POSITIVE AND NEGATIVE WORKAHOLISM

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A Thesis

Presented to

The Faculty of the Department

of Psychology

University of Houston

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In Partial Fulfillment

Of the Requirements of the Degree of

Master of Arts

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By

Cyrus S. Mirza

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ABSTRACT

Despite over 30 years of research on workaholism, scholars have been unable to reach a consensus regarding its definition, measurement, or implications for practice. My review of past research suggested that the relationships of outcomes to workaholism may be better understood using a two-dimensional positive/negative conceptual model as opposed to the unitary model that is currently used. This study surveyed 566 undergraduate students to compare two distinct models of workaholism and determine which has the best fit. Model 1 specified a unitary model of workaholism, and Model 2 specified two workaholism factors corresponding to positive and negative workaholism. Using various goodness-of-fit indices, results suggest that although the two-dimensional model of workaholism fits the data better than the unidimensional model, both models exhibited poor fit. An exploratory factor analysis suggests that workaholism may indeed be best studied as a two-dimensional construct; however, the factors found did not support the hypothesized positive/negative conceptual model.

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Chapter I

Positive and Negative Workaholism

The past two decades have seen research on workaholism increase dramatically. A significant portion of this research has focused on the negative correlates of workaholism, including physical and familial effects (Seybold & Salomone, 1994; Brady, Vodanovich, & Rotunda, 2008), burnout, and strain (Andreassen, Ursin, & Eriksen, 2007). However, an outstanding issue still remains regarding whether workaholism uniformly leads to negative consequences. For example, despite evidence that long working hours leads to higher amounts of work-family conflict (Bonebright et al., 2000), workaholism has been described as a cornerstone of business success. A recent Harvard Business Review survey revealed that 62% of high-earning individuals work more than 50 hours a week, 35% work more than 60 hours a week, and 10% work more than 80 hours a week (Hewitt & Luce, 2006). While it is true that number of hours worked cannot solely determine business success, these statistics are telling. Additionally, Machlowitz (1979) found workaholics to be both satisfied and productive. Others have described workaholics as more financially stable, to have work play a more central role in their lives (Harpaz & Snir, 2003), and to be more satisfied with their compensation (Peiperl & Jones, 2001). As demonstrated by the diversity of these correlates and outcomes, it remains unclear as to whether workaholism is a positive or a negative attribute. Workaholics have been positively described as dependable workhorses and negatively as "seven-eleven" (7 am-11 pm) spouses, who get up early in the morning to go to work and do not return until late in the evening, thus unable to spend time with other family members (Ishiyama & Kitayama, 1994). Based on previous research, workaholism appears to have both positive and negative outcomes for both individuals and organizations. This

apparent contradiction brings to light several important questions regarding the construct itself.

In most instances lay people, researchers, and managers are unsure about how to react to a workaholic. For example, should a manager be excited, upset, or neutral upon learning that one of his/her subordinates is a workaholic? Second, the outcomes of workaholism, as the construct is currently conceptualized, are extremely diverse. Organizations may covet certain aspects of workaholism (e.g., high performance; Burke, 2001) while other aspects may be abhorred (e.g., burnout; Andreassen et al., 2007). The notion that organizations are confused regarding the utility of workaholism is a key issue and has contributed to some of the confusion of the construct.

Despite this, prior research tends to ignore the distinction between positive and negative workaholism. Although the outcomes of workaholism have been well studied, evidence suggests that it may also be important to investigate the possibility that workaholism is not a unitary construct. Aspects of the construct validity of workaholism suggest that the construct in its current form suffers from numerous conceptual issues. For example, workaholism seems to suffer from one of the more common threats to construct validity: the inadequate explication of constructs (Shadish, Cook, & Campbell, 2002). As previously mentioned, many outcomes of workaholism have been reported in the literature. However, an agreed upon and adequate definition of workaholism has failed to emerge. The lack of a clear definition, as well as other conceptual issues of workaholism, will be discussed further later in this paper. These issues along with a review of research findings will provide support for examining workaholism as a two-dimensional construct.

Though the literature indicates that workaholism has both adaptive and maladaptive qualities, this distinction in its outcomes is not empirically addressed in the current research literature. Such a distinction may be worthwhile in order to examine the differences between different types of workaholics (Taris, Schaufeli, & Verhoeven, 2005). Thus, it is the purpose of the current study to provide evidence for examining workaholism as a two-dimensional construct and, more specifically, whether two types of workaholism can be distinguished empirically. Such a conceptualization may allow researchers and practitioners alike to have a better understanding of the construct. In its current form, it is ambiguous as to whether or not it would be wise to hire a workaholic into one's organization; however, the implications of hiring a "positive workaholic" and a "negative workaholic" may be easier to interpret. To begin, I present a review of the workaholism literature including a discussion of the construct validity of workaholism. This review provides support for why it may be best to conceptualize and study workaholism as a two-factor latent construct. The next part of the review will discuss the two measures that are most commonly used to study workaholism. Next, I discuss the outcomes of workaholism that have been previously studied in the literature. Finally, I present two models of workaholism that were be compared to determine which factor structure is best for studying the construct.

Workaholism

Over time, workaholism has become a popular term to use when describing people who work many hours or who work very hard. However, simply evaluating how many hours a person works per week is not a complete evaluation of workaholism. There are numerous external factors, such as financial necessity (Porter, 2004), organizational culture, and even marital problems that may contribute to excessive work hours (Schaufeli, Taris, & van

Rhenen, 2008). Clarifying the reasons for long work hours is important when describing and distinguishing the workaholic.

For example, there is consensus in the literature that workaholics work in order to satisfy an internal drive or need (Spence & Robbins, 1992). This drive is not caused by external circumstances, such as financial need. Scott, Moore, and Miceli (1997) identified the spending of discretionary time on work related activities as one of the key elements of workaholism. This perspective is also emphasized by Mudrack and Naughton (2001), who note that employees who work an extraordinarily large number of hours per week would not necessarily be considered workaholics if such work habits were expected by the organization or were required to complete tasks. Subsequently, employees who may work hard and focus on tasks at hand during regular working hours would not be considered workaholics if they give no thought to work outside of regular working hours. In other words, workaholism is thought to be more about internal needs and reasons for working long hours than just the number of hours worked per week.

Defining Workaholism. Scholars have had difficulty agreeing on a definition of workaholism (Clark, Lelchook, & Taylor, 2010), however, there are certain themes that have emerged from the literature. Spence and Robbins (1992) defined the indicators of workaholism as being high levels of work involvement and drive, and low levels of work enjoyment. And, as mentioned earlier in this paper, high levels of work involvement include more than the amount of time spent on work. According to Spence and Robbins (1992), a greater emphasis should be placed on the intensity of the work. They hypothesize that the drive or compulsion to work is due to internal feelings of pressure that cause guilt over not working. Porter (1996) notes that the workaholics' internal drive to remain constantly

involved in work comes with the sacrifice of pursuing other interests. Spence and Robbins' (1992) final indicator is a low level of work enjoyment. While it may seem counterintuitive for workaholics to not enjoy their work, the authors point out that workaholics eventually become so disenchanted with their work that they eventually cease to derive any enjoyment out of it.

Taking an alternative approach, Flowers and Robinson (2002) describe a five-indicator construct of workaholism consisting of compulsive tendencies, control, impaired communication/self-absorption, inability to delegate, and impaired self-worth. A third approach is taken by Scott et al. (1997), who characterize workaholics as spending discretionary time in work activities, thinking about work when not at work, and working beyond organizational or economic requirements. As can be seen, numerous definitions and conceptualizations of workaholism exist.

Researchers have presented numerous reasons for why workaholism occurs in certain individuals. For example, Porter (1996) postulated that workaholism is the result of internal motives of behavioral maintenance, such that a person's work habits are driven by an internal drive as opposed to requirements of the job or organization. Kanai, Wakabayashi, and Fling (1996) note that workaholism might emerge through perfectionistic tendencies that prevent an individual from effectively delegating work when appropriate. In a study of working students who worked more than 25 hours per week, Clark et al. (2010) found numerous personality factors including narcissism, negative affect, positive affect, and perfectionism, to be significantly related to workaholism. The origin of workaholism has also been linked to self-esteem, as Porter (2004) noted that the process of work and its outcomes are important to workaholics when they provide external rewards that can provide boosts to self-esteem. In

summary, it appears that while the literature devotes considerable attention to defining workaholism, a consensus has not been reached. In addition, there has been significant attention given to describing the outcomes of workaholism. Outcomes are relevant in both a theoretical and practical sense, as they help to define as well as elucidate the practical relevance of a construct. The outcomes of workaholism are varied and include work-family conflict, health effects, burnout, strain, and increased levels of performance, and life satisfaction. These outcomes will be explicated later in this paper. After providing a general background of workaholism in its current form, I will now cover some of the important research issues regarding this construct.

Construct Validity of Workaholism

Validity is an important aspect of any construct, and is used to refer to the approximate truth of an inference (Shadish et al., 2002). Therefore, if the validity of a construct is questionable, the very inferences that are made based on that construct become suspect. As will be shown below, there are numerous issues surrounding the construct validity of workaholism. As such, the inferences that are being made regarding workaholism in its current form may be questionable. In this section, I will first describe the importance of construct validity. Then, I will describe how workaholism in its current form suffers from certain threats to construct validity. Finally, I will explain how conceptualizing workaholism as a two-dimensional construct may alleviate many of these concerns.

While it is true that there are numerous aspects of validity (Binning & Barrett, 1989), they cannot be easily separated from each other. For example, *content*, *criterion-related*, and *construct* validity are not discrete and independent processes. Instead, these words represent parts of a larger system that address the overall goals of hypothesis testing (Landy, 1986).

This view is consistent with the unitarian conceptualization of validity, which states that content, criterion-related, and construct validity are different strategies for demonstrating the construct validity of a test or measure (Binning & Barrett, 1989). The concept of construct validity is important throughout social science research as it involves making inferences from the sampling particulars of a study to the higher-order constructs they are meant to represent.

Shadish et al. (2002) offer three reasons for the importance of construct validity. First, constructs are the central means by which the operations used in an experiment can be connected to relevant theory as well as to the language communities that will use the results to inform practical action. This implies that constructs that contain errors risk misleading future theory development as well as practice. This is an important issue for all constructs, including workaholism. This paper argues that workaholism is not yet a clearly defined construct, which may subsequently lead to errors when trying to connect workaholism to relevant theory and/or practice. For example from a practice standpoint, the diversity of the outcomes of workaholism has caused researchers and practitioners to be unsure regarding whether workaholism is a trait that should be encouraged or suppressed (e.g. Brady et al., 2008; Hewitt & Luce, 2006; Seybold & Salomone, 1994). Thus, the construct in its current form is not providing a clear direction for research or for practice.

The second reason arguing for the importance of construct validity is that construct labels can often carry social, political, and economic implications (Shadish et al., 2002). In other words these labels can shape the perceptions, frame debates, and elicit support or criticism of a construct. The external perceptions of workaholism are far reaching, and include perceptions of work performance. Oftentimes, workaholics are thought to be extremely high performers and organizational assets. However, the workaholism literature

indicates that this result is not always consistent. As noted earlier, Burke (2001) found a positive relationship between workaholism and salary increases and promotions, which are key indicators of high job performance. However, Andreassen et al. (2007) found that workaholism was related to job stress and burnout, which have been shown to be negatively related to job performance (Liang & Chu, 2009; Swider & Zimmerman, 2010). Workaholism seems to contribute to factors that both facilitate and hinder high levels of job performance, thus making its implications on job performance cloudy. This exemplifies the notion that workaholism may not be a unidimensional construct and may be better conceptualized as a two-factor positive and negative construct. For example, in the context of job performance, it may be more beneficial to group the positive outcomes of workaholism in relation to job performance (e.g., salary increases and promotions) with positive workaholism and the negative outcomes of workaholism in relation to job performance (e.g., negative health effects and burnout) with negative workaholism.

The third reason Shadish et al. (2002) provide for the importance of construct validity is that the creation and defense of basic constructs is a fundamental task of all science. The process of developing definitions of workaholism, identifying its outcomes, and deriving prescriptions has been met with considerable difficulty. Part of this difficulty can be attributed to the lack of a consensus regarding the prototypical features of the construct. For example, consensus has not been reached regarding what many would consider to be a fundamental aspect of workaholism: work involvement. Some condone its inclusion within the construct (e.g., Spence & Robbins, 1992) while others call for its elimination (e.g., McMillan et al., 2002; Kanai et al., 1996). As such, this confusion can have serious implications for both theory and practice (Shadish et al., 2002). For example, some persons

who score high on a workaholism instrument may be given labels such as "highly involved in work" or "extremely dedicated to the organization" based on the work involvement indicator. However, this may be a mistake if the construct does not involve work involvement. This confusion is indicative of the state of workaholism in its current form. The notion that scholars have disagreed with the inclusion of work involvement, a seemingly vital factor of workaholism, indicates that the current conceptualization of the construct may need to be rethought.

Whereas these issues of construct validity are serious, it is important to point out that validation processes are not so much directed toward the integrity of measures as they are directed toward the inferences that can be made about the attributes of the people who have performed at various levels on those measures. This point is exemplified in forensic settings, as expert witnesses will often be advised to establish the distinction between the validity of inferences and the validity of tests (Landy, 1986). In the case of construct validity, the key is to make sure that the inferences that are to be made regarding the attributes of the people taking the test are in accordance with the construct of interest.

To summarize, it appears that workaholism suffers from several threats to its construct validity. One of the more common threats to construct validity is the inadequate explication of constructs, which can lead to incorrect inferences about the relationship between an operation and a construct (Shadish et al., 2002). According to Mark (2000) four common errors are made by researchers in explicating constructs: (1) the construct is identified at too general a level, (2) the construct is identified at too specific a level, (3) the wrong construct is identified, and (4) a study operation that really reflects two or more constructs may be described using only one construct. In its unidimensional form,

workaholism seems to especially suffer from the first and fourth of Mark's (2000) errors. As evidenced throughout this paper, workaholism is a broad concept. This broadness may lead to construct-irrelevant variance, which occurs when a construct contains reliable variance associated with other distinct constructs (Messick, 1995). Furthermore, I argue that although workaholism is studied as one construct, it may best be studied as two—positive workaholism and negative workaholism.

  Addressing the Construct Validity Issues. Put in its simplest terms construct validity is the evidential basis for score interpretation (Messick, 1995). Examining whether there is a distinction between positive and negative workaholism may help increase the overall interpretive value of workaholism. If the results of the current study support a two-factor structure of workaholism, the numerous controversies described in the previous section may be alleviated. For example, a two-factor construct may be better suited to lead both theory and practice. While the indicators of workaholism will remain unchanged they will now be linked to two latent factors, positive workaholism and negative workaholism, as opposed to a unitary latent factor of workaholism. For example, in its current form both Person A, who loads high on the indicators of internal drive to work, work involvement, and self-worth, and Person B who loads high on the indicators of compulsive tendencies, inability to delegate, and impaired communication would both be labeled a workaholic. It makes little sense for two people who load highly on two such contrasting sets of attributes to be given the same label. A two-factor structure however, would allow Person A to be given the "positive workaholic" label and Person B the "negative workaholic" label. This distinction, if supported, will make the outcomes of workaholism much easier to predict, as positive workaholism would be predicted to lead to positive outcomes while negative workaholism

would be predicted to lead to negative outcomes. In a similar way, a two-factor structure would help elucidate the implications of the construct. For example, workaholism as a unitary latent construct appears to simultaneously lead to both positive and negative implications for job performance. The two-factor model would make the implications of certain types of workaholism more well defined when it comes to something like job performance, as positive workaholism could potentially be more easily linked to high job performance in comparison to a unitary workaholism construct. Finally, a two-factor model would help make the prototypical features of the construct more understandable. For example, under the two-factor model high amounts of internal drive and self-worth could be prototypical features of positive workaholism while compulsive tendencies and inability to delegate could be prototypical features of negative workaholism. In its current form, it is difficult to assess which of these indicators are prototypical of the unitary construct of workaholism and which are not. As such, two different models were compared in the current study, which will be explained later on in this paper. Before describing and justifying these different models, I will next elaborate upon the scales and indicators that were used to construct them.

The Workaholism Scales

The general question investigated in the current study is whether workaholism may best be described as a two-dimensional model as opposed to a unitary model. Although the current research on workaholism differentiates between positive and negative outcomes, it continues to discuss and measure workaholism as a unitary construct. While both measures to be used in this study have multiple indicators, the latent construct of workaholism itself is assumed to be unidimensional. When investigating workaholism as a multifactor construct I

focus on two specific factors, positive workaholism and negative workaholism, while simultaneously comparing two distinct models of workaholism. These models will be explicated later on in this paper.

Although few studies have set out to make an explicit distinction between positive and negative workaholism, the various definitions and scales of workaholism may provide evidence for this distinction. Two of the oldest and most widely used scales of workaholism are the Work Addiction Risk Test (WART; Robinson, 1999) and the Workaholism Battery (WorkBAT; Spence & Robbins, 1992).

WART. The WART is a 25-item measure of workaholism. A discriminant analysis of the WART suggests that workaholism is a multidimensional construct made up of five dimensions: (a) compulsive tendencies, (b) control, (c) impaired communication/self-absorption, (d) inability to delegate, and (e) impaired self-worth (Flowers & Robinson, 2002). The questions from the compulsive tendencies indicator largely deal with working hard and having difficulties relaxing after work. Questions from the control indicator are related to an eagerness to complete tasks. Impaired communication and self-absorption questions deal with putting more energy into one's work than into relationships with others. The inability to delegate indicator is related to an aversion towards asking for help to complete a task. Finally, the self-worth indicator deals with the degree to which a person is interested in the results of one's work rather than the work process itself (Taris et al., 2005). This last indicator is in line with Porter's (2004) argument that the process of work and its outcomes are important to workaholics only as much as they supply external rewards which lead to boosts in self-esteem.

WorkBAT. Another of the most widely used workaholism scales is the Workaholism Battery (WorkBAT). In their 25-item scale, Spence and Robbins (1992) identify three attributes of the workaholic in comparison to others: high levels of work involvement, a compulsion or drive to work due to inner pressures, and a low amount of work enjoyment (Ersoy-Kart, 2005). Questions from the work involvement factor concern the generalized attitude of psychological involvement with work. Questions from the drive indicator are related to an inner compulsion to work hard and guilt over not working. Finally, work enjoyment questions are related to the pleasure that one derives from their work.

Although the WorkBAT (Spence & Robbins, 1992) is frequently cited in workaholism research, it is not without its critics. In a study meant to examine the reliability and validity of a Japanese version of the WorkBAT, Kanai et al. (1996) found that the work involvement indicator could not be extracted from the Japanese sample, which led the authors to endorse a two-indicator model of workaholism. However, the authors point out that this discrepancy may be due to cultural differences. Despite this discrepancy, the tripartite definition of workaholism continues to be extensively used (e.g., Brady et al., 2008; Burke, Koyuncu, & Fiksenbaum, 2008). Figure 1 displays the factor structure of both the WART and the WorkBAT.

To examine if workaholism is best studied as a two-dimensional positive/negative construct, this study used the two most commonly used measures of workaholism: the WART and the WorkBAT. The WorkBAT is often described as the most widely utilized and cited workaholism measure in the literature (McMillan et al., 2001; Ng, Sorensen, & Feldman, 2007), while the WART is the next most widely used scale and is the oldest of the three empirically confirmed measures of workaholism. The other available scale is the

Schedule for Nonadaptive and Adaptive Personality Workaholism Scale (SNAP-Work; Clark, 1993). However, McMillan et al. (2001) point out that the SNAP is not widely employed by researchers and thus is not included in the current study. Using these two scales, the current study compares two models of workaholism: (1) a unitary workaholism model (Model 1, see Figure 2), and (2) a two-dimensional positive and negative workaholism model (Model 2, see Figure 3). Model 1 was chosen because in its current form, workaholism is generally discussed as a unitary factor while Model 2 was chosen because, as evidenced throughout this paper, different aspects of workaholism may be adaptive (positive workaholism) and maladaptive (negative workaholism).

Model 1 specifies a unitary model with a single workaholism factor that is common to all subscales of the WorkBAT and the WART. In this model, all three indicators of the WorkBAT and all five indicators of the WART load on to the single latent variable of workaholism. Model 2 specifies two workaholism factors corresponding to positive workaholism and negative workaholism. In this model enjoyment, involvement, drive, control, and self-worth load onto positive workaholism, while compulsive tendencies, impaired communication/self-absorption, and inability to delegate load onto negative workaholism. If this second model is found to be the best fitting model, it suggests that workaholism may best be conceptualized and studied as a two-factor construct. Outcomes of workaholism are also incorporated into both of these models. The purpose of incorporating these outcomes is to examine the impact that they have on the overall fit of models 1 and 2. A review of past research findings for these outcomes is presented below.

Outcomes of Workaholism

Work-Family Conflict. According to Greenhaus and Beutell (1985), work-family conflict is a form of interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respect. That is, participation in the work (family) domain is made more difficult due to participation in the family (work) role. Arguably, the most consistent outcome of workaholism is impaired interpersonal relationships (Piotrowski & Vodanovich, 2006), specifically work-family relationships. For example, Bakker, Demerouti, and Burke (2009) found that workaholism was positively related to work-family conflict for dual-earner couples. Differences were found between spouses of workaholics vs. nonworkaholics on such dimensions as marital estrangement, positive feelings, and locus of control (Robinson, Carroll, & Flowers, 2001). Robinson et al. (2001) found that women who identified their husbands as workaholics reported greater levels of marital estrangement, less positive feelings towards their spouses, and greater external locus of control when compared to women who did not identify their husbands as workaholics. Robinson, Flowers, and Ng (2006) found that husbands who identified their wives as workaholics had similar results. Problems in these marriages can oftentimes be masked by the positive performance of the workaholic, leading the suffering spouse to grow fearful of speaking out against their spouses work habits, lest they should be called ungrateful for the material rewards that are oftentimes generated by workaholic lifestyles (Robinson, 1998).

Health Effects. As demonstrated by the degree of conflict that has been shown to be associated with workaholism, it is perhaps not surprising that the detrimental health effects of workaholism have also been well established. Chamberlin and Zhang (2009) found that in a sample of undergraduate and graduate students, participants who scored higher on measures

of workaholism also scored higher on measures of physical health complaints. Bonebright, Clay, and Ankenmann (2000) propose that people typically use time off work to build and maintain personal relationships (e.g. with spouse or children), and when workaholics do not have the time to build these relationships, stress levels may increase. In fact, the Japanese have coined the term "karoshi", or death from overwork, to describe the debilitating physical effects that workaholism can have on employees.

Burnout. Burnout has been defined as a psychological syndrome that follows a prolonged response to stressors in the workplace, and specifically involves the chronic strain that results from a misfit between a worker and a job (Maslach, 2003). Maslach, Schaufeli, and Leiter (2001) identified three dimensions of burnout: exhaustion, depersonalization (cynicism), and inefficacy. Exhaustion is defined as the central quality of burnout and is easily relatable to the workaholic. The extreme amounts of work involvement that they put forth can easily lead to high levels of exhaustion, even when the workaholic seems to thrive in this work environment. Depersonalization refers to indifference or a distant attitude towards work. Finally, inefficacy occurs when a work situation with overwhelming demands results in feelings of inadequacy and worthlessness. Andreassen et al. (2007) found that for a sample of bank employees the drive indicator of workaholism was positively related to higher instances of burnout. Similarly, Burke and Matthiesen (2004) found that workaholics exhibited higher levels of exhaustion and cynicism. These outcomes should be relevant to organizations, as those who experience greater amounts of burnout are more likely to engage in negative workplace behaviors including absenteeism, turnover, and poor job performance (Swider & Zimmerman, 2010).

Strain. A common theme in workaholism research is that workaholics are at increased risk for strain related issues (Vodanovich, Piotrowski, & Wallace, 2007). For example, Spence and Robbins (1992) found that workaholics had greater strain levels when compared to nonworkaholics. This finding is supported by Taris, et al. (2005) and McMillan et al. (2001), who found that workaholics experience more strain than others. McMillan et al. (2001) point out that it is difficult to ascertain whether workaholism causes strain, or whether strain precipitates some sort of tendency towards workaholism.

Performance. While research has been conducted on negative outcomes of workaholism, positive outcomes have also been found. Burke (2001) found that workaholism was positively related to salary increases and self-reported career prospects for a sample of MBA graduates. Ng et al. (2005) found that those who work longer hours have greater extrinsic career success in terms of salary and promotions. While it is true that outcomes such as salary increases, career prospects and promotions are not necessarily direct measures of performance, it is not unreasonable to think of them as proxy measures, as oftentimes salary increases and promotions are a result of high performance. The conflicting desirability that is evident in the outcomes of workaholism makes it difficult for organizations to decide whether to foster workaholism within their organizational culture (Scott et al., 1997).

Life Satisfaction. Life satisfaction is an overall measure of well-being and has specifically been defined as a global assessment of a person's quality of life according to their chosen criteria (Diener, Emmons, Larsen, & Griffin, 1985). Life satisfaction is considered to be a cognitively based (rational) evaluation of well-being, as opposed to positive and negative affect, which provide affectively based (emotional) evaluations of well-being (Zika & Chamberlain, 1992). Along with life satisfaction previous outcomes of

workaholism that have been found in the literature, such as strain and health complaints, can also have effects on outcomes that lie outside the sphere of work (Aziz & Zickar, 2006). Indeed, both Bonebright, Clay, and Ankenmann (2000) and Aziz and Zickar (2006) have found that workaholics have significantly less life satisfaction than nonworkaholics.

Hypothesis 1: Model 2, which conceptualizes workaholism as a two-dimensional positive/negative construct, will provide a better fit to the data than Model 1.

Chapter II

Method

Participants

566 undergraduate participants from a large southwestern university volunteered to participate in this study in return for course extra credit. The average age of each participant was 21.83 years old. The sample was racially diverse, as 31% of participants were Caucasian, 16% were African-American, 25% were Hispanic, 20% were Asian, and 7% were classified as Other.

Measures

WorkBAT. The WorkBAT (Spence & Robbins, 1992) is a 25-item self-report questionnaire using a 5-point Likert response scale. The indicators of work involvement ($\alpha = .80$), work enjoyment ($\alpha = .85$), and drive ($\alpha = .74$) are represented within the scale. A sample question from the work involvement scale is, "I spend my free time on projects and other activities." A sample question from the work enjoyment scale is, "When I get involved in an interesting project it's hard to describe how exhilarated I feel." Lastly, a sample question from the drive scale is, "I often find myself thinking about work, even when I want to get away from it for a while." (see Appendix A).

WART. Like the WorkBAT, the WART ($\alpha = .88$) (Robinson, 1999) is a 25-item self-report inventory. The indicators of compulsive tendencies, control, impaired communication/self-absorption, inability to delegate, and self-worth are represented within the scale. Respondents rate each item based on how well the item describes their work habits. Responses are scored on a 4-point Likert scale. Sample items include "I get impatient when I have to wait for someone else or when something takes too long," "I lose my temper when

things don't go my way or work out to suit me," and "I put more thought, time, and energy into my work than I do into my relationships with friends and loved ones." (see Appendix B).

Work-Family Conflict and Family-Work Conflict Scales. The Work-Family Conflict (WFC) ($\alpha = .88$), and Family-Work Conflict (FWC) ($\alpha = .86$), scales (Netemeyer, Boles, & McMurrian, 1996) are 5-item indicators of distinct but related forms of interrole conflict. WFC is a form of interrole conflict in which the general demands of, time devoted to, and strain created by the job interfere with performing family related responsibilities. FWC is a form of interrole conflict in which the general demands of, time devoted to, and strain created by the family interfere with performing work related responsibilities. A sample item from the WFC scale is "My job produces strain that makes it difficult to fulfill family duties," and a sample item from the FWC scale is "I have to put off doing things at work because of demands on my time at home." The items ask the degree to which respondents agree with each statement using a 7-point Likert-type scale with the anchors "1=Strongly Disagree" and "7=Strongly Agree" (see Appendix C).

The Cohen-Hoberman Inventory of Physical Symptoms (CHIPS). The CHIPS (Cohen & Hoberman, 1983) ($\alpha = .88$) is a 33-item list of common physical symptoms used to measure physical health complaints. The items ask the degree to which respondents felt bothered by each complaint over the previous two weeks using a 5-point Likert-type scale with the anchors "0=Not Bothered" and "4=Extremely Bothered" (see Appendix D).

The Maslach Burnout Inventory (MBI). The MBI (Maslach & Jackson, 1981) consists of nine items measuring the exhaustion ($\alpha = .84$) dimension of burnout, five items measuring the depersonalization ($\alpha = .74$) dimension, and eight items measuring efficacy ($\alpha = .77$). An example item from the emotional exhaustion dimension is "I feel emotionally

drained," an example item from the inefficacy dimension is "In my work, I deal with emotional problems very calmly," and an example from the depersonalization dimension is "I worry that this job is hardening me emotionally." The 22-item ($\alpha = .87$) scale asks participants to indicate how often they experience facets of the different dimensions of burnout using a 5-point Likert-type scale with the anchors "1=A few times a year" and "5=Daily" (see Appendix E).

The Perceived Stress Scale (PSS). The PSS (Cohen, Kamarck, & Mermelstein, 1983) was used to measure participants' appraisal of perceived strain over the past month. Sample items from the PSS include, "In the last month, how often have you dealt successfully with irritating life hassles?," "In the last month, how often have you been able to control irritations in your life?," and "In the last month, how often have you felt that you were on top of things?". The 14-item ($\alpha = .85$) scale asks participants to indicate how often they experience facets of strain using a 5-point Likert-type scale with the anchors "0=Never" and "4=Very Often" (see Appendix F).

Performance. Participants were asked to provide their overall grade point average (GPA) on a 0-4 point scale as a proxy measure for performance (see Appendix G).

The Satisfaction With Life Scale. Life satisfaction was measured using the Satisfaction With Life Scale (SWLS; Diener et al., 1985). The SWLS ($\alpha = .87$) assesses a person's global judgment of his or her life according to their own personal values. The SWLS consists of five items that are answered on a 7-point scale ranging from *strongly disagree* (1) to *strongly agree* (7). Sample items include "I am satisfied with my life," "In most ways my life is close to ideal," and "If I could live my life over, I would change almost

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nothing." Total scores range from 5-35. A score of 20 corresponds to a neutral point on the scale, indicating that the respondent is equally satisfied and dissatisfied (see Appendix H).

Demographic Variables. Participants were asked to indicate their age, gender, race/ethnicity, highest obtained educational level, and relationship status as demographic variables (see Appendix I).

Chapter III

Results

Means, standard deviations, correlations, and alphas are presented in Table 1, and parameter estimates for the unitary and two-dimensional model can be found in Tables 2 and 3, respectively. I used a confirmatory factor analysis to test hypothesis 1, which proposed that a two-dimensional model of positive and negative workaholism (Figure 3) would provide a better fit to the data than a unidimensional model (Figure 2). The two models were compared on goodness-of-fit metrics. The Mplus statistical package (Muthen & Muthen, 1998) was used to estimate these two models. Numerous goodness-of-fit indices, including the model chi-square (χ^2) test, the chi-square difference ($\Delta\chi^2$) test, the root mean square error of approximation index (RMSEA; Steiger, 1990), the Bentler Comparative Fit Index (CFI; Bentler, 1990), and the Akaike Information Criterion (AIC; Akaike, 1987) were used to compare the fit of both models. These indices have been identified as a fairly common set of indices that perform adequately across a wide range of situations (Hair et al., 2010). There are numerous fit statistics described in the SEM literature, and as yet there is no "gold standard" that leads to a clear decision about whether to accept or reject a particular model (Kline, 2011).

Hypothesis 1 predicted that a two-dimensional positive/negative workaholism construct would provide a better fit to the data than a unitary workaholism construct. Table 4 presents the goodness-of-fit indices for our competing models. The goodness-of-fit indices indicate that the two-dimensional positive and negative workaholism model fit the data better than the unidimensional model. The two-dimensional model provides a smaller χ^2 value ($\chi^2_{(1415)}$=5354.17, p<.00) compared to the unidimensional model ($\chi^2_{(1416)}$=5729.02, p<.00).

A χ^2 difference test indicates that this difference is significant ($\Delta\chi^2 = 374.85, p < .00$).

Furthermore, as shown in Table 4, the RMSEA (0.070 vs. 0.073), AIC (72775.43 vs.

73148.28), and CFI (0.48 vs. 0.43) statistics all favor the two-dimensional model. The results

shown in Table 4 are representative of the complete models in figures 2 and 3. Although my

hypothesis is supported, these indices do not provide strong support. A closer examination of

the indices indicates that neither of the two presented models fit the data particularly well.

Although not hypothesized, it should be pointed out that in this initial analysis, positive

workaholism was significantly correlated with the negative outcomes of family conflict,

health effects, and burnout. This surprising result will be discussed later on in the paper.

Although it is clear that no "golden rules" exist when it comes to model fit indices,

general guidelines (e.g., Bentler, 1990; Hair et al., 2010; MacCallum, Browne, & Sugawara,

1996) indicate that neither model fit the data particularly well. This is based on the

significant χ^2 p-values, coupled with the relatively high RMSEA values and low CFIs. In

SEM, a significant χ^2 value is an indication of poor model fit, while an RMSEA value

around 0.05 is desirable (MacCallum, Browne, & Sugawara, 1996). Usually, CFI values

above .90 are associated with well fitting models (Bentler, 1990; Hair et al., 2010). As shown

in tables 4 and 5, both the unidimensional and two-dimensional models have significant χ^2

values, as well as RMSEAs above 0.05 and well below .90.

Post-Hoc Analyses

In order to see if model fit could be improved, I also conducted a post-hoc analysis in

which I removed all workaholism scale items and outcomes with nonsignificant factor

loadings. For the unidimensional model, this included items 1,2,4,9, and 10 from the

WART, and the life satisfaction and GPA (performance) outcomes. For the two-dimensional

model, this included items 2,4,9,10,12, and 17 from the WART, and the strain and GPA (performance) outcomes. The corresponding goodness-of-fit indices were applied to these revised models. Results indicated that there was not a drastic change in model fit for either model, and this analysis continued to support hypothesis 1. These statistics can be found in Table 5. Because the fit statistics were still relatively weak, I performed an exploratory factor analysis (EFA) to determine how many factors the workaholism indicators produce.

EFA is used when a researcher wishes to identify a set of latent constructs underlying a set of measured variables (Fabrigar, Wegener, MacCallum, & Strahan, 1999). I used an oblimin rotation to conduct the EFA. While no compelling analytical reason exists for choosing one rotational method over another, the oblimin method is suited to the goal of obtaining theoretically meaningful factors or constructs (Hair et al., 2010). The EFA was conducted using the eight indicators of workaholism that were used for both the unidimensional and two-dimensional model. As the indicators were already defined, the EFA was run at the indicator level instead of at the item level. Using the eight indicators of workaholism for this study, the EFA suggests that the indicators load onto two distinct components (see Table 6), but were somewhat different from what I hypothesized. Specifically, neither of the components from the EFA are fully "positive" or fully "negative". The first component (EFA Factor 1) does contain the positive indicators of work involvement, drive, and work enjoyment. However, it also contains the negative indicator of compulsive tendencies. The second component (EFA Factor 2) is even more of a mixed bag, containing control, impaired communication/self-absorption, inability to delegate, and self-worth. To summarize, the hoped for identification of factors that would have more coherently explained the positive and negative workaholism outcomes was not found. As these results

were unexpected I decided to take a closer look at the correlations between the factors and outcomes in order to try and determine why the hypothesized positive and negative structure was not supported.

Table 7 further illustrates the lack of a relationship between the hypothesized positive and negative factors and the outcome variables. First, I examined the correlations between positive/negative workaholism and the outcome variables. Positive workaholism was significantly correlated with family conflict ($r=.26**$), health effects ($r=.10*$), burnout ($r=.09*$), and GPA (performance) ($r=.08*$), while negative workaholism was significantly correlated with family conflict ($r=.41**$), health effects ($r=.17**$), burnout ($r=.16**$), strain ($r=.14**$), and life satisfaction ($r=-.08*$). These correlations produced some unexpected results, specifically that hypothesized positive workaholism was significantly correlated with the negative outcome variables of family conflict, health effects, and burnout. I then examined the correlations between EFA Factor 1 and EFA Factor 2 and the outcome variables. EFA Factor 1 was significantly correlated with family conflict ($r=.30**$), health effects ($r=.10*$), burnout ($r=.11*$), and life satisfaction ($r=.10*$), while EFA Factor 2 was significantly correlated with family conflict ($r=.30**$), health effects ($r=.16**$), burnout ($r=.12**$), strain ($r=.23**$), and life satisfaction ($r=-.16**$). Similar to the positive and negative workaholism latent variables, both EFA Factor 1 and EFA Factor 2 were significantly correlated with both positive and negative outcomes. The two-dimensional model did not propose that positive workaholism would be significantly related to any of the negative outcomes. Furthermore, the latent variables of positive workaholism and negative workaholism were themselves highly correlated ($r=.63**$). This may indicate that as conceptualized, positive workaholism and negative workaholism may not have been distinct

enough from one another, which may contribute to why positive and negative workaholism were significantly correlated with many of the same outcomes and thus, why the distinct positive and negative structure was not supported. This is exemplified by the fact that had the correlation between positive and negative workaholism been 1.00, the unitary model and two-dimensional model of workaholism would be absolutely equivalent. By comparison, EFA Factor 1 and EFA Factor 2 are not as highly correlated (r=.37**), though still significant. Finally, it should be noted here that for positive workaholism, negative workaholism, unitary workaholism, EFA Factor 1, and EFA Factor 2, the outcome variable with the strongest relationship was family conflict.

Chapter IV

Discussion

Past research on workaholism has failed to establish a unified set of criteria that defines the construct. Up to this point, workaholism has been thought of as a unidimensional, single-factor construct. Numerous studies have attempted, with difficulty (Clark, Lelchook, & Taylor, 2010), to explicate the key elements and outcomes of workaholism. The lack of success in this regard was significant, as researchers disagree on the definition, antecedents, and outcomes of workaholism. The purpose of this study was to examine workaholism as a two-dimensional construct in the hope of resolving some of the conflicting research findings that rely on a unidimensional view of the workaholism construct.

I hypothesized that a two-dimensional positive/negative workaholism model would provide a better fit to the data than a unidimensional workaholism model. All of the goodness-of-fit indices used in the current study support this hypothesis. The χ^2 values, RMSEA, CFI, and AIC statistics favor the two-factor model. While the fit indices do support my hypothesis, they do not provide strong support. A closer examination of the goodness-of-fit indices indicates that neither of the two presented models fit the data particularly well. The exploratory factor analysis also provided limited support for my hypothesis that workaholism may best be studied as a two-dimensional construct. However, examination of the component analysis from the EFA (Table 6) indicates that these two dimensions are not comprised of positive and negative workaholism as hypothesized. The factors of work involvement, drive, work enjoyment, and compulsive tendencies load onto the first component, while control, impaired communication/self-absorption, inability to delegate, and self-worth load onto the second component. Both of these components contain positive and negative attributes.

Although not hypothesized, this EFA suggests that although workaholism may indeed be a two-dimensional construct, the labels of "positive" and "negative" do not fit. Considering that in the initial analysis positive workaholism was correlated with the negative outcomes of family conflict, health effects, and burnout, it may be the case that there is no true "positive" workaholism. This is exemplified when looking at the correlations between positive/negative workaholism and the outcomes and EFA Factor 1/EFA Factor 2 and the outcomes. In both cases there is little evidence for a distinct positive and negative conceptualization of workaholism. This may have been due in part to the relatively high correlation between positive and negative workaholism. Nonetheless, these results do provide a starting point for researchers going forward with the workaholism construct, particularly that a unitary workaholism model may need to be rethought, as supported by both the hypothesized models as well as the EFA. Future research should consider refining the components of the two-dimensional model and refining workaholism scales that incorporate the multidimensionality of the construct. Until more research addresses these issues the value of this construct in employment is unclear.

Limitations

One limitation in this study may be using a sample of undergraduate students. Although student samples have been used before in workaholism research (e.g., Burke, 2001; Chamberlin & Zhang, 2009; Clark, Lelchook, & Taylor, 2010), it would be better to sample from working populations, as the workaholism scales used were initially developed for use on working populations. However, some argue that workaholic tendencies are already formed at college age, as many students work in addition to taking classes (Chamberlin & Zhang, 2009), making the generalizability issues less relevant. An additional limitation is that

all of the data were collected via self-report. Future researcher's should consider using or supplementing self-reports with observer ratings of workaholism to minimize common method variance (Clark, Lelchook, & Taylor, 2010). However, this limitation may be minimal as Spector (2006) points out that common method variance may not play as large of a role in self-report research as it was once believed to. Another limitation is that, as with any SEM study, there are inherent limitations in the statistics that are used. As explained earlier on in this paper, at present there are no "golden rules" when it comes to fit statistics in SEM research, thereby making it difficult to truly ascertain the absolute goodness-of-fit of any given model. Hopefully in the future new analysis models will be developed to address this problem. Finally, the cross-sectional nature of this study prevents cause and effect relationships from being uncovered. Despite the use of arrows in figures 2 and 3, the current analysis was not meant suggest that I was able to investigate causal relationships.

Future Research

The goal of the current study was to examine the fit between two competing models of workaholism, a two-dimensional and unidimensional model. The unidimensional model was based on workaholism as a single-factor construct with numerous indicators and outcomes. This conceptualization was used in almost all previous studies of workaholism. However, as mentioned earlier in this paper, the unidimensional construct did not seem to explain the research findings in a coherent manner, which led me to propose an alternate two-dimensional model. It was thought that support for the two-dimensional model would better explain conflicting research findings and suggest a more useful direction for future research and practice.

The current study provides limited support for investigating workaholism as a two-factor positive/negative construct. However, it is evident from the numerous fit statistics and the EFA that there is still room for improvement in terms of the model fit of a two-dimensional workaholism construct. Future research should continue this line of research so as to have a better understanding of what these factors are, as well as to produce better fitting models of workaholism. Specifically, researchers need to refine the indicators, outcomes, and structure of the two-dimensional model so as to help it achieve a better absolute fit. Furthermore, researchers may want to consider using working samples when studying the construct. Although past research has used student samples, the findings may be more generalizable if participants were more representative of the population of interest (Shadish et al., 2002). Finally, a multimethod approach to data collection may be useful for future workaholism research. For example, coupling observational techniques with traditional self-report measures may lead to more reliable information and lead to a better understanding of workaholic functioning (Robinson, Flowers, & Ng, 2006). Finally, researchers may seek to use longitudinal research to help deal with the issues of causation mentioned in the limitations section above.

Conclusion

Understanding the workaholism construct is important to both theorists and practitioners alike. I found that a two-dimensional positive/negative conceptualization of the workaholism construct provides a better fit to the data than a unitary workaholism model. However, neither the two-dimensional or unitary model provided a good fit to the data in an absolute sense. An exploratory factor analysis provided additional support for a multidimensional model but suggested that the positive/negative labels were inappropriate. It

was suggested that future work should further explore multidimensional models to better

understand the nature and utility of this construct.

REFERENCES

Andreassen, C., Ursin, H., & Eriksen, H. (2007). The relationship between strong motivation to work, "workaholism", and health. *Psychology & Health*, *22*, 615-629.

Akaike, H. (1987). Factor analysis and AIC. *Psychometrika*, 52,317-332.

Aziz, S., & Zickar, M.J. (2006). A cluster analysis investigation of workaholism as a syndrome. *Journal of Occupational Health Psychology, 11*, 52-62.

Bakker, A. B., Demerouti, E., & Burke, R. (2009). Workaholism and relationship quality: A spillover-crossover perspective. *Journal of Occupational Health Psychology*, *14*, 23-33.

Bentler, P.M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*, 238-246.

Binning, J. F., & Barrett, G. V. (1989). Validity of personnel decisions: A conceptual analysis of the inferential and evidential bases. *Journal of Applied Psychology*, *74*, 478-494.

Bonebright, C. A., Clay, D. L., & Ankenmann, R. D. (2000). The relationship of workaholism with work–life conflict, life satisfaction, and purpose in life. *Journal of Counseling Psychology*, *47*, 469-477.

Brady, B. R., Vodanovich, S. J., & Rotunda, R. (2008). The impact of workaholism on work-family conflict, job satisfaction, and perception of leisure activities. *Psychologist-Manager Journal*, *11*, 241-263.

Burke, R. J. (2001). Workaholism components, job satisfaction, and career progress. *Journal of Applied Social Psychology*, *31*, 2339-2356.

Burke, R. J., Koyuncu, M., & Fiksenbaum, L. (2008). Workaholism, work and extra-work

    satisfactions and psychological well-being among professors in Turkey. *Cross*

    Cultural Management, *15*, 353-366.

Burke, R. J., & Matthiesen, S. (2004). Workaholism among Norwegian journalists:

    antecedents and consequences. *Stress & Health: Journal of the International Society*

    for the Investigation of Stress, *20*, 301-308.

Chamberlin, C. M., & Zhang, N. (2009). Workaholism, health, and self-acceptance. *Journal*

    of Counseling & Development, *87*, 159-169.

Clark, L.A. (1993). *Manual for the Schedule of Nonadaptive and Adaptive Personality*.

    Minneapolis: University of Minnesota Press.

Clark, M. A., Lelchook, A. M., & Taylor, M. L. (2010). Beyond the Big Five: How

    narcissism, perfectionism, and dispositional affect relate to workaholism. *Personality*

    & Individual Differences, *48*, 786-791.

Cohen, S., & Hoberman, H. M. (1983). Positive events and social supports as buffers of life

    change stress. *Journal of Applied Social Psychology*, *13*, 99-125.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress.

    Journal of Health & Social Behavior, *24*, 385-396.

Diener, E., Emmons, R.A., Larsen, R.J., & Griffin, S. (1985). The satisfaction with life scale.

    Journal of Personality Assessment, 49, 71-75.

Ersoy-Kart, M. (2005). Reliability and validity of the Workaholism Batter (Work-BAT):

    Turkish Form. *Social Behavior & Personality: An International Journal*, *33*, 609-617.

Fabrigar, L.R., Wegener, D.T., MacCallum, R.C., & Strahan, E.J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods, 4*, 272-299.

Flowers, C. P., & Robinson, B. (2002). A structural and discriminant analysis of the Work Addiction Risk Test. *Educational & Psychological Measurement*, *62*, 517-526.

Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review*, *10*, 76-88.

Hair, J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2010). *Multivariate data analysis. A global perspective* (7th ed.). New Jersey: Pearson Education, Inc.

Harpaz, I., & Snir, R. (2003). Workaholism: Its definition and nature. *Human Relations*, *56*, 291-319.

Hewett, S., & Luce, C. (2006). Extreme jobs: The dangerous allure of the 70-hour workweek. *Harvard Business Review*, *84*, 49-59.

Ishiyama, F., & Kitayama, A. (1994). Overwork and career-centered self-validation among the Japanese: Psychosocial issues and counseling implications. *International Journal for the Advancement of Counseling*, *17*, 167-182.

Kanai, A., Wakabayashi, M., & Fling, S. (1996). Workaholism among employees in Japanese corporations: An examination based on the Japanese version of the Workaholism Scales. *Japanese Psychological Research*, *38*, 192-203.

Kline, R.B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). New York: The Guilford Press.

Landy, F. J. (1986). Stamp collecting versus science: Validation as hypothesis testing. *American Psychologist*, *41*, 1183-1192.

Liang, Y., & Chu, C. (2009). Personality traits and personal and organizational inducements: Antecedents of workaholism. *Social Behavior and Personality*, *37*, 645-660.

Machlowitz, M. (1979). Determining the effects of workaholism. *Dissertation Abstracts International*, *40*, 480-481.

MacCallum, R.C., Browne, M.W., & Sugawara, H.M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods, 1*, 130-149.

Mark, M.M. (2000). Realism, validity, and the experimenting society. In L. Bickman (Ed.), *Validity and social experimentation: Donald Campbell's legacy* (Vol. 1, pp.141-166). Thousand Oaks, CA: Sage.

Maslach, C. (2003). Job burnout: new directions in research and intervention. *Current Directions in Psychological Science*, *12*, 189-192.

Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior*, *2*, 99-113.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, *52*, 397-422.

McMillan, L. W., Brady, E. C., O'Driscoll, M. P., & Marsh, N. V. (2002). A multifaceted validation study of Spence and Robbins' (1992) Workaholism Battery. *Journal of Occupational & Organizational Psychology*, *75*, 357-368.

McMillan, L. W., O'Driscoll, M. P., Marsh, N. V., & Brady, E. C. (2001). Understanding workaholism: Data synthesis, theoretical critique, and future design strategies. *International Journal of Stress Management*, *8*, 69-91.

Messick, S. (1995). Validity of psychological assessment: Validation of inferences from

    persons' responses and performances as scientific inquiry into score

    meaning. *American Psychologist*, *50*, 741-749.

Mudrack, P. E., & Naughton, T. J. (2001). The assessment of workaholism as behavioral

    tendencies: Scale development and preliminary empirical testing. *International*

    Journal of Stress Management, *8*, 93-111.

Mulaik, S. A., James, L. R., Van Alstine, J., Bennett, N., Lind, S., & Stilwell, C. (1989).

    Evaluation of goodness-of-fit indices for structural equation models. *Psychological*

    Bulletin, *105*, 430-445.

Muthén, L.K., & Muthén, B.O. (1998-2011). *Mplus User's Guide* (6th ed.) . Los Angeles,

    CA: Muthén & Muthén.

Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of

    work-family conflict and family-work conflict scales. *Journal of Applied Psychology*,

    81, 400-410.

Ng, T. H., Eby, L. T., Sorensen, K. L., & Feldman, D. C. (2005). Predictors of objective and

    subjective career success: A meta-analysis. *Personnel Psychology*, *58*, 367-408.

Peiperl, M., & Jones, B. (2001). Workaholics and overworkers: Productivity or pathology?

    Group & Organization Management, *26*, 369-393.

Piotrowski, C., & Vodanovich, S. J. (2006). The interface between workaholism and work-

    family conflict: A review and conceptual framework. *Organization Development*

    Journal, *24*, 84-92.

Porter, G. (1996). Organizational impact of workaholism: Suggestions for researching the negative outcomes of excessive work. *Journal of Occupational Health Psychology*, *1*, 70-84.

Porter, G. (2004). Work, work ethic, work excess. *Journal of Organizational Change Management*, *17*, 424-439.

Robinson, B. E. (1998). Spouses of workaholics: Clinical implications for psychotherapy. *Psychotherapy: Theory, Research, Practice, Training*, *35*, 260-268.

Robinson, B. E. (1999). The Work Addiction Risk Test: Development of a tentative measure of workaholism. *Perceptual and Motor Skills*, *88*, 199-210.

Robinson, B. E., Carroll, J. J., & Flowers, C. (2001). Marital estrangement, positive affect, and locus of control among spouses of workaholics and spouses of nonworkaholics: A national study. *American Journal of Family Therapy*, *29*, 397-410.

Robinson, B. E., Flowers, C., & Ng, K. (2006). The relationship between workaholism and marital disaffection: Husbands' perspective. *Family Journal*, *14*, 213-220.

Schaufeli, W. B., Taris, T. W., & van Rhenen, W. (2008). Workaholism, burnout, and work engagement: Three of a kind or three different kinds of employee well-being? *Applied Psychology: An International Review*, *57*, 173-203.

Schreiber, J.B., Stage, F.K., King, J., Nora, A., & Barlow, E.A. (2006). Reporting structural equation modeling and confirmatory factor analysis results: A review. *Journal of Educational Research, 99*, 323-337.

Scott, K. S., Moore, K. S., & Miceli, M. P. (1997). An exploration of the meaning and consequences of workaholism. *Human Relations*, *50*, 287-314.

Seybold, K., & Salomone, P. R. (1994). Understanding workaholism: A review of causes and

counseling approaches. *Journal of Counseling & Development*, *73*, 4-9.

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-*

experimental   designs for generalized causal inference. Boston, MA US: Houghton,

Mifflin and Company.

Spector, P.E. (2006). Method variance in organizational research: Truth or urban legend?

Organizational Research Methods, 9, 221-232.

Spence, J. T., & Robbins, A. S. (1992). Workaholism: Definition, measurement, and

preliminary results. *Journal of Personality Assessment*, *58*, 160-178.

Steiger, J.H. (1990). Structural model evaluation and modification: An interval estimation

approach. *Multivariate Behavioral Research, 25*, 173-180.

Swider, B. W., & Zimmerman, R. D. (2010). Born to burnout: A meta-analytic path model of

personality, job burnout, and work outcomes. *Journal of Vocational Behavior*, *76*,

487-506.

Taris, T. W., Schaufeli, W. B., & Verhoeven, L. C. (2005). Workaholism in the Netherlands:

Measurement and implications for job strain and work-nonwork conflict. *Applied*

Psychology: An International Review, *54*, 37-60.

Vodanovich, S. J., Piotrowski, C., & Wallace, J. (2007). The relationship between

workaholism and health: A report of negative findings. *Organization Development*

Journal, *25*, 70-75.

Zika, S., & Chamberlain, K. (1992). On the relation between meaning in life and

psychological well-being. *British Journal of Psychology, 83*, 133-145.

Table 1.
Means, Standard Deviations, Alphas, and Correlations

Variable	M	SD	α	1	2	3	4	5	6	7
1. Age	21.82	5.40	--	--						
2. Female	0.81	0.39	--	-0.00	--					
3. White	0.31	0.46	--	0.16**	0.01	--				
4. African-American	0.16	0.37	--	0.00	0.03	-0.30**	--			
5. Hispanic	0.25	0.43	--	-0.07	0.04	-0.39**	-0.25**	--		
6. Asian	0.20	0.40	--	-0.10**	-0.08*	-0.33**	-0.21**	-0.28**	--	
7. Other Race	0.07	0.26	--	0.00	0.00	-0.18**	-0.12**	-0.16**	-0.13**	--
8. Single, living alone	0.15	0.35	--	0.09*	-0.12**	0.02	-0.07	-0.01	-0.07	-0.02
9. Single, living w/family or friends	0.67	0.47	--	-0.33**	0.03	-0.12**	-0.08*	0.07	0.13**	0.05
10. Married	0.06	0.24	--	0.47**	0.06	0.06	-0.05	0.02	-0.03	-0.01
11. Living w/significant other	0.11	0.32	--	0.03	0.05	0.12**	0.09*	-0.11**	-0.09*	-0.03
12. Family Conflict	3.14	1.21	.90	0.04	0.02	0.01	-0.06	-0.06	0.12**	-0.02
13. Health Effects	0.97	0.72	.94	0.04	0.05	-0.03	0.02	0.02	0.06	-0.07
14. Burnout	2.31	0.68	.83	0.07	-0.02	-0.02	-0.02	-0.02	0.09*	0.00
15. Strain	1.95	0.50	.82	0.04	0.02	0.04	-0.05	-0.05	0.05	-0.04
16. Life Satisfaction	4.63	1.36	.87	-0.05	-0.01	-0.02	0.03	0.03	-0.01	-0.03
17. GPA (Performance)	3.06	0.59	--	0.04	-0.03	-0.00	0.03	0.03	-0.02	0.01
18. Pos. Workaholism	2.64	0.30	.75	-0.02	-0.02	0.00	-0.03	-0.02	0.04	0.02

Note: N=566. White (1=White), African-American (1=African-American), Hispanic (1=Hispanic), Asian (1=Asian), Other Race (1=Other Race), and Female (1=Female) are dummy coded; *p < .05, ** p < .01

Table 1 (continued).
Means, Standard Deviations, Alphas, and Correlations

Variable	M	SD	α	1	2	3	4	5	6	7
19. Neg. Workaholism	2.63	0.46	.74	-0.02	0.06	0.04	-0.02	-0.07	0.04	0.03
20. Social Desirability	2.17	0.49	.62	-0.06	-0.01	0.01	0.03	-0.04	0.01	-0.00
21. WorkBAT	2.53	0.35	.85	-0.04	-0.03	0.03	-0.03	-0.03	0.03	-0.00
22. WART	2.77	0.39	.80	-0.00	0.04	0.01	-0.02	-0.05	0.04	0.04

Note: N=566. White (1=White), African-American (1=African-American), Hispanic (1=Hispanic), Asian (1=Asian), Other Race (1=Other Race), and Female (1=Female) are dummy coded; *$p < .05$, ** $p < .01$

Table 1 (continued).
Means, Standard Deviations, Alphas, and Correlations

Variable	8	9	10	11	12	13	14	15
8. Single, living alone	--							
9. Single, living w/family or friends	-0.59**	--						
10. Married	-0.10**	-0.37**	--					
11. Living w/significant other	-0.15**	-0.51**	-0.10*	--				
12. Family Conflict	-0.08*	0.05	0.07	-0.03	--			
13. Health Effects	0.05	-0.03	0.05	-0.08	0.26**	--		
14. Burnout	-0.04	-0.01	0.07	0.00	0,35**	0.32**	--	
15. Strain	0.01	0.01	0.01	-0.03	0.32**	0.36**	0.26**	--
16. Life Satisfaction	-0.02	0.07	-0.04	-0.04	-0.19**	-0.20**	-0.17**	-0.47**
17. GPA (Performance)	-0.02	-0.02	0.01	0.04	-0.02	-0.08	-0.02	-0.09*
18. Pos. Workaholism	-0.02	-0.02	-0.00	0.06	0.26**	0.10*	0.09*	0.02
19. Neg. Workaholism	-0.03	0.02	-0.01	0.02	0.41**	0.16**	0.16**	0.13**
20. Social Desirability	-0.00	0.03	-0.02	-0.02	-0.15**	-0.09*	-0.22**	-0.18**
21. WorkBAT	-0.03	0.01	-0.02	0.04	0.21**	0.05	0.07	-0.09*
22. WART	-0.02	-0.01	0.01	0.03	0.37**	0.18**	0.15**	0.20**

Note: N=566. White (1=White), African-American (1=African-American), Hispanic (1=Hispanic), Asian (1=Asian), Other Race (1=Other Race), and Female (1=Female) are dummy coded*; *$p < .05$, ** $p < .01$

Table 1 (continued).
Means, Standard Deviations, Alphas, and Correlations

Variable	16	17	18	19	20	21
16. Life Satisfaction	--					
17. GPA (Performance)	0.16**	--				
18. Pos. Workaholism	0.07	0.08*	--			
19. Neg. Workaholism	-0.08*	0.02	0.63**	--		
20. Social Desirability	0.16**	-0.06	-0.08*	-0.12**	--	
21. WorkBAT	0.15**	0.07	0.91**	0.51**	0.02	--
22. WART	-0.12**	0.04	0.67**	0.92**	-0.19**	0.41**

Note: N=566. White (1=White), African-American (1=African-American), Hispanic (1=Hispanic), Asian (1=Asian), Other Race (1=Other Race), and Female (1=Female) are dummy coded*;*
*$p < .05$, ** $p < .01$

Table 2.
Unstandardized Parameter Estimates for Unitary Model

Parameter	Estimate	P-Value
Workaholism By		
Involvement		
WkBAT1	0.28	0.00
WkBAT2	0.26	0.00
WkBAT3	0.34	0.00
WkBAT4	0.26	0.00
WkBAT5	0.34	0.00
WkBAT6	0.30	0.00
WkBAT7	0.34	0.00
WkBAT8	0.43	0.00
Drive		
WkBAT9	0.40	0.00
WkBAT10	0.27	0.00
WkBAT11	0.29	0.00
WkBAT12	0.23	0.00
WkBAT13	0.48	0.00
WkBAT14	0.42	0.00
WkBAT15	0.42	0.00
Enjoyment		
WkBAT16	0.51	0.00
WkBAT17	0.41	0.00
WkBAT18	0.43	0.00
WkBAT19	0.48	0.00
WkBAT20	0.42	0.00
WkBAT21	0.19	0.00
WkBAT22	0.25	0.00
WkBAT23	0.42	0.00
WkBAT24	0.36	0.00
WkBAT25	0.47	0.00
Compulsive Tendencies		
WART3	0.22	0.00
WART5	0.35	0.00
WART6	0.33	0.00
WART7	0.37	0.00
WART8	0.45	0.00
WART15	0.62	0.00
WART18	0.37	0.00
WART19	0.51	0.00
WART20	0.56	0.00
Control		
WART2	0.03	0.11
WART4	0.07	0.12

Table 2 (continued).
Unstandardized Parameter Estimates for Unitary Model

Parameter	Estimate	P-Value
WART12	0.16	0.00
WART16	0.23	0.00
WART17	0.17	0.00
WART22	0.32	0.00
Impaired Communication/Self-Absorption		
WART13	0.25	0.00
WART21	0.56	0.00
WART23	0.51	0.00
WART24	0.31	0.00
WART25	0.28	0.00
Inability to Delegate		
WART1	0.06	0.11
Self-Worth		
WART9	0.03	0.46
WART10	-0.03	0.53
Outcomes		
Family Conflict	1.00*	0.00
Health Effects	0.17	0.00
Burnout	0.19	0.00
Strain	0.06	0.02
Life Satisfaction	-0.00	0.91
GPA (Performance)	0.04	0.26

Note: *Factor Loading was set to 1.0.; Italicized font indicates factor.

Table 3.
Unstandardized Parameter Estimates for Two-Dimensional Model

Parameter	Estimate	P-Value
Positive Workaholism By		
Involvement		
WkBAT1	0.24	0.00
WkBAT2	0.20	0.00
WkBAT3	0.25	0.00
WkBAT4	0.22	0.00
WkBAT5	0.29	0.00
WkBAT6	0.25	0.00
WkBAT7	0.25	0.00
WkBAT8	0.33	0.00
Drive		
WkBAT9	0.29	0.00
WkBAT10	0.16	0.00
WkBAT11	0.20	0.00
WkBAT12	0.19	0.00
WkBAT13	0.34	0.00
WkBAT14	0.35	0.00
WkBAT15	0.33	0.00
Enjoyment		
WkBAT16	0.51	0.00
WkBAT17	0.49	0.00
WkBAT18	0.50	0.00
WkBAT19	0.47	0.00
WkBAT20	0.48	0.00
WkBAT21	0.25	0.00
WkBAT22	0.23	0.00
WkBAT23	0.41	0.00
WkBAT24	0.33	0.00
WkBAT25	0.44	0.00
Control		
WART2	-0.00	0.93
WART4	0.01	0.79
WART11	0.13	0.00
WART12	0.04	0.37
WART16	0.11	0.02
WART17	0.08	0.07
WART22	0.18	0.00
Self-Worth		
WART9	-0.00	0.96
WART10	-0.06	0.13
Negative Workaholism By		

Table 3 (continued).
Unstandardized Parameter Estimates for Two-Dimensional Model

Parameter	Estimate	P-Value
Impaired Communication/Self-Absorption		
WART13	0.30	0.00
WART21	0.48	0.00
WART23	0.56	0.00
WART24	0.41	0.00
WART25	0.35	0.00
Compulsive Tendencies		
WART3	0.27	0.00
WART5	0.34	0.00
WART6	0.32	0.00
WART7	0.41	0.00
WART8	0.42	0.00
WART15	0.56	0.00
WART18	0.36	0.00
WART19	0.51	0.00
WART20	0.56	0.00
Inability to Delegate		
WART1	0.11	0.00
Positive Workaholism Outcomes		
Life Satisfaction	0.15	0.01
GPA (Performance)	0.04	0.19
Negative Workaholism Outcomes		
Family Conflict	0.53	0.00
Health Effects	0.10	0.00
Burnout	0.10	0.00
Strain	0.01	0.56

Note: Italicized font indicates factor.

Table 4.
Model Comparison Statistics

Models Tested	χ^2	df	$\Delta\chi^2$	RMSEA	AIC	CFI
			Fit Indices			
Unitary Model (Workaholism only)	5729.02 (p<.00)	1416		0.073	73148.28	0.43
			$\Delta\chi^2$=374.85, p<.00			
Two-Dimensional Model (Positive and Negative Workaholism)	5354.17 (p<.00)	1415		0.070	72775.43	0.48

Note: N=566.

Table 5.
Model Comparison Statistics with Insignificant Factor Loadings Removed

			Fit Indices			
Models Tested	χ^2	df	$\Delta\chi^2$	RMSEA	AIC	CFI
Unitary Model (Workaholism only)	5113.44 (p<.00)	1075	$\Delta\chi^2$=691.25, p<.00	0.081	63792.70	0.44
Two-Dimensional Model (Positive and Negative Workaholism)	4422.19 (p<.00)	1028		0.076	62631.62	0.50

Note: N=566.

Table 6.

Exploratory Factor Analysis Component Loadings

	Component	
	EFA Factor 1	**EFA Factor 2**
Work Involvement	.762	-.041
Drive	.728	.075
Work Enjoyment	.691	-.144
Compulsive Tendencies	.695	.483
Control	.187	.713
Impaired Communication/Self-Absorption	.484	.553
Inability to Delegate	-.015	.435
Self-Worth	-.196	.650
Variance Explained	32.86%	17.45%

Table 7.
Scale, Factor, and Outcome Correlations

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. WkBAT	--												
2. WART	.41**	--											
3. PosWA	.91**	.67**	--										
4. NegWA	.51**	.92**	.63**	--									
5. UnitaryWA	.82**	.86**	.93**	.86**	--								
6. EFA 1	.94**	.63**	.91**	.73**	.92**	--							
7. EFA 2	.23**	.90**	.56**	.71**	.69**	.37**	--						
8. FC	.21**	.37**	.26**	.41**	.36**	.30**	.30**	--					
9. HE	.05	.18**	.10*	.17**	.14**	.10*	.16**	.26**	--				
10. Burnout	.07	.15**	.09*	.16**	.13**	.11**	.12**	.35**	.32**	--			
11. Strain	-.09*	.21**	.02	.14**	.08	-.03	.23**	.32**	.36**	.26**	--		
12. Life Sat.	.15**	-.12**	.07	-.08*	.01	.10*	-.16**	-.19**	-.21**	-.17**	-.47**	--	
13. GPA (Performance)	.07	.04	.08*	.02	.07	.07	.03	-.02	-.08	-.02	-.09*	.16**	--

Note: WkBAT=Workaholism Battery; WART=Work Addiction Risk Test; PosWA=Positive Workaholism; NegWA=Negative Workaholism; UnitaryWA=Unitary Workaholism; EFA 1=Work Involvement, Drive, Work Enjoyment, and Compulsive Tendencies; EFA 2=Control, Impaired Communication/Self-Absorption, Inability to Delegate, and Self-Worth; FC=Family Conflict; HE=Health Effects; Life Sat.=Life Satisfaction;
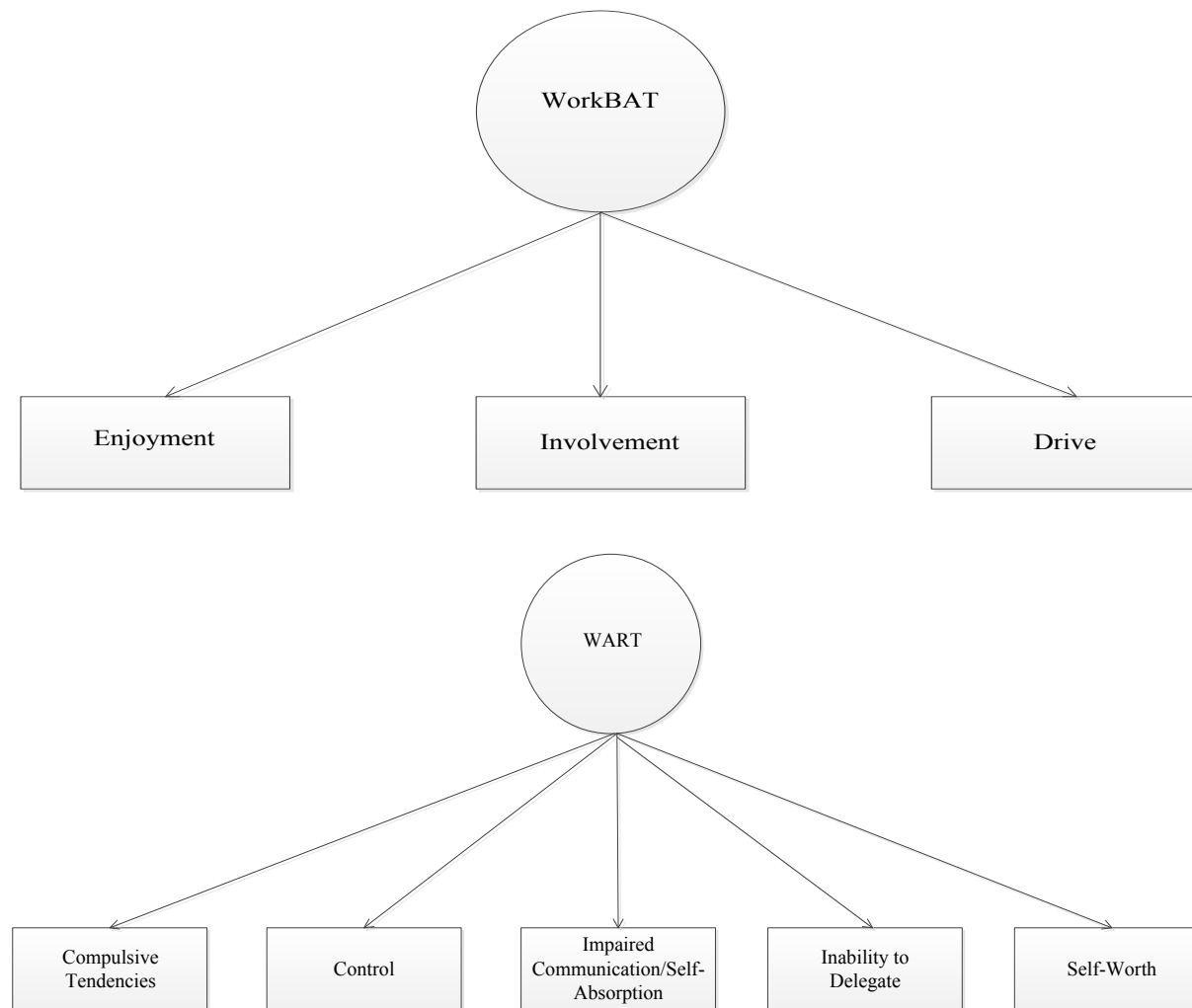*p < .05, ** p < .01

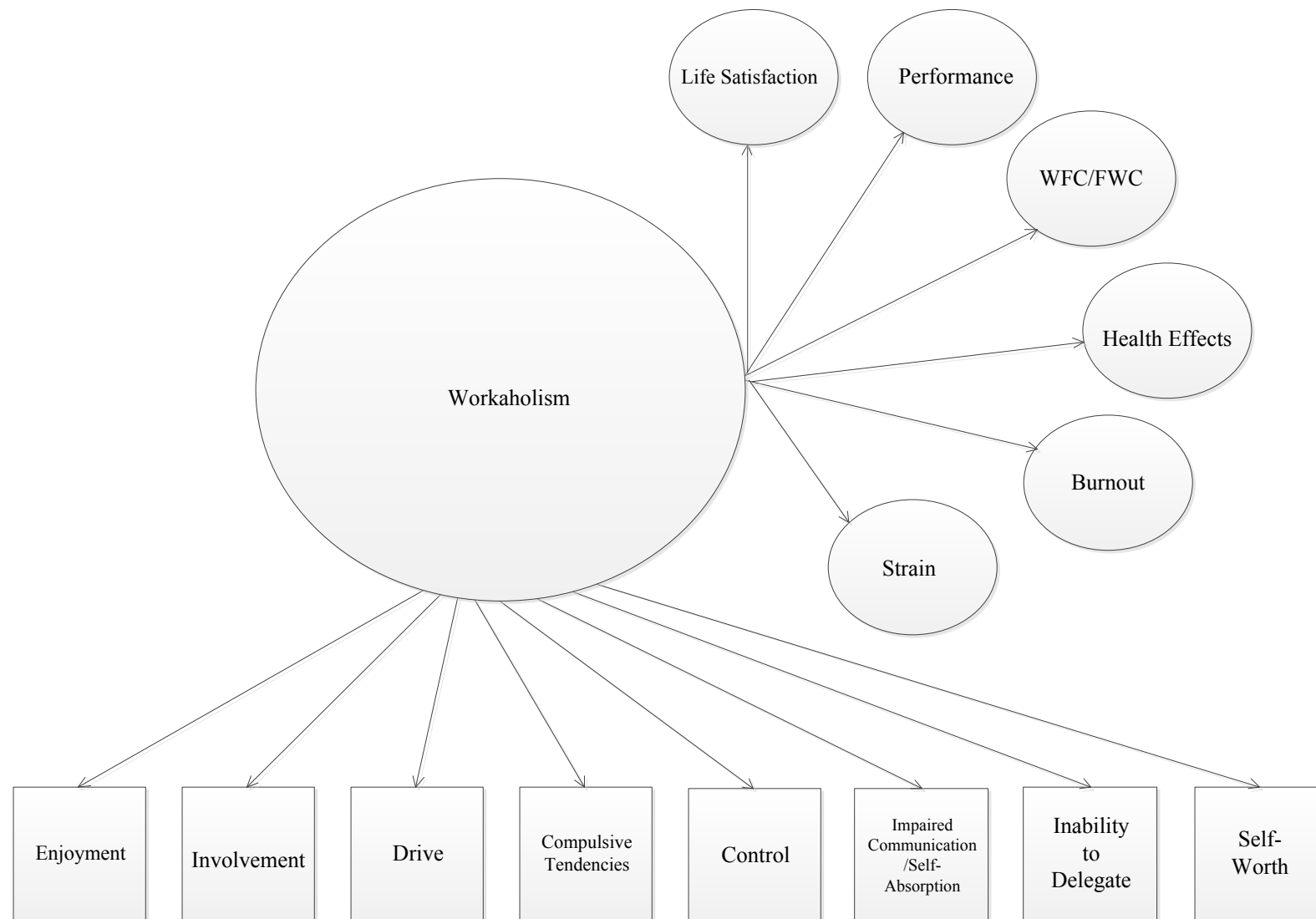Figure 1. Factor Structure of the WorkBat and WART.
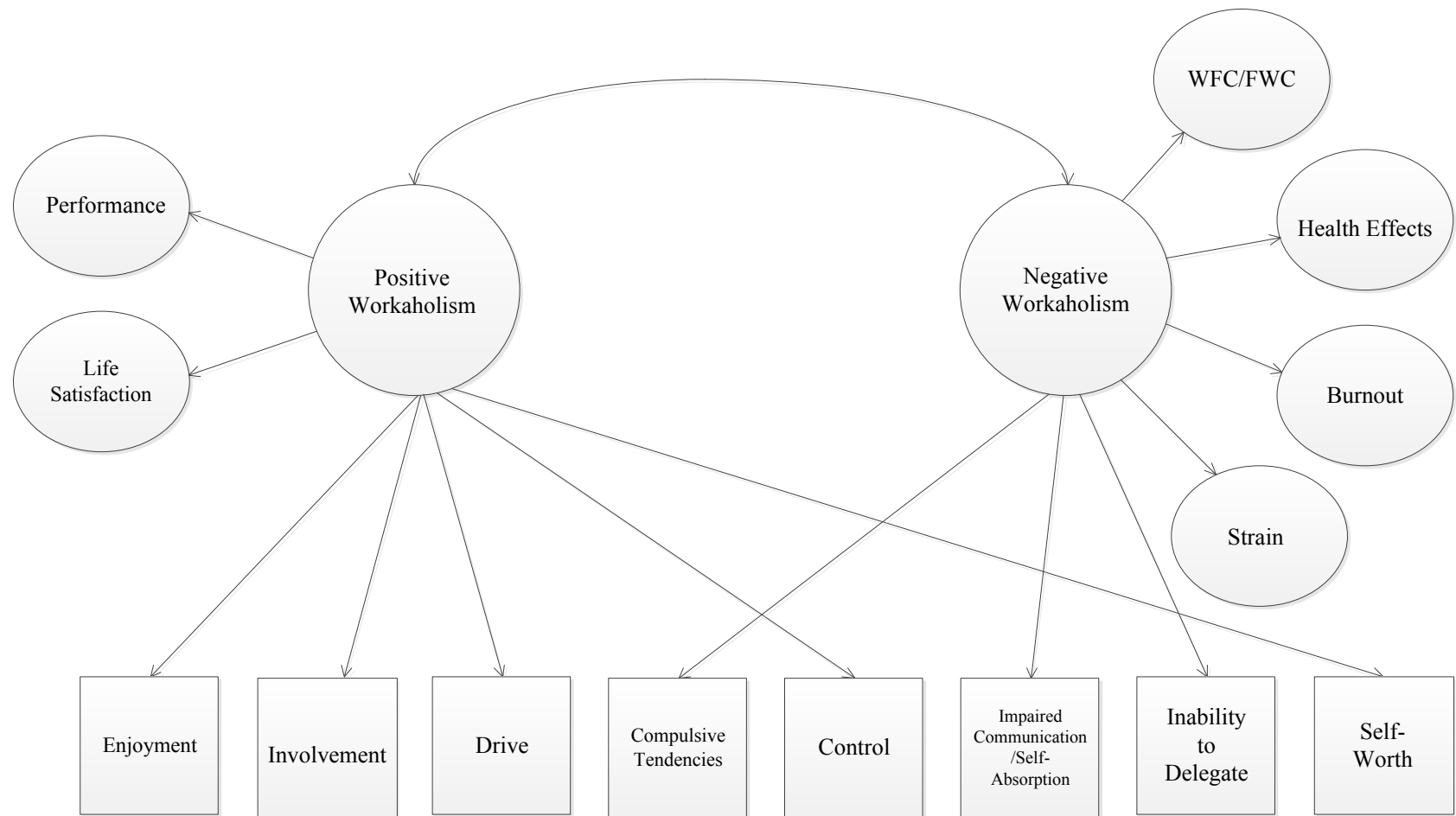
Figure 2. Unitary workaholism model.

Figure 3. Positive Workaholism and Negative Workaholism model.

Appendix A: Workaholism Battery (WorkBAT)

Please indicate how much you agree or disagree with the following statements using the choices below.

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

Work Involvement

1.) When I have free time I like to relax and do nothing serious.
2.) I like to relax and enjoy myself as often as possible.
3.) I really look forward to the weekend—all fun, no work.
4.) Wasting time is as bad as wasting money.
5.) I spend my free time on projects and other activities.
6.) I like to use my time constructively, both on and off the job.
7.) Between my job and other activities I'm involved in I don't have much free time.
8.) I get bored and restless on vacations when I haven't anything productive to do.

Drive

9.) I feel guilty when I take time off work.
10.) I often wish I weren't so committed to my work.
11.) I feel obliged to work hard even when it's not enjoyable.
12.) It's important to me to work hard, even when I don't enjoy what I'm doing.
13.) I often find myself thinking about work, even when I want to get away from it for a while.
14.) I often feel there is something inside me that drives me to work hard.
15.) I seem to have an inner compulsion to work hard.

Enjoyment of Work

16.) I like my work more than most people do.
17.) My job is more like fun than work.
18.) My job is so interesting that if often doesn't seem like work.
19.) I do more work than is expected of me strictly for the fun of it.
20.) Most of the time my work is very pleasurable.
21.) I seldom find anything to enjoy about my work.
22.) I lose track of time when I'm involved on a project.
23.) Sometimes when I get up in the morning I can hardly wait to get to work.
24.) When I get involved in an interesting project it's hard to describe how exhilarated I feel.
25.) Sometimes I enjoy my work so much I have a hard time stopping.

Appendix B: Work Addiction Risk Test (WART)

Please indicate how much you agree or disagree with the following statements using the choices below.

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

1. I prefer to do most things myself, rather than ask for help.
2. I get impatient when I have to wait for someone else or when something takes too long, such as long, slow moving lines.
3. I seem to be in a hurry and racing against the clock.
4. I get irritated when I am interrupted while I am in the middle of something.
5. I stay busy and keep many irons in the fire.
6. I find myself doing two or three things at one time, such as eating lunch, and writing a memo, while talking on the telephone.
7. I overly commit myself by biting off more than I can chew.
8. I feel guilty when I am not working on something.
9. It is important that I see the concrete results of what I do.
10. I am more interested in the final result of my work than in the process.
11. Things do not seem to move fast enough or get done fast enough for me.
12. I lose my temper when things do not go my way or work out to suit me.
13. I ask the same question over again, without realizing it, after I've already been given the answer once.
14. I spend a lot of my time mentally planning and thinking about future events while tuning out the here and now.
15. I find myself continuing to work after my co-workers have called it quits.
16. I get angry when people do not meet my standards of perfection.
17. I get upset when I am in situations where I cannot be in control.
18. I put myself under pressure from self-imposed deadlines when I work.
19. It is hard for me to relax when I am not working.
20. I spend more time working than on socializing with friends, on hobbies, or on leisure activities.
21. I dive into projects to get a head start before all phases have been finalized.
22. I get upset with myself for making even the smallest mistake.
23. I put more thought, time, and energy into my work than I do into my relationships with friends and loved ones.
24. I forget, ignore, or minimize birthdays, reunions, anniversaries, or holidays.
25. I make important decisions before I have all of the facts and a chance to think them through thoroughly.

Appendix C: Work-Family Conflict (WFC) and Family-Work Conflict (FWC) Scales

The statements below ask how you feel about your work and family roles. Read each statement and indicate your agreement or disagreement for each question based on the following 1 (*strongly disagree*) to 7 (*strongly agree*) scale.

1= Strongly Disagree, 2=Disagree, 3=Slightly Disagree, 4=Neither Agree nor Disagree, 5=Slightly Agree, 6=Agree, 7=Strongly Agree

Work-Family Conflict Scale

1. The demands of my work interfere with my home and family life.
2. The amount of time my job takes up makes it difficult to fulfill family responsibilities.
3. Things I want to do at home do not get done because of the demands my job puts on me.
4. My job produces strain that makes it difficult to fulfill family duties.
5. Due to work-related duties, I have to make changes to my plans for family activities.

Family-Work Conflict Scale

1. The demands of my family or spouse/partner interfere with work-related activities.
2. I have to put off doing things at work because of demands on my time at home.
3. Things I want to do at work don't get done because of the demands of my family or spouse/partner.
4. My home life interferes with my responsibilities at work such as getting to work on time, accomplishing daily tasks, and working overtime.
5. Family-related strain interferes with my ability to perform job-related duties.

Appendix D: Cohen-Hoberman Inventory of Physical Symptoms (CHIPS)

Mark the number for each statement that best describes HOW MUCH THE PROBLEM HAS BOTHERED OR DISTRESSED YOU DURING THE PAST TWO WEEKS INCLUDING TODAY. Mark only one number for each item. At one extreme, 0 means that you have not been bothered by the problem. At the other extreme, 4 means that the problem has been an extreme bother.

HOW MUCH WERE YOU BOTHERED BY:
1. Sleep problems (can't fall asleep, wake up in the middle of the night or early in the morning)
2. Weight change (gain or loss of 5 lbs. or more)
3. Back pain
4. Constipation
5. Dizziness
6. Diarrhea
7. Faintness
8. Constant fatigue
9. Headache
10. Migraine headache
11. Nausea and/or vomiting
12. Acid stomach or indigestion
13. Stomach pain (e.g., cramps)
14. Hot or cold spells
15. Hands trembling
16. Heart pounding or racing
17. Poor appetite
18. Shortness of breath when not exercising or working hard
19. Numbness or tingling in parts of your body
20. Felt weak all over
21. Pains in heart or chest
22. Feeling low in energy
23. Stuffy head or nose
24. Blurred vision
25. Muscle tension or soreness
26. Muscle cramps
27. Severe aches and pains
28. Acne
29. Bruises
30. Nosebleed
31. Pulled (strained) muscles
32. Pulled (strained) ligaments
33. Cold or cough

Appendix E: Maslach Burnout Inventory (MBI)

Please read each statement carefully and decide if you ever feel this way *about your job or about your life as a student*. If you have *never* had this feeling, write a "0" (zero) in the space before the statement. If you have had this feeling, indicate *how often* you feel it by writing the number (from 1 to 5) that best describes how frequently you feel that way.

0=Never, 1=A few times a year or less, 2=Once a month or less, 3=Once a week, 4=A few times a week, 5=Every day

Emotional Exhaustion
1. I feel emotionally drained from my work.
2. I feel used up at the end of the workday.
3. I feel fatigued when I get up in the morning and have to face another day on the job.
4. Working with people all day is really a strain for me.
5. I feel burned out from my work.
6. I feel frustrated by my job.
7. I feel I'm working too hard on my job.
8. Working with people directly puts too much stress on me.
9. I feel like I'm at the end of my rope.

Efficacy
10. I can easily understand how my recipients feel about things.
11. I deal very effectively with the problems of my recipients.
12. I feel I'm positively influencing other people's lives through my work.
13. I feel very energetic.
14. I can easily create a relaxed atmosphere with my recipients.
15. I feel exhilarated after working closely with my recipients.
16. I have accomplished many worthwhile things in this job.
17. In my work, I deal with emotional problems very calmly.

Depersonalization
18. I feel I treat some recipients as if they were impersonal 'objects'.
19. I've become more callous toward people since I took this job.
20. I worry that this job is hardening me emotionally.
21. I don't really care what happens to some recipients.
22. I feel recipients blame me for some of their problems.

Appendix F: Perceived Stress Scale (PSS)

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate how often you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer each question fairly quickly. That is, don't try to count up the number of times you felt a particular way, but rather indicate the alternative that seems like a reasonable estimate. For each question, choose from the following alternatives: 0=Never, 1=Almost Never, 2=Sometimes, 3=Fairly Often, and 4=Very Often.

1. In the last month, how often have you been upset because of something that happened unexpectedly?
2. In the last month, how often have you felt that you were unable to control the important things in your life?
3. In the last month, how often have you felt nervous or "stressed"?
4. In the last month, how often have you dealt successfully with irritating life hassles?
5. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?
6. In the last month, how often have you felt confident about your ability to handle your personal problems?
7. In the last month, how often have you felt that things were going your way?
8. In the last month, how often have you found that you could not cope with all the things that you had to do?
9. In the last month, how often have you been able to control irritations in your life?
10. In the last month, how often have you felt that you were on top of things?
11. In the last month, how often have you been angered because of things that happened that were outside of your control?
12. In the last month, how often have you found yourself thinking about things that you have to accomplish?
13. In the last month, how often have you been able to control the way you spend your time?
14. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

Appendix G: Grade Point Average

Please indicate your overall grade point average (GPA) as a college student:

_____GPA

Appendix H: Satisfaction With Life Scale (SWLS)

Below are five statements that you may agree or disagree with. Using a 1 - 7 scale (1= Strongly Disagree, 2=Disagree, 3=Slightly Disagree, 4=Neither Agree nor Disagree, 5=Slightly Agree, 6=Agree, 7=Strongly Agree) indicate your agreement with each item by placing the appropriate number on the line following that item. Please be open and honest in your responding.

1. In most ways my life is close to ideal. _____

2. The conditions of my life are excellent. _____

3. I am satisfied with my life. _____

4. So far I have gotten the important things I want in life. _____

5. If I could live my life over, I would change almost nothing. _____

   - 31 - 35 Extremely satisfied
   - 26 - 30 Satisfied
   - 21 - 25 Slightly satisfied
   - 20   Neutral
   - 15 - 19 Slightly dissatisfied
   - 10 - 14 Dissatisfied
   - 5 - 9 Extremely dissatisfied

Appendix I: Demographic Variables

1. What is your age? _____

2. What is your gender?

    _____ Male
    _____ Female

3. What is your race/ethnicity?
    _____White/Caucasian
    _____ African American
    _____ Hispanic
    _____ Asian American
    _____ Other, please specify: _____

4. What is your highest obtained educational level?
    _____High school degree
    _____Some college
    _____Bachelor's degree
    _____Master's degree
    _____Doctorate degree (including MD, JD, PhD)

5. What is your current relationship status?
    _____Single, living alone
    _____Single, living with family
    _____Married
    _____Not married, but living with a significant other