enjoyment-R *or* a Drive-R score that fell above the mean.

The composition of the contrasted groups was evenly matched to each other in terms of most demographic variables but not as closely matched in terms of age and income as originally hoped. Of the 88 workers in the total sample, 46 were male and 41 female, with 85% aged between 20 and 50, 47% of whom had undertaken some form of post-high school education (see Appendix H). Workaholics, on average, were 7 years older (M = 37.5, range = 23-62, SD =11.8) than the Non-workaholic group (M = 30.5, range = 19-58, SD =9.0), with this difference statistically significant (Mann-Whitney U = 619.5, z=2.89, p =. 00). Similarly, the workaholic group had significantly greater proportions of people earning more than $70,000 per annum (workaholics = 33%, non-workaholics = 2%; z = 2.97, p =. 00). However, while they exhibited differences regarding holding managerial and professional jobs (workaholics=46%, non-workaholics = 17%) and living in relationships (workaholics = 72%, non-workaholics = 54%; these differences approached, but did not attain significance at the p<. 01 level (z = 2.59, p = .01; z = 2.37, p = .02, respectively). The groups similar levels of post-school education post-school education (u = 777.5, z = -1.57, p = .12), although the workaholics group contained significantly more females (workaholic = 50%, non-workaholic = 45%; u = 920.0, z = 2.89, p = .00)

Colleagues. Of the 77 colleagues, 26 were male, 41 female and 10 did not state their gender (see Appendix I). More colleagues of workaholics responded (n = 42) than those of non-workaholics (n = 35), although these two were similar on several variables; gender (u = 474.5, z = .91, p = .36), employment status (u = 732.5, z = -.03, p = .98), time known to the worker (z = -.39, p = .70) and how

well they knew the worker (u = 623.5, z = -.98, p = .33). Substantial proportions of both groups worked in the same department as the participant they were completing the questionnaire about (workaholic = 95%, non-workaholic = 80%), although more workaholics' colleagues (45%) worked very closely than non-workaholics' colleagues (26%).

Partners. In total, 69 workers had partners, 40 of whom responded (n = 20 male, 20 female). In total, 25 partners of workaholics (13 male, 12 female) and 15 partners of non-workaholics responded (7 male, 8 female), with both groups spending an average of 6.6 nights per week in the same home. In general, partners of the workaholic group tended to be older (M = 38.1, range = 24 - 60) than non-workaholics' partners (M = 33.1, range = 19 - 57) but this difference was not statistically significant (u = 127.0, z = 1.69, p = .09). The workaholics also trended toward longer relationships (M = 13.0 years, SD = 10.2, range = 2-41 years) than the non-workaholics (M = 10.1, SD = 9.7, range = 1.5-39 years) although this difference did not attain significance (u = 146.5, z = 1.14, p = .25).

Measures Completed by Workers

Workaholism

The WorkBAT-R is a 14 item self-report questionnaire with a 7-point Likert (disagree/agree) response scale that resulted from construct validation in study one, and was re-administered to test its psychometric characteristics. The responses were scored in the same manner as study one.

Enjoyment-R. The Enjoyment-R scale contained seven items, which typically referred to enjoying work so much it was difficult to stop. Responses were summed and reversed so that high scores reflected high levels of Enjoyment. The scale yielded an alpha value of .90, split half reliability of .90, and average inter-item reliability of .59. The mean score was slightly above the midpoint of 4.0 on the scale (M = 4.42, SD = 1.36), although the scores were normally distributed (skew = -.42, w = .96, p =. 02). Whilst the theoretical range of scores was 1-7, the actual range was restricted slightly from 1.14 - 6.71.

Drive-R. The Drive-R scale contained seven items, which typically referred to feeling obliged to work hard and thinking about work even when wanting to get away from it. Responses were summed and reversed so that high scores reflected high levels of drive. The scale yielded an alpha internal consistency value of .75, split half reliability of .77, and an average inter-item reliability of .34. The mean score was slightly above the midpoint of 4.0 on the scale (M = 4.91, SD = 1.06), although the scores were normally distributed (skew = -.37, w = .96, p =. 01). Whilst the theoretical range of scores was 1-7, the actual range was restricted from 2.29 to 6.57.

Work Patterns

As self-report data regarding the number of hours worked are notoriously unreliable, particularly when only one item is used (Robinson & Godbey, 1997), three sets of items were used to capture the complexity of individuals' work patterns. These measures included time commitment, hours worked and time spent thinking about work.

Time commitment. The Time Commitment to Job Scale (Spence and Robbins, 1992) used a five-point Likert scale (strongly agree - strongly disagree) to assess the amount of time people worked after hours. The scale contained seven items, which typically referred to wishing there was more time to get work done, working nights, weekends, and after dinner. It is important to note that the scale did not specifically quantify the number of hours spent working, but assessed a *general trend* toward working long hours. The item concerning keeping nights and weekends open for leisure activities was reverse scored, and the anchors were extended to seven-points to maintain consistency with the other Spence and Robbins (1992) scales used. The alpha coefficient was .78. Raw scores were summed and overall mean scores calculated, which had a theoretical range of 1-7 where high scores indicated substantial time spent working. The mean score was 3.15 (SD = 1.3) and the scale was positively skewed (skew = .34, w = .94, p = .00).

Time working. The number of hours worked was assessed using three separately analysed items. The first two items were sourced from the census: 'What is the minimum number of hours your employer requires you to work each week?' and 'How many hours have you actually worked per week, on average, over the last six months?' Responses to the first item ranged from 0 (the respondent was self employed) to 45 (M =37.95, SD =6.52), and the scores were negatively skewed (skew = -4.41, w = .44, p = .00). Responses to the second item ranged from 25 to 80 (M =44.68, SD =6.52) and the distribution was positively skewed (skew = 1.21, w = .90, p = .00). The third item asked participants to

concurrently record the hours they spent working in 24-hour time diaries, which are described in full in the next section on leisure patterns. The mean number of hours worked per week on this measure was 40.85 (SD = 7.58) and the scores were normally distributed (skew = .22, w = .97, p = .35), ranging from 22.8 to 66.8 hours per week.

Time thinking about work. This was assessed in three ways. The first involved a retrospective estimate of the quantity of thinking about work: 'Please estimate, on average, how many hours each week you think about work during your spare time.' Scores had a theoretical range of 0-128, an actual range of 0 to 50 hours per week (M =5.92, SD = 7.42) and were positively skewed (skew = 3.25, w = .69, p = .00). Partners were also asked to estimate how much time workers thought about work in their spare time, with their responses ranging from 0 to 30 hours per week (M = 6.84, SD = 5.84). These scores were positively skewed (skew = 2.20, w = .79, p = .00). The second measure involved a retrospective estimate of the frequency in which participants thought about work during the last seven days. This data was gained by performing a retrospective analysis of study one data from the Obsessive Thinking Scale that measured time spent thinking about work over a seven-day period. Scores on this scale for the present group of participants were positively skewed (skew = .94, w = .92, p = .00), with a mean of 1.78 (SD = 1.38, range = 0 – 6). The third measure involved a concurrent record (time-sampling) of the frequency of thinking about work between 6pm and midnight over a seven-day period. This measure was located in the time diaries (which are described in full in the next section on leisure patterns) that asked participants to tick a box if they had thought about

work in each 20-minute period between 6pm and midnight. Scores ranged from 0 to 39 times per week ($M = 6.35$, $SD = 8.70$) and were positively skewed (skew = 1.64, $w = .76$, $p = .00$).

Leisure Patterns

Leisure patterns were assessed using seven-day time diaries designed specifically for the current research. The diaries collected longitudinal, continuous and concurrent behavioural data that could not otherwise be captured through cross sectional questionnaires. Each diary comprised seven sturdy sheets of coloured cardboard, a permanently attached marker pen, an instruction sheet (see Appendix J), a glossary of typical activities, and contact phone number. Thus, the seven sheets captured 10,080 consecutive minutes (i.e., seven 24-hour days).

The sheet for each day comprised 18 activity columns and 58 rows, and captured a maximum of 1440 minutes. The activity columns were grouped into three 'themes' to provide ease of use (at work, other places, travelling). The 18 activity columns were labelled with commonplace events broadly based on those used by the New Zealand government in previous census research. The columns were working, eating at work, caregiving, chores, cultural (e.g., religion), community (e.g., charity clubs), eating, education, exercise, hobbies, media (e.g., television, stereo, computer games), personal care, relationships, shopping, sleeping, work travel and personal travel. There was also one blank column for activities unable to be otherwise categorised but this was seldom used and removed from later data analysis. The 58 rows were labelled with the relevant time periods, providing one row for each 20-minute period between 7 am and

midnight, and one row for every 60-minute period between 12 am and 6 am when virtually all of the sample would have been asleep. A copy of a diary page is presented in Appendix K. Completing the diary required a three-step process (a) determining the location (e.g., work, other, travelling), (b) selecting the relevant activity (e.g., media, shopping, education, etc.) and iii) colouring in the square (if more than one thing occurred, respondents were asked to indicate the main activity only). Thus, workers coloured in the box corresponding to the activity they were doing every 20 minutes. Essentially therefore, participant requirements were kept to an absolute minimum (i.e., colouring squares and ticking boxes) to maximise compliance and minimise attrition rates. Of the 100 diaries distributed, 80 usable data sets were returned, the substantial majority of which (91%) contained at least 6 ½ days' data.

Intrapersonal Well-being

Health status. Health status was measured using the Rand Short Form-36, a multifaceted measure that assesses generic health difficulties (Ware & Gandek. 1998). The scale yielded two summary measures: the *Physical Health* Components Score and the *Mental Health* Components Score. The measure employs numerical rating scales (presented in both Likhert and yes/no format) where approximately half of the 36 items are reverse scored to maintain reliability (McDowell & Newell, 1996). Both subscales have accurate predictive validity (utilisation of health care services, clinical course of depression, job loss within 12 months and survival rates over a five year period), strong reliability and high internal consistency (Ware & Gandek, 1998). In accordance with McDowell & Newell (1996), the scales were scored using the conventional procedure that

converts each item to a 0 – 100 scale and ignores items that are not answered. For instance, questions with three-category responses were coded 0, 50 or 100, five-category responses were coded in steps of 25, and six-point scales were coded in steps of 20. The individual scales are described in more detail below.

The Physical Components Scale measured current physical health across 21 items that were summed and averaged to provide a summary score ranging between 0 and 100. Low scores indicated poor self-care, frequent tiredness and severe pain, and high scores indicating high energy levels, well-being and general good health. Typical items referred to having a lot of energy, and being free from pain. Raw scores were summed and overall mean scores were calculated. The alpha coefficient was .90 in the current study. The mean score for the New Zealand population is 50.1 (Johnstone, et al., 1998), and in the present study was 85.66 (range = 16.9 to 100, SD = 14.68), indicating that the sample was particularly healthy, as would be expected for a working population. Scores were negatively skewed (skew =-2.09, w = .77, p = .00).

The Mental Health Components Scale measured general mental wellness across 14 items that were summed and averaged to provide a summary score ranging between 0 and 100. Low scores indicated frequent mental distress, social dysfunction and emotional problems and high scores indicated positive affect, social competence and emotional health. In addition to screening for psychiatric disorders, the scale has a particularly accurate sensitivity for depressive disorder (Ware and Gandek, 1998). Typical items included feeling calm, feeling happy and expecting health to remain at high levels. Raw scores were summed and overall

mean scores were calculated. The scale had an alpha coefficient of.86. The mean score in the present study (M = 72.69, SD = 15.70, range = 27.5 to 94.3) was higher than that of the New Zealand population (51.2; Johnstone, et al., 1998) indicating that the sample was particularly healthy, as would be expected for a working population. Scores were negatively skewed (skew = -.93, w = .90, p = .00).

Pleasure levels. The level of pleasure obtained from everyday leisure activities was measured with a 49-item subscale of the Mood-Related Pleasant Events Schedule (MacPhillamy & Lewinsohn, 1976). Typical items included going to a party, sitting in the sun, seeing beautiful scenery and being with friends. Respondents rated how frequently each of the 49 different activities occurred over the last 30 days on a three-point rating scale (never, 1-6 times, 7 or more times) and how pleasurable they found them (not pleasant, somewhat pleasant, and very pleasant). The scale provided three scores: frequency, enjoyability and obtained pleasure (frequency multiplied by enjoyability; α =. 93). Firstly, frequency scores were summed and divided by 49 to produce a mean score (theoretical range = 0 to 2, obtained range = 0.73 to 1.98), where high scores indicated high frequency of the activity. The mean score for this scale was 1.41 (SD = .25), with scores normally distributed (skew = -.48, w = .97, p = .28). This scoring procedure was repeated for the enjoyability ratings, where the mean was 1.62 (range = 1.12 to 2.0, SD = .20) and scores were normally distributed (skew = -.40, w = .97, p = 0.12). Finally the mean frequency score was multiplied by mean pleasure to produce an obtained pleasure score (theoretical range = 0-4, actual range = 1.05 to

3.96), where the mean was 2.35 (SD = .59) and scores were normally distributed (skew = -.09, w = .98, p = .71).

Interpersonal Relationships

Dyadic adjustment. The degree of satisfaction in people's relationships was measured with the Dyadic Adjustment Scale (Spanier, 1976), which assessed couple's perceptions of the quality of their relationship. Typical items included disagreements over issues such as money, physical intimacy, and happiness in the relationship. The scale contained 32 items; 26 utilised six-point rating scales (anchored at 'always agree-always disagree', 'all of the time-never', or 'never-more often'), two were based on five-point scales ('everyday-never'), two forced-choice ('yes/no'), one seven-point (extremely unhappy-perfect) and one six point (indicating feelings about the future of the relationship). Each of these responses was converted to numerical format (e.g., six-point Likert items were scored 1-6) and summed. Importantly, the scale was completed independently by each person of a couple, and thus provided three scores; workers' scores, partners' scores, and a general relationship satisfaction score (obtained by adding each of the dyad's scores). The scale yielded an alpha coefficient of .89 and split half reliability of .89. The theoretical range of mean scores was 0 - 4.72, with high scores indicating high satisfaction. The obtained range of workers' scores was 1.81 to 3.91 (M = 3.05, SD = .46) and scores were normally distributed (skew = -.77 w = .94, p = .01). The couples' general relationship satisfaction scores ranged from 1.94 to 3.59 (M = 3.07, SD = .35) and were also normally distributed (skew = -1.08, w = .92, p = .02).

Time communicating with significant others. This was assessed with a four-component item: ' Please estimate how much time you spend communicating with these people each week (a) friends, (b) partner, (c) children, (d) other family members'. The word 'communicating' was stressed in order to tap time spent actually interacting with these people. Responses to the four items were summed to provide an index of how much time was spent communicating with significant others, with a theoretical range of 0-128 and an actual range of 0 to 130, with one respondent overstating the time possible (group $M = 38.06$, $SD = 28.57$). Given that the remainder of this respondent's scores on the other scales were within normal range, their data was included with the rest of the sample. The scores were positively skewed (skew = 1.11, $w = .91$, $p = .00$).

Demographics

In addition to the demographic data already gathered in study one (age, income, ethnicity and gender), eight demographic questions were asked; the first five concerned demographic changes in the preceding 6-month period (e.g., bought a house, moved in with a new partner, had a baby, separated from a partner and changed jobs). These questions were intended to pinpoint any life circumstance that may have altered the tendency to workaholism in a systematic manner and therefore bias respondents' results. The remaining three questions concerned relationship status (Do you have a current partner? How long have you been in the relationship? How many nights per week do you spend in the same home? see Appendix L).

Measures Completed by Colleagues

Enjoyment-R. The Enjoyment-R scale was adapted for use by colleagues so that they could rate workers' levels of workaholism. Adaptations were made by substituting the word 'he' or 'she' (as appropriate) for 'I'. The scale retained the same number and ordering of items as the main WorkBAT-R (i.e., seven items in total). Reliability values were comparable to the main Enjoyment-R scale (α = .87, split half r = .85 and average inter-item r = .51), with the range slightly restricted between 1.57 and 6.86 (M = 4.66, SD =1.13). Scores were normally distributed (skew =-.34, w = .98, p =. 28).

Drive-R. The Drive-R scale was also adapted for use by colleagues so that they could rate workers' levels of workaholism. The scale retained the same number and ordering of items as the main WorkBAT-R (i.e., seven items in total). Reliability values were comparable to the main Drive-R scale (α = .74, split half r = .62 and average inter-item r = .31) with the range restricted between 2.57 and 6.86 (M = 4.90, SD =. 94). Scores were normally distributed (skew = -.10, w = .98, p =. 50).

Time working. Colleagues were asked to estimate how many hours the workers had per week, on average, over the last six months, using the two census items from study one. The item asking the minimum hours required was then subtracted from the number of hours actually worked, which provided an index of discretionary hours worked. The theoretical range of discretionary hours worked was 0-128 and the obtained ranged -.95 to 51.0 (M = 6.32, SD = 8.19). Responses

ranged from 25 to 75 (M = 44.78), with the scores positively skewed (skew = 2.69, w = .77, p = .00).

Measures Completed by Partners

Enjoyment-R. The Enjoyment-R scale was adapted for use by partners so that they could rate workers' levels of workaholism. The scale contained the same number and ordering of items as the main WorkBAT-R (i.e., seven items in total). Reliability values were comparable to the main Enjoyment-R scale ($\propto$ = .84, split half r = .92 and average inter-item r = .44) with the range restricted between was 1.71 and 6.43 (M = 4.45, SD = 1.23). Scores were normally distributed (skew = -.42, w = .94, p =. 04).

Drive-R. The Drive-R scale was adapted for use by partners so that they could rate workers' levels of workaholism. The scale retained the same number and ordering of items as the main WorkBAT-R (i.e., seven items in total). Reliability values were comparable to the main Drive-R ($\propto$ = .81, split half r = .74, average inter-item r = .43) with the range restricted between 1.43 and 6.57 (M = 4.75, SD = 1.22). Scores were normally distributed (skew =-.76, w = .94, p =. 06).

Time commitment. The time commitment to job scale was adapted for use by partners so that they could rate workers' levels of time commitment. The scale retained the same number and ordering of items as the workers' scale (i.e., 7 items in total). Reliability values were comparable to the workers' scale ($\propto$ = .78, split half r = .80, average inter-item r = .34) with the range restricted slightly from 1.14

to 6.43 ($M = 3.32$, $SD = 1.28$). Scores were positively skewed and but normally distributed (skew = .43, $w = .96$, $p = .27$).

Time spent thinking about work. Partners were asked to 'estimate how many hours each week your partner thinks about work during their spare time.' Responses ranged from 0 to 30 ($M = 6.84$, $SD = 5.84$) and scores were positively skewed (skew = 2.20, $w = .79$, $p = .00$).

Time working. Partners were asked to estimate how many hours the workers had worked (using the adapted census items). Their responses ranged from 32 to 85 ($M = 49.11$, $SD = 11.15$) and were positively skewed (skew = 1.42, $w = .87$, $p = .00$).

Time communicating with significant others. This was assessed with the adapted four-component item used by workers: ' Please estimate how much time your partner spends communicating with these people each week (a) friends, (b) you, (c) children, (d) other family members'. The theoretical range for the summed scale was 0-128, the obtained range was 2.5 to 123 ($M = 37.12$, $SD = 24.78$) and scores were positively skewed (skew = 1.36, $w = .91$, $p = .00$).

Dyadic Adjustment. The same version of the Dyadic Adjustment Scale (Spanier, 1976) used for the workers was used for partners. The alpha coefficient was .84 and the split half reliability (.75) was slightly lower than that of the workers. The range of scores was relatively restricted (range = 2.06 - 3.63, $M = 3.06$, $SD = .35$), and scores were normally distributed (skew = -.78, $w = .95$,

$p = .13$).

A précis of all the measures administered to workers, their partners and colleagues in study two is presented in Table 4.1.

Table 4.1
A Summary of the Constructs Measured in Study Two

Workers	Colleagues	Partners
Workaholism Time Commitment to Job Hours worked Thinking about work Leisure time usage (diaries) Health Status (physical / mental) Pleasant Events Dyadic Adjustment Time communicating Demographics	Workaholism Hours worked	Workaholism Time commitment to job Hours worked Time thinking Dyadic Adjustment Time communicating

Procedure

Data collection for study two occurred precisely six months after study one, and occurred in the following manner.

Pretesting. Each measure was pre-tested on a pilot sample (two males, three females) prior to use. The pilot group highlighted ambiguities and critiqued the general face validity and layout of the new WorkBAT-R and the time diaries, especially where activities were difficult to categorise, or ease of use could be improved. This process of feedback and re-testing was continued until the group reported the diaries as user-friendly, efficient and face valid.

Data collection. All participants (i.e., workers, colleagues and partners) were blind to the research aims and to the existence of the contrasted groups throughout data collection, with the research discussed only in generic terms (i.e., 'attitudes toward work, leisure and pleasure'). At each point of contact, the researcher met workers 'en masse' in their respective workplaces to ensure that standardised instructions, training and information were given. Specifically, workers were met and briefed on the generic research design, confidentiality, voluntary participation, and privacy with respect to employers having no access to personal information. Each was given a research package containing; (a) a questionnaire (see Appendix L), cover letter (see Appendix M) and return envelope, (b) a 'Colleagues Questionnaire' and return envelope to give to a colleague, and (c) a 'Partner's Letter' requesting, where applicable, the partner's consent to participate. The workers were met the following day to collect their own and their colleagues' questionnaires and receive training on how to complete the time diaries. Partners returned their questionnaires directly to the researcher.

Time diary training. Training in using the time diaries went as follows. Firstly, the diaries were explained and demonstrated to each group. Each worker was then personally assisted to retrospectively complete the first four hours of that day, to ensure that they had understood what was required. The workers were then were asked to continue the diary for the remainder of the next seven days, so that each diary collected a total of 10,080 minutes of continuous data. Given traditional concerns that time dairies become increasingly incomplete toward the end of data collection, diaries were commenced on a Wednesday so that three full workdays and two weekend days were collected before fatigue was likely to occur.

At the end of every 20-minute period thereon, workers indicated the main activity they had been undertaking by colouring a blank square with a felt pen. During the evening (6pm to midnight) they also indicated whether they had thought about work during that 20-minute period, by ticking a box at the side of the diary. Where multiple activities were conducted in one time sector, workers were instructed to attribute the activity to the *main* activity they were undertaking at the time. Details of these instructions are presented in Appendix J. After ten days, workers were met in their workplaces, thanked for their participation, reminded of the upcoming data collection in six-months' time and returned their diaries and any outstanding questionnaires.

Statistical Treatment of the Data

Diary data were coded in the following manner: One diary that was missing more than 20% of the raw data was excluded from the analysis, which left 80 diaries in the data set. Raw data from each of the 18 daily columns were than totalled and summed into the following groups: (a) weekdays only, (b) weekend days only, and (c) complete weeks. While most workers indicated only the main activity as instructed, a small majority indicated multiple activities in each 20-minute period. In these instances, the time was divided and allotted in equal portions to each activity (i.e., three activities would have been allotted 6.7 minutes each). As respondents were asked to return all diaries regardless of how many days they had completed, some diaries (9%) contained less than seven days data. To ensure scores were comparable across participants, raw data were converted to percentage of time spent on each activity, by dividing the time allocated to each

activity by the total number of minutes recorded for the week. (For instance, where a person had completed only 9000 of the 10,080 possible minutes, percentages were calculated using 9000 as the base figure).

To reduce the likelihood of Type 1 errors and spurious false positives, the significance level for all correlations was set at .01. Additionally, non-parametric analyses were conducted with external constructs due to negative skews of several measures and alpha reliability statistics were used to calculate 'corrected' correlations where relevant. The data were analysed using 'STATISTICA ©1995' software. Specific analyses included descriptive statistics (distributions, means, standard deviations and alpha coefficients) and multivariate analyses (Spearman-Brown correlations, Mann Whitney U tests and Wilcoxon matched pairs). Specifically, these latter two tests were used as many of the measures yielded significant skews in their distributions (i.e., nonparametric distributions). The Mann-Whitney U test is the most powerful nonparametric alternative to the *t*-test for independent samples (Statistica, 1995) and was used to compare dependent variables for workaholics and non-workaholics based on rank sums rather than means. Wilcoxon matched pairs analyses is a nonparametric alternative to the *t*-test for dependent (correlated) samples and was used to compare workaholics' and their partners' ratings of the same individual's workaholism.

Results

Enjoyment-R related significantly with Drive-R ($r_s = .57$), but neither scale related significantly to the demographic variables (age, gender, income, ethnicity, highest qualification).

Work Patterns

Hypothesis I (that people classified as workaholic work longer hours than non-workaholics) was tested using the Mann Whitney U test. Comparisons made between workaholics' and their partners' estimates were analysed using Wilcoxon matched pairs tests. When asked about their *general* time commitment to work using a 7-point Likert scale (the time commitment scale) workaholics rated themselves as committing significantly more time to work ($M_w = 3.81$, $M_{nw} = 2.38$) than nonworkaholics ($u = 266, z = 5.85, p = .00$). When partners were asked to estimate the workers behaviour using the same set of questions, they also estimated workaholics as more committed (3.72) than nonworkaholics (2.51). This difference was also significant ($u = 89, z = 2.75, p = .00$).

When asked to *retrospectively* estimate how many hours they had worked on average over the last six months, workaholics ($M_w = 46.2$), reported more hours than non-workaholics ($M_{nw} = 43.0$). This 3-hour difference between the means was statistically significant ($u = 651, z = 2.63, p = .00$). When colleagues were asked to estimate workers' hours, they corroborated this trend, estimating that workaholics worked more hours ($M_w = 45.2$) than nonworkaholics ($M_{nw} = 42.8$).

However, this difference was not significant ($u = 470$, $z = 2.28$, $p = .02$). Partners corroborated this trend, estimating that workaholics worked significantly more hours ($M_w = 53.60$) than nonworkaholics (M_{nw} =43.86; $t = 51$, $z = 3.46$, $p = .00$). This 10-hour difference was statistically significant ($u = 88$, $z = 2.79$, $p = .00$). Interestingly, workaholics and their partners differed substantially over how many hours they worked. Partners estimated that workaholics worked 7.4 hours per week more than the workaholics themselves estimated. As a comparative measure, this trend was not so evident in the nonworkaholic group with only a 50-minute difference between workers' and partners' estimates.

When asked to *concurrently record* the actual number of hours worked using time diaries, workaholics again worked three hours more per week (M_w = 42.0 hours) than nonworkaholics (M_{nw} = 39.7 hours). The specific patterns of hours worked also differed, with workaholics working twice as much during weekends (M_w = 2.1 hours, M_{nw} = 1.0), and after 6pm (M_w = 1.7 hours, M_{nw} = 0.9). Importantly, however, Mann Whitney U tests indicated that none of these differences between the means attained statistical significance.

Overall, therefore, across three separate indices of hours worked (generic time commitment, retrospective estimation and concurrent recording) workaholics worked more hours than non-workaholics, a trend that was corroborated by their partners and colleagues. However, in ostensibly the most reliable measure (time diaries), the difference between the two groups did not attain significance. In general, however, Hypothesis I was supported by the bulk of the data.

Hypothesis II (that people classified as workaholic work off-site more than non-workaholics) was tested with the Mann Whitney U test. When the places that people conducted their work were compared, workaholics worked at their main physical workplace 105 minutes less per week than nonworkaholics (M_w = 36.2 hours, M_{nw} = 38.0), although this difference was not significant (u = 761, z = -.37, p=. 71). Similarly, while workaholics also conducted their work off-site, at places like home, cafes and other peoples' workplaces, at triple the amount than nonworkaholics (M_w = 5.8 hours, M_{nw} = 1.7), this difference was not significant either (u =573, z = 2.18, p=. 03). Thus Hypothesis II was not supported.

Hypothesis III (that people classified as workaholic think about work more frequently when they are away from the workplace [i.e., not actively working] than non-workaholics do) was tested with the Mann Whitney U test. When asked to *estimate the quantity* of hours per week they thought about work in their spare time, workaholics estimated an amount almost four times greater than non-workaholics (M_w = 8.84 hours, M_{nw} = 2.56 hours). This difference was statistically significant (u = 341, z = 5.02, p =. 00). Partners also estimated that workaholics spent substantially more time thinking about work in their spare time than non-workaholics did (M_w = 7.95 hours, M_{nw} = 4.71 hours), although this difference was not significant (u = 91, z = 1.63, p =. 10).

In study one, workaholics and non-workaholics had been asked to *estimate the frequency* they thought about work outside of work hours every week using the Obsessive Thinking Scale. A retrospective analysis of these data indicated that the

mean responses differed. Workaholics estimated they thought about work (M_w = 19.31 occasions per week) with almost double the frequency of nonworkaholics (M_{nw} = 9.12). This difference was significant ($u = 379.5$, $z = 4.80$, $p = .00$).

When asked *concurrently* whether they thought about work between 6pm and midnight (i.e., time diary data), workaholics reported thinking about work almost five times more frequently per week than nonworkaholics ($M_w = 10.35$ times, $M_{nw} = 2.35$). This difference was also statistically significant ($u = 414$, $z = 3.71$, $p = .00$).

Overall, across three separate indices of time thinking about work (retrospective quantity, retrospective frequency and concurrent frequency), workaholics thought about work outside of work time significantly more than nonworkaholics did. Their partners corroborated this trend. Thus the data supported Hypothesis III.

Leisure Patterns

Hypothesis IV (that workaholism is inversely related to outside-of-work activities) was tested using Spearman Brown correlations. The duration of outside-of-work activities was measured using time diary data. Specifically, 14 categories were used; caregiving, chores, cultural (e.g., religion), community (e.g., charity clubs), eating, education, exercise, hobbies, media (e.g., television, stereo, computer games), personal care, relationships, shopping, sleeping and personal travel. Summary data are presented in Table 4.2.

Table 4.2
Study Two Diary Data Comparing Workaholics' and Non-workaholics' Mean Time Usage.

Activity	*M* Workaholics (minutes per week)[a]	*M* Nonworkaholics (minutes per week)[b]	*U*	*p*
Care-giving,	133.8	93.5	422	.86
Chores	354.0	283.0	326	.10
Community	57.2	20.3	433	.99
Culture	140.8	93.6	404	.65
Education	101.1	25.4	383	.44
Exercise	244.6	194.0	374	.37
Hobbies	226.3	331.6	404	.65
Media	529.6	802.8	312	.07
Personal care	373.9	376.4	413	.75
Relationships	753.0	806.0	407	.69
Shopping	92.9	158.0	308	.06
Sleeping	3218.8	3395.1	290	.03
Travel - Personal	203.6	216.6	420	.83
Travel - Work	274.4	289.0	376	.38
Eating (not at work)	408.4	317.4	381	.43
Eating at work	219.5	264.9	367	.31
Working offsite	345.8	101.0	294	.03
Working onsite	2175.7	2280.2	378	.40

[a] $n = 28$, [b] $n = 31$

The amount of time spent on the following activities was inversely related to Enjoyment-R; education (r_s = -.04) hobbies (r_s = -.04), media (r_s = -.19) personal care (r_s = -.03), relationships (r_s = -.15), sleeping (r_s = -.16), and personal travel (r_s = -.20). However, it is important to note that *none* of these correlations were significant, or even approached significance. With respect to Drive-R, five of the same activities related inversely; hobbies (r_s = -.09), media (r_s = -.24) relationships (r_s = -.08), shopping (r_s = -.14) sleeping (r_s = -.14), and personal travel (r_s = -.07). However, *none* of these correlations were significant either.

Conversely, time spent on many leisure activities related positively to Enjoyment-R, although it is important to iterate that *none* of these correlations

were significant. These activities were; care giving (r_s = .09) chores (r_s = .18), community (r_s = .14), eating (r_s = .11), exercise (r_s = .13), and personal care (r_s = -.03). Drive-R also related positively to many leisure activities although it is important to iterate that *none* of these correlations were significant either. The relevant activities were; care giving (r_s = .15) chores (r_s = .18), community (r_s = .03), eating (r_s = .03), exercise (r_s = .17) and personal care (r_s = .00), in addition to culture (r_s =. 12) and education (r_s = .15). In fact, the only leisure-based activity that related significantly to Enjoyment-R was cultural activity (r_s = .11), and the only one that related significantly to Drive-R was chores (r_s = .32). Overall, therefore, hobbies, media, personal care, relationships, sleeping and personal travel related inversely but extremely weakly with both workaholism factors (education and shopping related negatively only to Enjoyment-R), and none of these relationships were significant. In general, the bulk of the correlations failed to reach statistical significance and therefore did not support Hypothesis IV.

Hypothesis V (that people classified as workaholic spend significantly more time of their leisure time on tangibly productive activities [such as chores] than non-workaholics) was tested with the Mann Whitney U test. The outside-of-work activities were measured using 14 categories from the time diary data. These were care giving, chores, cultural, community, eating, education, exercise, hobbies, media, personal care, relationships, shopping, sleeping and personal travel. As outlined in Table 4.2, none of the differences between workaholics' and non-workaholics' leisure time usage were statistically significant. However, as depicted in Figure 4.1, mean data indicated that workaholics tended to spend comparatively *more* time on eating (M_w = 92 mins more), education (M_w = +78

mins), chores (M_w = +77 mins), care giving (M_w = +76 mins), exercise (M_w = +51 mins), culture (M_w = +47 mins) and community (M_w = +37 mins). Additionally, they spent comparatively *less* time on media (M_w = 273 mins less), sleeping (M_w = -176 mins), hobbies (M_w = -105 mins), shopping (M_w = -65 mins), relationships (M_w = - 53 mins), personal travel (M_w = -13 mins) and personal care (M_w = -3 mins). Again, however, it is important to iterate that none of these differences were significant. Thus, a trend towards engaging in more 'active' and tangibly productive pursuits such as exercising was evident, but correlations failed to reach significance and therefore failed to support Hypothesis V.

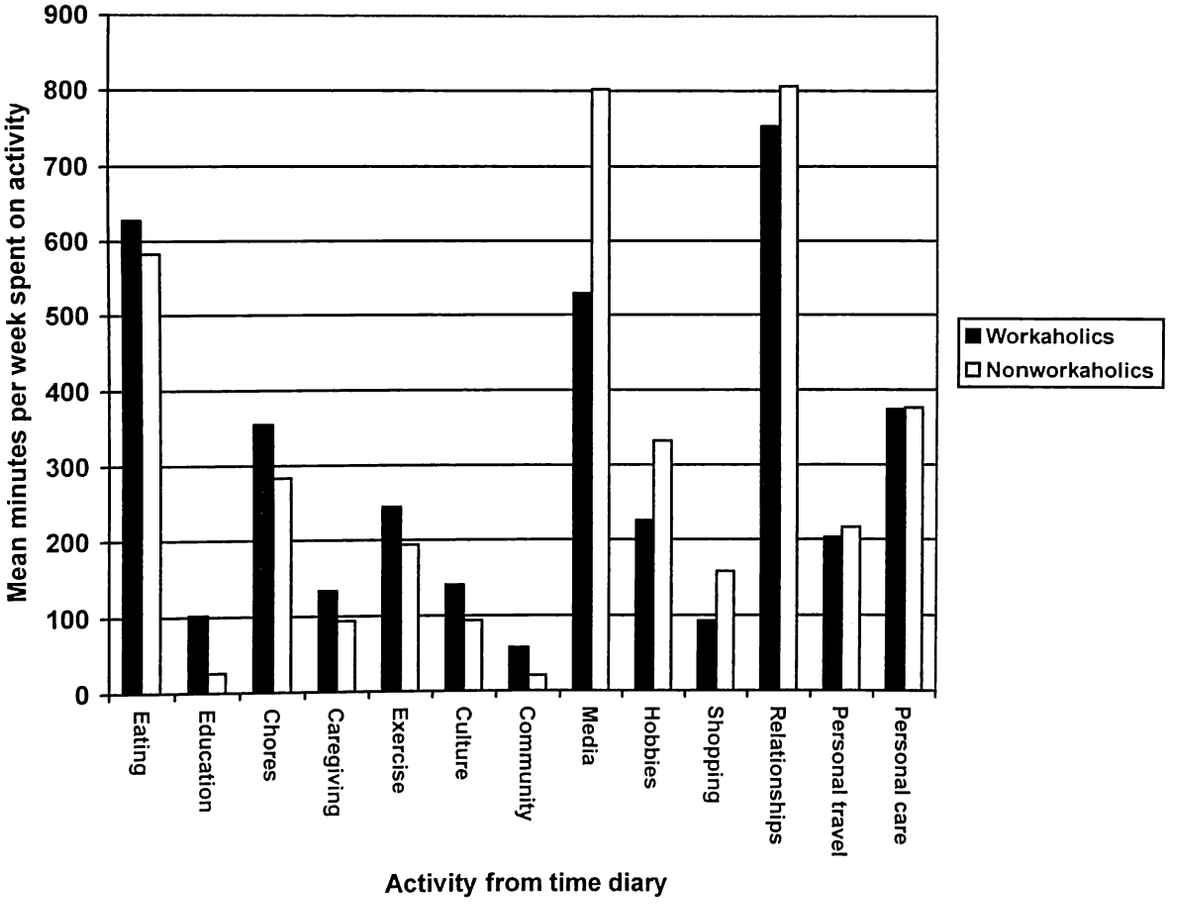

Figure 4.1. Workaholics' and nonworkaholics' time diary data.

Intrapersonal Well-being

Hypothesis VI (that people classified as workaholic experience poorer physical and mental health than non-workaholics) was tested with the Mann Whitney U test. When asked on a 0-100 scale (where 100 indicates excellent health) workaholics reported slightly poorer mental health (M_w = 71.2) than non-workaholics (M_{nw} = 75.2). This difference, however, was very small and not statistically significant (u = 826, z = -.83, p =. 41). Similarly, workaholics also reported slightly poorer physical health (M_w = 82.0) than non-workaholics (M_{nw} = 88.6) but this difference was also very small and not significant (u = 819, z = -.38, p =. 70). Thus the data did not support Hypothesis VI.

Hypothesis VII (that people classified as workaholic report less frequent engagement in non-work-related pleasant events than non-workaholics) was tested with the Mann Whitney U test. Workaholics reported experiencing a greater frequency of pleasant events (M_w 1.44) than non-workaholics (M_{nw} = 1.38) but the difference was not significant (u = 766, z = .76, p =. 45). They also reported obtaining higher levels of pleasure from pleasant events (M_w = 1.66, M_{nw} =1.58), but this difference was not significant either (u = 618, z = 1.57, p =. 12). The overall quality of pleasant events (M_w = 2.44, M_{nw} =2.25) did not differ significantly between the two groups (u = 675, z = 1.00, p =. 32). Thus the data did not support Hypothesis VII.

Interpersonal Relationships

Hypothesis VIII (that workaholics' self-ratings of workaholism [i.e., their WorkBAT-R scores] are lower than the ratings of their workaholism provided by significant others) was tested with the Wilcoxon Matched pairs for dependent

samples test. Workaholics rated their Enjoyment-R (M_w = 5.38) as higher than partners rated it (M = 5.01) although this difference was not significant (z = 2.16, p =. 03). Workaholics rated themselves significantly higher than colleagues (M = 4.90) rated them (z = 3.19, p = .00). Similarly, workaholics rated themselves as significantly higher in Drive-R (M_w = 5.65) than partners (M = 5.08) rated them (z = 3.24, p =. 00). They also rated themselves higher than colleagues (M = 4.97) rated them (z = 4.00, p = .00). These data directly contradicted Hypothesis VIII and therefore did not support it.

Hypothesis IX (that people classified as workaholic experience greater disturbances in close relationships than non-workaholics) was tested with the Mann Whitney U test. Workaholics estimated that they spent more time (M = 36.8 hours per week) with friends, partners, children and families than partners estimated that they did (M = 33.9). Workaholics reported slightly greater relationship satisfaction (M_w = 98.2, theoretical maximum was 151) than nonworkaholics (M_w = 96.8). However, this difference was very small and not significant (u = 487, z = .40, p =. 69). Partners of workaholics reported less satisfaction (M_w = 97.4) than those of nonworkaholics (x_w = 99.0), although again this difference was very small and not significant (u = 130, z = -1.13, p =. 19). Furthermore, when couples' *mutual* satisfaction was assessed, those comprising a workaholic and their partner expressed slightly less satisfaction (M_w = 97.7) than nonworkaholics and their partners (M_w = 99.2). However, this difference was not statistically significant (u = 140, z = -.67, p =. 50). Together these data directly contradicted Hypothesis IX and therefore did not support it.

Summary and Preliminary Discussion

The present study aimed to provide a systematic study of workaholism across four dimensions; work behaviour, leisure behaviour, intrapersonal health and interpersonal relationships. Overall, the data indicated the following trends. Firstly, as predicted by the literature, people classified as workaholic exhibited different work patterns than others. Specifically they worked longer hours, worked off-site a little more and thought about work substantially more than others (*H1-H3*). While the raw data suggested that workaholics spent *less* time on activities such as media, sleeping, hobbies, shopping, and relationships, and *more* time on more active and challenging pursuits, such as educating themselves and doing chores, none of the analyses reached statistical significance (*H4-H5*). Against predictions, workaholics did not experience poorer health status, fewer pleasant events or poorer relationship satisfaction than nonworkaholics. In fact they appeared to experience similar mental health, physical health, pleasure, and relationship satisfaction to nonworkaholics (*H6, H7, H9*). Finally, they did not tend to deny or under-rate their workaholism, compared to their partners' ratings (*H8*). Thus, in summary, workaholics showed different work and leisure behaviour than non-workaholics, but these did not appear to have a substantial impact on their intrapersonal or interpersonal well-being. Given that the data were triangulated across several measures (diaries, questionnaires, retrospective reports) and gained from three different groups of informants (workers, colleagues and partners), these findings are likely to be relatively robust.

Several aspects of the current findings warrant further discussion. Firstly, the differing work and leisure behaviours seen in workaholics compared to non-workaholics (as evidenced in the present study) may reflect the high levels of achievement striving and work ethic that they possess (as evidenced in study one). Specifically, if a person has a high tendency toward striving for achievement, it is likely that they will spend more time working than others. It is also possible that their leisure time may tend to be directed toward tasks where achievement can be measured in more tangible terms (e.g., exercising) than something that is more abstract (e.g., relationships). Also, if they have a strong work ethic, it is likely to compound the tendency to work at 'accomplishing things' both in employment and leisure time. However, while the data suggested some interesting trends, the majority of analyses could not rule out chance as an explanation (i.e., they did not reach significance at $p<.01$). Given the previous literature that has speculated about the differing topography of workaholics' leisure behaviour, the present failure of these differences to attain statistical significance is somewhat unexpected.

The finding that workaholics appear to suffer no intrapersonal harm regarding physical and mental health is in contrast to previous data such as that of Burke (2000c). Importantly, the present study used a different measure from Burke. Thus, the present findings are particularly interesting. The present study used the Rand Short-Form-36 which has substantial validation data from across more than 20 countries, is published in over 200 scientific journals (Ware & Gandek, 1998), has well-established predictive validity to health outcomes, and is normed on New Zealand populations. It is prudent to accentuate, however, that the

present sample was very healthy, which is perhaps not surprising given that the New Zealand norms include the very elderly, infirm and those unable to work due to illness, which may have biased the result. However, while previous research indicates that workaholics report higher levels of stress, the present data suggest that this does not necessarily translate to poorer health outcomes. It is possible for instance, that high levels of achievement striving (which earns rewarding and positively reinforcing outcomes) ameliorate at least in part, the stress they report, and thereby reduce the incidence of illness. It is also feasible to argue that the high levels of income in the present sample would mean participants also had higher levels of good health. However, given that Burke's (2000c) sample comprised MBA educated managers, those data were also likely to be influenced in a similar manner. It is clear that the relationship between workaholism and health outcomes requires further empirical investigation.

The finding that workaholics do not appear to suffer poorer interpersonal relationships is also in contrast to previous data, such as that of Robinson et al., (2001). Importantly, the measure used (the Dyadic Adjust Scale) is also well validated and supported by empirical data from numerous studies (Spanier, 1976). It is possible that one reason for the discrepancy between the present and previous findings is that workaholics had 'matched' themselves to partners who were also workaholic and therefore there was less tension in the relationship. As partners' own levels of workaholism were not measured, however, it is difficult to ascertain whether this is the case. It is important to iterate however that the present study triangulated both workers', partners' and the couples' perceptions of the

relationship, which is likely to make them more robust than previous data (c.f., Robinson, et al., 2001) who evaluated only partners' views.

Together, if they able to be replicated the present data regarding the lack of harmful impact of workaholism on health and relationships hold some important implications for the theories of workaholism discussed in chapter one. Firstly, they refute the possibility of addiction theory being able to explain workaholism, especially given that workaholics do not appear to deny their behaviour (a key tenet of addiction theory), do not appear to suffer personally (a key prediction arising from addiction theory) and do not appear to harm intimate relationships (a key outcome of addiction theory). These data also refute the likelihood of psychodynamic and family systems theories holding utility for workaholism research, as the dynamics between the couples do not seem to be negative and harmful as predicted.

In summary therefore, the present data lend preliminary support to the notion that workaholics differ in their work and leisure behaviours to non-workaholics, and challenge several of the theories of workaholism. These findings will be contextualised within prior research and discussed in more detail in the final chapter of the thesis. Firstly, however, in order to establish the replicability of the present findings over a longitudinal timeframe, a further study (study three) was commenced.

CHAPTER 5

Study Three: The Longitudinal Properties of Workaholism

As previously outlined, workaholism is widely written about as a progressive disorder. However, despite this body of opinion, there are currently no published data concerning the predictive validity or the longitudinal course of workaholism. In fact, virtually all the designs have been cross-sectional, and have not been followed up or replicated with repeated measures. Furthermore, the majority of methods utilised to measure workaholism are restricted to quantitative analyses of pencil-and-paper self-reports that have been used on homogeneous samples. It is therefore conceivable that the data are be confounded by one-off spurious events (such as a recent promotion) that occurred during measurement. This means that our current knowledge about workaholism is restricted in its generality. There is also ongoing debate about the most appropriate operational definition of workaholism, which, perplexingly, has not yet resulted in researchers directly asking the public (workers, colleagues and partners) how they define workaholism. Essentially this debate has been based upon supposition rather than inductive data. Therefore, the present chapter describes study three, which (a) involves a direct replication of the study two methodology, (b) evaluates the predictive validity of workaholism scores, and (c) aims to inductively generate an operational definition of workaholism then compare it to the theoretical definition presented in chapter one. The chapter concludes with a preliminary discussion of the present data.

The Stability of Workaholism

The differing theories of workaholism variously predict that over time workaholism will either increase, move bi-directionally, or remain stable. Each of these predictions is considered in sequence below.

Firstly, addiction theories predict that workaholism gradually *increases* over time to eventually affect both the person and their significant others in a progressive, harmful manner. Thus workaholism is a progressive and potentially fatal disease (Robinson, 1998c). Taken to its logical conclusion, this argument suggests that few workaholics would ever retire, as they are likely to have died first. Family systems theory also implies that workaholism would worsen over time as workaholics worked more to escape family tension and accelerating conflict over working hours.

In contrast, learning theory predicts that workaholism is a malleable behaviour that is sensitive to the relative richness of reinforcement schedules and changes *in either direction* (i.e., either increases or decreases) over time. Thus workaholism could be substituted by a functionally equivalent behaviour such as running or socialising, and therefore be conditioned out of individuals who are motivated to change. Logically then, workaholism would be expected to decline (i.e., put on a schedule of extinction) in retirement when there are no reinforcers for working. It would also predict that workaholism could be shaped into people's repertoires, and may commence at any time in life if the relevant reinforcement

contingencies were activated. On this basis, workaholism would change in either direction within individuals over time.

Several other theories predict that workaholism would remain *stable* over time. For instance, trait theory predicts that workaholism is a stable dispositional variable that occurs in some individuals within all societies. Essentially, workaholism is considered an inelastic tendency that can be modified only slightly, but never entirely removed from an individual's repertoire. Thus, the aetiology is located within the individual rather than the social context, meaning that workaholism would still be evident in retirement. On this basis, workaholism would have a life-time duration and thus remain relatively stable across time, jobs and life events. Similarly, cognitive theory predicts that workaholism arises from a belief or set of beliefs (i.e., schemata) that remain constant over time, and are reinforced and strengthened by their outcomes (i.e., self-fulfilling prophesies). Thus workaholism be stable, and possibly exhibit a slight increase over time unless a person suddenly gained insight into their cognitive processes. Psychodynamic theory also predicts that workaholism would continue as long as a person had no insight into the origins of their behaviour (i.e., in childhood) and would thus require extensive psychoanalytic therapy to redress. Likewise, interaction theory predicts that the onset of workaholism is traceable to a discrete period where an underlying predisposition is triggered by an environmental stimulus (such as a role model or an extrinsic reward), and as long as the stimulus remains in operation, the behaviour remains relatively stable.

Clearly, the theories differ in their predictions. This suggests that longitudinal research would be of demonstrable benefit in resolving these issues. In particular, a longitudinal design incorporating multiple informants, multiple measures and contrasted groups would be valuable in gaining a broader understanding of workaholism. Based on anecdotal observations, Oates (1971) proposed that workaholism becomes aggravated over time as societal pressure to achieve promotions increases. Conversely, Naughton (1987) concluded that as they age people select leisure activities in preference to working, and therefore workaholism would diminish over time. However, there are three considerations that contradict both viewpoints and predict that workaholism may actually be stable over time.

Firstly, substantial changes have occurred in the workplace since Oates' and Naughton's work was published, especially with respect to flexible retirement ages and employment contracts. Secondly, both workaholics and non-workaholics are found in a broad range of ages, from those in their twenties to retirement (Machlowitz, 1980). Finally, qualitative data indicate that workaholism is relatively permanent and stable (Machlowitz, 1980). On this basis it is feasible to predict that the relationship between workaholism and work behaviours, leisure behaviour, well-being and interpersonal relationships would exhibit a relatively stable pattern over 12 months. Consequently, the present research aimed to repeat the study two methodology in order to assess the temporal stability of those findings. Specifically, the present research therefore tested the following hypotheses, which are numbered sequentially from Chapter four and commence at hypothesis ten:

Hypothesis X. There is no change in (study one) workaholism scores over 6-months, or 12-months (i.e., at time two and three, respectively).

Hypothesis XI. People classified as workaholic differ significantly in their work-related behaviour (i.e., hours worked and time spent thinking about work) from non-workaholics.

Hypothesis XII. People classified as workaholic differ significantly in their leisure-related behaviour (i.e., outside-of-work activities and leisure-time usage) from non-workaholics.

Hypothesis XIII. People classified as workaholic have poorer intrapersonal health (i.e., mental and physical health, and pleasant events) than non-workaholics.

Hypothesis XIV. People classified as workaholic have poorer interpersonal relationships (i.e., denial of workaholism by workers and relationship dissatisfaction) than non-workaholics.

The Predictive Validity of Workaholism Scores

Although many authors have argued that workaholism predicts a multitude of outcomes, none appear to have tested how well workaholism predicts these behaviours. Given that the ultimate goal of science is the prediction and control of variables (Skinner, 1974), it is remiss that there are very little workaholism data

concerning the validity of workaholism scores in predicting work and leisure behaviours, and intrapersonal and interpersonal relationships. If, however, the WorkBAT is a valid and reliable measure of workaholism, it should predict the impact of workaholism over time. Given the significant differences between workaholics and non-workaholics in terms of work and leisure behaviours in study two, the present study aimed to test the following hypotheses:

Hypothesis XV. Enjoyment and Drive predict work behaviour (i.e., hours worked, time committed to work and time thinking about work) across time.

Hypothesis XVI. Enjoyment and Drive predict time-diary leisure data across time.

An Inductively Generated Definition of Workaholism

In addition to contemporary data, the data from studies one and two endorse current scientific thinking that workaholism is a distinct construct that merits continued empirical investigation. However, an integrated, concise theoretical conceptualisation of what workaholism includes and excludes would be beneficial in integrating the theories, data and measures of workaholism. The present study therefore aimed to *inductively* generate an operational definition of workaholism by asking *participants* how they defined it, and then explore the correspondence between these definitions and the theoretical definition. The present study therefore aimed to compare workers' empirically based definitions of workaholism to the theoretical definition presented in chapter one.

Design Issues

Study three was conducted 12-months after study one (i.e., 6-months after study two). The main methodology involved repeated measures of the study two design. This enabled: (a) a test-retest analysis of the 12-month stability of WorkBAT scores, (b) a test of the robustness, stability and replicability of the data from study two, and (3) adequate data to generate an empirically substantiated operational definition of workaholism. The methodological structure included contrasted groups, longitudinal design, triangulated data sources (workers, partners, colleagues) and triangulated measurement (self report questionnaires, diaries, independent observers).

Summary and Aims of Study Three

The present study comprised a replication of study two in addition to testing the predictive validity and an inductive definition of workaholism. Essentially therefore, the study aimed to contribute to the literature in four ways. These were: (a) To provide a systematic study of workaholism, (b) to provide triangulated empirical data regarding significant others' perceptions, (c) to collect longitudinal New Zealand data, and (d) to generate an empirically based definition of workaholism. The epistemological perspective involved applied research in a naturalistic setting, using quantitative data from a contrasted group design and data gathered from multivariate sources (i.e., triangulated data). As outlined above, workaholism was expected to remain temporally stable, maintain a consistent relationship with external correlates over time, hold predictive validity to work and leisure behaviours, and participants' definitions were expected to correspond with the theoretical definition.

Method

Sample

The sample comprised four participant groups. These were workers (workaholic and non-workaholic), their colleagues, and their partners, and the content analysts. In total, the 80 workers from study two who had remained employed at the participating organisations were invited to participate. As part of their participation, each worker was asked to give a questionnaire to a colleague who had not participated in study two (n = 80) and, where applicable, their partner (n = 48). Workers were requested to select a new colleague for two reasons. These were to avoid replicating any response biases inherent in the previous colleague's reports (due to seniority differences, interim promotions, job changes etc) and to avert the logistical difficulties of retaining the same group of colleagues across job changes in the intervening 6-month period.

Overall, 208 questionnaires were distributed (80 workers, 80 colleagues and 48 partners) and 131 (63%) returned. Workers returned 55 questionnaires (69%), colleagues returned 52 questionnaires (65%) and partners returned 24 questionnaires (50%). In addition, 51 time diaries were returned (64%), four of which were excluded as they were missing more than 20% of the raw data. Thus 47 usable sets of time diary data were returned. The demographics of each group were as follows:

Workers. The workers remained categorised in the same groups as in study two (i.e., workaholic and non-workaholic), which were smaller due to attrition, but comparable with the sample from study two in terms of demographics (see Appendix N). The 55 workers (24 male, 31 female) had a mean age 36.8 years (range = 20-63, *SD* = 11.6). Half of the sample held some type of tertiary qualification (ranging from apprenticeship certificates through to masters degrees), while 10% had only three years secondary school education. The majority of workers (80%) were New Zealand European (4% Maori, 2% Pacific Island, 5% Asian) and the majority (62%) were living in married or de-facto relationships. The majority of respondents were in technical, clerical or sales roles, with almost half working in the financial services industry. Importantly, the proportion of workaholics did not differ from non-workaholics in terms of gender, age, income, or highest qualification.

Colleagues. Colleagues of the workaholic group (n = 52) were similar to the study two sample in terms of demographic characteristics (12 male, 40 female; (see Appendix O). While Mann Whitney U tests indicated that none of the following differences in demographics between workaholics' and non-workaholics' colleagues were significant, the raw data indicated the following patterns. Workaholics' colleagues tended to be female (n_w = 85%; n_{nw} =69%), fewer were junior to the workaholics than to non-workaholics' colleagues (n_w = 12%, n_{nw} = 27%) and fewer knew each other longer than two years (n_w = 12%, n_{nw} = 46). Substantial proportions of both workaholics' and non-workaholics' colleagues worked in the same department as the worker they were completing the questionnaire about (n_w = 85%, n_{nw} = 81%).

Partners. In total 24 partners responded; 16 partners of workaholics (12 male, 4 female) and 8 partners of non-workaholics responded (five male, three female). While Mann Whitney U tests indicated that none of the following differences in demographics between workaholics' and non-workaholics' partners were significant, the raw data indicated the following patterns. In general, partners of workaholics still tended to be older (M_w= 42.4, M_{nw} = 34.5), in their relationships for longer (M_w = 13.8, M_{nw} = 11.1) and to spend less time each week living in the same home as their partner (M_w = 6.25, M_{nw} = 7.0 nights), than partners of non-workaholics.

Content Analysts. Nine tertiary qualified people (2 male, 7 female) acted as content analysts. Seven of the group were degree-qualified psychologists, while the remaining two had tertiary qualifications in business studies. None had particular expertise in the area of workaholism.

Measures Completed by Workers

The questionnaire and time diaries that were used in study two were re-administered in the present study. Newly written auxiliary questions were also administered. The properties of each of these measures were as follows:

Workaholism

Two scales were administered to measure workaholism (Enjoyment-R and Drive-R, from the WorkBAT-R) in addition to five new items concerning workaholism.

Enjoyment revised. The Enjoyment-R scale measured enjoyment of work across 7-items, where typical items concerned finding work more like fun than work. The scale had an alpha value of .92, split half reliability of .94, and average inter-item correlation of .63. The mean score was slightly above the scale (M = 4.58, SD = 1.37) and the scores were normally distributed (skew = -.47, w = .96, p = .07). The theoretical range was 0-7 and the obtained range 1.43 - 6.86.

Drive revised. The Drive-R scale measured drive across 7-items, where typical items concerned feeling obliged to work hard and thinking about work even when wanting to get away from it. The scale had an alpha value of .82, split half reliability of .79, and average inter-item reliability of .42. The mean score was slightly above the scale midpoint (M = 4.92, SD = 1.18) and the scores normally distributed (skew = -.58, w = .94, p = .01). The theoretical range was 0-7 and the obtained range 2.14 - 6.71.

New items. Given that there are currently no measures that directly ask a worker how workaholic they perceive themselves to be, five new items were written. The first item was: Has anyone ever called you a workaholic? (M = .53, SD = .50, range = 0-1) which was negatively skewed (skew = -.11, w = .62, p = .00). The second item was: How much of a workaholic do you think you are? (rated from 0 = definitely not at all, to 5 = completely workaholic; M = 2.33, SD = 1.17, range = 0-4) which was negatively skewed (skew = -.53, w = .86, p = .00). The third item was: What number do you think your colleagues would give you? (Rated from 0 = definitely not at all, to 5 = completely workaholic;

$M = 2.60$, $SD = 1.23$, range = 0-5) which was negatively skewed (skew = -.62, $w = .89$, $p = .00$). The final item was: What number do you think your partner would give you? (Rated from 0 = definitely not at all, to 5 = completely workaholic; $M = 2.91$, $SD = 1.14$, range = 0-5) which was negatively skewed (skew = -.87, $w = .87$, $p = .00$). The items were placed at the end of the last questionnaire in the final phase of data collection to minimise any self-presentation biases contaminating responses to other measures. Additionally, in order to qualitatively assess how the public defines workaholism, one final question was posed at the end of the questionnaire; "How would you describe someone who is workaholic?" All items are listed in Appendix P.

Work Behaviours

Time commitment. The Time Commitment to Job Scale from study two was re-administered (Spence & Robbins, 1992). The scale measured how much time people estimated they worked after-hours across seven items, with typical items concerning working nights, weekends, and after dinner. The scale yielded an alpha coefficient of .82, and split half reliability of .79. Mean scores had a theoretical range of 0-7, while actual scores ranged from 1.00 - 6.00 ($M = 3.22$, $SD = 1.32$) and were normally distributed (skew = .36, $w = .95$, $p = .05$).

Time working. Hours worked were assessed using the same three items from study two. The first two items were sourced from the census: 'What is the minimum number of hours your employer requires you to work each week?' and 'How many hours have you actually worked per week, on average, over the last six months?' The mean minimum number of hours required by employers was

37.5 (*SD* =6.52, range = 0 [the respondent was self employed] to 47.5) with the scores negatively skewed (skew = -3.40, w = .37, p = .00). However, workers actually reported working an average of 44.8 hours, which is almost seven more than formally required (*SD* = 8.80, range = 8 to 65) with the scores negatively skewed (skew = -1.01, w = .89, p = .00). When required hours were subtracted from actual hours worked, discretionary hours worked ranged from 0 to 26 (*M* = 7.45, *SD* =6.31) and were positively skewed (skew = 1.23, w = .89, p = .00). The third measure was sourced from time diaries, which were presented in the same format as in study two. Participants recorded the hours they spent working over a 24-hour, 7-day period, which was totalled to provide a concurrent measure of hours worked.

Time thinking about work. This was assessed in two ways. The first was a retrospective estimate of the quantity of thinking about work: 'Please estimate, on average, how many hours each week you think about work during your spare time.' Time thinking about work ranged from 0 to 30 hours per week (*M* = 4.78, *SD* = 5.42) with the distribution positively skewed (skew = 2.66, w = .72, p = .00). The second measure involved a concurrent record (time-sampling) of the frequency of thinking about work between 6pm and midnight over a seven-day period using time diaries that are described in the next section. Workers thought about work in the evenings an average of 5.89 times per week (*SD* = 10.63, range = 0 - 41) and scores were positively skewed (skew = 2.08, w = .62, p = .00).

Leisure Behaviours

The 24-hour, 7-day time diaries from study two were re-administered to measure leisure behaviour in the present study. The diaries were utilised and coded in the same manner as in study two (see Appendices J and K). Thus, the seven sheets captured 10,080 consecutive minutes (i.e., seven 24-hour days) across the same 18 activity columns (working, eating at work, caregiving, chores, cultural, community, eating, education, exercise, hobbies, media, personal care, relationships, shopping, sleeping, work travel and personal travel). The 58 rows were labelled with the relevant time periods, providing one row for each 20-minute period between 7 am and midnight, and one row for every 60-minute period between 12 am and 6 am when virtually all of the sample would have been asleep. Completing the diary required: (a) Determining the location (e.g., work, other, travelling), (b) selecting the relevant activity (e.g., media, shopping, education, etc.) and iii) colouring in the square (if more than one thing occurred, indicate the main activity only). Thus, workers coloured in the box corresponding to the activity they were doing every 20 minutes. As previously outlined, 64% of diaries were returned (n = 51), 47 of which contained usable data.

Intrapersonal Well-being

Intrapersonal well-being was measured with three separate scales, the Rand Physical Health measure, the Rand Mental Health measure and the Pleasant Events Schedule. Each of these measures has demonstrated predictive validity to health outcomes, such as illness, anxiety and depression, as detailed in chapter four.

Health status. Physical health status was measured with the Rand SF-36, which was used in study two, and provides two summary measures of generic health: Physical Health and Mental Health (Ware & Gandek, 1998). The *Physical Components* Scale has 35 items (theoretical range = 0 – 100) where low scores indicate frequent tiredness and severe pain, and high scores indicate high energy levels and general good health. The scale had an alpha coefficient of .91, a range of 36.67 – 100 (*SD* = 15.73), and a mean score of 84.42. Scores were negatively skewed (skew = -1.61, w = .80, p = .00). Mental health status was measured using the *Mental Components* Scale (Ware & Gandek, 1998), which has 35 items (theoretical range = 0-100), where low scores indicate mental distress and emotional problems, and high scores indicate social competence and emotional health. The scale had an alpha coefficient of .89, a range of 26.79 - 92.86 (*SD* = 16.04), and a mean score of 74.44. Scores were negatively skewed (skew = -1.38, w = .86, p = .00).

Pleasure levels. The level of pleasure obtained from everyday leisure activities was measured with a 49-item subscale of the Mood-Related Pleasant Events Schedule (MacPhillamy & Lewinsohn, 1976) that was used in study two. Typical items included going to a party, sitting in the sun, seeing beautiful scenery and being with friends. The scale provided three scores: frequency, enjoyability and obtained pleasure (frequency multiplied by enjoyability). The full scale had an alpha coefficient of .95. The frequency subscale had a mean score of 1.36

(*SD* = .28, range = .78 - 1.84) and scores were normally distributed (skew = -.48, *w* = .94, *p* = .02). The enjoyability subscale had a mean score of 1.54 (*SD* = .27, range = .73 - 1.98) and scores were negatively skewed (skew = -.99, *w* = .91, *p* = .00). The obtained pleasure scores had a mean of 2.16 (*SD* = .73, range = .70 - 3.64) and the scores were normally distributed (skew = -.32, *w* = .96, *p* = .19).

Interpersonal Relationships

Dyadic adjustment. The degree of satisfaction in people's relationships was measured with the Dyadic Adjustment Scale (Spanier, 1976), which was used in study two. The scale assessed couple's perceptions of the quality of their relationship, with typical items including disagreements over issues such as money, physical intimacy, and happiness in the relationship. The scale contained 32 items and had an alpha coefficient of .89. The mean score for workers was 3.13 (*SD* = .43, range = 1.72 - 3.88), with scores normally distributed (skew = -1.05, *w* = .94, *p* = .05). The mean score per couple was 3.15 (*SD* = .24, range = 2.58 - 3.63), with scores normally distributed (skew = -.22, *w* = .98, *p* = .95).

Time spent communicating with significant others. Time spent communicating with friends, partners, children and family (i.e., four items) was summed to provide a measure of time spent with significant others. This utilised the same format as in study two. Workers' responses ranged from 2.5 to 182 hours per week (*M* = 41.93, *SD* = 36.97) and were positively skewed (skew = 2.44, *w* = .76, *p* = .00).

Demographics

In addition to the demographic data collected in study one, eight demographic questions from study two were used. The first five items concerned demographic changes in the preceding six-month period (bought a house, moved in with a new partner, had a baby, separated from a partner and changed jobs). The remaining three concerned whether a person was in a current relationship (Do you have a current partner? How long have you been in the relationship? How many nights per week do you spend in the same home?).

Measures Completed by Colleagues

Enjoyment revised. The Enjoyment-R scale that had been adapted for use by colleagues in study two (where they rated workers' levels of workaholism), was re-administered maintaining the same number and ordering of items (i.e., seven items in total). The scale yielded an alpha value of .81, split half reliability of .80, and average inter-item reliability of .38. The mean score was slightly above the scale midpoint ($M = 4.76$, $SD = .97$) and the scores were normally distributed (skew = -.60, $w = .95$, $p = .02$). The obtained range was 2.43 - 6.14. The scale correlated significantly with the workers' version ($r_s = .44$).

Drive revised. The Drive-R scale that had been adapted for use by colleagues in study two (where they rated workers' levels of workaholism), was re-administered maintaining the same number and ordering of items (i.e., seven items in total). The scale yielded an alpha value of .78, split half reliability of .73, and average inter-item reliability of .36. The mean score was above the midpoint ($M = 5.00$, $SD = .97$) and the scores were normally distributed (skew = -.91,

$w = .95, p = .03$). The obtained range was 1.71 - 6.71. The scale was correlated with the workers' version ($r_s = .34$), although the p value (.013) of this correlation was slightly over the present threshold for accepting statistical significance.

New items. Given that there were currently no scales directly asking a *colleague* to rate a co-workers' workaholism, four items were adapted from those administered to the workers (see Appendix P). The first item was: Have you ever called your colleague a workaholic? ($M = .25$, $SD = .44$). Scores were positively skewed (skew = 1.16, $w = .53$, $p = .00$). The second item was: How much of a workaholic do you think they are? (0 = definitely not at all, 5 = completely workaholic; $M = 2.59$, $SD = 1.21$, range = 0-4). Scores were negatively skewed (skew = -.93, $w = .82$, $p = .00$). The third item was: What number do you think your colleague would give themselves? (0 = definitely not at all, 5 = completely workaholic; $M = 2.61$, $SD = 1.16$, range = 0-5). Scores were negatively skewed (skew = -.25, $w = .92$, $p = .00$). These questions were placed at the end of the last questionnaire in the final phase of data collection to minimise any self-preservation biases contaminating responses to other measures. In addition, in order to qualitatively assess how the people define workaholism, one final question was posed at the end of the questionnaire; "How would you describe someone who is workaholic?"

Measures Completed by Partners

Enjoyment revised. The Enjoyment-R scale that had been adapted for use by partners in study two (where they rated workers' levels of workaholism), was re-administered maintaining the same number and ordering of items (i.e., seven

items in total). The scale had an alpha value of .81, split half reliability of .78, and average inter-item reliability of .43. The mean score was slightly above the midpoint (M = 4.64, SD = 1.06) with scores normally distributed (skew = -.93, w = .93, p =. 11). The obtained range was 1.86 - 6.00. The scale correlated significantly with the workers' version (r_s = .57).

Drive revised. The Drive-R scale that had been adapted for use by partners in study two (where they rated workers' levels of workaholism), was re-administered maintaining the same number and ordering of items (i.e., seven items in total). The scale had an alpha value of .76, split half reliability of .72, and average inter-item reliability of .39. The mean score was slightly above the midpoint (M = 4.47, SD = 1.12) with scores normally distributed (skew = -1.23, w = .91, p =. 03). The obtained range was 1.29 - 6.14. The scale was correlated positively with the workers' version (r_s = .41), although the p value (.05) indicated that the relationship was not statistically significant.

New items. Given that there are currently no items that directly ask partners to rate workers' workaholism, four items were adapted from those administered to the workers (see Appendix P). The first item was: Have you ever called your colleague a workaholic? (M = .38, SD = .49). Scores were positively skewed (skew = .53, w = .61, p = .00). The second item was: How much of a workaholic do you think they are? (0 = definitely not at all, 5 = completely workaholic; M = 2.34, SD = 1.26, range = 0-4). Scores were negatively skewed (skew = -.37, w = .86, p = .00). The third item was: What number do you think your colleague would give themselves? (0 = definitely not at all, 5 = completely

workaholic; $M = 1.97$, $SD = 1.40$, range = 0-4). Scores were negatively skewed (skew = -.02, $w = .89$, $p = .00$). The questions were placed at the end of the last questionnaire in the final phase of data collection to minimise any self-preservation biases contaminating responses to other measures. In addition, in order to qualitatively assess how the people define workaholism, one final question was posed at the end of the questionnaire; "How would you describe someone who is workaholic?"

Time commitment. The Time Commitment to Job scale (Spence & Robbins, 1992) that had been adapted for use by partners in study two was also re-administered. Partners rated workers' levels of time commitment across seven items, which were presented in the same format as in study two. The scale yielded an alpha coefficient of .78 and obtained range of 1.57 - 5.57 ($M = 3.30$, $SD = 1.22$). Scores were normally distributed (skew = .45, $w = .92$, $p = .03$)

Time thinking about work. Partners were asked to 'estimate how many hours each week your partner thinks about work during their spare time.' They estimated that workers spent between 0 and 35 hours per week thinking about work ($M = 6.55$, $SD = 7.89$). Scores were positively skewed (skew = 2.58, $w = .69$, $p = .00$).

Time working. Partners were asked to estimate how many hours the workers had worked (using the adapted census items from study two). Partners' estimated that workers spent between 5.05 and 80 hours working each week ($M = 47.9$, $SD = 14.01$). Scores were normally distributed (skew = -.56, $w = .95$,

p = .21).

Time communicating with significant others. This was assessed with the adapted four-component item used by workers: ' Please estimate how much time your partner spends communicating with these people each week (a) friends, (b) you, (c) children, (d) other family members'. Responses from the four items were summed into a summary score. Partners' estimated that workers spent between 2.5 and 182 hours per week communicating with significant others (M = 41.9, SD = 36.97). Scores were positively skewed (skew = 2.44, w = .76, p = .00).

Dyadic adjustment. The same 32-item version of the Dyadic Adjustment Scale (Spanier, 1976) that was used in study two was re-administered to partners. The scale assessed couple's perceptions of the quality of their relationship, with typical items including disagreements over issues such as money, physical intimacy, and happiness in the relationship. The scale had an alpha coefficient of .76 and obtained range of 2.34 - 3.84 (M = 3.11, SD =. 26). Scores were normally distributed (skew = -.16, w = .93, p = .05).

Procedure

Workers were given their diaries and questionnaires (including one to give to a colleague which had the instructions printed onto it) on the same day (not a week apart as in Study two, since diary training was not required). Workers were met the week following data collection to thank them for their participation and de-brief them on the preliminary findings of the research. Managers subsequently sent emails to all staff (including the original study one participants) thanking

them and advising that the research was now complete. Colleagues returned their questionnaires directly to the researcher. Partners' questionnaires (which included printed instructions) were posted directly to them and were returned directly to the researcher.

Content analysis. The qualitative workaholism question that had been completed by the workers and their significant others was analysed by the nine content analysts to determine the core elements that the general public use to define workaholism. 'Agreement' was defined to have occurred where *all three* analysts concurred on a decision.

The first group ($n = 3$) defined what constituted a response by subdividing the raw responses from participants (which often referred to three or four different themes) into discrete concepts. The group were given 132 initial statements ($n = 74$ from workaholics, partners and colleagues, $n = 58$ from non-workaholics, partners and colleagues). Specific instructions were: "Here are some definitions of workaholism. Please break every response into single concepts." Each respondent's definition of workaholism was broken down into one or more simple thematic phrases so that only one key concept was expressed in each. For example, the statement "One who cannot stop working at a given time who feels the need to be an overachiever and who thinks and eats and sleeps work' was divided into three key phrases; "One who cannot stop working at a given time", "Feels the need to be an overachiever ", and "Thinks and eats and sleeps work." The analysts reached 45% initial agreements ($n = 60$ decisions) and 55% disagreements ($n = 72$ decisions) over how statements should be divided up. The

group then met and discussed the items they had disagreed upon and negotiated a consensus about how each statement should be divided. At the conclusion of these discussions the group had reached 100% final agreement (n = 132 decisions) and produced 298 final statements (see Appendix Q).

The resultant 298 statements were then given to the second group (n = 3) for thematic analysis. The participants clustered these statements into a maximum of seven themes and named the resultant categories as they saw appropriate. Specific instructions were "Here are some statements about workaholics. Please read all the statements and create 5-7 categories that capture the main themes expressed in the statements." They created six categories, four of which they agreed on, and two of which they disagreed on, meaning that from a potential of six opportunities for agreement, they agreed 67% of the time. The group then met to discuss differing decisions with the researcher present as a data recorder. After these discussions, they reached 100% final agreements (n = 6 decisions), which produced five final categories and consensus to delete the 6th category that had been proposed by only one participant.

The third group (n = 3) were then presented with two lists; a randomised list of statements generated by the first group (n = 298) and the list of categories generated by the second group (n = 5), and asked to match each statement to the most appropriate category. Specific instructions were: "Here are some statements about workaholics and some categories that they are likely to fit into. Please place each statement into the most suitable category". After initially coding the statements on an individual basis, the participants met as a group to discuss their

differing decisions with the researcher present as a data recorder. Discussions were held until mutual solutions were negotiated, with the goal of achieving as close to 100% final agreement as practicable. Data from this process are presented in the results section.

Statistical treatment of the data. Diary data were coded using the same process as in study two. Raw data from each of the 18 daily columns were totalled, summed and data were converted to percentage of time spent on each activity, by dividing the time allocated to each activity by the total number of minutes recorded for the week. All diaries missing more than 20% of the raw data were excluded from data analysis.

To reduce the likelihood of Type 1 errors and spurious false positives the significance level for all correlations was set at .01. Additionally, non-parametric analyses were conducted due to negative skews of several measures and alpha reliability statistics were used to calculate 'corrected' correlations where relevant. The data were analysed using 'STATISTICA ©1995' software. Specific analyses included descriptive statistics (distributions, means, standard deviations and alpha coefficients) and multivariate analyses (Spearman-Brown correlations, Mann Whitney U tests, Wilcoxon matched pairs). Specifically, these latter two tests were used as the WorkBAT scales that had been used to select the contrasted groups (i.e., the scores in study one) were negatively skewed. The Mann-Whitney U test is the most powerful nonparametric alternative to the *t*-test for independent samples (Statistica, 1996) and was used to compare dependent variables for workaholics and non-workaholics, based on rank sums rather than means.

Wilcoxon matched pairs analyses is a nonparametric alternative to the *t*-test for dependent (correlated) samples and was used to compare workaholics and their partner's ratings of the same individual's workaholism. Spearman Brown correlations were used to test the predictive validity of the WorkBAT.

Results

Workaholics had a mean Enjoyment-R score of 5.57, ranging from 4.43 (.36 *SD* above the study one mean) to 6.71 (1.91 *SD* above the study one mean). Their mean Drive-R was 5.81, ranging from 4.86 (.02 *SD* above the study one mean) to 6.71 (1.75 *SD* above the study one mean). In contrast, non-workaholics had a mean Enjoyment-R score of 3.62, ranging from 1.57 (2.34 *SD* below the study one mean) to 4.43 (.01 *SD* below the study one mean). Their mean Drive-R score was 4.05, ranging from 2.29 (2.38 *SD* below the study one mean) to 4.83 (.01 *SD* below the study one mean). The nature of the extreme group scores produced a relatively strong correlation between Enjoyment-R and Drive-R ($r_s = .67$).

Stability of Workaholism

Hypothesis X (that there is no change in study one Workaholism scores over 6-months [i.e., at time 2], nor 12-months [i.e., at time 3]) was tested using Wilcoxon matched pairs tests. Specifically, it was predicted that a non-significant result would indicate that on average there was no change in participants' scores from study one to studies two and three. Enjoyment scores at study one remained stable at study two ($z = 1.75$, $p = .08$) and at study three ($z = 1.16$, $p = .25$), while

scores from study two also remained stable at study three ($z = 2.00, p = .04$). Thus, enjoyment was stable across six and twelve-month intervals. There were also significant correlations between Enjoyment-R and having been called a workaholic at some stage ($r_s = .51$), and between Enjoyment-R and the new item where workers estimated their levels of workaholism on a 5-point likert scale ($r_s = .50$).

Drive scores at study one remained stable at study two ($z = .37, p = .71$) and at study three ($z = .23, p = .82$), while scores from study two also remained stable at study three ($z = .15, p = .88$). Thus, Drive was stable across six and twelve-month intervals. There were also significant correlations between Drive-R having been called a workaholic at some stage ($r_s = .64$), and between Drive-R and the new item where workers estimated their levels of workaholism on a 5-point likert scale ($r_s = .59$). Importantly, the WorkBAT had classified the workaholics relatively accurately; 75% of the workaholics been directly called a workaholic at some point in their lives. As a comparison 70% of non-workaholics had never been called a workaholic. Thus the data supported Hypothesis X and confirmed the accuracy of the WorkBAT in differentiating workaholics from others.

Hypothesis XI (that people classified as workaholic differ significantly in their work-related behaviour [i.e., hours worked and time spent thinking about work] from non-workaholics) was tested using Mann Whitney U tests. Specifically, part (a) of Hypothesis XI proposed that people classified as workaholic work longer hours than non-workaholic. When asked about their

general time commitment to work using the 7-point Time Commitment Scale, workaholics rated themselves as committing significantly more time to work ($M_w = 4.07$) than nonworkaholics ($M_{nw}= 2.39$), a difference that was statistically significant ($u = 95.5$, $z = 4.76$, $p = .00$). Partners agreed that workaholics ($M_w = 3.54$) were more committed than nonworkaholics ($M_{nw} = 2.39$) although this difference was not significant ($u = 46$, $z = 2.25$, $p = .03$). Thus, in comparison to study two, the difference between the groups was larger and remained significant.

When asked to *retrospectively estimate* how many hours they had worked on average over the last six months, workaholics ($M_w = 47.1$ hours per week) reported almost five hours more than non-workaholics ($M_{nw} = 42.6$). Colleagues' estimates followed this trend, suggesting that workaholics ($M_w = 46.7$) worked approximately six hours more than non-workaholics ($M_{nw} = 42.8$). Partners agreed, estimating that workaholics ($M_w = 49.7$) worked five hours longer than non-workaholics ($M_{nw} = 44.0$). However, whilst a consistent trend was evident, none of these differences between workaholics and nonworkaholics were statistically significant. Thus, in comparison to study two, the present difference between the groups was slightly larger, but lost statistical significance.

When asked to *concurrently record* the actual number of hours worked using time diaries, workaholics worked almost identical hours more per week ($M_w = 39.1$ hours) to nonworkaholics ($M_{nw} = 39.2$). Time spent working in weekends was also similar ($M_w = 55$ minutes, $M_{nw} = 57$ minutes), with workaholics again working less time at the physical workplace ($M_w = 37$ hours,

M_{nw} = 37.6 hours) and more time off-site (M_w = 125.0, M_{nw} = 98.4 minutes per week respectively). None of these differences were significant however. Thus, in comparison to study two, the difference between the groups was much smaller, and remained not significant.

When asked to *retrospectively estimate* the quantity that they thought about work after working hours, workaholics reported double the amount (M_w = 6.24) of hours than nonworkaholics M_{nw} =3.31), which was a significant difference (u = 206, z = 2.74, p =. 00). Partners agreed with these estimates (M_w = 7.79, M_{nw} = 3.94) but the difference was not significant. Thus, in comparison to study two, the difference between the groups was much smaller, and remained significant.

Specifically, part (b) of Hypothesis XI proposed that people classified as workaholic think about work more frequently when they are away from the workplace than others do. When asked to *concurrently record* the frequency of thinking about work using time diaries, workaholics thought about work almost twice as often between 6pm and midnight (M_w = 7.29 times per week) than nonworkaholics (M_{nw} = 4.72) although this difference was not significant. Thus, in comparison to study two, the difference between the groups was much smaller and lost significance. Together these five sets of data supported Hypothesis XI that workaholism is associated with different working behaviours than non-workaholism.

Hypothesis XII (that people classified as workaholic differ significantly in their leisure-related behaviour [i.e., outside-of-work activities and leisure-time usage] from non-workaholics) was tested with Mann Whitney U tests. Specifically, part (a) of Hypothesis XII proposed that workaholism is inversely related to the duration of outside-of-work activities. However, of the 14 leisure variables tested the only inverse relationship was between Drive-R and time spent watching media (r_s = -.45, p = .001). Thus, in a similar manner to study two, the data did not support this hypothesis.

Specifically, part (b) of Hypothesis XII proposed that there is a significant difference between how workaholics and non-workaholics spend their leisure time. Only one relationship reached statistical significance: Workaholics watched significantly less media (M = 413 mins less, u = 143, p = .00) than non-workaholics. However, as depicted in Table 5.1, while workaholics spent more time on the following activities than non-workaholics, none of the differences were statistically significant. The activities were chores (M = +212 mins more), education (M = + 95 mins), eating (M = 89 mins more), personal travel (+78 mins), relationships (M = +76 mins), personal care (M = +43 mins) and care giving (M = +35 mins). Workaholics also spent less time on hobbies (M = -114 mins), sleeping (M = -35 mins), exercise (M = -32 mins), culture (M = -12 mins) and community (M = -11) and shopping (M = -1 min), although none of these differences were statistically significant. Altogether, neither part of Hypothesis XII was supported.

Hypothesis XIII (that people classified as workaholic have poorer intrapersonal health [i.e., mental and physical health, and pleasant events] than non-workaholics) was analysed using Mann Whitney U tests. Specifically, part (a) of Hypothesis XIII proposed that people classified as workaholic have poorer mental and physical health than others. Workaholics' mental health scores ($M_w = 74.4$) were almost identical to nonworkaholics ($M_{nw} = 74.5$). Their physical health scores ($M_w = 83.5$) also barely differed from nonworkaholics ($M_{nw} = 85.3$). None of the Mann Whitney U tests were significant.

Table 5.1
Study Three Diary Data Comparing Workaholics' and Non-Workaholics' Mean Time Usage.

Activity	*M* Workaholics (minutes per week)[a]	*M* Nonworkaholics (minutes per week)[b]	U	*p*
Care-giving	99.32	64.00	247	.55
Chores	414.09	202.80	175	.03
Community	30.68	31.20	251	.61
Culture	55.91	67.60	258	.72
Education	141.82	46.80	231	.35
Exercise	187.96	220.00	239	.45
Hobbies	260.00	374.00	234	.38
Media	492.36	905.60	143	.00*
Personal care	379.32	336.80	248	.56
Relationships	728.64	652.00	256	.69
Shopping	177.05	178.00	251	.62
Sleeping	3401.00	3436.40	244	.52
Travel – Personal	291.59	213.60	178	.04
Travel - Work	191.59	241.60	223	.27
Eating – not at work	51.18	361.60	180	.04
Eating - at work	198.41	202.40	275	1.00
Working offsite	125.50	98.40	230	.34
Working onsite	2220.46	2258.40	236	.41

[a] $n = 22$, [b] $n = 25$, * $p < .01$.

Part (b) of Hypothesis XIII proposed that people classified as workaholic engage in a narrower range of pleasant events than other people. However, scores for frequency of pleasant events were also similar for both groups (M_w = 1.38, M_{nw} = 1.35), so were scores for obtained pleasure (M_w = 1.57, M_{nw}= 1.52) and overall quality of pleasant events (Mw = 2.20, M_{nw} = 2.10), with none of these differences significant. Therefore, in comparison to study two, the differences between the groups' intrapersonal well-being scores were smaller and still not significant. Thus, neither part of Hypothesis XIII was supported.

Hypothesis XIV (that people classified as workaholic have poorer interpersonal relationships than non-workaholics [i.e., denial of workaholism by workers and relationship dissatisfaction]) was tested using Wilcoxon matched pairs tests and Mann Whitney U tests. Firstly, time diary data confirmed that workaholics estimated they spend a greater number of hours with friends, partners, children and families (M = 31.3) than their partners estimated they did (M = 21.1). In comparison to study two, the present difference between the groups was larger. Specifically, part (a) of Hypothesis XIV proposed that significant others rate workaholics as having higher scores on the WorkBAT than workaholics do. On a sliding scale (0= completely not workaholic, 5 = completely workaholic), workaholics rated themselves more highly (M = 2.86) than partners rated them (M = 2.68), although this difference was not significant (z =1.29, p = .20). Workaholics' ratings were lower than colleagues' ratings (M = 2.93, z =1.82, p = .07). Thus, part (a) of the hypothesis was not supported.

Specifically, part (b) of Hypothesis XIV proposed that people classified as workaholic experience greater disturbances in close relationships than others. Workaholics also reported being equally satisfied in their relationships (M_w = 2.96) as non-workaholics (M_{nw} = 2.96), while their partners (M_w = 2.92) reported almost identical satisfaction to non-workaholics' partners (M_{nw} =2.95). However, Mann Whitney U tests indicated that neither of these differences was significant. Thus, neither part of Hypothesis XIV was supported.

Predictive Validity of Workaholism

Hypothesis XV (that Enjoyment-R and Drive-R predict work behaviours [i.e., hours worked, time committed to work and time thinking about work] across time) was tested using Spearman Brown correlations between time one WorkBAT scores, and the time two and three work behaviour data. Spearman Brown analyses were used as several of the measures were significantly skewed.

Specifically, part (a) of Hypothesis XV proposed that Enjoyment-R at study one would predict hours worked, time committed to work and time thinking about work at studies two and three. As summarised in Table 5.2, study one Enjoyment-R predicted hours worked estimates (r = .30), time commitment to work (r = .53), frequency of thinking about work in the evenings (r = .48) and quantity of time thinking about work (r = .38) at time two. Enjoyment-R at study one also predicted the frequency of thinking about work in the evenings at time three (r = .30). However, Enjoyment-R was unable to predict the diary measure of hours worked in study two, or hours worked, time committed to work, or quantity of thinking about work in study three, although this last relationship approached

significance (p= .012). Thus, Enjoyment-R was able to predict some future work behaviours and the hypothesis was given limited support.

Table 5.2
Predictive Validity of Study One Enjoyment-R to Work and Leisure Behaviours at Studies Two and Three.

Work-related Behaviour	Study two *r* (n = 88)	Study three *r* (n = 55)
Work-related behaviours		
Hours worked [a]	.30*	.19
Hours worked [c]	.17	.01
Time committed to work [b]	.53 *	.57 *
Thinking about work (quantity)	.48*	.34
Thinking about work (frequency) [c]	.38*	.13
Leisure-related behaviours		
Care-giving	.09	.01
Chores	.20	.31
Community	.12	.02
Culture	.12	.18
Eating – not at work	.15	.18
Education	.05	.15
Exercise	.13	.09
Hobbies	-.04	-.03
Media	-.17	-.27
Personal care	-.05	-.04
Relationships	-.12	-.06
Shopping	-.23	-.09
Sleeping	-.15	-.16

Note. [a] Estimated using retrospective self-reports. [b] Taken from the Time Commitment Battery (Spence & Robbins, 1992) [c] Taken from the time diaries * $p < .01$

Part (b) of Hypothesis XV proposed that Drive-R at study one would predict hours worked, time committed to work and time thinking about work at studies two and three. As summarised in Table 5.3, Drive-R at study one predicted time commitment to work (r = .68), frequency of thinking about work (r = .46) and quantity of thinking about work (r = .50) at time two, but did not predict hours worked. Drive also predicted time commitment to work (r = .67) and quantity of

time thinking about work (r = .42) at time three, but was unable to predict hours worked or frequency of thinking about work. Thus, Drive-R was able to predict some future work behaviours and the hypothesis was given limited support. Thus, hypothesis XV was given general, but certainly not unconditional, support.

Table 5.3
Predictive Validity of Study One Drive-R to Work and Leisure Behaviours at Studies Two and Three.

Work-related Behaviour	Study two r (n = 88)	Study three r (n = 55)
Work-related behaviours		
Hours worked [a]	.24	.24
Hours worked [c]	.01	-.06
Time committed to work [b]	.68 *	.67 *
Thinking about work (quantity) [a]	.50*	.42*
Thinking about work (frequency) [c]	.46 *	.25
Leisure-related behaviours		
Care-giving	.20	.10
Chores	.24	.24
Community	.17	-.02
Culture	.16	.04
Eating – not at work	.16	.37
Education	.13	.14
Exercise	.14	.09
Hobbies	-.10	-.17
Media	-.27	-.35
Personal care	-.01	.19
Relationships	-.05	.13
Shopping	-.20	-.02
Sleeping	-.26	-.11

Note. [a] Estimated using retrospective self-reports. [b] Taken from the Time Commitment Battery (Spence & Robbins, 1992) [c] Taken from the time diaries. * $p < .01$

Hypothesis XVI (that Enjoyment and Drive are able to predict time-diary leisure data across time) was tested using Spearman Brown correlations between time one WorkBAT scores, and times two and three time diary data (i.e., 13

categories of leisure activities). Specifically, part (a) of Hypothesis XVI proposed that Enjoyment-R at study one would predict the time diary leisure data at studies two and three. As outlined in Table 5.2, Enjoyment-R was unable to predict any of the 13 variables from the time diaries at time two or time three. Specifically, part (b) of Hypothesis XVI proposed that Drive-R at study one would predict the time diary leisure data at studies two and three. Similarly, as summarised in Table 5.3, Drive-R was unable to predict any of the 13 variables from the time diaries at either time point. Thus, neither Enjoyment-R nor Drive-R was able to predict future leisure behaviours and Hypothesis XVI was not supported.

Inductively Generated Operational Definition of Workaholism

Workers' (empirically based) definitions of workaholism were compared to the theoretical definition presented in chapter one by performing content analyses of respondents' data. As outlined in Table 5.4, the final five categories proposed by the second group of content analysts were: (a) obsessive personal style [e.g., unable to stop, lack of control, addicted, can't help it] (b) driven by internal (positive) reasons, [such as passion, satisfaction, focus, task orientation, developing competencies, exceeding goals] (c) time spent working and thinking about work, [i.e., viewed as excessive by others with respect to quantity and quality], (d) work-leisure balance, [i.e., chooses work over leisure time] (e) work-relationships balance, [i.e., no firm boundaries between home life and work life]. There was extended discussion among this second group of content analysts on whether the leisure and relationship categories should be collapsed, but the group chose to keep them separate, as leisure activities (e.g., riding a jetski) were not necessarily equivalent in intensity to relationship activities (e.g., establishing

intimacy with a lover). The majority of their discussion centred around the importance of communicating that the driven category represented a positive, constructive aspect of workaholism, whereas the obsessive category was intended to represent a less functional, and ostensibly more negative aspect of workaholism that was more pervasive across the rest of life.

The third group of content analysts placed the 298 statements into the five categories and reached 54% initial agreements on how items should be categorised (n = 162 unanimous decisions) and 46% disagreement. Of these disagreements, 115 occurred where one participant disagreed, and 21 occurred where the majority of participants disagreed. After discussing these 136 items and re-negotiated mutual categorisations for each item, the group reached 100% agreement (i.e., 136 agreements reached after discussion in addition to their 162 initial agreements before discussion). As outlined in Figure 5.1, the largest category of responses concerned time spent working of thinking about work (39%), followed by obsessive personal style (22%), which together accounted for the majority of participants' definitions of workaholism (61%). The remaining categories were used substantially less frequently: work-relationships balance was used 16% of the time, driven to work by internal positive reasons was used 14%, and, lastly, work-leisure balance was used only 9% pf the time. The individual statements and their relevant categories are presented in Appendix R.

Table 5.4.
Results from the Third Group of Content Analysts.

Category	Before discussion		After discussion	
	n responses	% of total categories	*n* responses	% of total categories
Agreements				
Obsessive personal style	28	10	65	22
Driven to work by internal positive reasons	17	5	43	14
Time spent working or thinking about work	72	24	116	39
Work-leisure balance	15	5	27	9
Work-relationships balance	30	10	47	16
SUBTOTAL	162	54	298	100
Disagreements				
Majority of the group agreed	21	7	0	0
None of the group agreed	115	39	0	0
SUBTOTAL	136	46	0	0
TOTAL	298	100.0	298	100.0

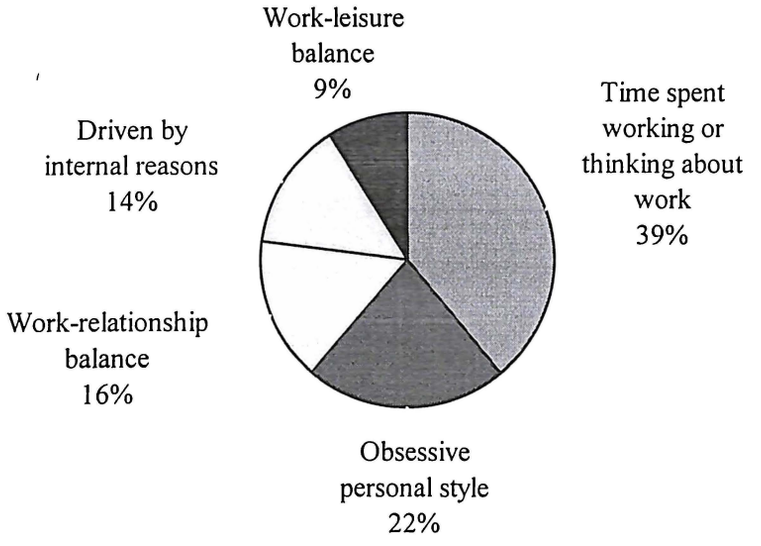

Figure 5.1. Pie chart depicting percentage of participants' statements categorised into each theme by the third group of content analysts.

Summary and Preliminary Discussion

Study three aimed to examine the 12-month stability of WorkBAT scores, test the robustness and replicability of study two findings, and to generate an empirically substantiated operational definition of workaholism. The method involved contrasted groups, longitudinal design, triangulated data sources (workers, partners, colleagues) and triangulated measurement (questionnaires, diaries, independent observers). Overall, WorkBAT scores were stable across time and the measure categorised people accurately. Importantly, colleagues' and partners' estimates of the workers' workaholism correlated positively with the workers' own scores, which substantiated the accuracy and external criterion validity of the WorkBAT. Furthermore, both Enjoyment-R and Drive-R correlated significantly with an alternate measure of workaholism (the new 5-point item which asked them to rate the level of their workaholism). The temporal stability of the WorkBAT scores across 6-and-12-month periods suggested workaholism is stable over time (*H10)* and thus supported trait, cognitive and psychodynamic theories. The data also indicated that workaholism holds the same relationship with work and leisure behaviours (*H11, H12)*, and intrapersonal and interpersonal well-being (*H13, H14)* over time, and does not necessarily result in diminishing health, pleasure, nor dyadic satisfaction. Scores on the WorkBAT predicted several working behaviours across 6-month and 12-month periods (*H15),* but were unable to predict leisure behaviours across these periods (*H16)*. Thus it appears that leisure behaviours are largely independent of workaholism, at least in a longitudinal sense. Finally, most aspects of the deductive and inductive definitions overlapped.

Several aspects of the current findings warrant further discussion. Firstly, given that one of the main aims was to employ repeated measures and examine the consistency of the relationship between workaholism and other behaviours, it is appropriate to compare the findings from the present study to study two. Accordingly, a summary of the findings from studies two and three is presented in Table 5.5. In general the findings were replicated to a very close degree, particularly with respect to health and relationship outcomes and time usage. However, several findings differed between studies.

With respect to hours worked, the present data appear more difficult to explain. Specifically, in instances where they *estimated* their time commitment to work, workaholics' ratings were significantly higher than non-workaholics in both studies (see Table 5.5). However, where *concurrent* measures were used (i.e., time diaries), the difference was not significant in either study. This discrepancy between measurement methods may represent a training effect, where recording behaviour may have actually modified, and therefore reduced that behaviour (Martin & Pear, 1992) as diaries were administered after estimates were requested. However, if this were the case, the modification effect would have affected both groups. Thus, the difference between workaholics and non-workaholics would have remained even after the administration of the time diaries. Either way, it is clear that workaholics *perceive* that they work significantly longer hours than the behavioural measures indicate. This raises the interesting possibility that workaholism represents an approach to work, or, maybe the intensity with which people work, rather than overt excess-work behaviour. Thus, workaholism may represent an *intensity* of working, as opposed to a frequency, and may be observed

as a *qualitative* characteristic that distinguishes them from other workers, as opposed to a quantitative behaviour.

Essentially the data also suggest that hours-worked, if used alone, may be a misleading measure of workaholism (Machlowitz, 1980), especially as hours *thinking* about work may hold better discriminatory power in differentiating workaholics from others. Specifically, as outlined in Table 5.5, the time workaholics estimated and actually thought about work after-hours were both significantly different than non-workaholics in study one. Workaholics also estimated they spent substantially more time thinking about work than non-workaholics in study three, but chance was not able to be eliminated as a viable explanation for the *actual* time they spent thinking about it. Thus, it is important to consider the possibility that attrition exaggerated some sample characteristic in study three. Given that study three occurred in winter, it is feasible that more cognitively distracting activities may have occurred in workaholics' leisure time (e.g., watching television), and acted as incompatible alternatives for thinking about work and thus decreased the behaviour (Martin & Pear 1992).

It is also possible, that having endured 12 months of data collection comprising three measurement points, the participants had become more aware of the time that they were thinking about work and made conscious efforts to reduce this behaviour. Either way, it is clear that workaholics *perceived* that they thought about work more frequently than others. The general failure of Enjoyment and Drive to predict hours-worked over 6-and-12-month periods using two different measures further supports the contention that hours-worked may not be a reliable

criterion for detecting workaholism. Measuring thinking about work certainly appears to be a more robust manner of differentiating workaholics from others, especially compared to merely measuring the hours that they spend at work. Arguably, a combination of the two concepts (working long hours, and thinking about work) may most accurately differentiate workaholics from others.

Table 5.5.
Summary Comparing Findings of Studies Two and Three

Construct	Measure used	Study two findings	Study three findings
Hours worked	General estimate Retrospective Concurrent (diary)	Ws commit significantly more time to work Ws say they work significantly longer hours Ws actually work longer hours (difference ns)	Ws commit significantly more time to work Ws say they work longer hours (difference ns) Ws actually work similar hours (difference ns)
Thinking about work	Retrospective Concurrent (diary)	Ws say they think of work after hours more Ws actually think about work more	Ws say they think of work after hours more Ws actually think about work more (difference ns)
Leisure	Concurrent (diary)	Eating (Ws +92 mins) Education (+78) Chores (+77) Care-giving (+76) Exercise (+51) Culture (+47) Community (+37) Media (-273) Sleeping (-176) Hobbies (-105) Shopping (-65) Relationships (-53) Personal care (-3)	Eating (Ws +89 mins) Education (+95) Chores (+212) Care-giving (+35) Exercise (-32) Culture (-12) Community (-11) Media (-413) Sleeping (-35) Hobbies (-114) Shopping (-1) Relationships (+76) Personal care (+43)
Intrapersonal well-being	Questionnaires	Ws had slightly poorer health (difference ns) Ws enjoyed more pleasant events (difference ns)	Ws slightly poorer health status (difference ns) Ws enjoyed more pleasant events (difference ns)
Interpersonal relationships	Questionnaires	Ws had similar relationship satisfaction (difference ns) Partners of ws had slightly less relationship satisfaction than nonworkaholics' partners (difference ns)	Ws had similar relationship satisfaction (difference ns) Partners of ws slightly less relationship satisfaction than nonworkaholics' partners (difference ns)

Note. These findings compare workaholics (Ws) to non- workaholics. All differences between group means are statistically different unless followed by the phrase 'difference ns'.

Finally, some specific findings are of interest. Workaholics exercised half an hour less per week than non-workaholics in study three but almost an hour *more* than them in study two. They also watched considerably less television in study three than non-workaholics (413 minutes less) compared to study two (273 minutes less per week) and spent less time on 'culture'. However, they spent an hour and a quarter more on relationships than non-workaholics in study three, compared to almost an hour *less* than them in study two. There are several possible explanations for these findings. Firstly, the smaller sample size may have altered the results. For instance, it is feasible to speculate that attrition exaggerated some of the sample characteristics. Possibly only the more obsessive participants would have been motivated to complete a relatively exacting schedule of time usage for the second time. Study two also occurred in summer, whereas study three was in winter. While it remains tentative, it is also feasible to speculate that the colder climate and shorter daylight hours explain the lesser amounts of exercise in study three, where workaholics spent comparatively more time on relationships. Overall, if the totals for the 14-days are aggregated to provide a unitary indicator, workaholics spent more time on relationships (23 minutes), exercise (19 mins), community activities (26 mins) and culture (35 mins) than non-workaholics.

Given that the second main aim of this study was to compare the inductive and deductive definitions of workaholism, it is appropriate to compare the content analysts' findings to the theoretically based definition from chapter one. The empirically generated definitions provided by participants hold some interesting

implications for workaholism research. Firstly, the categories share considerable overlap with the theoretically (deductively) based operational definition presented in chapter one. Specifically, the inductive definition comprised five categories: (a) obsessive personal style, (b) driven by internal (positive) reasons, (c) time spent working and thinking about work, (d) work-leisure balance and (e) work-relationships balance. The deductive definition also comprised five aspects; (a) a personal reluctance to disengage from work, (b) a strong drive to work, (c) intense enjoyment of work, (d) a tendency to work or think about work, and (e) to do this anytime and anywhere. Table 5.6 presents a comparison of the inductive and deductive definitions. Clearly, the two sets of definitions share substantial conceptual overlap.

Table 5.6.
Comparison of the Deductive and Inductive Definitions of Workaholism.

Category number	Inductive (empirical) definition	Deductive (theoretical) definition
1	Obsessive personal style [i.e., unable to stop, lack of control, addicted, can't help it]	Personal reluctance to disengage from work
2	Driven by internal (positive) reasons [e.g., passion, satisfaction, focus, task orientations, developing	Driven to work
3	competencies, exceeding goals]	High enjoyment in work
4	Time spent working or thinking about work [i.e., viewed as excessive by others, both in terms of quantity and quality]	Tendency to work or think about work
5	Work-leisure balance [i.e., chooses work over leisure time] Work-relationships balance [i.e., no firm boundaries between home life/relationships and work life]	Tendency to work any time, any where

For instance, there are clear parallels between both statements in the first category, which concerned difficulty disengaging from work and an obsessive personal style that included being unable to stop. There are also direct overlaps between both statements in the fourth category, which concerned a tendency to work or think about work, and time spent working or thinking about work. Both statements in category five (working anytime, anywhere, and an imbalance in leisure and relationships) also shared a common theme, although the content analysts had treated leisure and relationships as separate categories. It is interesting however, that two of the separate theoretical antecedents of workaholism (Drive and Enjoyment) have been collapsed into one category in the inductive definition (see Table 5.6). This is not a new concept; Perez-Prada (1996) argued that the drive items of the (original) WorkBAT were confounded with enjoyment themes. For instance, the item " It is important to me to work hard, even when I do not enjoy what I am doing" appeared to tap both constructs. This provides an interesting hypothesis for future research.

In terms of theoretical conceptualisation, the fourth category describes workaholic behaviour (tendency to work or think about work), the first three categories concern the antecedents of workaholism (reluctant to disengage, obsessiveness, drive, and enjoyment), while the fifth category alludes to the consequences of workaholism (working anytime and anywhere that affects the balance between work, leisure and relationships). Theoretically, therefore, it is conceivable that obsessiveness is activated by internal stimuli (drive) and reinforced by enjoyment, which starts a cycle of working and thinking about work

anytime and anywhere. Overall, while this is of course highly speculative, there is clear evidence of conceptual overlap between deductive and inductive definitions, which extends the generalisability of the data produced by the WorkBAT

In summary therefore, the present data supported the notions that workaholism is stable over time and that workaholics differ in terms of work behaviours and perhaps some leisure behaviours. The data also gave preliminary support for some aspects of trait, cognitive and psychodynamic theories of workaholism. Finally, the inductive data from the content analysis gave reasonable support to the theoretical definition of workaholism adopted in the present research.

CHAPTER 6

Discussion

The present chapter summarises and contextualises the present research in four sections. Part A overviews the results, strengths, and weaknesses of the present research. Part B integrates the present findings into the current body of literature, theories and definitions. Part C considers the implications of the present data in terms of our general understanding about workaholism along with potential social applications. Part D scopes out future research directions and discusses possible hypotheses, theoretical development and methodological innovations. The chapter concludes with a summary of the key findings and how they can be used as a springboard for further investigation into workaholism.

Part A: Key Findings

The present section overviews the results in three parts. Firstly, the broad research question, methodologies and specific studies are summarised. Secondly, the strengths of the present research are outlined. Finally, limitations inherent in the current research are presented.

Summary of the Key Findings

The present research addressed the question 'How does workaholism impact on people's lives?' The definition of workaholism employed was: A personal reluctance to disengage from work, involving Drive and Enjoyment, that is evidenced by a tendency to work or think about work anytime, anywhere. The

theoretical assumptions were based in Interaction Theory, which predicts that workaholism arises when an underlying trait is activated and perpetuated by environmental stimuli. The methodology included heterogeneous sampling, contrasted groups, triangulated measures and triangulated informants over a longitudinal time frame. The key findings included psychometric validation of the 2-factor WorkBAT-R, corroboration of the current definition, strong support for interaction theory and little support for other theories, such as addiction theory.

Study one recruited a sample of 421 employees from five major companies and factor analysed the WorkBAT. There were four key findings: (a) The two-factor Enjoyment-Drive model of workaholism was appropriate in New Zealand, (b) workaholism was negatively skewed in the general working population, (c) four ethics (work, achievement, leisure, and time) were distinct from workaholism, and (d) three obsessive-compulsive constructs (obsessive thinking, compulsive finishing and delayed gratification) were distinct from workaholism. These findings endorsed the previous factor analyses that questioned the validity of using the WorkBAT in its original format (Kanai et al., 1996; McMillan, Brady et al., in press) and indicated that the revised version of the WorkBAT (labelled here as the WorkBAT-R) is a valid measure of workaholism. Specifically, both Enjoyment-R and Drive-R appeared to reflect a value system about the importance of both working and achieving. Enjoyment-R was also unrelated to leisure satisfaction, while Drive-R related strongly to Obsessive Thinking and Compulsive Finishing and was the only workaholism scale to relate positively to the heart disease risk factor of Impatience-Irritability.

The data also indicated that it is not logically defensible to dismiss workaholism as merely a semantic equivalent for hours worked, Protestant Work Ethic, Type A Behaviour, Leisure Compensation or Obsessive Compulsive Personality. Specifically, the data repeated trends from previous studies, where the relationship between workaholism and the number of hours worked has been consistently weak (e.g., McMillan, et al., 2001). Thus, it appeared, at least in preliminary terms, that the traditional notion of excess-hours-worked (c.f., Oates, 1968) may represent an oversimplified conceptualisation of workaholism. These discriminant validity findings were particularly important, as they clarified the operational specific-ness of the construct and substantiated the rationale for further empirical investigation.

The relationship between workaholism and Type A behaviour was of particular note. While both the Enjoyment and Drive workaholism factors related strongly to Achievement Striving (one aspect of Type A behaviour) they related inconsistently to Impatience-Irritability (the other aspect of Type A behaviour). Specifically, Drive-R related only very weakly to Impatience-Irritability while Enjoyment-R was *unrelated* to it. Thus, workaholics are likely to be motivated to achieve well, but not necessarily in a manner that is impatient or intolerant of others. Unfortunately, while the Type A and workaholism constructs are distinct, it is possible that their relatively close conceptual overlap (both involve an overt focus on work) has hindered previous workaholism research. It is likely that much of the research on workaholism has been subsumed under the Type A literature, which makes the present findings of particular relevance.

Study two provided a systematic evaluation of workaholism across four dimensions (work patterns, leisure patterns, intrapersonal health and interpersonal relationships). The study used triangulated measures (diaries, questionnaires, retrospective reports) and triangulated informants (workers, colleagues and partners). There were five key findings: (a) Workaholics worked longer hours, worked off-site more and thought about work more than non-workaholics, (b) they spent less time on sleep, hobbies, shopping and relationships, but more time on education, chores, exercise, and cultural/community activities than non-workaholics, (c) they experienced similar health status and pleasure to non-workaholics, (d) they experienced similar relationship satisfaction to non-workaholics, and (e) they did not appear to deny their workaholism. Therefore, while workaholics had differing work and leisure patterns to non-workaholics, these did not appear to impact on their overall well-being. This finding challenges the utility and applicability of addiction, psychodynamic and family systems theories.

Study three examined the stability of workaholism scores over time, tested the robustness and replicability (i.e., test-retest reliability) of study two findings, and generated an empirical definition of workaholism. The method involved contrasted groups, a longitudinal design, triangulated data sources and triangulated measurement. There were six key findings: (a) WorkBAT scores were stable across time, (b) the measure categorised people in the same manner that their partners and colleagues had categorised them and was consistent with their self-categorisations, (c) workaholism held a consistent relationship over time with work and leisure behaviours, and intrapersonal and interpersonal well-being, (d) workaholism did not result in diminishing health, pleasure, or dyadic

satisfaction over time, (e) WorkBAT scores were unable to predict leisure behaviour and inconsistently predicted work behaviour across 6 and 12-month periods, and (f), the deductive and inductive definitions converged (e.g., difficulty disengaging, time spent working, and drive-enjoyment), although participants separately categorised work-leisure balance and work-relationship balance (the deductive definitions had treated them as implicit in the 'work anytime, anywhere' aspect of the definition). Thus, workaholism impacted on peoples' choices about time allocated to work and non-work activities, but it was not necessarily harmful. These data were congruent with cognitive and interaction theories, and in principle, support the inductively generated definition of workaholism.

Strengths of the Present Research

The robustness of the present research findings is underpinned by several strengths, predominantly in the methodological design. For instance, participation rates were high, both initially in study one (42%) and throughout the research (84% of people invited to participate in study two and 63% in study three returned questionnaires). In comparison with other time diary studies, these participation rates are relatively high. For instance, the English and Dutch studies reviewed by Robinson and Godbey (1997) generally collected only 1-5 days' data, and typically yielded response rates of 40%. However, high rates are not unheard of: Gechman and Wiener (1975) collected 24-hour / 7-day data using 30-minute measurement points on a sample of teachers and had a response rate of 90%. With respect to the breadth and depth of data gathered, the present time diaries formed an invaluable tool for elucidating the patterns with which participants utilised their leisure time. Specifically, the diaries permitted the researcher to effectively

'follow' people's behaviour for seven days in a manner that was efficient, timely, cost effective and non-intrusive. Importantly, the resultant data were concurrent, relatively objective compared to traditional estimates of time usage, and in most cases 100% complete. Thus, the diary data were an integral aspect in ensuring that results were sufficiently triangulated to enable conclusions to be drawn with relative confidence.

Several features of the present design are also likely to have enhanced the present participation rates. The initial response rate was undoubtedly assisted by the chief executives' support, which was engaged and maintained by providing regular feedback about the progress of the research and resultant publications, conferences and media releases. Continued participation rates were likely to have been aided by the 'user-friendly' design of the questionnaires, and, in particular, that the diaries were brightly coloured, sturdy, attractive and acted as relatively novel stimuli. Pre-testing the instruments before usage also ensured they were engaging at first glance, acceptable to busy people, and produced maximum information with minimum effort (i.e., ticking boxes and colouring squares). Finally, the most arduous task (i.e., the qualitative question) was left until the last data collection point, lest the more intense demands influence refusal rates.

Secondly, especially given that the sampling was heterogeneous, the ecological validity of the data is likely to be relatively robust. Specifically, the power of the findings is increased by the large sample sizes (n = 421, 206 and 131 for studies 1-3 respectively), stringent significance levels (.01), and instrument reliability (Enjoyment-R $\propto$ = .87, - .92, Drive-R $\propto$ = .75 - .82; Everitt & Hay, 1992). Thus the findings should hold relevance for at least the comparable well

earning sectors of New Zealand's working population. This is of particular applicability to the diary data, which captured a broad range of data (24-hour data over 7-days) and were completed by a substantial number of people (n = 127 diaries in total).

Thirdly, the use of contrasted groups that were relatively well matched enabled the research to quantitatively elucidate how workaholic and non-workaholic behaviour differ in the workplace and community. The utility of the contrasted group data was also supported by the employment of triangulated measures (diaries, questionnaires, retrospective estimates) from triangulated sources (workers, colleagues, partners). The utilisation of triangulation strategies also minimised the likelihood that spurious measurement error from instrumentation weakness could explain the results. This means that, as opposed to traditional 'snapshot' measures based on one group's perceptions, the present data reflect a more holistic and inclusive assessment of peoples' perspectives on workaholism. Thus the conclusions from the data can be drawn with relative confidence.

Finally, the utilisation of repeated measures (i.e., 0-months, 6-months, and 12-months) across a longitudinal time frame (12-months) means that replications were able to be performed, which reduced the likelihood of findings having arisen due to chance. Thus the key strengths included a relatively stringent and conservative approach to methodological design, which added considerably to the generalisability of the data.

Limitations

While the data appear reasonably convincing, especially given the significance levels, sample sizes, measurement reliability and heterogeneous sampling techniques, limitations due to sample bias are an important consideration. In particular, the entire sample from study one (and therefore the studies that followed) was biased toward high-income levels, possibly as all were full-time employed and some worked in high earning market sectors such as finance and communications. Specifically, the sample in study one comprised three times the rate of people earning over $70,000 than the general population, and consequently, more workaholics than non-workaholics earned above that level in study two and study three. It is also possible that people who earned well were more motivated to complete and return a questionnaire about work than those for whom work had a less important role in their lives.

It is also likely that the nature of some of the tasks involved in the research attracted people with particular characteristics. For instance, it is possible that people who were willing to complete the diaries were more detail-oriented than those who refused. Furthermore, it is also likely that some diaries may have been filled in retrospectively (e.g., after a period of 2-hours rather than every 20-minutes), although response-sets, such as acquiescence, were not particularly evident in the raw data. As homogeneous patterns were observed only rarely in the diaries, the problem of coding was more oriented toward how to make sense of *diverse* data patterns. In addition, while a slight training effect may have arisen from completing repeated measures, the 6-month gap between administrations should have been sufficient to allow adequate 'forgetting' of the items for the

majority of people. Overall, while these are valid criticisms of the research design, they were in part counterbalanced by the numerous design strengths previously outlined.

Part B: Integration of Present Data into the Literature

The present data can be integrated into three specific aspects of the literature: psychometric data, definitions, and correlates of workaholism, each of which is discussed separately below.

Psychometric Data

Given that only one New Zealand study has been conducted previously (McMillan, Brady et al., in press, which was conducted 12 months prior to the present research), it is prudent to integrate those present findings with the present data from studies one, two and three. The relevant psychometric data from these four studies are summarised in Table 6.1. Together, the studies offer pervasive support for the psychometric properties of the Enjoyment-R and Drive-R scales. For instance, the internal consistency alpha values (Enjoyment-R = .85-.92, Drive-R = .75-.82) are relatively constant, the scales are repeatedly negatively skewed and standard deviations are commonly around 1.06-1.37. Where representative samples were used (i.e., McMillan, Brady et al., and study one from the present research), Enjoyment-R and Drive-R are relatively independent (.29 and .22, respectively). It is important to qualify that the higher correlations in studies two and three (.57 and .67, respectively) were due to the skewed, non-normative nature of the samples (i.e., participants had either extreme high or extreme low workaholism scores and were purposively selected on this basis).

Table 6.1
A Summary of the Psychometric Properties of the WorkBAT-R

	Enjoyment-R				Drive-R			
	Study1	Study 2	Study 3	McMillan Brady, et al (in press)	Study 1	Study 2	Study 3	McMillan, Brady, et al (in press)
Descriptive Statistics								
M	4.40	4.42	4.58	4.87	4.84	4.91	4.92	5.06
Skew	-.36 *	-.42	-.47	-.51*	-.65*	-.37	-.58	-.55*
SD	1.21	1.36	1.37	1.14	1.07	1.06	1.18	1.08
α	.87	.90	.92	.85	.76	.75	.82	.75
Correlations:								
Drive-R	.29*	.57*	.67*	.22*				
Hours worked [a]	.08	.27	.20	.16*	.25*	.19	.25	.22*
Thinking about Work	.17* [b]	.52* [a]	.34 [a]	.03 [c]	.50* [b]	.56* [a]	.42* [b]	.35*

Notes. Correlations are corrected. Studies two and three comprised skewed samples. The McMillan, Brady et al., (in press) study was undertaken 12 months prior to the present thesis.

[a] census-based measure of estimated quantity.

[b] Obsessive Thinking scale

[c] Obsessive Compulsive Personality Disorder Scale.

* $p < .01$.

Interestingly, Enjoyment-R and Drive-R were consistently unrelated to demographic variables, such as gender, ethnicity, qualifications, income, and (with the exception of Enjoyment-R in study one) age. There was also a consistently weak relationship with hours worked (significant correlations ranged between .16 and .25) and a repeatedly stronger relationship with thinking about work (significant correlations ranged between .17 and .56). In particular, Drive-R

related most strongly to thinking about work, while the relationship between Enjoyment-R and hours working and think about work were more variable. Together these data represent a noteworthy contribution to the psychometric validation of the newly revised Enjoyment and Drive scales.

Definitions of Workaholism

In addition to the deductive definitions that were based on a factor analysis of the WorkBAT, the present research also generated an inductive definition of workaholism. Importantly, both the inductive (i.e., qualitative) and deductive (i.e., quantitative) definitions are consistent with the majority of existing theoretical literature. Firstly, in relation to the three types of definition outlined in chapter one (dynamic, characteristic and operational), neither of the definitions could be categorised as purely *dynamic,* as they did not specify the effects of workaholism. For instance, neither set of data included disturbances in health, happiness and relationships, as suggested by Oates (1971). However, both definitions incorporated *characteristic* elements, as they specified the structure and magnitude of workaholism. This was directly reflected in quantitative data regarding workaholics thinking and working more than others and qualitative statements from the content analysts such as 'viewed as excessive by others.' In particular, the present definitions encompassed the desire to work long and hard noted by Machlowitz (1980), and the excessive involvement in work noted by Porter (1996).

However, both definitions were relatively *operational* as they specified how to generate workaholism, and both converged with the McMillan et al., (2001) definition of reluctance to disengage, drive, enjoyment, and working any

time, anywhere. The data also gave qualified support to the Scott et al., (1997) definition that included (a) discretionary time spent working, (b) thinking about work when not at work, and (c) working beyond requirements. However, as noted by Scott et al., if there are subtypes of workaholism, these definitions may require modifications as further data emerge. Meanwhile, the present quantitative-qualitative definitions integrate and link several of the themes in the literature, and on this basis, provide an important foundation from which to conduct further research.

Correlates of Workaholism

The present data also have important implications for the existing workaholism literature. Firstly, with respect to relationships, the present data directly contradict that of Pietropinto (1986), who reported that workaholics experience numerous marital problems. The data also contradict Robinson and Post's (1995b) finding that workaholism interferes with intimate relationships and the Bonebright et al., (2000) findings that workaholics have more work-life conflict than others. In addition, the present workaholics certainly did not work to the exclusion of pleasure, as suggested by Pietropinto (1986), nor did they appear to be 'tone deaf' to the feelings of others (Engstrom & Juroe, 1979). Conversely, they appeared to function relatively well, without too many negative outcomes in either health or relationships. These findings are supported by Burke (1999b, 2000a, 2000c), who reported that workaholism was unrelated to divorce and found that high-enjoyment workaholics had fewer psychosomatic symptoms and more favourable physical well being than many other workers.

In interpreting the present health and relationship data, it is important to avoid the tendency to equate statistical significance with psychological or clinical importance (Everitt & Hay, 1992). For instance, while workaholics have 5% worse physical health scores (which were not significantly different from non-workaholics and within the 95% confidence-limits range; Ware & Gandek, 1998) the difference may be *clinically* significant in terms of long-term health outcomes. Machlowitz (1978) found that workaholics had good health, but expressed feelings of failure concerning their families, so while the present differences in health and relationship satisfaction may not be statistically significant, they may be *personally meaningful*. Clearly, more longitudinal data are required to determine the applied significance of these differences. Perhaps, as Machlowitz (1978) suggested, workaholism represents an 'approach' to work, or, as the present content analysis group suggested, it reflects the 'intensity' with which they work, rather than an overtly harmful personal flaw. Either way, it is clear, that in New Zealand at least, workaholism does not appear to contain the traditional elements of addiction: denial, worsening health and disturbed relationships.

Aside from cultural considerations (workaholism may be different in New Zealand than North America, where, with the exception of Kanai et al., 1996, the other samples were based), there are several potential explanations for these 'no-harm' findings. Firstly, the present samples were high earning, and presumably well resourced to access timely, effective and preventative health care and relationship support. Secondly, it feasible that, because we studied workaholics who were high in enjoyment, ('*enthusiastic workaholics*' in Spence & Robbins' [1992] terminology), we also inadvertently studied '*peak performers*' (well-

balanced workers who are high in fulfilment; Garfield, 1986). Garfield described peak performers as people who have an intense commitment to work that is balanced by careful attention to physical and mental health. Our data certainly supported this, and the notion of '*integration*' proposed by Staines (1980), where high involvement in work accompanies high involvement in non-work and vice versa. Staines explained this on the basis that people's jobs teach them social and organisational skills that facilitate involvement in non-work, thus they 'excel' in both worlds. The present strong correlations of Achievement Striving with Enjoyment and Drive (.54, .53, respectively) appear to support these possibilities. However, it is also prudent to recall that we based our definition on the results from the factor analyses, in which the *data specified* high enjoyment as a component for workaholism. Thus, the possibility remains, that at least in New Zealand, workaholics and peak performers may overlap. Currently, however, there are not adequate data to resolve this contention. Further research analysing the productivity of workaholics would of course be required to address this hypothesis.

Finally, it is important to contextualise the present data within the original paper by Spence and Robbins (1992), who created the measure that was adapted and utilised in the present thesis. The present findings support their statement that the core feature of workaholism is a "heavy investment in work" (p.160). However, the present findings contradict their core definition of feeling "driven or compelled to work, not because of...pleasure" (p.161). Conversely, enjoyment and pleasure were two consistently strong themes in the present research, both quantitatively (e.g., factor analyses) and qualitatively (e.g., participants' definitions and content analyses). As previously outlined, the type of workaholic

presently studied is most closely aligned to Spence and Robbins' (1992) *enthusiastic workaholics* (i.e., high in drive and enjoyment). Interestingly, in their sample, such workers suffered fewer health complaints than those with high drive / *low* enjoyment, and those with average drive / u enjoyment. Ostensibly, these two latter groups may be suffering obsessive-compulsive personality disorder (a pathological, psychiatric condition) rather than workaholism. In summary, both studies agree with Machlowitz' (1978) idea that "intensity of involvement defines these individuals more than the sheer amount of time they devote to work" (Spence & Robbins, 1992, p.162). Thus the present study builds on and extends Spence and Robbins' original work, but does not agree with their conceptualisation of the majority of workaholic types as *not* enjoying their work. In sum, the difference in our two conceptualisations of the role of enjoyment in workaholism may explain at least part of the differences in the health/relationship findings.

Part C: Implications

The implications from the present data extend to two areas; research designs, and our general understandings about workaholism, each of which is discussed separately below.

Research Designs

The present data imply that the Workaholism Battery (Spence & Robbins, 1992) is not appropriate for use in the New Zealand workplace in its original format. Rather, the WorkBAT-R appears to have more appropriate validity and utility for workaholism research in New Zealand, and perhaps elsewhere (c.f.,

Kanai et al., 1996). Furthermore, despite traditional concerns about the willingness of participants to complete concurrent, time-based measures such as time diaries, the majority of the present sample (and by implication the general workforce) appeared willing to utilise these measures. Thus, it appears feasible and prudent to continue employing diaries in addition to the WorkBAT-R in further workaholism research, especially as they provide such fine-grained and comprehensive data. However, the present close correspondence between diaries, others' reports and self-reports also suggests that the WorkBAT self-report measure also seems to be a valid measure of workaholism when used alone.

Likewise, the enthusiasm of partners and colleagues in responding indicates that they are also an important (and, ostensibly, eager) resource for further workaholism research. Thus, the data suggest that further measurement should also include a broad variety of populations. Furthermore, the present response rates to the qualitative questions, and the quality of data gained from the content analyses, imply that combining quantitative-qualitative methodologies in workaholism research is an acceptable, albeit untapped, approach that has face validity with participants. Clearly, there is considerable potential to build on the present design in further research. Further implications for future research designs are discussed in more detail in Part D.

General Understandings about Workaholism

The present data endorse contemporary scientific thinking that workaholism is indeed a distinct construct that merits continued empirical investigation. Furthermore, the robustness of the findings is expanded by the

precautionary approach of undertaking prior measurement validation on the sample before conducting correlational analyses.

Unfortunately, however, despite Scott et al.'s (1997) caution, it appears that much of the research has prematurely adopted implicit value judgments about workaholism, which has perpetuated an ongoing reluctance to investigate the possible positive outcomes of workaholism. For example, we still require data on the organisational value of workaholism, especially in terms of productivity, efficiency and profitability, and the long-term outcomes of workaholism using prospective designs. It is possible, for instance, that some organisational cultures and job structures may be suited to workaholic types (Porter, 1996b), or that positive aspects of workaholism could be trained into people's repertoires (Scott et al., 1997). The present data also contest the widely held stereotype of workaholics being male, working inexplicably long hours and having extremely poor health and relationship outcomes, and instead imply that researchers should retain an open-minded curiosity about workaholism. However, issues around the organisational value of workaholism, efficacious therapies (or, even if therapy is really necessary) and tactics on how to maximize benefits and minimise costs remain unexplored. In essence, while the present data have added considerably to our understandings about workaholism, the field is still largely unexplored, particularly in the South Pacific. People from all sectors of society, including employers, tax-takers, public educators, health-care providers, and of course, workers and their families, will continue to benefit from research that adopts an open-minded stance.

In terms of applied usefulness, the present data challenge the negative stereotype of workaholism, especially as it pertains to New Zealand culture. It is not beyond the realms of possibility, of course, that 'healthy' workaholism is a culturally-bound phenomenon specific to the New Zealand workforce. However, the present data certainly support the notion that workaholics should not be unfairly typecast as unhappy work-slaves, at least in this study, as they appear to enjoy comparable levels of leisure, pleasure and health to others. In terms of health and psychological therapies, it would seem illogical to 'blame' workaholism for poor physical and mental health. The present data suggest that the two are more likely to co-occur by co-incidence rather than causation. Correspondingly, it is pertinent to emphasise that several of the reports concerning adverse health impacts and workaholism (c.f., Robinson, 1989, Robinson, 1998c) were based on anecdotal evidence from counselling self-selected workaholics from therapy groups (Workaholics Anonymous), samples that are non-normative, and certainly non-representative of New Zealand culture.

Interestingly, the present high earning sample has more in common with the Burke (2000c) sample who were masters-degree qualified, and also earned at relatively high levels. Burke's data indicated that (enthusiastic) workaholics' and non-workaholics' physical health scores were so similar that they all fell within one standard deviation of the mean (M = 18.4, range = 17.7 - 19.9, SD = 3.94). Thus, it is thus important to draw attention to the possibility that perhaps low enjoyment in work is the critical factor that leads to poor health outcomes, as many of these studies conceptualised workaholism as comprising low enjoyment.

Importantly, the present failure to obtain strong relationships between the workaholism components and hours worked, poses questions over the nature of workaholism. Firstly, based on the factor analysis in study one, the present thesis adopted the implicit assumption:

$$E_R + D_R = workaholism$$

(where E represents Enjoyment, and D represents Drive)

However, the present data have provided clear evidence that Enjoyment-R and Drive-R are *separate* scales that related at only .29 in the representative sample in study one. Furthermore, as outlined in Figure 5.1 on page 161, the (E+D) category in the content analysts' data accounted for only one seventh (14%) of their definition of workaholism. Likewise, the workers' (E+D) scores accounted for only 33% of their self-reported levels of workaholism on the new 5-point likert item (r_s = .58). Interestingly, the lay conceptualisation of workaholism suggested that it includes dominantly hours worked and thinking/talking about work. Together, these elements accounted for 39% of their definition. It is also noteworthy that while 75% of workaholics agreed that they had been correctly categorised by the (E+D) criterion for group membership outlined in chapter four, 25% disagreed. Thus it appears that a sizeable proportion of workaholism remained unexplained by combining (E +D), even when several different approaches and definitions are employed. Patently, we do not have clear evidence that a simplistic summing of (E + D) fully accounts for workaholism.

Together, these failings to substantiate (E + D) as the sole explanatory factors in workaholism prompt such questions such as "What is workaholism" and challenge the notion that it is an unitary phenomenon. Perhaps the tendency to

work or think about work is actually the *essence* of workaholism, while Enjoyment and Drive are merely antecedents that trigger the workaholic behaviour. It is certainly feasible that Enjoyment and Drive are constructs that are related to workaholism, but whether they merely describe workaholic behaviour, as opposed to *explain* its origins and causes remains unknown. Therefore, it is feasible that Enjoyment and Drive are *antecedents* that trigger a repertoire of workaholic *behaviours* that consist of working, thinking and talking about work, striving for achievement and demonstrating a strong work ethic.

This provokes the contention that maybe researchers should abandon the unitary workaholism construct, much like they have with Type A, and focus instead on studying enjoyment, drive and hours worked, as separate constructs. Given the weak relationship with hours worked, the present data also imply that workaholism represents an approach to work characterised by the intensity with which work is undertaken, as opposed to the sheer quantity of work performed. In any instance, it is apparent that the nature of workaholism remains unclear, and further research is required to determine (a) whether the construct is unitary (b) whether it has utility and (c) whether it merely describes a set of behaviours that are triggered by the independent constructs of Enjoyment and Drive. Thus, workaholism may represent an over-arching, abstract concept that acts as an umbrella for the specific variables, rather than being a variable or construct in its own right. If this is the case, logic dictates that future research should explore Drive, Enjoyment, hours worked and hours thinking about work as specific manifestations of this umbrella concept, rather than amalgamating them all under one label.

Part D: Future Research Suggestions

Despite a three-decade history, the workaholism research arena is still in its infancy, with the present body of knowledge limited by a lack of innovative research designs and theoretically integrated research programmes. As alluded to earlier, this may have arisen due to the parallel nature of the workaholism and Type A constructs, where workaholism research may have been subsumed into the Type A literature. The present research has attempted to address this problem, and, given the strength of the current findings and sample sizes, constitutes a feasible platform from which to continue investigations into workaholism. Accordingly, this final section of the thesis offers suggestions to guide future research regarding theoretical development, future replications and new approaches, and concludes with a brief précis positioning the present investigation as a catalyst for innovative new methodologies in workaholism research.

Theoretical Model

With respect to the present data, several hypotheses arise. Firstly, drive was more clearly related to harmful correlates, such as impatience-irritability (which relates to poor cardiac health) and obsessive-compulsiveness (which relates to anxiety and stress) than enjoyment was. Enjoyment, on the other hand, related to more health enhancing constructs, such as job satisfaction (McMillan et al., in press). Previous studies have also observed that enjoyment relates positively to life satisfaction, purpose in life, and positive team-focused beliefs (Bonebright et al., 2000; Burke, 2000c). On this basis, it is feasible to hypothesise that drive may be the toxic (i.e., harmful) element in workaholism that produces negative health and lifestyle outcomes, while enjoyment may be a protective factor that

modulates the influence of drive. It is also feasible, as 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.

Theoretically, it is clear from the present data that the validity of addiction theory with respect to workaholism is at best tenuous, especially given the lack of 'detrimental impact' data. It is also clear that family systems theory is not supported here, as the impact on intimate relationships seemed to be minimal, and certainly not harmful, as the theory would predict. However, the data do suggest that trait and, in particular, interaction theories merit further investigation. For instance, the inductive definition appears to encompass several aspects of interaction theory. Specifically, it is feasible to speculate that obsessiveness, drive and enjoyment appear to interact to catalyse workaholism. Furthermore, it is conceivable that drive and an obsessive personal style are *antecedent traits* that interact with and are reinforced by enjoyment to produce *workaholic behaviour* that involves achievement striving, work ethic and a tendency to work or think about work incessantly. This behaviour results in *consequences* that include working any time, anywhere, that have a slight, but not significant impact on lifestyle (leisure, relationships and health). In turn, these consequences are likely to provide discriminative stimuli for further working. These propositions are modelled in Figure 6.1, which, it must be re-iterated, is very tentative and intended to spur further research questions, rather than provide definitive answers about the nature of workaholism.

Specifically, Figure 6.1 integrates the arguments from the introduction, where the workaholism antecedents and behaviour were formulated within

interaction theory (see Figure 1.1 on page 18), with the data obtained from studies one, two, and three pertaining to the magnitude of the relationship between workaholism and other correlates. The present data appear to suggest that workaholism (measured 12 months previously) does *not* appear to precede health and relationship difficulties. Clearly, modelling any type of ongoing human behaviour is fraught with conceptual overlap and circularity, and further testing and modelling are required to conclusively quantify this proposition.

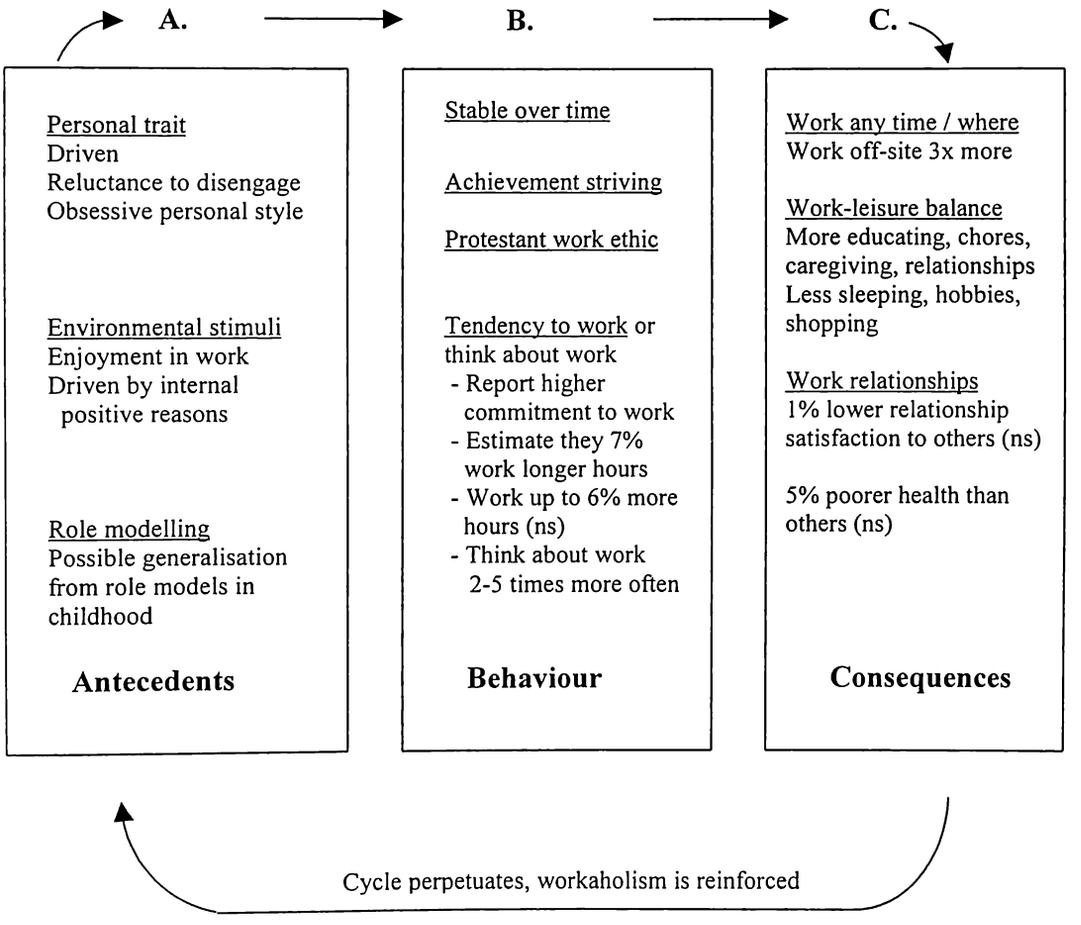

Figure 6.1. A model of workaholism based on the present data. Where statements are followed by the phrase 'ns' the difference between workaholics' and non-workaholics' mean scores did not reach statistical significance.

The working model spurs several other hypotheses. For instance, the model implies that traits and role models precede workaholism. Furthermore, the reluctance to disengage is implied, but has not actually been measured – for instance, research taken 'at the point of disengaging from work' could elucidate the subtleties of this process. Does the person attempt to disengage several times before they succeed? Do they use certain cognitive tactics to help themselves disengage from work each day? Specifically, further theoretical development, hypothesis testing and structural equation modelling are required to ascertain the scientific and applied utility of this tentative model.

Future Replications

Methodologically, the present research was the first study of workaholism to adopt contrasted groups, heterogeneous sampling, triangulation (of both measures and data sources), time-diaries, and retrospective / concurrent measures within a longitudinal design. There are many more potential applications of these methods that could add significantly to the current body of knowledge about workaholism. For instance, further use of contrasted groups could clarify many of hypotheses about workaholism, such as the direction of the workaholism-lifestyle relationship (Robinson, 2000b), by comparing workaholics to non-workaholics within a prospective, longitudinal design. Heterogeneous sampling, in particular inter-organisational sampling, could clarify the influence of corporate culture and workaholic role models in workaholism aetiology (Porter, 1996). Ongoing use of cross-sectional sampling across occupational types would also indicate whether some occupations (e.g., entrepreneurs) have greater incidences of workaholism, and provide prevalence rates in different strata of the population.

As this is the first repeated-measures study, continued use of longitudinal designs is important in workaholism research. Specifically, the knowledge base would benefit from replications of the present longitudinal design in different cultures, economies and samples to help explain the impact of different cultural, economic and personality factors on the expression of workaholism. Longitudinal research that is conducted over extended timeframes (e.g., prospective 10-year studies) is also important in elucidating the course of workaholism over time and confirming which theoretical framework provides the most scientifically valid explication of workaholism. Importantly, as previously alluded, the lack of statistical significance between workaholics and non-workaholics in their health and relationships does not necessarily imply the difference does not matter. One potential hypothesis is that the 5% poorer health, or the 1% difference in relationship satisfaction between workaholics and non-workaholics may actually make an important difference in terms of a person's 'quality of life.' These possibilities merit further investigation. Finally, a sequential study of the antecedents, behaviour and consequences of workaholism could shed light on the perpetuating and maintaining factors of this little understood syndrome.

New Approaches

In addition to these suggested replications (which, by the present response rates and data quality appear to have been suitable), there are equally innovative methods that have been successfully used in other psychological domains, but remain untouched in workaholism research. For instance, field studies using direct observation in the workplace and the home may shed light on whether subtle communication differences (e.g., body language, intensity of communication)

may underlie the stereotype-empirical contradiction over the quality of workaholics' relationships. Retrospective analyses of medical records and job histories may elucidate some of the antecedents and consequences of workaholism.

Action research would also be helpful in ascertaining some of the intentions behind workaholism, while ethnographic studies could be used to draw on workaholics' own expertise about how they make meaning of their working styles (Foster & Parker, 1995). The relationship between thinking about work and job type also requires further investigation. It is possible, for instance, that both job variables and organisational culture may modulate this behaviour by acting as discriminative stimuli (i.e., antecedents) for thinking about work. Cross-cultural studies would also make a valuable contribution in terms of comparing prevalence rates in different economies and elucidating whether workaholism is an individual or cultural variable. Finally, it is important to consider the impact of seasonal differences on leisure time, in addition to the influence of organisational variables (e.g., productivity; Burke, 2000; Porter, 1996), cultural variables, lifestyle variables (e.g., sexual orientation, childlessness, dual working status) and matching variables (e.g., when both parties are workaholic) on levels of workaholism. Clearly, therefore, there are numerous opportunities to instigate innovative, but empirically validated designs in future workaholism research.

Summary and Concluding Comments

Workaholism occurs when a person has difficulty disengaging from work, (evidenced by the capability to work at any time in any situation), a strong drive

to work and intense enjoyment of work. Most researchers concur that workaholism leads a person to work more hours, and to employ a differing use of leisure time than others. Given the current breadth of empirical support, it appears that workaholism is most appropriately explained as a personal trait that is activated and maintained by environmental circumstances (i.e., interaction theory). The present research has advanced contemporary knowledge about workaholism in five ways (a) provided one of the first systematic analyses of workaholism using data from multivariate sources, (b) generated longitudinal New Zealand data from contrasted groups, (c) analysed significant others' perceptions of workaholism, (d) generated an empirically based operational definition, and (e) adapted innovative measurement methods from other fields (e.g., time diaries) for use in workaholism research.

In summary, the present studies have helped develop an *empirically-based* picture of workaholism that is relevant to New Zealand culture, explicated the links between the data, measurement tools and theory, and evolved successful methodologies for studying this important phenomenon. The data indicate that workaholism represents a value system about the importance of working and achieving, which is most accurately identified by considering the hours someone works *plus* the time they spend thinking about work. Workaholism may be associated with differing leisure patterns, and while these are not necessarily adverse in their impact, they tentatively appear to include the selection of more 'active' pursuits, such as education, exercise, and chores, in preference to passive recreation such as watching media and sleeping. However, as outlined, these data were non-significant, which suggests that we require further replications to establish the exact nature of this relationship.

As the world trends toward globalisation, international migration, cross-cultural communications, mobilized technology, and elastic-boundaried workplaces (e.g., working from home or abroad) shrink the distance between workplaces, the need for workaholism research will increase. Along with it, so will the opportunities for critical thinking scientists to enter the workaholism research arena. Thus, while the present research has made some vital progress in explaining, rather than merely describing workaholism, its most valuable contribution to the body of knowledge, is arguably the conceptual springboard it provides for evolving future research designs and integrating the resultant data into meaningful theories.

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Appendix A

Demographics of respondents in study one compared to New Zealand Census Data

Demographic	*N*	% of sample	% in 1996 census
Gender [a,b]			
Male	228	54.4	51.4
Female	191	45.6	48.6
Income [a,c]			
$ 0-30,000	78	18.5	53.1
$30,001-$40,000	90	21.3	19.2
$40,001 - $50,000	77	18.3	10.2
$50,001-$70,000	79	18.8	7.3
$70,001- $100,000	30	7.1	3.1
$100,001 and over	47	11.2	2.7

Note. [a] Not all participants specified their gender, employment status and income [b] [c] Fulltime employees only

Appendix B

Questionnaire from study one, including full version of the Workaholism Battery

_____

Work Questionnaire

Please read each question and give the answer which best describes you

1. How old are you?
   _____ years

2. What is your gender?
   a) Male.
   b) Female.

3. What is currently your main type of employment?
   a) Paid Employee.
   b) Employer with employees.
   c) Self Employed without employees.
   d) Other (please specify) _____

4. What is your current job title?
   _____

5. How long have you been in your current job?
   _____ years

6. What is the minimum number of hours your employer requires you to work each week?
   _____ hours per week

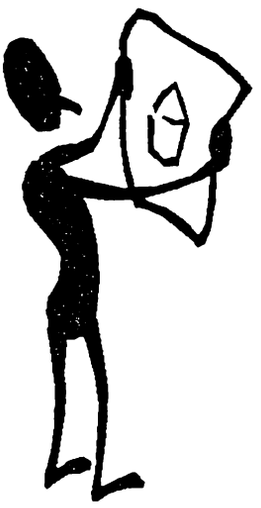
7. How many hours each week have you actually worked (on average) over the last six months?
   _____ hours per week

8. Have you bought a house in the last month?
   a) Yes
   b) No

9. Have you married or moved in with a new partner in the last month?
   a) Yes
   b) No

10. Have you divorced, separated or left a partner in the last month?
    a) Yes
    b) No

11. Have you or your partner had a new baby in the last month?
    a) Yes
    b) No



12. How much does your job "stir you into action?"
    a) Much less than most people's jobs.
    b) A little less than most people's jobs.
    c) About average.
    d) A little more than most other people's jobs.
    e) Much more than most other people's jobs.

13. Nowadays, do you consider yourself to be
    a) Very hard-driving?
    b) Reasonably hard-driving?
    c) About average?
    d) Reasonably relaxed and easy-going?
    e) Very relaxed and easy going?

14. How would your best friends, or others who know you w: rate your general level of activity?
    a) Too slow .
    b) A little slower than others.
    c) About average.
    d) A little more active than others.
    e) Very active - should slow down.

15. How seriously do you take your work?
    a) Much more seriously than others.
    b) A little more seriously than others .
    c) The same as others.
    d) A little less seriously than others.
    e) Much less seriously than others.

16. How often do you set deadlines or quotas for yourself at : other activities?
    a) Very often.
    b) Fairly often.
    c) Sometimes.
    d) Seldom.
    e) Almost never.

17. Compared to other workers, the amount of effort
    a) Much more effort than others.
    b) A little more effort than others.
    c) The same as others.
    d) A little less effort than others.
    e) Much less effort than others.

18. Compared with other workers, I approach life in
    a) Much more seriously than others.
    b) A little more seriously than others.
    c) The same as others.
    d) A little less seriously than others.
    e) Much less seriously than others.

Section B - Your Work

Please read each question and give the answer which best describes you.

	1= strongly agree	2= moderately agree	3= slightly agree	4= not sure	5= slightly disagree	6=moderately disagree	7=strongly disagree
1. When I have free time I like to relax and do nothing serious.	1	2	3	4	5	6	7
2. I like my work more than most people do.	1	2	3	4	5	6	7
3. I feel guilty when I take time off work.	1	2	3	4	5	6	7
4. My job is more like fun than work.	1	2	3	4	5	6	7
5. I often wish I weren't so committed to my work.	1	2	3	4	5	6	7
6. I like to relax and enjoy myself as often as possible.	1	2	3	4	5	6	7
7. My job is so interesting that it often doesn't seem like work.	1	2	3	4	5	6	7
8. I really look forward to the weekend - all fun, no work.	1	2	3	4	5	6	7
9. I do more work than is expected of me strictly for the fun of it.	1	2	3	4	5	6	7
10. Most of the time my work is very pleasurable.	1	2	3	4	5	6	7
11. I rarely find anything to enjoy about my work.	1	2	3	4	5	6	7
12. Wasting time is as bad as wasting money.	1	2	3	4	5	6	7
13. I spend my free time on projects and other activities.	1	2	3	4	5	6	7
14. I feel obliged to work hard, even when it's not enjoyable.	1	2	3	4	5	6	7
15. I like to use my time constructively both on and off the job.	1	2	3	4	5	6	7
16. I lose track of time when I'm engaged on a project.	1	2	3	4	5	6	7
17. Sometimes when I get up in the morning I can hardly wait to get to work.	1	2	3	4	5	6	7
18. 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
19. When I get involved in an interesting project, it's hard to describe how exhilarated I feel.	1	2	3	4	5	6	7
20. 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
21. Between my job and other activities I'm involved in, I don't have much free time.	1	2	3	4	5	6	7
22. I often feel that there's something inside me that drives me to work hard.	1	2	3	4	5	6	7
23. Sometimes I enjoy my work so much that I have a hard time stopping.	1	2	3	4	5	6	7
24. I get bored and restless on vacations when I haven't anything productive to do.	1	2	3	4	5	6	7
25. I seem to have an inner compulsion to work hard, a feeling that it's something I have to do whether I want to or not.	1	2	3	4	5	6	7

Appendix B continued

Section C - Your Leisure
Please tell us about your leisure time.

Please use these codes:

1= Almost always true
2= Often true
3= Sometimes true
4 = Seldom true
5= Almost never true

1. My leisure activities are very interesting to me. _____
2. My leisure activities give me self confidence. _____
3. My leisure activities give me a sense of accomplishment. _____
4. I use many different skills and abilities in my leisure activities. _____
5. My leisure activities increase my knowledge about things around me. _____
6. My leisure activities provide opportunities to try new things. _____
7. My leisure activities help me to learn about myself. _____
8. My leisure activities help me to learn about other people. _____
9. I have social interaction with others through leisure activities. _____
10. My leisure activities have helped me develop close relationships with others. _____
11. The people I meet in my leisure activities are friendly. _____
12. I associate with people in my free time who enjoy doing leisure activities a great deal. _____
13. My leisure activities help me relax. _____
14. My leisure activities help me relieve stress. _____
15. My leisure activities contribute to my emotional well being. _____
16. I engage in leisure activities simply because I like doing them. _____
17. My leisure activities are physically challenging. _____
18. I do leisure activities which develop my physical fitness. _____
19. I do leisure activities which restore me physically. _____
20. My leisure activities help me to stay healthy. _____
21. The areas or places where I engage in leisure activities are fresh and clean. _____
22. The areas or places where I engage in leisure activities are interesting. _____
23. The areas or places where I engage in leisure activities are beautiful. _____
24. The areas or places where I engage in leisure activities are well designed. _____

Many people find they think about their job after they have gone home. Please think back over the last 7 days:

25. How many mornings last week was work the first thing you thought about when you woke up? _____ *mornings*
26. When travelling to and from work, on how many days did you fail to remember the journey because you were absorbed in work? _____ *days*
27. On how many days did you read work-related material in your spare time? _____ *days*
28. On how many days did you contact work colleagues outside of work hours? _____ *days*
29. How many evenings when you were relaxing, did you find yourself thinking about your work? _____ *evenings*
30. On how many evenings did you find you weren't really listening to to people because your thoughts had strayed to your work? _____ *evenings*
31. On how many nights did you go to sleep with work on your mind? _____ *nights*
32. How many nights last week did you lie awake thinking about work? _____ *nights*

Section D - Work and Money
Please tell us what you think:

Please use these codes:

1= Strongly agree
2= Moderately agree
3= Slightly agree
4 = Not sure
5= Slightly disagree
6 = Moderately disagree
7= Strongly disagree

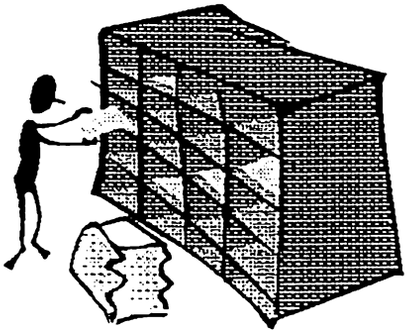
1. Most people spend too much time in unprofitable amusement. _____
2. Our society would have fewer problems if people had less leisure time. _____
3. Money acquired easily (e.g. through gambling or speculation) is usually spent unwisely. _____
4. There are few satisfactions equal to when you realise you have done your best at a job. _____
5. The most difficult high school courses usually turn out to be the most rewarding. _____
6. Most people who don't succeed in life are just plain lazy. _____
7. The self-made person is likely to be more ethical than those born to wealth. _____
8. I often feel I would be more successful if I sacrificed certain pleasures. _____
9. People should have more leisure time to spend in relaxation. _____
10. Any person who is able and willing to work hard has a good chance of succeeding. _____
11. People who fail at a job have usually not tried hard enough. _____
12. Life would have very little meaning if we never had to suffer. _____
13. Hard work offers little guarantee of success _____
14. The credit card is a ticket to careless spending _____
15. Life would be more meaningful if we had more leisure time. _____
16. The person who can approach an unpleasant task with enthusiasm is the one who gets ahead. _____
17. If a person works hard enough they are likely to make a good life for themselves. _____
18. I feel uneasy when there is little work for me to do. _____
19. A distaste for hard work usually reflects a weakness of character. _____

Now please circle your answer

20. Are you good at saving your money rather than spending it straight away? *Yes / Not sure / No*
21. Do you enjoy a thing all the more because you have had to wait for it and plan for it? *Yes / Not sure / No*
22. Did you tend to save your pocket-money as a child? *Yes / Not sure / No*
23. When you're in a supermarket do you tend to buy a lot of things you hadn't planned to? *Yes / Not sure / No*
24. Are you constantly "broke"? *Yes / Not sure / No*
25. Do you agree with the philosophy "Eat, drink and be merry, for tomorrow we may die"? *Yes / Not sure / No*
26. Would you describe yourself as often being too impulsive for your own good? *Yes / Not sure / No*
27. Do you often find that it is worthwhile to wait and think things over before deciding? *Yes / Not sure / No*
28. Do you like to spend your money as soon as you get it? *Yes / Not sure / No*
29. Is it hard for you to keep from blowing your top when someone gets you very angry? *Yes / Not sure / No*
30. Can you tolerate being kept waiting for things fairly easily most of the time? *Yes / Not sure / No*
31. Are you good at planning things way in advance? *Yes / Not sure / No*

32. What was your gross <u>personal</u> income from all sources before tax in 1998?

a) Nil / Loss	b) $ 1 - $ 5,000
c) $ 5,001 - $ 10,000	d) $10,001 - $ 15,000
e) $15,001 - $ 20,000	f) $20,001 - $ 25,000
g) $25,001 - $ 30,000	h) $30,001 - $ 40,000
i) $40,001 - $ 50,000	j) $50,001 - $ 70,000
k) $70,001-$100,000	l) $100,001 or more



Appendix B continued

Section E
The LAST page.....!

1. When a person is talking and takes too long to come to the point, how often do you feel like hurrying them along?
   a) Very frequently.
   b) Often.
   c) Sometimes.
   d) Occasionally.
   e) Almost never.

Yippee....
nearly there!

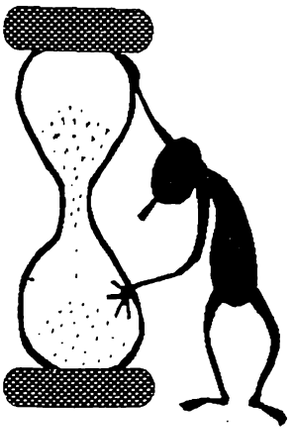
2. Typically, how easily do you get irritated?
   a) Extremely easily.
   b) More easily than others.
   c) Same as others.
   d) Less easily than others.
   e) Not at all easily.

3. Do you tend to do most things in a hurry?
   a) Definitely true.
   b) Probably true.
   c) Same as others.
   d) Probably untrue.
   e) Not at all true.

4. How is your 'temper' these days?
   a) Very hard to control.
   b) Strong but controllable.
   c) Same as others
   d) Easily controllable.
   e) I seldom get angry.

5. When you have to wait in line such as at a restaurant, the movies, or the post office, how do you usually feel?
   a) Accept it calmly.
   b) Feel a little impatient
   c) Feel quite impatient, but not show it
   d) Feel so impatient that someone watching can tell I am restless.
   e) Feel very impatient and refuse to stay long.

Now think about the <u>way</u> in which you work....



6. Before going home from work, I try to I finish all of my tasks. *Yes / No*
7. Leaving a task incomplete upsets me. *Yes / No*
8. I don't start things unless I am sure I can finish them. *Yes / No*
9. It is difficult or impossible for me to stop a task half-way through. *Yes / No*
10. Once I start a task, I just have to keep working at it until I complete it *Yes / No*
11. I become frustrated when I am not able to complete a task that I started. Yes / *No*
12. Your name: _____ (to contact you for the next stage of research) *

* Please note that your researcher (Lynley) is the ONLY person who will see your name - she may contact you at work next summer to take part in the next stage of research. All the rest of the time you will be referred to by a special code of numbers so that you are unable to be identified. Your privacy is paramount - every response remains totally confidential between yourself & Lynley - neither your employer, nor anyone else will ever know what you have written on the questionnaire. You are welcome to leave your name blank if you prefer

THANKS!

You have helped with some really important research...
and I couldn't have done it without <u>YOU.</u>

Appendix C

Obsessive Thinking Scale items

Instruction: Many people find they think about their job after they have gone home. Please think back over the last 7 days

1. How many mornings last week was work the first thing you thought about when you woke up?
2. When travelling to and from work, on how many days did you fail to remember the journey because you were absorbed in work?
3. On how many days did you read work-related material in your spare time?
4. On how many days did you contact work colleagues out of work hours?
5. How many evenings, when you were relaxing, did you find yourself thinking about work?
6. On how many evenings did you find you weren't listening to people because your thoughts had strayed to work?
7. On how many nights did you go to sleep with work on your mind?
8. How many nights last week did you lie awake thinking about work?

Appendix D

Compulsive Finishing Scale items

Instruction: Now think about the way in which you work

1. Before going home I try to finish all of my tasks
2. Leaving a task incomplete upsets me
3. I don't start things unless I am sure a can finish them
4. It is difficult or impossible for me to stop a task half-way through
5. Once I start a task, I just have to keep working at it until I complete it
6. I become frustrated when I am not able to complete a task that I started

Appendix E

Flyer from research package given to study one participants

ATTENTION!

Research into attitudes about work and leisure.

In the first week of August, Lynley McMillan from the University of Waikato will give you a

Work-Leisure Questionnaire

to complete. You will find it very interesting and worthwhile, and we encourage you to take part in the research.

Participating is **EASY** - all you have to do is:

1) Complete the questionnaire (remember, it is confidential between yourself & Lynley)
2) Seal it in the envelope provided
3) Leave it at RECEPTION for Lynley to collect

Thanks again for helping with the research,
We appreciate your support.

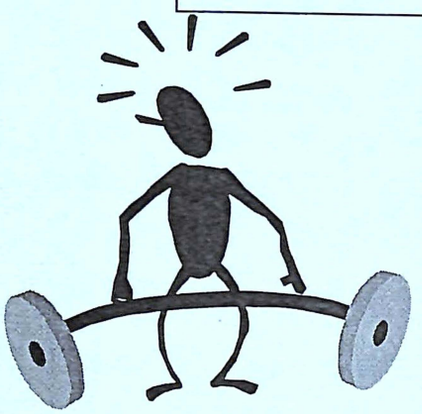
XXXX Management

Appendix F

Letter explaining research given to study one participants

August 1999
Lynley McMillan
University Student
Box 362
Tauranga

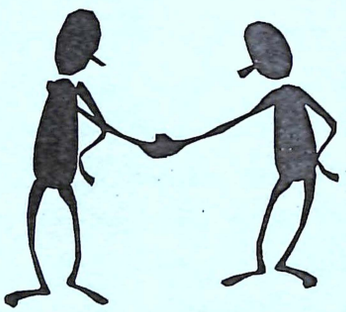
Have you ever **stopped to think....**
about your **work** habits?



....***maybe*** you could help me - I am a doctoral student, at the University of Waikato, researching New Zealander's working habits and would like to hear from you. PDL management have agreed for you to help with this research.

Enclosed is a simple, voluntary questionnaire which is *entirely confidential* and takes only twenty minutes to complete. Please could you fill out the questionnaire and place it in the envelope for me to collect personally. When your response is received, it will be coded to protect your privacy and will be analysed with all the other responses.

This research has been approved by the Psychology Department Ethics Committee of the University of Waikato, and is supervised by academic staff; Associate Professor Mike O'Driscoll and Dr. Nigel March, who can be contacted on (07) 856 2889. The results will be formally reported within 3 years at the University, however, you are most welcome to contact me personally for a 'plain English' version, which will be available within six months.



Meanwhile, if you have any questions, please ask me - I am here to help.

Thanks so much for your time!

Lynley McMillan
M.Soc.Sc. (Hons) (Psychology)
Phone (021) 987 - 664

Appendix G

Thank you letters sent to all respondents

Work-Leisure

Research Results

The Work-Leisure research was conducted in August 1999 and analysed people's attitudes toward their work and the manner in which leisure activities impacted on their well-being. 1000 questionnaires were distributed and 421 people responded, yielding a sample that was fairly representative of the working population of New Zealand. Males and females responded in fairly even numbers (56% / 46%). People's average age was 35, and they had been in their job for 3.8 years. 44% of people held degrees or diplomas, and 40% earned between $30,000 and $50,000.

The companies who participated came from 5 different sectors, and had the following response rates;

Manufacturing (52%)
Hospital - Health Care (43%)
Financial Services (44%)
Dairy Industry (46%)
Communications (34%)

Main Findings

- **70 % of people** took their work seriously, approached unpleasant tasks with enthusiasm, and felt 'fidgety' when they had little to do.
- **48%** of people said their job was **so interesting** it did not feel like work.
- **20%** completely **forgot** about work when they left each day.
- **6%** thought about work **every day** of the week and in the weekend.
- Most people used leisure activities to reduce **stress**.
- 1 out of every 2 people thought **hard work** reflects a strong character
- Employers required a **minimum of 38 hours** per week (on average).
- People **actually worked 43 hours** per week (on average).
- People's leisure was **not very physical** - even the very hard working people preferred to relax, rather than exercise in their spare time.

Appendix H

Demographics of the workers in study two

Demographic	All participants	Workaholic	Non - workaholic
N	88	46	42
Gender			
Male	46	23	23
Female	42	23	19
Age			
0-19 years	2	0	2
20-29	38	16	22
30-39	26	12	14
41-49	11	10	1
50-59	9	6	3
60-69	2	2	0
Qualification			
University degree	31	18	13
Technical certificate	10	10	0
Higher school cert	25	14	11
School certificate	7	2	5
Not stated	5	2	3
Ethnicity			
Pakeha	70	35	35
Maori	5	1	4
Pacific Island	4	3	1
Asian	3	3	0
Other	6	4	2
Income			
0-$29000 per year	20	8	12
30-39	19	7	12
40-49	10	5	5
50-69	21	10	11
70-100	7	7	0
100+	9	8	1
Not stated	2	1	1
Relationship status			
Married/defacto	56	33	23
Single / widowed	24	9	15
Not stated	8	4	4
Occupational group			
Manager/Profess	28	21	7
Tech/Clerical/Sales	48	21	27
Trades/Blue	12	4	8
Market sector			
Manufacturing	12	6	6
Financial	42	22	20
Communications	4	0	4
Agricultural	26	15	11
Health	4	3	1

Appendix I

Demographics of the colleagues in study two

Demographic	All colleagues	Colleagues of Workaholics only	Colleagues of Non Workaholics only
N	77	42	35
Gender			
Male	26	13	13
Female	41	26	15
	10	3	7
Seniority of colleague			
Senior to worker	10	8	2
Equal to worker	47	21	26
Junior to worker	20	13	7
Not stated			
Time known to worker			
0-11 months	23	8	12
12-23	21	23	5
24+	38	14	15
Not stated	5	6	3
Working relationship			
Not close	5	1	4
Somewhat close	41	21	20
Very close	30	19	11
	1	1	0
How well known			
Less than others	1	0	1
As well as others	31	20	11
Better than others	44	21	23
	1	1	0
Department			
Same as worker	70	40	30
Different to worker	7	2	5

Appendix J

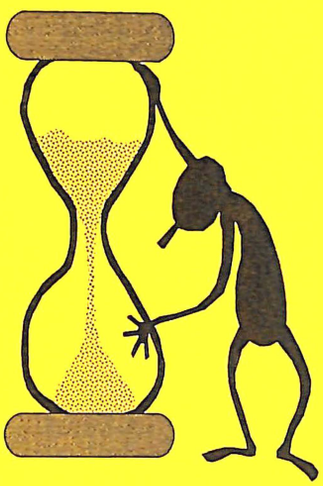
Instructions provided with the Time Diaries

Instructions

1. **Decide** where you are (at work, travelling, etc)

2. **Find** the activity you are doing

3. **Colour** in the square!
(If you did more than one thing,
colour in the MAIN activity only)



Care giving	Looking after other people (children, elderly etc), bathing/changing kids, etc
Chores	Things you HAVE to do at home - cooking, housework, dishes, washing, etc
Cultural	Religious activities, watching sport at the actual venue, attending theatre, arts
Community	Time given freely to a community activity like a charity, Lions, Playcentre etc
Eating	Eating food, coffee breaks, takeaways, eating out
Education	Nightclasses, workshops, university
Exercising	Gym, running, sports, cycling, walking, etc
Hobbies	Reading, playing piano / guitar, crafts, gardening, arts, building something,
Media	Watching TV, video or movie, listening to stereo, computer games, internet
Personal care	Showering, bathing, sex, grooming, dressing, toilet, etc
Relationships	Time with people - friends, family, playing with kids, talking to partner
Shopping	Include paying bills, internet shopping, groceries, hairdresser
Sleeping	Sleeping, dozing, trying to get to sleep, etc
Personal travel	Travel to sports, shopping, personal errands, the doctor etc
Work travel	Travel to and from work, to conferences, meetings etc
Working	ONLY include work for your employer, include thinking and reading about work

If you're stuck  **RING ME (021) 987-664** - I am here to help!

Appendix K

Sample page from a Time Diary

THURSDAY 17 August

1. WHERE are you? →

2. WHAT are you doing? →

		At work		Other places												Travel		
		Eating	Working	Caregiving	Chores	Cultural	Community	Eating	Education	Exercising	Hobbies	Media	Persnl care	Relatnshps	Shopping	Sleeping	Working	Personal	Work	
Midnight	**Midnight**																			
	1.00 am																			
	2.00																			
	3.00																			
	4.00																			
	5.00																			
	6.00																			
Morning	**7.00 am**																			
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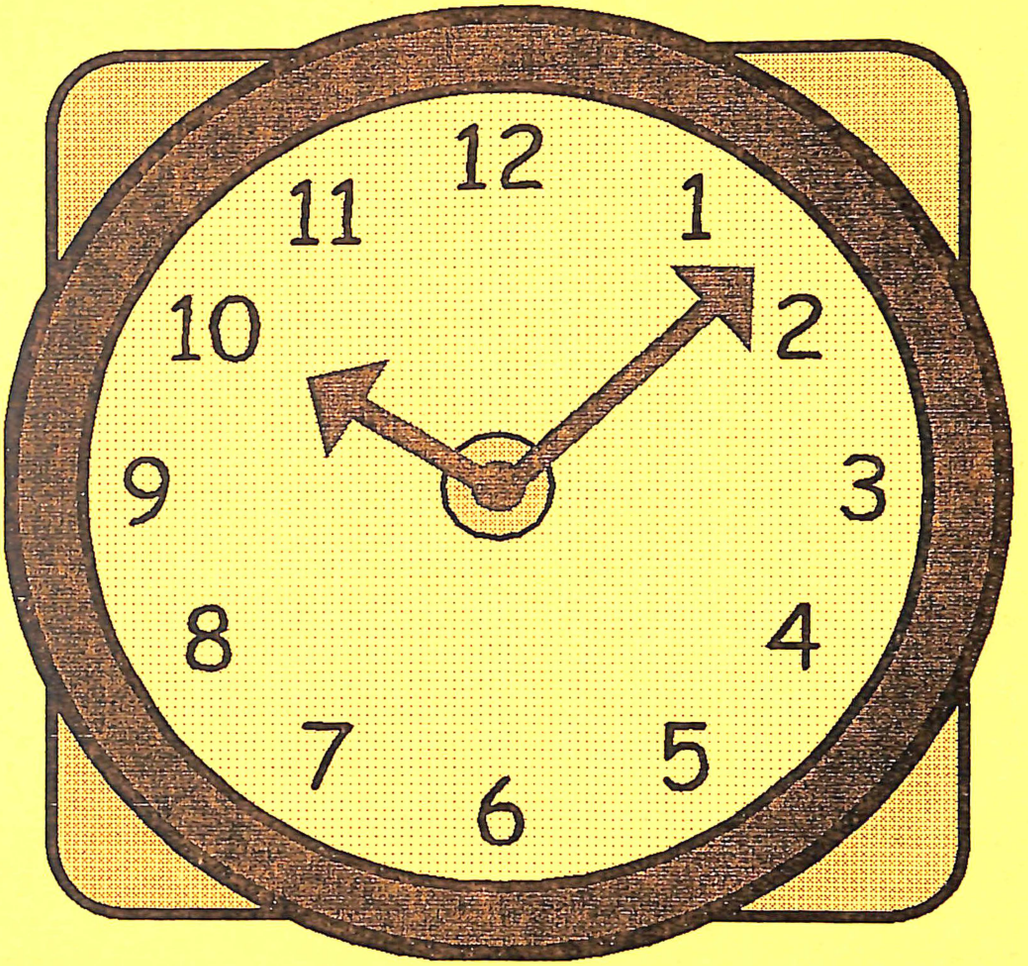
	10.00																			
	10.20																			
	10.40																			
	11.00																			
	11.20																			
	11.40																			

Please tick the matching box if you also thought about work during this 20 mins ↓

Work-Pleasure Time Diary



Your name: _____

Your phone: _____

Appendix L

Questionnaire from study two, including revised WorkBAT

Work-Pleasure Questionnaire

CONFIDENTIAL

This is a Work-Pleasure questionnaire which asks about your work, time off, health and relationships. In total, 100 people who live in Auckland will complete the questionnaire.

Your answers to these questions will remain at all times STRICTLY CONFIDENTIAL to Lynley.

You are welcome to withdraw from this research at any stage if you prefer not to participate.

Your privacy is protected at all times by the Privacy Act and by the Ethical Principles which bind all psychologists.

Your Name: _____ *Age:* _____

Section A - Your Work

Please circle the number which best describes your feelings:

	1= Strongly Agree	2= Moderately Agree	3= Slightly Agree	4= Not Sure	5= Slightly Disagree	6= Moderately Disagree	7= Strongly Disagree
Please use this scale →							
1. I like my work more than most people do.	1	2	3	4	5	6	7
2. Between my job and other activities I'm involved in, I don't have much free time.	1	2	3	4	5	6	7
3. I usually take some job-related work along on holidays	1	2	3	4	5	6	7
4. My job is so interesting that it often doesn't seem like work.	1	2	3	4	5	6	7
5. I work in the evening after dinner.	1	2	3	4	5	6	7
6. 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
7. I do more work than is expected of me strictly for the fun of it.	1	2	3	4	5	6	7
8. I work most nights and weekends.	1	2	3	4	5	6	7
9. I often feel that there's something inside me that drives me to work hard.	1	2	3	4	5	6	7
10. Most of the time my work is very pleasurable.	1	2	3	4	5	6	7
11. I feel obliged to work hard, even when it's not enjoyable.	1	2	3	4	5	6	7
12. I try to keep my nights and weekends open for leisure activities.	1	2	3	4	5	6	7
13. Sometimes when I get up in the morning I can hardly wait to get to work.	1	2	3	4	5	6	7
14. 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
15. I frequently work until I'm too tired to work more.	1	2	3	4	5	6	7
16. I rarely find anything to enjoy about my work.	1	2	3	4	5	6	7
17. I get bored and restless on holidays when I haven't anything productive to do.	1	2	3	4	5	6	7
18. I wish there were more hours in a day so I could get more work done.	1	2	3	4	5	6	7
19. I seem to have an inner compulsion to work hard, a feeling that it's something I have to do whether I want to or not.	1	2	3	4	5	6	7
20. My job is more like fun than work.	1	2	3	4	5	6	7
21. I devote more time to my work than most people.	1	2	3	4	5	6	7

22. How are you paid? (please tick ONE box)
    - ☐ Wages only
    - ☐ Wages plus overtime
    - ☐ Salary only
    - ☐ Salary plus bonus
    - ☐ Other: Please specify:_____

23. What is the <u>minimum</u> number of hours your employer requires you to work each week? _____hours per week

24. How many hours each week have you <u>actually</u> worked (on average) over the last six months? _____hours per week

25. Please estimate how many hours each week you **think about work** during your **spare time**? _____ hours per week

Appendix L continued

Section B - Your Spare Time

1. If you have done any of these things since August last year, please tick the box(es) that apply:

- ☐ Bought a house?
- ☐ Married or moved in with a new partner?
- ☐ Had a new baby?
- ☐ Divorced, separated or left a partner?
- ☐ Changed jobs?

2. Please estimate how much time you spend communicating with these people each week:

Your friends _____ hours / week
Your partner _____ hours (if applicable)
Your children_____ hours (if applicable)
Other family members ____ hours / week

3. Listed below are twenty events that some people find pleasant. Please answer each question TWICE

i) Indicate how OFTEN you have done this activity in the last 30 days using the FREQUENCY scale:

0 = *Has not happened in past 30 days*
1 = *Happened 1-6 times in past 30 days*
2 = *Happened 7 times or more in past 30 days*

ii) Indicate how pleasant, rewarding or enjoyable you found each activity you did using the PLEASURE scale:

A = *This was not pleasant*
B = *This was somewhat pleasant*
C = *This was very pleasant*

	Frequency (0,1,2)	Pleasure (A,B, C)
1. Being in the country	____	____
2. Meeting someone new of the same sex	____	____
3. Planning trips or holidays	____	____
4. Reading stories, novels, poems or plays	____	____
5. Driving skilfully	____	____
6. Breathing clean air	____	____
7. Saying something clearly	____	____
8. Thinking about something good in the future	____	____
9. Laughing	____	____
10. Being with animals	____	____
11. Having frank and open conversation	____	____
12. Going to a party	____	____
13. Wearing informal clothes	____	____
14. Being with friends	____	____
15. Being popular at a gathering	____	____
16. Watching wild animals	____	____
17. Sitting in the sun	____	____
18. Seeing good things happen to my family or friends	____	____
19. Planning or organising something	____	____
20. Having a lively talk	____	____
21. Having friends come to visit	____	____
22. Wearing clean clothes	____	____
23. Seeing beautiful scenery	____	____
24. Eating good meals	____	____
25. Doing a job well	____	____

	Frequency (0,1,2)	Pleasure (A,B, C)
26. Having spare time	____	____
27. Being noticed as sexually attractive	____	____
28. Learning to do something new	____	____
29. Complimenting/ praising someone	____	____
30. Thinking about people I like	____	____
31. Kissing	____	____
32. Doing a project in my own way	____	____
33. Having peace and quiet	____	____
34. Being relaxed	____	____
35. Sleeping soundly at night	____	____
36. Petting, necking	____	____
37. Amusing people	____	____
38. Being with someone I love	____	____
39. Having sexual relations	____	____
40. Watching people	____	____
41. Being with happy people	____	____
42. Smiling at people	____	____
43. Being with my partner or spouse	____	____
44. Having people show interest in what I have said	____	____
45. Feeling the presence of the Lord in my life	____	____
46. Having coffee, tea, coke, etc with friends	____	____
47. Being complimented or told I have done well	____	____
48. Being told I am loved	____	____
49. Seeing old friends	____	____

Section C - Your General Health

1. In general, would you say your health is: (please tick one)
   - ☐ Excellent
   - ☐ Very Good
   - ☐ Good
   - ☐ Fair
   - ☐ Poor

2. *Compared to one year ago*, how would you rate your health in general *now?* (please tick one)
   - ☐ Much better now than one year ago
   - ☐ Somewhat better now than one year ago
   - ☐ About the same now as one year ago
   - ☐ Somewhat worse now than one year ago
   - ☐ Much worse now than one year ago

3. The following items are about activities you might do during a typical day.
   Does *your health* now limit you in those activities? (If so, how much?) *Circle one number on <u>each</u> line*

	YES Limited a lot	**YES** Limited a little	**NO** Not limited at all
A. **Vigorous activities**, such as running, lifting heavy objects, participating in strenuous sports	1	2	3
B. **Moderate activities**, such as moving a table, pushing a vacuum cleaner, or playing golf	1	2	3
C. Lifting or carrying groceries	1	2	3
D. Climbing **several** flights of stairs	1	2	3
E. Climbing **one** flight of stairs	1	2	3
F. Bending, kneeling or stooping	1	2	3
G. Walking **more than a kilometre**	1	2	3
H. Walking **half a kilometre**	1	2	3
I. Walking **100 metres**	1	2	3
J. Bathing or dressing yourself	1	2	3

4. During the ***past 4 weeks*** have you had any of the following problems with your work or other regular daily activities *as a result of your <u>physical health</u>?* *Circle one on <u>each</u> line*

A. Cut down on the **amount of time** you spent on work or other activities	YES	NO
B. **Accomplished less** than you would like	YES	NO
C. Were limited in the **kind** of work or other activities	YES	NO
D. Had **difficulty** performing the work or other activities (for example, it took extra effort)	YES	NO

5. During the ***past 4 weeks***, have you had any of the following problems with your work or other activities *as a result of any <u>emotional problems</u>* (such as feeling depressed or anxious)? *Circle one on <u>each</u> line*

A. Cut down on the **amount of time** you spent on work or other activities	YES	NO
B. **Accomplished less** than you would like	YES	NO
C. Didn't do other activities as **carefully** as usual	YES	NO

Appendix L continued

Section D - Your Relationship

1. Do you currently have a partner / spouse / defacto / lover / girl or boyfriend / sexual partner?
   a) Yes
   b) No

2. If yes, please complete the following. Most people have disagreements in their relationships with their partners. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

	Always Agree	Almost Always Agree	Occasionally Disagree	Frequently Disagree	Almost Always Disagree	Always Disagree
1. Handling family finances	5	4	3	2	1	0
2. Matters of recreation	5	4	3	2	1	0
3. Religious matters	5	4	3	2	1	0
4. Demonstrations of affection	5	4	3	2	1	0
5. Friends	5	4	3	2	1	0
6. Sexual relations	5	4	3	2	1	0
7. Conventionality (correct or proper behaviour)	5	4	3	2	1	0
8. Philosophy of life	5	4	3	2	1	0
9. Ways of dealing with parents or in-laws	5	4	3	2	1	0
10. Aims, goals and things believed important	5	4	3	2	1	0
11. Amount of time spent together	5	4	3	2	1	0
12. Making major decisions	5	4	3	2	1	0
13. Household tasks	5	4	3	2	1	0
14. Leisure time interests and activities	5	4	3	2	1	0
15. Career decisions	5	4	3	2	1	0

	All of the time	Most of the time	More often than not	Occasionally	Rarely	Never
16. How often do you discuss or have you considered divorce, separation or terminating your relationship?	5	4	3	2	1	0
17. How often do you or your partner leave the house after a fight?	5	4	3	2	1	0
18. In general, how often do you think that things between you and your partner are going well?	5	4	3	2	1	0
19. Do you confide in your partner?	5	4	3	2	1	0
20. Do you ever regret that you married or lived together?	5	4	3	2	1	0
21. How often do you and your partner quarrel?	5	4	3	2	1	0
22. How often do you and your partner get on each other's nerves?	5	4	3	2	1	0

23. Do you kiss your partner? *(circle the best answer)*
    a) Every day b) Almost every day c) Occasionally d) Rarely e) Never

24. Do you and your partner engage in outside interests together? *(circle the best answer)*
    a) All of them b) Most of them c) Some of them d) Very few of them e) None of them

25. How long have you been in this relationship? _____

26. How many nights per week do you stay in the same home? _____

6. During the ***past 4 weeks*** to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbours, or groups?
   - ☐ Not at all
   - ☐ Slightly
   - ☐ Moderately
   - ☐ Quite a bit
   - ☐ Extremely

7. How much ***bodily pain*** have you had during the ***past 4 weeks***? (please tick one)
   - ☐ No bodily pain
   - ☐ Very mild
   - ☐ Mild
   - ☐ Moderate
   - ☐ Severe
   - ☐ Very severe

8. During the ***past 4 weeks*** how much did ***pain*** interfere with your normal work including both work outside the home and housework? (please tick one)
   - ☐ Not at all
   - ☐ A little bit
   - ☐ Moderately
   - ☐ Quite a bit
   - ☐ Extremely

9. These questions are about how you feel and how things have been with you ***during the past 4 weeks.*** For each question, please circle the number that comes closest to the way you have been feeling.

	All of the time	Most of the time	A good part of the time	Some of the time	A little of the time	None of the time
A. Did you feel full of life?	1	2	3	4	5	6
B. Have you been a very nervous person?	1	2	3	4	5	6
C. Have you felt so down in the dumps that nothing could cheer you up?	1	2	3	4	5	6
D. Have you felt calm and peaceful?	1	2	3	4	5	6
E. Did you have a lot of energy?	1	2	3	4	5	6
F. Have you felt down?	1	2	3	4	5	6
G. Did you feel worn out?	1	2	3	4	5	6
H. Have you been a happy person?	1	2	3	4	5	6
I. Did you feel tired?	1	2	3	4	5	6

10. During the ***past 4 weeks***, how much of the time has your ***physical health or emotional problems*** interfered with your social activities like visiting with friends, relatives, etc.? (please tick one)
   - ☐ All of the time
   - ☐ Most of the time
   - ☐ Some of the time
   - ☐ A little of the time
   - ☐ None of the time

11. How TRUE or FALSE is *each* of the following statements for you? *Please circle ONE on each line*

	Definitely true	Mostly true	Don't know	Mostly false	Definitely false
A. I seem to get sick a little easier than most people.	1	2	3	4	5
B. I am as healthy as anybody I know.	1	2	3	4	5
C. I expect my health to get worse.	1	2	3	4	5
D. My health is excellent	1	2	3	4	5

Appendix L continued

27. How often would you say the following events occur between you and your partner:

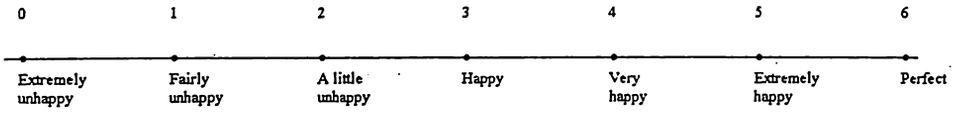
Please circle ONE on each line.

	Never	Less than once a month	Once or twice a month	Once or twice a week	Once a day	More often
A. Have a stimulating exchange of ideas:	1	2	3	4	5	6
B. Laugh together:	1	2	3	4	5	6
C. Calmly discuss something:	1	2	3	4	5	6
D. Work together on a project:	1	2	3	4	5	6

28. Here are some things about which couples sometimes agree and sometimes disagree. Has either of these things caused differences of opinions or were problems in your relationship during the past few weeks:

	YES we disagreed	NO we did not disagree
A. Being too tired for sex	1	2
B. Not showing love	1	2

29. The dots on the following line represent different degrees of happiness in your relationship. The middle point "happy" represents the degree of happiness of most relationships. Please circle the dot which best describes the degree of happiness, all things considered of your relationship.



30. Which of the following statements best describes how you feel about the future of your relationship? (tick one)

- ☐ I want desperately for my relationships to succeed and I *would go to almost any length* to see that it does
- ☐ I want very much for my relationship to succeed and *will do all I can* to see that it does.
- ☐ I want very much for my relationship to succeed and I *will do my fair share* to see that it does.
- ☐ It would be nice if my relationship succeeded, but *I can't do much more than I am doing now* to help it succeed.
- ☐ It would be nice if it succeeded, but I *refuse to do any more than I am doing now* to keep the relationship going.
- ☐ My relationship can never succeed, and *there is no more that I can do* to keep the relationship going.

Remember...

ALL of your answers will remain strictly confidential

ONLY ONE PAGE TO GO NOW.....

Appendix M

Letter explaining research given to study two participants

18 November 1999
Lynley McMillan
University student
P o Box 362
Tauranga

THANKS for agreeing to help with the research. You'll find it really worthwhile – and very interesting, in fact, you (and the 99 other people) will be helping us with **world leading** research....

We are going to take a look at the types of activities people do in their spare time, and how pleasurable they find those things....and then compare that to the sorts of jobs they do, and the types of industries they work in. At the end of the research, we will be able to give you some really interesting feedback about eth relationships between work and pleasure...and you will be among the **first people in the world** to hear about it!

All you need to do is wait...until February, when I will make contact again and then meet with you to fill in a couple of questionnaires...it's really very simple, and won't take long at all. (Your employers have agreed for us to do this during work time...as long as we are brief). There are 99 people like you who are helping us – together you will play an important part in helping is discover important links between work and pleasure. And all you have to do is answer a few SIMPLE question. Easy!

Meanwhile, if you have any questions, please ask me – I am happy to hear from you.

Lynley McMillan
M.Soc.Sc. (Hons) (Psychology) : Doctoral candidate – Waikato
Phone: (021) 987 664 : Email: Emerald-Lynley@xtra.co.nz

Appendix N

Demographics of the workers in study three

Demographic	All participants	Workaholic	Non Workaholic
N	55	27	28
Gender			
Male	24	10	14
Female	31	17	14
Age			
0-19 years	18	7	11
20-29	18	6	12
30-39	8	6	2
41-49	10	7	3
50-59	1	1	0
60-69	0	0	0
Qualification			
University degree	16	10	6
Technical certificate	12	7	5
Higher school cert	17	7	10
School certificate	5	1	4
Not stated	5	2	3
Ethnicity			
Pakeha	44	20	24
Maori	2	0	2
Pacific Island	1	1	0
Asian	3	3	0
Other	5	3	2
Income			
0-$29000 per year	27	10	17
30-39	6	3	3
40-49	13	6	7
50-69	2	2	0
70-100	6	5	1
100+	1	1	0
Not stated			
Relationship status			
Married/defacto	34	17	17
Single / widowed	14	6	8
Not stated	7	4	3
Occupational group			
Manager/Profess	17	12	5
Tech/Clerical/Sales	31	13	18
Trades/Blue	7	2	5
Market sector			
Manufacturing	5	2	3
Financial	26	12	14
Communications	3	0	3
Agricultural	17	10	7
Health	4	3	1

Appendix O

Demographics of the colleagues in study three

Demographic	All colleagues	Colleagues of workaholics	Colleagues of Non-workaholics
N	52	26	26
Gender			
Male	12	4	8
Female	40	22	18
Seniority of colleague			
Senior to worker	10	3	7
Equal to worker	24	12	12
Junior to worker	17	11	6
Not stated	1	0	1
Time known to worker			
0-11 months	20	11	9
12-23	12	7	5
24+	20	9	11
Not stated	0	0	1
Working relationship			
Not close	5	1	4
Somewhat close	27	10	17
Very close	20	15	5
How well known			
Less than others	16	0	16
As well as others	12	12	0
Better than others	24	14	10
Department			
Same as worker	45	22	21
Different than worker	9	4	5

Appendix P

Workaholism questions given to all participants in study three

The very last page!!!!

Nearly there...

1. Has anyone ever called you a workaholic? Yes / No

2. How much of a workaholic do YOU think you are? (Please circle a dot on the line to indicate)

1	2	3	4	5	6
I am completely not workaholic	I am strongly not workaholic	I am slightly not workaholic	I am slightly workaholic	I am strongly workaholic	I am completely workaholic

3. What number do you think your colleagues would give you?
(choose the number from the scale above and write it here): _____

4. What number do you think your spouse/partner would give you?
(choose the number from the scale above and write it here): _____

5. How would you describe someone who is workaholic?

_____

_____

_____

6. Would you be interested in telling us more about your views on workaholism? (please tick one)

☐ Yes please - my contact email address is: _____
☐ Not sure - please send more info to this email: _____
☐ No thanks - please do not contact me.

You've made it

Please post this booklet TODAY to:
Lynley McMillan
FREEPOST 97 110
Box 362 Tauranga

Thank You !

Appendix Q

Participants' definitions of workaholism

Workaholics' Definitions

- Wasting the one opportunity we have in this world to enjoy life
- Someone who sets aside pleasure and relationships in preference for work
- Someone who either enjoys or feels compelled to work at the expense of social time - or a normal amount of.
- Working 80 hours a week with no leisure time to relax and enjoy family and friends' company.
- A person works more than 10 hours a day and still not feel safe / satisfied with their job.
- Engrossed in work. Takes work home. Goes to work at weekend. No outside interests
- Work over-rides personal life. Lack of balance.
- One who cannot stop working at a given time, feels the need to be an overachiever. Thinks and eats and sleep work!
- A person with no interest in people, hobbies or plain boring.
- Someone who works more than 'normal' and cares about work outside normal work hours and takes stress home with them.
- Someone who is always thinking about work. Someone who has problems functioning outside of work or outside thinking about work.
- Someone who loves what they do. Puts in 150% of themselves. Doesn't see work as work.
- Lives to work with no outside interest and puts work above family and personal life.
- Someone who works excessive hours, has no home life and tackles far too many tasks for the capabilities.
- Places more value on work than anything else, e.g., leisure, family.
- Constantly working, even after hours, Always busy doing something associated with their hobs and constantly talking about work.
- See work as the 'PRIORITY" in their lives. Often they are more 'comfortable' in their work than in any other area of their lives! And use work as an excuse not to get involved in other things like 'relationships' which can be more challenging than work.
- Long hours a work including weekends all the time. In social area discussion often turns to work.
- Someone who spends all their time either at work or working at home.
- Someone who doesn't come home from work until late during the week - after 7pm and works weekends often.
- Spends long hours working hard - works more than 45 hours a week on a regular basis - thinks about work outside work hours.
- Bringing work home which interferes with time that should be spent with family.
- Working long hours and exceeding all target and demands places on me.
- Always at work - always talks about work. More than one project going at a time.
- Someone who has to be busy all the time and who multitasks most of the time. Who feels guilty if not being productive
- Totally consumed by work with no outside or family interests.

(Workaholics) Colleagues' Definitions

- Can't forget about work, works weekends, doesn't leave office until 7pm+ each evening
- Someone who works constantly over and above what is required of them. They work and look for work continually
- A person who cannot relax and is always looking for and taking on more work that can be managed
- They would not be able to 'switch off' from work in their leisure time, if they have any leisure time at all. They would work approximately seven days a week from 7.00 or 7.30 am to 8pm-10pm approx.
- Letting work have a detrimental effect on leisure time i.e., take up spare time, spend more hours at

work than is reasonably expected of them. 50+ hours per week.
- Exaggerate about his/her work - obsessed.
- Long days. 10+ hours, at least 10 hours on weekend.
- Thinks, lives and breathes work.
- Driven to work hard and long hours at the expense of their family life and leisure time.
- Someone who is at work before we get there and is still here after we finish.
- No interests outside of work. Sacrifices social / family events for work related activities.
- Think mainly about work, work huge hours with little complaint. Take work home and over the weekend.
- Someone who places work above all other things in his/her life and spends the majority of their time and energy focused on work, even when not necessary.
- A workaholic is a person who cannot keep away from work even when it is not necessary to be there.
- Compulsive and addictive personality, whom strives for perfections, routine and wishes to exceed goals.
- A person who spends more time at work than any other activity i.e., over 10-12 hours per day. They are restless if they are not at work.
- Puts his all into his job. Only stops working when the job's done.
- Always works long hours at the expense of everything else. They work long hours when there is lots of work and even when there isn't.
- Work till late to meet deadline, think and worry about work, take on extra work to cover those who cannot cope. Always uses initiative to improve efficiency - Multitasking Queen!!!!
- Always doing something, predominantly for someone else, not necessarily his family, but more for his company.
- Feels a compulsion to work both in a paid job and outside of their paid job. Have difficulty relaxing / unwinding, "can't sit still"
- Someone who stays late to complete tasks, comes in during weekends, thinks about work at home and when on leave.
- Someone who thinks, eats, sleeps work, who doesn't "switch off" out of hours and is 100% committed to the company, possibly to the detrimental effect of all other outside activities.
- Some whose work is so important to them and their clients that they do more than the impossible.
- Dedicated to working - always clean and tidy - puts herself out for others frequently.
- Does nothing but work, has no outside interests.
- Focused on work to exclusion of outside activities, including friends and family. Lacking in balance in their life.
- Works long hours. Starts early and leaves late. Works most weekends.
- Arrives at work earlier than necessary, leaves late - works holidays (stats) weekends etc. if necessary - is totally immersed in their work and industry
- All consumed by work with no balance or perspective of achieving balance in other areas of life.

(Workaholics) Partners' Definitions

- Someone that works <u>all</u> the time and puts work before other things like family/friends/health...It (work) destroys their life / relationships etc. - much like being an alcoholic or addict
- Works day and night
- Work tends to be the dominant interest to the detriment of friends, interests, and social involvement
- Someone who works every waking hour and if not working is thinking about. Life is work.
- It's easy - my husband and I each accuse each other of the same ailment!
- One who gets home late from work (and <u>is</u> at the office!). Works on his job most weekends, brings work home, seems detached and stressed in the relationship with the spouse.
- Someone who is constantly at work (>12 hours per day) and finds it very difficult to leave work behind.
- Me! A person who doesn't like to relax, someone who sees a job to be done and then has to do it.
- 10 hours day plus weekends and take work home.

- Someone who works all hours of the working week and on weekends. Finds it difficult to talk casually during the working day. Doesn't take lunch breaks.
- Someone who works very long hours and also constantly thinks about their job when they are not there.
- Someone who lives to work.
- Too busy for other things, social and person. Nothing else matters.
- Works 90% of the time.
- Can not turn down work i.e., say No when asked to do extra stuff
- Someone who works 60+ hours per week. Can never enjoy going on holiday.
- Works in excess of 40 hours a week by choice. Always thinking about work. Even when not at work, works hard in their personal life, e.g., housework.
- Brings work home most nights and does some work most weekends. Puts work before family. Thinks about work often outside work hours.

Nonworkaholics' Definitions

- Someone who can often not stop working
- When work consumes all time and other aspects of life suffer. Unbalanced.
- Someone that can't stop working even in spare time i.e., not spare time and always has to do something. Also always thinking of work. Not necessarily your paid work though.
- Someone who works more than an average week. Also someone who feels like they must work to keep themselves busy.
- Someone who is very sad and has no life outside of work. Someone who places little value on their family and relationships. Someone with something to prove to everyone else and themselves.
- Someone who has to be up and doing and unable to take reasonable time out.
- Anyone who works more than 50 hours a week
- Always in the office outside of standard hours. Believes they are indispensable.
- Someone who puts their personal life at peril through too much work, or their relationships in peril.
- A person who does not have a full balance of activities in their life and who leans on work or the workplace as a crutch to achieve esteem or finance.
- Put more effort and time into a job than is required.
- Works long hours and is always thinking about the workplace and occurrences within the day.
- Someone who not only does a 40 hour week but also stays after work during the week overtime and works most weekends.
- Private life suffers.
- They would work longer than required without reward. Work through weekend, think about work all the time, die of stress.
- Someone whose life is very overbalanced towards the time they commit to working to the exclusion of quality time spent with family and friends.
- Works too many hours and loses 'balance' in their life. Work shouldn't be <u>everything.</u>
- Someone who goes the extra mile, starts early, stays late, works through breaks.
- Someone who needs to work in order to ease stress, occupies one's time, reach personal goals!
- Spends too many hours at work. Work dominates their life and becomes the priority at the expense of family / private time.
- Have no or very little outside activities.
- Work beyond call of duty - late evenings, weekends, drop everything for work.
- No time for pleasure. Work comes before everything.
- Eat, sleep and live work.
- Their whole LIFE revolves around their work.

(Nonworkaholics) Colleague's Definitions

- Works more than 60 hours a week and does not have any activities outside of work to participate in.
- Works very long hours. Perfectionist, dependable. A finisher.

- Someone that enjoys their work and loves going to work day and night.
- Someone whom spends more time at work - doing work than having personal time out of work.
- Someone that works 7-8 or more than 12 hours a day and who's only conversation is about work and matters relating to work.
- Spends most of their time at work. Talks nothing but work.
- Someone that is here every day and does all the call back that are available and also any extra hours that is required on the day.
- Always at work early and late. Don't wait to take breaks. Very ambitious.
- Someone who works all the hours possible for the company and then goes home and works on their own projects or sideline business like me.
- Someone who would rather be at work than not. Someone who takes 'their hob home with them' each night.
- Someone who indulges in work constantly after hours - someone who just won't leave work behind, even for a few hours.
- Determined to achieve goals and prove they can manage specific tasks - often to detriment of leisure and home activities.
- Someone who prefers work for enjoyment rather than recreation - sport, holidays.
- Consumed by work with work being a high priority
- Someone who works long hours / overtime all the time and someone who thinks / talks about work all the time.
- 60 hours per week plus.
- Someone who puts work above everything else.
- Works 100 hours a week and has no time for family or friends and only talks about work issues.
- Someone who is at work before everyone else is one of the last to leave - works weekends - takes work home with them - has no social interests.
- Dedicated, hard working.
- Somebody who can't distinguish between 'family / private' time and work.
- Someone who puts in more hours than what is called for; often skip lunch and breaks.
- Offering to work leisure time.
- Someone whose mind is on their work 90% of the time.

(Nonworkaholics) Partner's Definitions

- Someone that lives to work as opposed to - working to live.
- No time for a cup of tea. No time to talk. Working all the time.
- Steady, honest, tense at times, in the end finishes up with blood pressure.
- Does 12+ hours a day Mon - Fri and also weekends.
- Puts work before all else. Doesn't know how / when to stop. Rest of life suffers (as does those around him)
- Working all the time and brings it home with them.
- Thinks about work all the time / works long hours / chooses to work over family leisure activities.
- A person that does not have a balanced life and focuses on work related activities 90% of the time.
- Someone that gives up some of there social life to work extra hours. They work excessively and will take on extra tasks and responsibilities even though they might not have time.

Appendix R

Participants' definitions of workaholism as categorized by content analysts

How would you describe someone who is workaholic?
1. OBSESSIVE PERSONAL STYLE [i.e., unable to stop, lack of control, addicted, can't help it]
They take on extra tasks and responsibilities even though they might not have time.
Doesn't know how / when to stop.
One who cannot stop working at a given time
A person who cannot relax
Exaggerate about (their) work
Obsessed
Totally consumed by work
Can't forget about work
Cannot keep away from work even when it is not necessary to be there.
Compulsive and addictive personality
Feels a compulsion to work (at) a paid job and outside of their paid job.
Have difficulty relaxing / unwinding
Can't sit still
Someone who often can't stop working
Can not turn down work, (such as) say 'no' when asked to do extra stuff
Someone who feels like they must work to keep themselves busy.
All consumed by work
Finds it very difficult to leave work behind.
Consumed by work
Someone who just won't leave work behind, even for a few hours.
They are restless if they are not at work
Doesn't "switch off" out of hours
Someone who can't stop working even in spare time (and has) no spare time
Always has to do something.
Someone who needs to work in order to ease stress
Die of stress.
Much like being an alcoholic or addict
Nothing else matters.
Talks nothing but work.
Only talks about work issues.
Someone whose only conversation is about work and matters relating to work.
Someone who has to be busy all the time
Someone who has to be up and going
Someone who sees a job to be done and then has to do it.
(Someone who) feels compelled to work at the expense of social time
(Someone who seldom) feels safe / satisfied with their job.
It's easy - my husband and I each accuse each other of the same ailment
Their whole LIFE revolves around their work.
Eat, sleep and live work.
They work excessively
Thinks, lives and breathes work.
Thinks and eats and sleep work!
Is totally immersed in their work and industry
Engrossed in work.
Work comes before everything.
Drop everything for work.
Finds it difficult to talk casually during the working day.
Believes they are indispensable
Someone who indulges in work constantly after hours
A person who doesn't like to relax
(Can't ever) enjoy going on holiday.
Unable to take reasonable time out.
Feels the need to be an overachiever.
Only stops working when the job's done.
Someone who thinks, eats, sleeps work

Puts work before all else.
Someone who puts work above everything else.
Someone who places work above all other things in his/her life and
Work shouldn't be everything.
Life is work.
(Always works) at the expense of everything else.
Does all the (tasks) that are available
They work and look for work continually
Always looking for and taking on more work that can be managed
No time to talk.

DRIVEN by internal (positive) reasons [e.g., passion, satisfaction, focus, task orientations, developing competencies, exceeding goals]
Someone who loves what they do.
Doesn't see work as work.
Exceeding all targets
(Exceeding all) demands placed on (them).
Strives for perfections, routine and wishes to exceed goals.
Dedicated to working
Dedicated (to work)
Hard working.
Determined to achieve goals
(Determined to) prove they can manage specific tasks
(After work) goes home and works on their own projects or sideline business
Very ambitious.
Someone who enjoys their work
(Someone who needs work in order to) reach personal goals!
Put (their) all into (their) job.
Works hard in their personal life, (such as) housework.
Always uses initiative to improve efficiency
(Work is) a high priority
Lives to work
See work as the 'PRIORITY" in their lives.
Not necessarily paid work.
Someone with something to prove to everyone else and themselves.
Driven to work hard
Puts in 150% of themselves.
Someone whose work is so important to them and their clients that they do more than the impossible.
Always clean and tidy
Puts (them) self out for others frequently.
Someone who works constantly over and above what is required of them
Put more effort (into job than required)
Someone who goes the extra mile
(Driven to work) long hours
Leans on work or the workplace as a crutch to achieve esteem or finance.
Multitasking Queen
Steady, honest, tense at times, in the end finishes up with blood pressure.
Loves going to work day and night.
Perfectionist, dependable.
Someone who prefers work for enjoyment rather than (using) recreation, sport, holidays (for enjoyment).
A finisher.
Someone who lives to work.
Someone that lives to work as opposed to - working to live.
Someone who would rather be at work than not.
Work beyond call of duty
Always doing something which is predominantly for (other people) who are sometimes family, but mostly (work-related)

TIME SPENT WORKING OR THINKING about work [i.e., viewed as excessive by others, both in terms of quantity and quality]

Someone who spends all their time either at work or working at home.
Work(s) 80 hours a week
Someone who works more than 'normal'
Someone who is always thinking about work.
Someone who doesn't come home from work until late during the week - after 7pm
Spends long hours working hard
Works more than 45 hours a week on a regular basis
Thinks about work outside work hours.
Someone who works excessive hours
Constantly working, even after hours
Always busy doing something associated with their hobs
Constantly talking about work.
Working long hours
Always at work
Always talk about work.
Doesn't leave office until 7pm+ each evening
(Work) long days
(Work) 10+ hours (per day)
(Work) at least 10 hours on weekend.
Someone who is at work before we get there and still here after we finish.
Someone who works very long hours
Constantly thinks about their job when they are not there.
Works 90% of the time.
Anyone who works more than 50 hours a week
10 hours day plus weekends
Spend more hours at work than is reasonably expected of them.
(Work) 50+ hours per week.
Someone who works more than an average week.
Does 12+ hours a day Mon – Fri
(Works long weeks) and also weekends.
Thinks about work all the time
Works long hours
A person works more than 10 hours a day
Someone who puts in more hours than what is called for
Often skips lunch and breaks.
(Works) 60 hours per week plus.
Work approximately seven days a week from 7.00/7.30 am to 8pm/10pm.
Works day and night
Does nothing but work
Someone who is at work before everyone else is one of the last to leave
Works weekends
Someone who works long hours
Someone who thinks (about work all the time)
(Someone who) talks about work all the time.
Someone who is constantly at work (>12 hours per day)
Always at work early and late.
(Put more) time into a job than is required.
Works long hours
Starts early, stays late
Someone that works 7-8 or more than 12 hours a day
Spends most of their time at work.
Someone who does a 40 hour week
Works very long hours.
Works more than 60 hours a week
Work) late evenings
(Work) weekends
Spends too many hours at work.

Always in the office outside of standard hours.
Works long hours.
Starts early and leaves late.
Also always thinking of work.
Works too many hours
Always works long hours
Someone who works every waking hour
If (they are) not working, (they are) thinking about (work).
Someone that works all the time
Works in excess of 40 hours a week by choice.
Think mainly about work,
Someone who works 60+ hours per week.
Someone who works all hours of the working week and on weekends.
Arrives at work earlier than necessary, leaves late
Works holidays (statutory days) weekends etc. if necessary
Tackles far too many tasks for the capabilities.
Doesn't take lunch breaks.
Always thinking about work, even when not at work
Thinks about work often outside work hours
Always thinking about the workplace and occurrences within the day.
Spends the majority of their time and energy focused on work, even when not necessary.
Take on extra work to cover those who cannot cope
They would work longer than required without reward.
Think about work all the time
More than one project going at a time.
Work till late to meet deadline
Don't wait to take breaks.
Someone that is (at work) every day
(Someone who) multitasks most of the time.
Works weekends
Long hours a work including weekends all the time.
Goes to work at weekend.
One who gets home late from work (and is at the office!)
Someone who stays late to complete tasks
(Someone who) comes in during weekends
(Someone who) thinks about work at home and when on leave.
Working all the time
(Someone who works) overtime all the time
Someone whose mind is on their work 90% of the time.
Works 100 hours a week
Works through breaks.
They work long hours when there is lots of work and even when there isn't.
Think and worry about work
Someone who works all the hours possible for the company
Cares about work outside normal work hours
Stays after work during the week overtime
Works most weekends.
Works weekends often.
Focuses on work related activities 90% of the time.
Spends more time at work than any other activity i.e., over 10-12 hours/day
Works most weekends.
Work through weekend
When work consumes all time
Works on his job most weekends
Someone whose life is very overbalanced towards time committed to work
(Works) any extra hours that is required on the day.
Work huge hours with little complaint.
In social area discussion often turns to work.

Working all the time.
WORK-LEISURE balance [i.e., chooses work over leisure time]
Has no or very little outside activities.
Let work have a detrimental effect on leisure time i.e., take up spare time
Someone that gives up some of there social life to work extra hours.
(Has) no outside interests
Wastes the one opportunity we have in this world to enjoy life
Someone who enjoys work at the expense of social time
No outside interests
May not) have any leisure time at all.
Offering to work leisure time.
No interests outside of work.
Work tends to be the dominant interest
Has no outside interests.
Has no social interests.
No time for pleasure.
A person who does not have a full balance of activities in their life
No balance or perspective of achieving balance in other areas of life.
Places more value on work than anything else, e.g., leisure, family.
No time for a cup of tea.
Often (works) to the detriment of leisure and home activities.
They would not be able to 'switch off' from work in their leisure time
Someone who spends more time working at work than having personal time
Does not have any activities outside of work to participate in.
No leisure time to relax
A person with no interest in people, hobbies or plain boring.
(Someone who needs work) in order to occupy one's time
Has problems functioning outside of work or outside thinking about work
100% committed to the company, possibly to the detrimental effect of all other outside activities
WORK-RELATIONSHIPS balance [i.e., no firm boundaries between home
Often they are more 'comfortable' in their work than in any other area of their lives!
Use work as an excuse not to get involved in other things like 'relationships' which can be more challenging than work.
Rest of life suffers (as does those around him)
(No leisure time to) enjoy family and friends' company.
Puts work above family and personal life.
Something which) interferes with time that should be spent with family.
Takes work home.
Someone who puts their personal life at peril through too much work
(Someone who puts their relationships in peril (through too much work)
Private life suffers.
Chooses to work over family leisure activities.
Somebody who can't distinguish between 'family / private' time and work.
(Work to) the detriment of friends, interests, and social involvement
Has no home life
Someone who takes 'their job home with them' each night.
Brings (work) home with them.
Takes work home with them
Has no time for family or friends
(Work) becomes the priority at the expense of family / private time.
(Works) at the expense of their family life and leisure time.
Focused on work to exclusion of outside activities (such as) friends / family
Other aspects of life suffer.
Unbalanced.
Brings work home
Seems detached and stressed in the relationship with the spouse
Puts work before other things like family/friends/health

It (work) destroys their life / relationships etc.
Brings work home most night
Puts work before family.
Someone who places little value on family and relationships.
(Has) no outside or family interests.
Sacrifices social / family events for work related activities.
(Work) to the exclusion of quality time spent with family and friends.
Takes stress home with them.
Someone who sets aside pleasure and relationships in preference for work
Bringing work home
Work over-rides personal life.
Lack of balance.
A person that does not have a balanced life
Loses 'balance' in their life.
Lacking in balance in their life.
Too busy for other things, social and personal.
Someone who is very sad and has no life outside of work.
Take work home and over the weekend.
Work dominates their life
Does some work most weekends.
Takes work home.