6-12-2024

Differentiating Workaholic Subtypes on Health and Wellness Outcomes

Carolyn Francis
University of Windsor

DIFFERENTIATING WORKAHOLIC SUBTYPES ON HEALTH AND WELLNESS OUTCOMES

by

Carolyn M. Francis

A Dissertation
Submitted to the Faculty of Graduate Studies
through the Department of Psychology
in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy at the
University of Windsor

Windsor, Ontario, Canada

DIFFERENTIATING WORKAHOLIC SUBTYPES ON HEALTH AND WELLNESS OUTCOMES

by

Carolyn M. Francis

APPROVED BY:

K. Brumley, External Examiner
Wayne State University

D. Kane
Faculty of Nursing

C. Kwantes
Department of Psychology

K. Lafreniere
Department of Psychology

D. Jackson, Advisor
Department of Psychology

May 29, 2024

DECLARATION OF ORIGINALITY

I hereby certify that I am the sole author of this dissertation and that no part of this dissertation has been published or submitted for publication.

I certify that, to the best of my knowledge, my dissertation does not infringe upon anyone's copyright nor violate any proprietary rights and that any ideas, techniques, quotations, or any other material from the work of other people included in my dissertation, published or otherwise, are fully acknowledged in accordance with the standard referencing practices. Furthermore, to the extent that I have included copyrighted material that surpasses the bounds of fair dealing within the meaning of the Canada Copyright Act, I certify that I have obtained a written permission from the copyright owner(s) to include such material(s) in my dissertation and have included copies of such copyright clearances to my appendix.

I declare that this is a true copy of my dissertation, including any final revisions, as approved by my dissertation committee and the Graduate Studies office, and that this dissertation has not been submitted for a higher degree to any other University or Institution.

ABSTRACT

The current study aimed to identify different subtypes of workaholics based on a combination of work engagement, motivation, perfectionism and job insecurity variables, and compare them on health and wellness outcomes. Perceptions of work-life balance, organizational culture and organizational climate were also examined to better understand the relationship between workaholic subtypes and their outcomes. A sample of n = 280 academics from universities in Ontario responded to an online self-report questionnaire. Cluster analysis showed the presence of three distinct workaholic subtypes that were named Engaged Workaholics, Perfectionist Workaholics and Job Insecure Workaholics. Univariate and multivariate analyses revealed significant differences between the clusters on health and wellness dimensions, whereby Engaged Workaholics reported significantly better outcomes compared to the other subtypes. Mediation analyses showed that lower levels of perceived work-life balance and higher levels of perceived work pressure culture explained poorer health and wellness outcomes, particularly for Job Insecure Workaholics. Moreover, it was shown that workaholic subtypes experienced different barriers to teaching and research, and attributed feelings of overwork to a variety of factors. This study is a first attempt to empirically distinguish workaholic subtypes based on personal and situational factors and provides evidence that different types of workaholics exist and outcomes are not the same for all. Findings of this work have important implications for employees and organizations, and could be used to inform policies and initiatives targeted at building healthy workplaces.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

CHAPTER I
INTRODUCTION

The term ‘workaholic’ was coined in the late 1960s by Wayne E. Oates, a professor of Religious Studies, when he used the term, in fun, to describe his own relationship to his work. He later formally defined a workaholic as “someone whose need for work has become so excessive that it creates a noticeable disturbance or interference with bodily health, personal happiness, interpersonal relationships, and smooth social functioning” (Oates, 1971, p. 4). Oates’ early conceptualization of workaholism drew parallels with alcoholism in terms of etiology and symptomology, and he warned that although work addiction is far more socially acceptable than other addictions, it can be just as destructive.

Since the term first surfaced, a number of definitions have been proposed. While there is no single agreed upon definition to date, there is consensus that workaholism involves both behavioural and cognitive components manifested through excessive involvement with work and compulsive thoughts about work, respectively (e.g., Schaufeli et al., 2009b; Scott et al., 1997; Sussman, 2012). Further, almost every conceptualization of workaholism involves the notion that workaholics work longer and harder than other employees (Clark et al., 2014) and that they display a personal reluctance to disengage from work despite negative consequences such as fatigue (McMillan et al., 2001; Sussman & Sussman, 2011).

The literature lacks consensus regarding the affective component in the conceptualization of workaholism. While there is agreement that workaholics experience negative emotions, such as guilt, irritability or anxiety, when they are not working (Ng et al., 2007), emotions experienced while working are less clear. Some scholars, for

example, suggest that workaholics experience positive emotions while at work (Bonebright et al., 2000), some suggest negative emotions (Spence & Robbins, 1992), and others believe that affect should not be a defining feature of workaholism (Mudrack, 2006).

With varying definitions come various instruments to measure the construct. Some previous studies have simply used the total number of hours that one works per week as an indication of workaholism (e.g., Snir & Harpaz, 2004) while others have used more complex and well-established measures. The most commonly used self-report scales in the workaholism literature are the Workaholism Battery (WorkBAT; Spence & Robbins, 1992), the Work Addiction Risk Test (WART; Robinson, 1998), the Dutch Work Addiction Scale (DUWAS; Schaufeli et al., 2009b) and the Bergen Work Addiction Scale (BWAS; Andreassen et al., 2012a). Each of these measures differ in their subdimensions, however, they all share the underlying assumption that workaholism stems from uncontrollable inner pressures to work. Notably, scholars often use the WorkBAT and the DUWAS to identify types of workers based on a combination of high and low subdimension scores which then allows for comparisons to be made between workaholic and nonworkaholic employees.

Past research has aimed to better understand the nomological network of workaholism by incorporating a host of potential antecedent and outcome measures with self-report workaholism scales. Antecedents including personal characteristics such as perfectionism (Clark et al., 2020), motivation (Mazzetti et al., 2014) and self-efficacy (Del Libano et al., 2012), as well as situational characteristics such as job demands (Molino et al., 2016) and job insecurity (e.g., Boatemaa et al., 2019) have been associated

with increased workaholic tendencies for employees across a range of industries. In terms of outcomes, scholars have reported that workaholism negatively impacts health and wellness by significantly increasing stress (Andreassen et al., 2011), burnout (Nie & Sun, 2016), anxiety and depression (Shimazu et al., 2010), poorer sleep quality and daytime dysfunction (Kubota et al., 2011) and high blood pressure, particularly for women (Balducci et al., 2022). Workaholism has also been linked to lower levels of job satisfaction (Taris et al., 2010), life satisfaction (Bakker et al., 2014) and work-life balance (Aziz & Cunningham, 2008). As noted by past scholars, inconsistent findings across studies may be explained by differing methodologies and sample characteristics, or perhaps by the existence of workaholic subtypes in which antecedents and outcomes of workaholism are not the same for all.

Since the early work in this field, it has been acknowledged that different types of workaholics exist (e.g., Oates, 1971; Fassel, 1990; Spence & Robbins, 1992). However, while different typologies have been proposed in the literature, empirical studies that differentiate between subtypes are limited. Many scholars have identified types of workers that distinguish between workaholic and nonworkaholic employees (e.g., Salanova et al., 2016) while others have distinguished between two distinct types of workaholics, most notably Enthusiastic/Engaged and NonEnthusiastic/NonEngaged workaholics (e.g., Burke & Mattheisen, 2004) by using a high/low dichotomy of scores on workaholism subdimensions. To date, however, only a few studies have incorporated additional constructs as a means to distinguish workaholic subtypes on a combination of variables beyond workaholism subdimensions (e.g., Guidetti et al., 2019). With this gap

in the literature, a sufficient empirical understanding of workaholic subtypes and how they differ on antecedents and outcomes is currently lacking.

Guided by aspects of personality and learning theories, the purpose of the current study was to further the empirical understanding of workaholic typologies by including personal and situational antecedent variables into the characterization of workaholic subtypes. The aim of this work was to discover profiles of workaholics that are distinguished by different underlying driving forces behind their work addiction and compare these groups on health and wellness outcomes to assess whether some workaholics are more prone to negative consequences than others. It was also of interest to examine how employees' perceptions of work-life balance, organizational climate and organizational culture impacts outcomes of workaholism. Findings of this research can be used to inform organizational initiatives and policies aimed at treating symptoms of workaholism by tailoring interventions and using targeted recommendations based on an understanding of varying driving forces behind the work addiction and can also be used to inform workplace policies and initiatives that are aimed at building healthy workplaces.

CHAPTER II
REVIEW OF THE LITERATURE

Definitions and Conceptualizations of Workaholism

Often credited with coining the term workaholism, Oates (1971) described a workaholic as "someone whose need for work has become so excessive that it creates a noticeable disturbance or interference with bodily health, personal happiness,

interpersonal relationships, and smooth social functioning" (p. 4). Since then, workaholism has been conceptualized in a number of ways and despite its common use in both academic literature and popular press, there is little consensus regarding what workaholism actually is beyond its core elements of excessive time spent at work and compulsive thoughts about work.

Oates' early conceptualization viewed workaholism as an addiction where compulsive thoughts about work produce behavioural patterns similar to those of an alcoholic. He posited that work addicts crave work, develop an increased tolerance for work, and experience withdrawals from work when they are not working. He warned that work addiction can be as destructive as other types of addictions and noted similar consequences such as poor health and impaired social relationships (Oates, 1968). Subsequent studies adopted this addiction perspective in their conceptualizations of workaholism. Fassel (1990), for example, defined workaholism as "a progressive, fatal disease in which a person is addicted to the process of working" (p. 2) and Sussman (2012) described workaholism as "feeling driven beyond the stated demands of the job to attempt to obtain an appetitive effect, a sense of lack of control over working, and suffering negative consequences as a result" (p. 7).

Similarly, Robinson (1998) defined workaholism as "an obsessive-compulsive disorder that manifests itself through self-imposed demands, an inability to regulate work habits, and an overindulgence in work to the exclusion of most other life activities" (p. 7) and Snir and Harpaz (2012) described workaholism as "a subtype of heavy work investment of both time and effort in work that stems not from internal predictors or from a passion from work, but from an addiction to work" (p. 236). Addiction involves

compulsion and loss of control as well as continued engagement in the behaviour despite negative consequences (Smith & Seymour, 2004), characteristics of which workaholics exhibit (e.g., Ng et al., 2007; Robinson, 1998). Based on this notion, the terms workaholism and work addiction are often used interchangeably across the literature.

Other studies have taken a different approach to defining workaholism. Mosier (1983), for example, conceptualized workaholism by behavioural patterns and described workaholics as those who work at least 50 hours per week. Aligning with this perspective, Snir and Harpaz (2004) measured workaholism by the total number of hours worked per week including overtime. However, this definition and approach to measurement has been criticized for being overly simplistic by those who view workaholism as a syndrome and much more than just working long hours (e.g., Mudrack, 2006). Focusing exclusively on excessive work involvement neglects the addictive, multifaceted nature and complexity of the construct including motives behind excessive work behaviours, thoughts about work, and emotions associated with work (Buelens & Poelmans, 2004; Clark et al., 2014; Schaufeli et al., 2009b).

In addition to the behavioural component of workaholism, previous research has highlighted a cognitive component of workaholism as well. For instance, Scott (1997) defined workaholism as "excessive time spent in work activities, persistent thoughts about work when not working, and working beyond what is reasonably expected to meet the requirements of the job" (p. 292). Similarly, McMillan et al., (2001) defined workaholism as "a personal reluctance to disengage from work, evidenced by the tendency to work or to think about work anytime and anywhere" (p. 71). Further, Schaufeli and colleagues (2010) characterized workaholism with both behavioural and

cognitive components and described a workaholic as someone who must exhibit tendencies of both working excessively and working compulsively. Thus, this perspective assumes that workaholism is not only about devoting excessive time to work, but rather must also involve constant thoughts about work.

An interesting debate in the literature is the role of affect, or emotion, in the conceptualization of workaholism. Spence and Robbins (1992) highlighted an affective component of workaholism in addition to cognitive and behavioural components as they characterized workaholics as those who are highly work involved, feel compelled or driven to work because of inner pressures, and are low in work enjoyment. Their definition appears to be most commonly cited across academic literature (e.g., Bonebright et al., 2000; Burke et al., 2004a; Haar & Roche, 2013; Yilmaz et al., 2014) and others such as Aziz and Zickar (2006) posit that a 'true' workaholic does not enjoy the act of working.

On the other hand, Ng, Sorensen, and Feldman (2007) described workaholics as those who enjoy the act of working, are obsessed with working, devote long hours and personal time to work, and have a hard time stepping away from their work. Their definition was grounded in the conceptualization of addiction that involves emotions such as pleasure, gratification or dopamine release, in addition to the cognitive and behavioural elements of addiction. Bonebright and colleagues (2000) attributed workaholism to 'immense enjoyment' from work, similar to Sussman (2012) which stated that workaholics feel positive emotions while working and may feel a rush or high from their work. Others have argued that workaholism should not include affect as a defining feature regardless if one's feelings are positive or negative (e.g., Mudrack, 2006;

Schaufeli et al., 2008). Despite the differing views of emotions that are experienced while working, scholars assume that workaholics experience frequent and intense negative emotions such as guilt and anxiety when they are not working (Clark et al., 2014; Ng et al., 2007).

As demonstrated here, researchers have failed to agree on a single definition of workaholism, though there is consensus that it is a multidimensional construct where workaholics are overly concerned about their work, driven by an uncontrollable desire to work, and spend much time and energy at work to the point of exclusion of other life activities. Further, workaholism has been deemed a type of heavy work investment which includes two core dimensions, the investment of time and effort (Rabenu et al., 2019; Snir & Harpaz, 2009).

Measurement of Workaholism

As mentioned previously, some scholars have measured workaholism by the total number of hours worked per week; however, the vast majority of studies have opted for more well-established, multidimensional, validated workaholism measures. Summarized in Table 1, the most commonly used measures across the literature are the Workaholism Battery (WorkBAT; Spence & Robbins, 1992), the Work Addiction Risk Test (WART; Robinson, 1998), the Dutch Work Addiction Scale (DUWAS; Schaufeli et al., 2009b) and the Bergen Work Addiction Scale (BWAS; Andreassen et al., 2012a).

Table 1
Commonly Used Workaholism Measures

Workaholism Measure	Items	Scale Subdimensions
WORKBAT (Spence & Robbins, 1992)	25	Work Involvement Work Drive Work Enjoyment
WART (Robinson, 1998)	25	Compulsive Tendencies Control Impaired Communication/ Self-Absorption Inability to Delegate Self-worth
DUWAS (Schaufeli et al., 2009b)	10	Working Excessively Working Compulsively
BWAS (Andreassen et al., 2012a)	7	Salience Mood Modification Conflict Withdrawal Tolerance Relapse Problems

The most frequently cited workaholism measure is the WorkBAT (Spence & Robbins, 1992). Spence and Robbins described workaholics as those who are highly work involved, feel compelled or driven to work because of inner pressures, and are low in enjoyment of work. Accordingly, the authors developed a self-report measure to capture these elements. The WorkBAT was first validated using a sample of undergraduate students and subsequently validated using a sample of social workers in academic institutions. The final measure consists of 25 items capturing three subdimensions: Work Involvement (8 items; “I get bored and restless on vacations when I haven’t anything productive to do”), Work Drive (7 items; “I often find myself thinking about work even when I want to get away from it for a while”) and Work Enjoyment (10 items; “Sometimes I enjoy my work so much I have a hard time stopping”). The items are

answered using a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Different combinations of the three WorkBAT subdimensions describe two different types of workaholics, and the WorkBAT remains of popular use due to its ability to identify multiple types of employees.

Using cluster analyses, Spence and Robbins (1992) identified six different types of workers in separate samples of men and women. As the authors had anticipated, the six profiles were essentially the same for both genders, showing stability of their findings across two independent samples. The six types of workers are described in more detail below, however, as an example, they refer to 'Workaholics' as those who score above the mean on Work Involvement and Work Drive dimensions, and score below the mean on Work Enjoyment, whereas in contrast, they refer to 'Relaxed Workers' as those who score below the mean on Work Involvement and Work Drive, and above the mean on Work Enjoyment. Many scholars have reported good psychometric properties of the three WorkBAT subdimensions (e.g., Bonebright et al., 2000; Buelens & Poelmans, 2004) and have replicated the proposed worker types in different samples including managers in mixed occupations (Burke, 2000b; Burke & MacDermid, 1999), information technology employees (Bonebright et al., 2000), psychologists (Burke et al., 2004a) and journalists (Burke & Mattheisen, 2004). Others, however, have reported poor reliability of the Work Involvement subdimension (e.g., Andreassen et al., 2007) which has led scholars to opt for a revised version of the WorkBAT that contains only the Work Drive and Work Enjoyment subscales (e.g., Dazzi et al., 2015; Johnstone & Johnson, 2005; Kanai & Wakabayashi, 2001).

The WART was later developed by Robinson (1998). Robinson viewed workaholism as a pathological disease and characterized it as a serious, legitimate type of compulsive disorder. The original measure was developed to screen for workaholic tendencies and the 25 items (*cf.* Robinson, 1999) were drawn from symptoms reported by clinicians who worked with clients and families seeking help for work addiction. The measure is composed of five subdimensions: Compulsive Tendencies (9 items; "I seem to be in a hurry and racing against the clock"), Control (7 items; "Things just never seem to move fast enough or get done fast enough for me"), Impaired Communication/Self-absorption (6 items; "I dive into projects to get a head start before all the phases have been finalized"), Inability to Delegate (1 item; "I prefer to do most things by myself rather than ask for help") and Self-worth (2 items; "It is important that I see concrete results of what I do"). Items are answered on a 4-point Likert scale ranging from 1 (*never true*) to 4 (*always true*). Despite capturing five domains, the WART is often used as a composite measure of work addiction. While previous studies have reported good psychometric properties in terms of internal consistency (Cronbach's alpha = 0.88; Robinson, 1999), two-week test-retest reliability (Cronbach's alpha = 0.85; Robinson et al., 1992) and split-half reliability (Spearman-Brown r = 0.85, Robinson & Post, 1995), the WART has been criticized for lacking a clear factor structure (e.g., Andreassen et al., 2012b; Quinones & Griffiths, 2015) and predominantly tapping Type A behaviours (e.g., Mudrack, 2006).

A relatively more recent measure and the one that was used in the current study is the DUWAS, which was developed by Schaufeli and colleagues (2009b). The authors defined workaholics as those who work excessively hard and are obsessed with work

which manifests as working compulsively. Accordingly, their 10-item measure was developed to capture both behavioural and cognitive elements of workaholism: Working Excessively (5 items; "I find myself continuing to work after my coworkers have called it quits") and Working Compulsively (5 items; "It is hard for me to relax when I'm not working"). The items that compose the Working Excessively subscale were derived from the Compulsive Tendencies subdimension of the WART and the Working Compulsively items were derived from the Work Drive subdimension of the WorkBAT. The items are answered on a 4-point Likert scale ranging from 1 (*never*) to 4 (*always*). The authors validated their measure using cross-occupational samples from the Netherlands and Japan. The Dutch sample consisted of hospital workers, managers and organizational consultants while the Japanese sample consisted of nurses, blue-collar workers and engineers. The DUWAS demonstrated adequate psychometric properties for both samples (Cronbach's alphas for Working Excessively and Working Compulsively, respectively, were .78 and .78 for Dutch and .73 and .68 for Japanese). Since published, the DUWAS has been translated and validated in countries including Argentina (Omar et al., 2018), Brazil (Vazquez et al., 2018) and Italy (Balducci et al., 2017). Similar to Spence and Robbins' approach with the WorkBAT, the authors of the DUWAS proposed four types of workers based on a high/low dichotomy of the Working Excessively and Working Compulsively subscales. Of the four types of workers, one group is considered to be workaholics while the other three are nonworkaholics.

Notably, a cross-validation study by Andreassen and colleagues (2014) showed that the correlates between the scores on the WorkBAT, WART and DUWAS were too low to conclude that these three scales measure the same construct. Given that these

scales are used to measure workaholism but their subdimensions were not strongly grounded in the addiction field, Andreassen and colleagues (2012) developed the Bergen Work Addiction Scale (BWAS) using general addiction theory. The BWAS is comprised of seven items that capture core addiction components and are framed in the context of their occurrence in the past year. A single item is used for each of the following dimensions: Salience ("Thought of how you could free more time to work?"), Mood Modification ("Working in order to reduce feelings of guilt, anxiety, helplessness, and/or depression?"), Conflict ("Down-prioritized hobbies, leisure activities, and/or others' needs?"), Withdrawal ("Become stressed if you have been prohibited from working?"), Tolerance ("Spent much more time working than initially intended?"), Relapse ("Experience that others have told you to cut down on work without listening to them?") and Problems ("Worked so much that it has negatively influenced your health?"). The items are rated on a 5-point Likert scale ranging from 1 (*never*) to 5 (*always*). Those who score 4 (*often*) or 5 (*always*) on at least 4 of the 7 items are considered to be a workaholic. This scale was validated using a large sample of cross-occupational Norwegian workers, split into two. The authors reported good internal consistency in both samples (Cronbach's alphas were .84 and .80, respectively) and the cut-off for categorization of workaholics demonstrated discriminative ability with respect to hours worked, leadership roles and health complaints. It should be noted that a recent study conducted by Morkeviciute and Endriulaitiene (2021a) compared the DUWAS and the BWAS on the Extrinsic and Intrinsic Motivation Scale and found different relations with motivation (*cf.* Tremblay et al., 2009). In this study, intrinsic motivation and one type of regulatory extrinsic motivation (introjected regulation) predicted workaholism as

measured by the DUWAS while three regulatory types of extrinsic motivation (external, introjected and integrated regulations) predicted workaholism as measured by the BWAS. Intrinsic motivation did not significantly predict BWAS and since these items are grounded in addiction theory the authors concluded that workaholism and work addiction as they are conceptualized and measured in the literature may have different motivational origins.

Other existing workaholism scales have received considerably less empirical attention to date (e.g., reviews by Andreassen, 2014 and Sussman, 2012), however, among the more recent measures that seem promising are the Workaholism Analysis Questionnaire (WAQ) and the Multidimensional Workaholism Scale (MWS). The WAQ is a 29-item self-report measure developed by Aziz and colleagues (2013). The authors conceptualized workaholism as an addiction that leads to negative outcomes, internal pressure to work that is independent from pressure from external sources, and preoccupation with work that results in the exclusion of personal activities. This scale captures five subdimensions: Work-life Conflict (11 items; “My work often seems to interfere with my personal life”), Work Perfectionism (5 items; “It takes me a long time to finish my work because it must be perfect”), Work Addiction (5 items; “I enjoy spending evenings and weekends working”), Unpleasantness (4 items; “I have a need for control over others”) and Withdrawal Symptoms (4 items; “I feel anxious when I am not working”). Items are rated from 1 (*strongly disagree*) to 5 (*strongly agree*). The WAQ appears to be the first measure to include a subscale that directly taps into work-life conflict, a typical symptom of workaholism (Aziz et al., 2013). The authors noted strong

psychometric properties including convergent and discriminant validity, concurrent and content validity, and strong internal consistency (Cronbach's alpha = .90).

Finally, the most recently published measure is the 16-item Multidimensional Workaholism Scale (MWS) developed by Clark et al., (2020). The authors posited that the constructs of workaholism and work addiction, though they conceptually overlap, are distinct. They suggested that the definition and measurement of work addiction involves several clinically relevant criteria and including such solely as a means to measure workaholism leads to construct contamination. Their conceptualization of workaholism involved an inner pressure or compulsion to work; persistent, uncontrollable thoughts about work; feeling negative emotions when not working or when prevented from working; and excessive time spent working that goes beyond what is required and expected. Accordingly, the MWS captures four subdimensions: Motivational (4 items; "I have a strong inner desire to work all of the time"), Cognitive (4 items; "In general, I spend my free time thinking about work"), Emotional (4 items; "I am almost always frustrated when I am not able to work") and Behavioural (4 items; "I work more than what is expected of me") and items are rated on a 5-point Likert scale ranging from 1 (*never true*) to 5 (*always true*). Across three samples of employees from various occupations in the United States, the authors reported good reliability for the subscales (Cronbach's alpha ranged from .82 to .94) and for the composite measure (Cronbach's alpha ranged from .93 to .94). They also reported content validity, convergent and divergent validity, and incremental validity in the prediction of important outcomes over and above previously established workaholism measures.

Theoretical Frameworks

The empirical study of workaholism within the social sciences has evolved on an hoc basis without explication of a corresponding theory (McMillan et al., 2001; Ng et al., 2007). McMillan and colleagues (2003) synthesized and critiqued theories that researchers most commonly draw on to help explain the phenomenon of workaholism, which includes addiction theory, learning theory and trait theory (summarized in Table 2). To date, none of them have been adequately substantiated in their explanation of workaholism.

Table 2
Frequently Drawn on Workaholism Theories

Workaholism Theories	Components of Theories
Addiction Theory	*Medical* models suggests that workaholics are addicted to work, and like other addictions, they develop cravings, tolerance and withdrawals related to their work. *Psychological* models suggest that workaholics are obsessive and compulsive about their work and simply cannot function without it.
Learning Theory	*Operant Learning* assumes workaholic tendencies are shaped and perpetuated by rewards and punishments while *Social Learning* assumes workaholic tendencies are learned through observations of others' behaviour (e.g., family, friends, colleagues).
Trait Theory	*Personality* models assume that workaholics have higher-order traits (e.g., achievement-oriented personality) and/or specific traits (e.g., Type-A personality, perfectionism) that contribute to the onset and perpetuation of workaholism.

Addiction Theory. Addiction theories typically fall into one of two general models: the medical model or the psychological model (Eysenck, 1997). The medical model proposes that "a person becomes physically addicted to chemicals that are either ingested into the body, such as drugs or alcohol, or that are produced internally, such as

dopamine" (McMillan et al., 2001, p. 79). The earliest conceptualizations of workaholism paralleled with alcoholism (i.e., Oates, 1968) and led to the assumption that addictive chemicals are strongly at play when understanding work addiction. Fassel (1990), for example, suggested that working excessively may release adrenaline which in turn produces pleasurable sensations that become addictive, and this is what perpetuates the cycle of excessive work. Some scholars have drawn parallels between workaholism and the classic biological symptoms of substance addiction, such as tolerance toward work, cravings for work, and experiences of withdrawals when not working (e.g., Robinson, 1998). McMillan and colleagues (2001) suggested that the medical model perspective assumes workaholism is inflexible and resistant to change.

The psychological model of addiction, on the other hand, proposes that continued abuse of a substance occurs due to some form of perceived benefits, despite potentially negative side effects (Eysenk, 1997). Workaholics often feel proud of and boast about the amount of work that they take on (Oates, 1968). McMillan et al. (2003) suggested that psychological dependence develops as individuals believe they cannot function without repetitively engaging in the behaviour and this leads to continual engagement in the behaviour despite consequences, similar to that of obsessive-compulsive disorders. This perspective assumes that workaholics perceive there to be benefits associated with excessive devotion to work and that these benefits outweigh costs such as burnout or family relationship issues. While both addiction models view workaholism as disordered thoughts and behaviours, the psychological model of addiction assumes workaholism is malleable and workaholic thoughts and behaviours can change (McMillan et al., 2001).

Despite a clinical perspective to workaholism, there is no formal diagnosis in the Diagnostic and Statistical Manual (DSM-5). Further, a direct link has yet to be made between either of the addiction models and workaholism likely due to methodological challenges. For example, investigating whether increased adrenaline results when working is difficult to rigorously and accurately test given that numerous variables could produce adrenaline fluctuations throughout the workday such as caffeine consumption, engaging in demanding tasks, or dealing with conflict in the organization. Researchers have acknowledged that methodologically controlling for moderating variables would also be complex and could require specialized biological tests, such as blood tests or urine samples (e.g., McMillan et al., 2001) which limits the feasibility of such studies.

Learning Theory. Learning theories that have been applied to the understanding of workaholism include operant learning and social learning. Operant learning theory proposes that behaviour is learned and gradually shaped through consequences (Skinner, 1963). Repeated reinforcers, whether positive or negative, are key maintenance factors in ensuring the behaviour persists (Mudrack & Naughton, 2001). In the context of workaholism, individuals may have initially learned workaholic tendencies, for example, by voluntarily working extra hours or taking on additional roles and responsibilities, which led to the outcome of peer approval, promotion or avoidance of conflict at home (Levy, 2016; van Beek et al., 2011). The former are examples of positive reinforcement while the latter is an example of negative reinforcement, yet both are known to be effective in shaping behaviour. Individuals, then, likely adopt workaholic tendencies as they become conditioned to, or expect, benefits of their behaviour. Operant learning theory assumes that individuals learn to be workaholics only when behaviour leads to

desirable outcomes (McMillan et al., 2003). Naughton (1987) suggests that the value of working hard rather than pursuing other activities are learned at a young age and can be long-lasting, and both Cherington (1980) and Machlowitz (1980) posit that workaholic tendencies are developed through childhood experiences in which work behaviours are reinforced by parents and other socializing groups or institutions.

Social learning theory proposes that behaviour is learned and shaped through observations of others (Bandura & McClelland, 1977). Levy (2016) highlighted that, in this paradigm, role-modeling allows individuals to learn more quickly from observing the behaviours of successful others instead of experimenting to discover one's own successful behaviours. When applied to the understanding of workaholism, it may be assumed that individuals adopt workaholic tendencies from their work environment or by observing co-workers' or supervisors' excessive work habits that have resulted in desirable outcomes such as praise or promotion. Ng and colleagues (2007) indicated that an organization's culture, through shared values and norms, can lead to workaholism as well. For instance, an organizational culture that promotes working beyond one's scheduled work hours, such as responding to emails in the evening or working on weekends, may result in an inability to disconnect from work because employees perceive that to be the norm of the organization. Ng et al. (2007) also proposed that workaholic tendencies may be learned through observation of significant others like family members or romantic partners who exhibit excessive work behavioural patterns and are considered to be successful in their work. This notion is empirically supported by scholars such as Burke (2001) who found that workaholic employees are more likely to work in organizations that support work-life imbalance and is supported by Carroll and

Robinson (2000) who found that children of workaholics often adopt workaholic values and behaviours and they tend to take on roles with higher levels of responsibility.

Learning theories are distinguished for being optimistic because, like other learned behaviour, they imply that workaholic tendencies can be unlearned (McMillan et al., 2003). Since this perspective assumes that workaholism is dependent on one's environment, learning theorists suggest workaholism can be extinguished when the individual is taken out of that work environment, such as holding a less demanding position, working in an environment that supports healthy work habits and work-life balance, or once they retire. A criticism, however, is that learning theories overlook emotional elements that are related to workaholism and fail to consider the dispositional variables linked to workaholism, such as personality traits which are more stable across time and place (Levy, 2016; Quinones & Griffiths, 2015). Learning theories also contradict trait theories in terms of the onset of workaholism as they assume the onset of workaholism is gradual, subtle and difficult to detect. Nonetheless, McMillan et al. (2001) acknowledged that learning theories are feasible to test empirically, and that they demonstrate generality, parsimony, and pragmatism. Few studies have explored learning theories in the context of workaholism, however, they certainly provide an avenue of investigation that merits further attention.

Trait Theory. Personality research has been prominent within the social sciences for quite some time. There is consensus amongst scholars that traits are firmly established, shape individuals' attitudes and behaviours, and can be used to explain individual differences (Andreassen et al., 2010). Trait theories conceptualize stable patterns of behaviours, thoughts and emotions as dispositions rather than stemming from

biological or social influences (Levy, 2016) and assume that traits remain relatively stable across adulthood (e.g., Roberts & DelVecchio, 2000). In their critique of trait theories, McMillan et al. (2001) distinguished between trait-specific models and generic personality models. Trait-specific models focus on "narrow behavioural patterns of individual variation and can explain a restricted range of phenomena" (p. 82). This perspective assumes that underlying traits impact every aspect of life in general, including how one approaches their work. In the context of workaholism, for example, an individual high in perfectionism would be a perfectionist when it comes to their work as well as in other areas of their life. In contrast, generic personality models explain more diffuse phenomenon but sacrifice individual variability (McMillan, 2001, p. 83). For example, two individuals can be equally neurotic in their work but otherwise are quite different from one another. With this view, workaholism may be related to general, higher order traits rather than specific ones (Stoeber et al., 2013).

Trait theories have been most commonly tested and are better substantiated in their explanation of workaholism. For example, perfectionism (e.g., Booket et al., 2018; Falco et al., 2014), obsessive compulsiveness (McMillan et al., 2001) and neuroticism (e.g., Andreassen et al., 2010; Khalidi et al., 2016) have been linked to workaholic tendencies, showing support for dispositional traits as an explanation or driving factor of workaholism. Trait theories assume that workaholism may arise in late adolescence, should remain relatively stable across time and across roles or organizational settings, and can worsen depending on environmental factors such as engaging in stressful tasks or demanding roles (Scott, 1997). Although trait theories are praised for being generalizable and practical, a criticism is that they are rather pessimistic and assume that because traits

are deeply embedded within us, workaholism is inflexible and resistant to change. While different theories represent different explanations of workaholism, they should not be considered mutually exclusive. Ng et al. (2007), for example, used a combination of theories to develop a theoretical model of workaholism. They proposed that workaholism is the combined result of dispositional traits, socio-cultural experiences, and behavioural reinforcements. The current study takes a similar approach by including both personality and situational factors in a typology framework to distinguish different types of workaholics on a combination of variables.

Antecedents of Workaholism

Analyzing variables that are precursors of workaholism not only helps facilitate a better understanding of the construct but can aid in the targeted selection of factors to mitigate its development in the first place (Aziz & Moyer, 2019). Over the past few decades, much research has focused on understanding the antecedents of workaholism which can be organized broadly into two classes: dispositional or personal antecedents and contextual or situational antecedents. An overview of the most commonly studied antecedents of workaholism is outlined below. While some scholars have examined the relationship between antecedents and a composite measure of workaholism, others have examined relationships with subdimensions of workaholism. Findings are not clear cut because, as indicated above, different workaholism measures include varying subcomponents. Further, inconsistent findings across studies may be due to varying sample characteristics or different scales used to measure the antecedents of interest.

Dispositional or Personal Antecedents

The Big Five. A commonly studied set of personality traits within the field of psychology is the Big Five which includes: Neuroticism, Conscientiousness, Extroversion, Openness and Agreeableness. As described by Costa and McCrae (1992), neuroticism is characterized by insecurity and poor emotional adjustment. Neurotic individuals experience psychological distress such as feelings of anxiousness and depression, and they tend to be tense, hostile and irritable. Conscientiousness is characterized by orderly, careful and self-disciplined behaviour, and conscientious individuals are well organized, diligent, competent and work hard for achievement. Extroversion is associated with sociable and energetic behaviours as extroverts draw their energy from interactions with others. Extroverts typically seek excitement, are active, and tend to experience positive emotions and enthusiasm when in the company of others. Openness to experience is characterized by a willingness to be open-minded to new ideas and welcoming of change, and those who are high in openness are typically intellectually curious, imaginative and behave flexibly. Lastly, agreeableness is characterized by easy-going and friendly behaviour with a prosocial orientation. Individuals who are high in agreeableness are trusting and forgiving of others, sympathetic toward others, and are helpful and cooperative.

A review of the extant literature examining the relationship between the Big Five traits and workaholism suggests that some relationships are more consistent than others though the strength and direction of their relationship with subdimensions of workaholism vary. For example, Andreassen, Hetland, and Pallesen (2010) reported that neuroticism correlated with all three subdimensions of the WorkBAT. Notably, the

authors found that neuroticism was positively associated with Work Involvement and Work Drive but negatively associated with Work Enjoyment in their Norwegian sample of cross-occupational employees. Burke, Matthiesen, and Pallesen (2006a), on the other hand, found neuroticism was only significantly associated with Work Drive for healthcare employees, and Aziz and Tronzo (2011) found neuroticism was only significantly associated only with Work Enjoyment in an American cross-occupational sample. Using the DUWAS, Schaufeli (2016) and Spurk et al. (2016) both found neuroticism positively predicted workaholism as measured by the Working Excessively and Working Compulsively in academic samples from universities in Germany and India, respectively, while Sharma and Sharma (2011) found neuroticism negatively predicted workaholism as measured by these exact same two subdimensions.

The relationship between conscientiousness and workaholism is also unclear. Conscientiousness shares characteristics with workaholic tendencies, such as persistence and achievement-orientation (Clark et al., 2014). Andreassen, Hetland and Pallesen (2009) reported a positive relationship between conscientiousness and WorkBAT components using a sample of Norwegian employees in six different organizations. Both Schaufeli (2016) and Sharma and Sharma (2011) reported conscientiousness is negatively associated with Working Excessively while other studies have offered no support for this relationship (e.g., Mazzetti et al., 2014; Spurk et al., 2016). Similarly, conscientiousness has shown a positive relationship with Work Enjoyment in some studies (e.g., Hameed et al., 2013; Jackson et al., 2016) but not in others (e.g., Burke, Matthiesen & Pallesen, 2006b), and has also been positively linked to Work Drive in some studies (e.g., Jackson

et al., 2016; Khalidi et al., 2016) but not in others (e.g., Hameed et al., 2013; Burke, Matthiesen, & Pallesen, 2006b).

Though findings are mixed, the remaining Big Five traits (extroversion, openness, and agreeableness) tend to be unrelated to workaholism. For example, Sharma and Sharma (2011) found that none of these traits predicted Working Excessively nor Working Compulsively, while a meta-analysis including 89 studies reported extroversion was the only Big Five trait significantly related to workaholism (Clark et al., 2014). A noteworthy study conducted by Jackson et al. (2016) also highlighted inconsistent findings in their two-part investigation assessing personality traits and workaholism dimensions. Study 1 comprised full-time workers in various occupations from Australia and Study 2 comprised managers from the United States. Both samples were given measures of NEO personality, Eysenck personality, and behavioural activation/inhibition. In Study 1, neuroticism, agreeableness, conscientiousness and psychoticism significantly predicted Work Drive while neuroticism and extroversion significantly predicted Work Enjoyment. In Study 2, neither the NEO traits nor psychoticism predicted either subdimension of workaholism. The authors concluded that personality may be less related to workaholism for managers compared to non-managerial employees, and provided further evidence that the relationship between Big Five personality traits and workaholism can vary across samples of employees.

Perfectionism. Perfectionism has been considered a predictor of workaholism since the earliest conceptualizations of the construct. Perfectionists are described as having high standards for themselves and a high preference for order (Slaney et al., 2001). Past research has distinguished between *adaptive perfectionism* (i.e., having high

personal standards while setting reasonable task objectives) and *maladaptive perfectionism* (i.e., setting unrealistic standards and being overly fixated with failures and mistakes; Grzegorek et al., 2004); however, workaholism tends to be related to the latter (Tziner & Tanami, 2013).

Spence and Robbins (1992) were one of the first to empirically assess the relationship between perfectionism and workaholism. They found that perfectionism correlated with all three WorkBAT subdimensions but most strongly with the cognitive dimension in separate samples of men and women, showing stability of their findings across gender. Since then, others have confirmed a strong relationship between perfectionism and Work Drive (e.g., Clark et al., 2020; Kanai & Wakabayashi, 2001; Serrano-Fernadez et al., 2016) which may be explained by perfectionists' drive for achievement (Booket et al., 2018) and inability to delegate tasks to others (Aziz & Tronzo, 2011; Mazzetti et al., 2014; Scott et al., 1997).

Taris, van Beek, and Schaufeli (2010) distinguished between perfectionism related to *personal standards* and perfectionism related to *concern over mistakes*. The authors found that both dimensions correlated with workaholism in a sample of managerial retail workers, however, of the two, concern over mistakes was the stronger predictor of workaholic tendencies. These findings were supported in a recent study by Clark, Smith and Haynes (2020) as the authors reported strong correlations between the personal standards and concern over mistakes dimensions of perfectionism with workaholism as measured by the Multidimensional Workaholism Scale (MSW), WART, DUWAS, and WorkBAT. Personal standards and concern over mistakes constitute the core of the traditional conceptualization of perfectionism and map onto characterizations

of self-oriented perfectionism and socially-prescribed perfectionism, respectively (Hewitt & Flett, 1991). Self-oriented perfectionism is characterized as the inclination to set extremely high standards for oneself because striving for perfection is internally deemed important, while on the other hand, socially-prescribed perfectionism is characterized by unrealistically high standards imposed on oneself by others and the belief that acceptance from others is conditional on meeting or exceeding such high standards.

Stoeber, Davis and Townley (2013) empirically distinguished between Hewitt and Flett's self-oriented and socially-prescribed perfectionism in relation to workaholism. Self-oriented perfectionism was found to positively predict workaholism in their sample of cross-occupational employees. This finding has been supported across managerial samples (e.g., Girardi et al., 2015; Girardi et al., 2018) and non-managerial samples (e.g., Falco et al., 2014). On the other hand, socially-prescribed perfectionism appears to only predict workaholism in managerial samples (e.g., Girardi et al., 2018) likely since managerial roles involve greater responsibility, demands and pressure compared to non-managerial roles.

Other scholars have taken a unidimensional approach to understanding perfectionism. Booket, Dehghan and Alizadeh (2018) reported a significant positive relationship between general perfectionism and workaholism among a sample of university academics. Further, Mazzetti et al., (2014) examined the interaction between dispositional and contextual antecedents of workaholism in a cross-occupational sample and found that in work environments characterized by an overwork climate, workaholism is higher for employees who are perfectionists.

Type A Personality. Type A personality has been characterized by ambition, impatience, aggressiveness and achievement striving (Al-Mashaan, 2003). Robinson and Kelley (1998) asserted that those with Type A personality and those who are work addicts share similar characteristics by their hard-driving, urgent and impatient approach to life. Other scholars such as Ng et al. (2007) have suggested that Type A personality can predispose individuals to workaholism, especially when under stressful job demands that result in constant thoughts about work and increased pressure to work hard.

Robinson (1997) found that individuals who are at an elevated risk for work addiction scored significantly higher on Type A behaviours compared to those who are at low or average risk for work addiction. A later study conducted by Erden and colleagues (2013) found that perceived job demands fully mediated the relationship between Type A personality and workaholism in a sample of service industry workers. The authors concluded that individuals high in Type A personality have a sense of urgency to complete their tasks within a short time frame due to their high-achieving tendencies and impatience and this may, in turn, create the illusion of greater job demands. Meta-analyses conducted by Zhdanova et al. (2006) and Clark et al. (2014) also provided support for the positive relationship between workaholism and achievement-oriented traits including Type A personality.

Motivation. Workaholics are known to be highly driven individuals; however, the relationship between workaholism and specific types of motivation seems to vary across the literature. Ng and colleagues (2007) suggested that achievement-oriented traits predispose individuals to work addiction, especially if their work involves goals that are personally important. Achievement-oriented motivation has been defined as the need to

establish difficult objectives and accomplish ambitious goals that require overcoming obstacles (McClelland & Winter, 1969). Achievement-oriented individuals like to compete and surpass others by driving themselves hard and wish to obtain recognition and rewards for their efforts. Liang and Chu (2009) posited that employees who are driven by achievement spend a great deal of time and energy on their work, constantly think about work, and work beyond employer requirements or financial gains, which is a similar description to that of a workaholic. Mazzetti et al. (2014) supported this notion as they found achievement motivation to be a strong predictor of workaholism in a sample of Dutch employees from mixed occupations. They also found that achievement motivation moderated the relationship between overwork climate and workaholism such that higher levels of workaholism were present when employees were motivated by achievement and perceived an overwork climate in their workplace.

van Beek and colleagues (2014) distinguished two types of motivation in relation to workaholism: prevention-focused and promotion-focused. Promotion-focused individuals seek to satisfy the need for personal or professional growth and development and are likely to engage in behaviours that align with their desired goals. In contrast, prevention-focused individuals seek to satisfy the need for security. These individuals are inclined to avoid behaviour that is discrepant from their desired goals. The authors found that workaholism is positively associated with both types of motivation, though more strongly associated with prevention-focused motivation, and nonetheless suggests that workaholic employees can be motivated for different reasons. For example, while some employees are motivated to avoid distress, penalization or job loss, other workaholics are motivated to achieve personal goals, praise or promotions.

The Self-Determination Theory (SDT) of motivation has also been examined in relation to workaholism. SDT, developed by Deci and Ryan (1980), postulates that there are two general types of motivated behavior: self-determined and nonself-determined. The SDT model contains three types of self-determined regulations (intrinsic, integrated, and identified) which stem from an internal locus of causality and two nonself-determined regulations (introjected and external) which stem from an external locus of causality. Self-determined behaviours are intrinsically motivated and autonomous while nonself-determined regulations are extrinsically motivated and controlled (Ryan & Deci, 2000). Individuals are intrinsically motivated when they find value or inherent satisfaction in the behaviour (i.e., the outcome is not separate from the behaviour itself), while on the other hand, individuals are extrinsically motivated if the behaviour is based on compliance with rewards and punishments (i.e., the outcome is separate from the behaviour itself). Thus, it is assumed that some workaholics are motivated because they find value in their work or find the tasks at hand fascinating, while other workaholics work excessively and compulsively to be acknowledged by others, benefit financially, or to avoid feelings of guilt, shame or anxiety. While autonomous motivation is linked to freedom and enjoyment, controlled motivation is linked to feelings of pressure and conflict (Deci & Ryan, 2000).

Van den Brock et al. (2011) examined the relationship between SDT and workaholism. The authors found that controlled motivation positively predicted both Working Excessively and Working Compulsively subdimensions of the DUWAS measure of workaholism, but was more strongly associated with the latter. Autonomous motivation, in contrast, only positively predicted Working Excessively. Further, van Beek

et al. (2011) reported that workaholism is positively linked to identified, introjected and external regulation, and negatively linked to intrinsic regulation, suggesting that both autonomous and controlled motivation can predispose workaholic behaviours. Other scholars, such as Stoeber et al. (2013), have also found evidence to support that both autonomous and controlled motivation are linked to workaholism.

Self-Esteem and Self-Efficacy. In their theoretical model, Ng et al. (2007) proposed that self-esteem, the extent to which one feels self-worth, is one of the most important dispositional influences of workaholism. Robinson and Kelley (1998) posited that individuals with low self-esteem are more likely to engage in addictive behaviours, which could suggest a predisposition of low self-esteem on workaholic tendencies. A later study by Graves et al. (2012) also suggested that individuals with low self-esteem put in extra time and effort to avoid ego deficits whereas those with high self-esteem already perceive themselves as having high self-worth. However, empirical findings are, once again, mixed. Burke (2004), for instance, found self-esteem was negatively related to workaholism, Graves et al. (2012) reported a positive relationship between self-esteem and workaholism, and both Clark et al. (2014) and An et al. (2020) found that self-esteem was not significantly related to workaholism.

Ng et al. (2007) also suggested self-efficacy, the extent to which one feels confident in their abilities, should be considered as an important antecedent of workaholism. The authors proposed that individuals with higher levels of self-efficacy in work activities compared to non-work activities are more likely to become workaholics. Such individuals may feel that they are more successful in their work than they are with non-work responsibilities and thus may devote more time to work at the exclusion of

other life responsibilities. Andreassen (2014) also suggested that when positive self-efficacy at work is better than in settings outside of work, this can drive a person to prioritize work tasks. However, the relationship between workaholism and self-efficacy is unclear. Some studies have indicated that higher levels of self-efficacy predicted workaholism (e.g., Burke at al., 2006; Del Libano et al., 2012; Serrano-Fernandez et al., 2016) while others did not find a significant relationship between these two variables (e.g., Falvo et al., 2013). Scholars have acknowledged that inconsistent findings may be related to the different measures used that assess general and specific forms of self-efficacy, however, it could also be the case that other variables play a role in this relationship. Mazzetti et al. (2014), for instance, found that self-efficacy did not predict workaholism alone but significantly interacted with work environment. Specifically, they found that a high overwork climate can promote workaholism especially for employees with high self-efficacy.

Contextual or Situational Antecedents

Job Demands and Job Resources. Contextual variables have often been grouped based on the job demands-resources model (Bakker & Demerouti, 2007). Job demands are described as "the physical, psychological, social or organizational characteristics of the job that require sustained exertion of effort, whereas job resources are the physical, psychological, social or organizational aspects of the job that stimulate personal growth" (Clark et al., 2014, p. 1846). Job demands, for example, include work overload and role ambiguity whereas job resources include job control and supervisor support, and both impact an organization's culture and climate. A review of the literature suggests that of the two, job demands is the stronger and more consistent antecedent of workaholism.

Scholars generally agree that increased workload is significantly associated with higher levels of workaholism (Converso et al., 2019; Girardi et al., 2018; Molino et al., 2016). Recent research has also shown that work intensity predicts increased levels of workaholism (Engelbrecht et al., 2019) as does job demands such as illegitimate tasks, interpersonal conflict, and role conflict (Langseth-Eide, 2019; Torp et al., 2018). Further, Clark et al. (2014) concluded that both role overload and role conflict were positively associated with workaholism, and Balducci and colleagues (2016) found evidence to suggest that there are long-term effects on workaholism when enduring high job demands (e.g., constantly working under time pressures or constantly having heavy workloads).

Job resources, on the other hand, are less well understood. Though there tends to be a negative association between job resources and workaholism, the relationships are often either statistically weak or non-significant. Spurk, Hirschi and Kauffeld (2016), for example, indicated that organizational support was negatively associated with workaholism beyond demographic characteristics and personality traits. Likewise, recent work by Langseth-Eide (2019) reported negative associations between workaholism and job resources such as social community and goal clarity. In contrast, Midje et al. (2014) found general work demands predicted workaholism but that workaholism was not significantly associated with job resources such as job control, social support, opportunity to use one's strengths, meaningful work, or role clarity. Further, co-worker cohesion and supervisor support have shown to be unrelated to the Work Drive subdimension of the WorkBAT though are positively related to Work Enjoyment (e.g., Johnstone & Johnston, 2005).

Taken together, these findings align with scholars' speculations that workaholism results from demanding work environments and that workaholics are attracted to organizations that support and encourage pressured work behaviours (e.g., Johnstone & Johnson, 2005; Snir & Harpaz, 2012). The findings also align with the notion that workaholics make their work more difficult and complicated than necessary by choosing to take on more roles and responsibilities (e.g., Schaufeli et al., 2009b). Further, these findings substantiate claims such that resources, or socially supportive work environments, are important in reducing workaholism (Andreassen et al., 2018), but may have no effect if the resources provided by the organization are insufficient to deal with demands.

Job Insecurity. The relationship between job insecurity and workaholism has been studied to a much lesser extent compared to other antecedents and is therefore less understood. Job insecurity refers to one's everyday concerns about job loss (Sverke & Hellgren, 2002) and career insecurity is an individual's expectation of insecure career development which includes thoughts regarding achievements of mid- to long-term career goals (Spurk et al., 2016). While scholars have conceptualized workaholism as a result of personality or an inner drive independent of pressure from external sources (e.g., Aziz et al., 2013; Liang & Chu, 2009), others suggested that workaholic tendencies are established from external factors such as career threats or financial strains (Oates, 1971). Workaholic tendencies such as working excessively and compulsively may be an important means for coping with career stressors and may act as a motivator or strategy for achieving personal career goals and progress (Douglas & Morris, 2006). When employees constantly worry about job loss or loss of aspects that negatively affect their

job, they may engage in workaholic behaviours to compensate for their feelings of anxiety while simultaneously showing their competency and abilities in their work (An et al., 2020). Job-related uncertainty and perceived economic insecurity may encourage employees to invest more time and effort into their work (Matuska, 2010) and this may be especially typical for those with dispositions that predispose workaholic traits (Mazzetti et al., 2014).

A review of the literature shows support for the relationship between insecurity and workaholism. In a study using a diverse sample of German scientists, Spurk and colleagues (2016) found that career insecurity was positively associated with workaholism and significantly explained a sizable proportion of variance in workaholism beyond employees' demographic characteristics and personality traits (i.e., extroversion, neuroticism and conscientiousness). This finding was later supported by Shin and Shin (2020) in their sample of hotel workers. Likewise, Boatemaa et al. (2019) reported a positive correlation between job insecurity and workaholism in their study using a sample of information technology workers from Ghana. On the other hand, Molino, Bakker and Ghislieri (2016) found that job security did not directly predict workaholism in a sample of mixed-occupation employees, however, workaholism was higher when individuals with low job security perceived a high workload.

Outcomes of Workaholism

Much research has been dedicated to understanding the outcomes of workaholism, and since the early work in this field, scholars tend to agree that workaholism is associated with a host of negative consequences (e.g., Andreassen, 2014; Levy, 2016). However, a review of the literature shows that while workaholism is

consistently related to some outcomes, other relationships vary. Summarized below are commonly studied outcomes of workaholism which can be organized broadly into two classes: personal outcomes and organizational outcomes. Similar to findings regarding antecedents, findings are not clear cut. Inconsistencies across studies can likely be attributed to different measures used or varying sample characteristics.

Personal Outcomes

Mental Health and Well-Being. For some time now, it has been acknowledged that workaholism is related to impairments in health and well-being (e.g., Andreassen et al., 2011; Clark et al., 2014; Falco et al., 2014; Gugliellmi et al., 2012; Wojdylo et al., 2014). However, there are some inconsistencies across studies, particularly in terms of the relationships with certain workaholism scale subdimensions. Gonclaves et al. (2016), for instance, reported that Work Involvement predicted lower levels of psychological well-being in a sample of Portuguese mixed-occupation employees, whereas Work Drive and Work Enjoyment were not significant predictors. Haar and Roche (2013), on the other hand, found that Work Involvement and Work Drive positively predicted anxiety while only Work Involvement predicted depression. In their study, Work Enjoyment negatively predicted both anxiety and depression.

Ariapooran (2019) reported that neither Working Excessively nor Working Compulsively predicted depression in their sample of Iranian nurses; however, Matsudaira et al. (2013) reported Japanese employees from various occupations who scored average or high on workaholism had significantly higher odds for depressive episodes compared to employees who scored low on workaholism. Further, Nie and Sun

(2016) found that workaholism directly predicted depression and indirectly predicted depression through burnout in their sample of Chinese professors.

Other research studies have shown indirect relationships between workaholism and well-being outcomes, suggesting that more complex models are needed to better understand this phenomenon. For example, studies have shown that workaholism can indirectly impair employee well-being through increased levels of work-family conflict (Karapinar et al., 2019) and exhaustion (Converso et al., 2019). Moreover, longitudinal work in this field suggests that workaholism is related to long-term increased psychological distress seven months (Shimazu et al., 2012), one year (Balducci et al., 2018) and two years later (Shimazu et al., 2015).

Stress and Burnout. While workaholism appears to be a consistent predictor of stress, the findings regarding burnout are inconsistent. Previous research has linked workaholism to increased levels of self-reported stress (e.g., Caesens et al., 2014) even after controlling for demographic characteristics such as age and gender, and organizational characteristics such as organizational level and size (Burke et al., 2003; Levy, 2016). Of the different workaholism subdimensions, stress seems to be most strongly associated with the cognitive aspect, Work Drive (e.g., Burke et al., 2003; Kilroy, 2008; Levy, 2016; Spence & Robbins, 1992). Further, the association between workaholism subdimensions and high stress has been documented for both men and women (Aziz & Cunningham, 2008; Spence and Robbins, 1992). A recent noteworthy study conducted by Girardi and colleagues (2019) reported a positive association between workaholism and proinflammatory cytokines (IL-17), a biomarker of psychosocial stress, after controlling for demographic characteristics and Body Mass Index (BMI). This study

not only aligned with findings using self-report measures of stress but was one of the first to shed light on the psychosomatic mechanisms that possibly explain the relationship between workaholism and longer-term health consequences.

The relationship between workaholism and burnout has been studied extensively. Early conceptualizations of workaholism and its consequences speculated that persistent time and effort put into work was linked to fatigue (e.g., Oates, 1971). Empirical evidence suggests a direct link between workaholism and burnout (e.g., Engelbrecht et al., 2019; Nonnis et al., 2018; Nie & Sun, 2016) and an indirect effect on burnout, for example, through increased job demands (Guglielmi et al., 2012) or work-family conflict (Converso et al., 2019). Clark and colleagues (2014) concluded that workaholism is positively related to general burnout as well as subdimensions including emotional exhaustion, cynicism and depersonalization. These findings have been supported by others (e.g., van den Broeck et al., 2011) and can be expected given that workaholics find it difficult to detach from their work mentally and physically and therefore leave little opportunity for rest and recovery (Converso et al., 2019; Ng et al., 2007). Further, Andreassen and colleagues (2007) found workaholism explained a larger proportion (approximately double) of variance accounted for in job burnout than it did for job stress. Though longitudinal research in this area is limited, there is some evidence that suggests Working Compulsively can predict higher levels of exhaustion six months later, but Working Excessively does not (van Wijhe et al., 2014). Further, workaholics who perceive high supervisor support have reported lower levels of emotional exhaustion (Sandarin et al., 2019) which suggests that social support may protect against harmful consequences of workaholism.

Physical Health. Workaholics not only devote much of their time to work, giving themselves little time for rest and recovery, they also continue to work despite physical ailments (Porter, 2006). Workaholism has been linked to somatic health complaints across diverse samples including academics (Bartczack & Oginska-Bulik, 2012), healthcare workers (Kubota et al., 2011), bank employees (Andreassen et al., 2007) and entrepreneurs (Burke et al., 2004b). Meta-analyses have also concluded that workaholism was related to poorer overall physical health (Clark et al., 2014; Sparks et al., 1997).

According to Levy (2016), workaholics' common somatic complaints range from headaches, muscle pain, colds, allergies, nausea and gastrointestinal problems. The authors found that Work Enjoyment negatively predicted overall subjective health problems whereas Work Drive positively predicted health problems in their sample of American female MBA graduate students. Similarly, both Andreassen et al., 2007 and Burke et al., 2004 reported Work Drive significantly predicted more subjective health complaints whereas Work Enjoyment significantly predicted fewer subjective health complaints. These finding may suggest that Work Enjoyment is a suppressor operating between Work Drive and physical health. Interestingly however, Burke et al. (2006) found that none of the WorkBAT subdimensions had significant relationships with overall physical health in a sample of female managers, but Work Drive did account for a significant increment in explained variance of somatic symptoms and emotional exhaustion. Notably, Matsudaira et al. (2013) reported that employees who scored average or high on workaholism had significantly increased odds for disabling back pain compared to those who scored low on workaholism.

Work-Family Conflict. Workaholism appears to be a stable predictor of work-family conflict across the literature. Work-family conflict is described as conflict between work and family roles as a result of mutually incompatible role pressures in the two domains (Weer & Greenhaus, 2014). Robinson and Post (1995) indicated that workaholic tendencies are related to a greater likelihood of poor family functioning due to poor communication, ineffective problem solving, less affective involvement and unclear family roles. Andreassen (2014) explained this notion as a result of as workaholics neglecting their domestic roles due to excessive time and energy spent on work.

Research suggests workaholic tendencies have unintended consequences for their offspring. Robinson and Kelley (1998), for example, found that adult children of workaholics scored higher on depression and external locus of control compared to adult children of nonworkaholic parents. They also found that children of workaholic fathers displayed higher levels of anxiety. Similarly, Caroll and Robinson (2000) reported adult children of workaholics scored higher on depression as well as parentification whereby they offer mental and physical support to their parents instead of receiving these supports themselves.

A number of studies have shown evidence that workaholics experience greater work-family conflict (e.g., Del Libano et al., 2012; Russo & Waters, 2006; Shimazu et al., 2011; Tahir & Aziz, 2019). Specifically, Working Excessively appears to be a strong predictor. Workaholism has also been indirectly linked to increased family conflict through presenteeism (i.e., working despite feeling ill which justifies an absence; Mazzetti et al., 2019), and it has shown to mediate this relationship with work overload (Converso et al., 2019). Torp, Lysford and Midge (2018) found that academics

experienced higher levels of workaholism and work-family conflict compared to non-academic employees, and they reported that workaholism partially mediated the relationship between role overload and work-family conflict. Further, Clark et al. (2014) found that workaholism was positively associated with work-life conflict and marital dissatisfaction, and was negatively associated with overall family satisfaction and family functioning.

Interestingly, in a sample of Japanese dual earners, Shimazu and colleagues (2011) found that both men and women workaholics were more likely to report work-family conflict compared to nonworkaholics spouses. However, male partners of female workaholics were more likely to experience work-family conflict than were female partners of male workaholics. On the other hand, in a sample of American employees, both male and female partners of workaholics report marital estrangement and less positive attitudes towards their spouses (e.g., Robinson et al., 2001; Robinson et al., 2006). These findings suggest that cultural norms associated with gender roles may impact attitudes, behaviours or expectations towards the balance between work and domestic life.

Work-Life Balance. Work-life balance is a phenomenon that grew out of the work-family conflict literature and encompasses a broader view of non-work life beyond domestic roles. Greenhaus and colleagues (2003) defined work-life balance as the extent to which a person is equally engaged in and satisfied with their work and nonwork roles. Aziz et al. (2013) posited that work-life imbalance is a key component and a symptom of workaholism and they incorporated work-life balance as a dimension in their Work Addiction Questionnaire (WAQ). Similar to views about work-family conflict, an

underlying assumption is that one's excessive time commitment and over involvement in work results in strain or neglect of other important areas of life (Clark et al., 2014; Matuska, 2010). Keown (2007) noted that many self-identified workaholics reported dissatisfaction with their work-life balance and wished they could spend more time with family and friends, and Matsuka (2010) speculated that workaholics with a role-imbalanced life are more stressed and less happy.

Empirical investigations have linked workaholic tendencies to lower levels of work-life balance. Taris et al. (2005), for instance, found that workaholism predicted work-life imbalance indirectly through overtime work and perceived job demands. Further, participants who reported work-life conflict, assumed to be the absence of balance, were significantly more likely to endorse workaholic tendencies. Aziz and Zickar (2006) also found that workaholics reported high levels of work-life imbalance compared to nonworkaholics, however, in a later study by Aziz, Wuench and Brandon (2010), low levels of work-life balance were related to Work Drive but not related to Work Enjoyment.

Life Satisfaction. Workaholics find it difficult to disconnect from their work, and thus even when off the clock, they tend to be thinking about work. Workaholics have self-reported lower levels of general life satisfaction (e.g., Clark et al., 2014; Schaufeli et al., 2009b; Schaufeli et al., 2012). In a study using a sample of technology workers, Bonebright et al. (2000) found that high levels of Work Involvement and Work Drive correlated with lower levels of life satisfaction while high Work Enjoyment correlated with higher levels of life satisfaction. While these findings have been supported in later research (e.g., Andreassen et al., 2011), others have reported a significant relationship

between the Work Involvement and Enjoyment subdimensions only (e.g., Levy, 2016). Nonetheless, there is support that workaholism has implications for longer term life-satisfaction. In two employed Japanese samples, workaholism predicted lower life satisfaction one year (Shimazu et al., 2012) and two years later (Shimazu et al., 2015).

Clark and colleagues (2014) suspected that lower satisfaction occurs as workaholics feel a substantial amount of guilt and anxiety when they are not working, however, it could also be the case that workaholics are not particularly fulfilled by their work and since they spend more of their time working, these negative feelings spill over into how they feel about life in general. In addition to this, factors such as increased work-family conflict (e.g., Del Libano et al., 2012; Russo & Waters, 2006; Shimazu et al., 2011; Tahir & Aziz, 2019) work-life imbalance (Aziz & Zickar, 2006; Aziz et al., 2010) and the occurrence of mental and physical health issues (e.g., Clark et al., 2014; Levy, 2016) could also contribute to one's negative feelings toward life.

Job Satisfaction. While much work has been devoted to understanding the relationship between workaholism and job satisfaction, the relationship remains unclear. A recent study conducted by Dordoni et al. (2019) surveyed a sample of health care professionals and found that workaholism was negatively linked to job satisfaction. The authors reported that this relationship was sequentially and partially mediated by workload perceptions and emotional exhaustion. Interestingly, when they examined these relationships across different age groups, they found a direct positive relationship between workaholism and job satisfaction for individuals under the age of 35 and between the ages of 35-50 years old, but not for those over the age of 50. The authors noted that workaholism can prompt a "gain-spiral" in younger and middle-aged workers,

which is where employees perceive their heavy workloads as career development that will pay off and result in gains for their future. The "gain-spiral" functions as a job resource which promotes job satisfaction. As employees age and are nearing the end of their career they presumably have more skills and experience and, thus, they tend to view their heavy workload differently. Workaholism can also prompt a "loss-spiral" for all age groups, but younger workers are most vulnerable. A "loss-spiral" is where employees feel emotionally exhausted, depleted and fear potential loss of resources. The "loss-spiral" functions as a job demand and hinders job satisfaction.

Converso et al. (2019) reported weak negative correlations between job satisfaction and both Working Excessively and Working Compulsively in a sample of academics. They also reported that while Working Compulsively did not predict job satisfaction, Working Excessively indirectly predicted higher levels of satisfaction through work engagement. Other scholars have reported that workaholism, measured by Working Excessively and Working Compulsively, is related to lower levels of job satisfaction (Dijkhuizen et al., 2012; Del Libano et al., 2012; van Beek et al., 2014). Further, a meta-analysis by Clarke et al. (2014) concluded that workaholism was negatively related to job satisfaction across 89 studies though the effect was small.

There is consensus that positive work emotions such as Work Enjoyment are consistently and most strongly associated with job satisfaction (e.g., Andreassen et al., 2011; Burke, 2001; Burke & MacDermid, 1999; Burke, Matthiesen, & Pallesen, 2006b; Hogan et al., 2016; Levy, 2016), however, Work Involvement and Work Drive subdimensions of workaholism vary in the direction and significance of their association.

Organizational Outcomes

Work Performance. Empirical findings regarding the relationship between workaholism and work performance, though scarce, are also inconsistent. Past research has indicated a negative relationship between workaholic behaviours and job performance for employees in the banking (van Beek et al., 2011) and construction (Shimazu & Schaufeli, 2009) industries. Findings suggests that commitment to work, by putting excessive time and energy into one's work, does not necessarily pay off in terms of better job performance and could actually impair performance. Scott, Moore and Miceli (1997) noted that workaholics are not more productive than their nonworkaholics colleagues, however, they proposed that some types of workaholics may have better job performance than others. Though never empirically tested, the authors proposed that compulsive-dependent workaholics and perfectionistic workaholics have lower job performance than nonworkaholics, and that achievement-oriented workaholics have higher job performance than nonworkaholics.

A recent study conducted by Sandarin et al. (2019) indicated that workaholism did not directly affect work performance but indirectly predicted work performance through exhaustion. In their sample of volunteer firefighters, work performance had declined when workaholics were emotionally exhausted, and this relationship was stronger when the perception of supervisor recognition was low. Thus, the accumulation of emotional exhaustion and feeling unsupported by ones' supervisor was more impactful on job performance compared to workaholic behaviours alone. Shimazu, Shaufeli and Taris (2010) also reported an indirect relationship where workaholic behaviours predicted higher levels of job performance when participants engaged in active coping. Active

coping refers to attempts to come to terms with problems at work by analyzing the situation and finding solutions to overcome the problems (De Rijk et al.,1998).

Longitudinal studies have not found support for long-term effects of workaholism on job performance. In two studies conducted by Shimazu and colleagues, for instance, workaholic behaviours did not significantly predict job performance seven months (Shimazu, et al., 2012) or two years later (Shimazu et al., 2015). It should be noted that the limited work in this area tends to use a single item self-report assessment of overall performance. Scholars have warned that more objective measures or multidimensional measures of job performance are necessary as workaholics often set unreasonably high-performance standards for themselves and may have a skewed perception of their abilities and performance on tasks (Ng et al., 2007).

Turnover Intention. While far fewer studies have investigated employee turnover intention, findings of this work are mixed. van Beek et al. (2014), for instance, found that workaholism was related to higher turnover intention in their sample of Dutch banking employees, however, Del Libano et al. (2012) found that workaholism was not related to organizational commitment in their sample of administrative staff from a Spanish university. Burke (2001) found, using a sample of managers, that Work Enjoyment negatively predicted turnover intention while controlling for demographics, work characteristics and organizational values, however, both Work Involvement and Work Drive were unrelated to turnover intention. Similarly, in a sample of university academics, Converso et al. (2019) found that neither Working Excessively nor Working Compulsively directly predicted employees' intention to leave their organization but an indirect relationship between the two constructs was found through work engagement.

The authors reported that individuals who worked excessively were less likely to leave their job if they were engaged with their work. The findings suggest, firstly, that one's occupation or position likely plays a role in turnover intention, and secondly, the degree of work engagement influences whether a workaholic intends to leave their job.

Typologies of Workaholics

Since the early work in this field, scholars have acknowledged that different types of workaholics exist. Some researchers have theoretically proposed typologies but never tested them while others have empirically distinguished between profiles of workaholics on key variables (summarized in Table 3).

Table 3
Summary of Workaholic/Worker Typologies

Authors	Defining Dimensions	Workaholic/Worker Typologies	Empirically Tested
Oates (1971)	Not specified	1. Dyed-in-the-wool workaholic 2. Pseudo workaholic 3. Converted workaholic 4. Situational workaholic 5. Escapist posing as workaholic	No
Naughton (1987)	Commitment and obsession-compulsion	1. Job-involved workaholic 2. Compulsive workaholic 3. Compulsive nonworkaholic 4. Nonworkaholics	No
Fassel (1990)	Not specified	1. Compulsive worker 2. Binge worker 3. Closet worker 4. Anorexic worker	No
Spence & Robbins (1992)	Work involvement, work drive, and work enjoyment	1. Enthusiastic workaholic 2. Workaholic 3. Work enthusiast 4. Unengaged worker 5. Relaxed worker 6. Disenchanted worker	Yes

Scott et al. (1997)	Discretionary time spent at work, thinking about work when not at work, and working beyond organizational or economic requirements	1. Compulsive-dependent workaholic 2. Perfectionistic workaholic 3. Achievement-oriented workaholic	No
Robinson (2000)	Work initiation and work completion	1. Relentless workaholic 2. Bulimic workaholic 3. Attention-deficit workaholic 4. Savoring workaholic	No
Schaufeli et al. (2009b)	Working excessively and working compulsively	1. Workaholic 2. Hard worker 3. Compulsive worker 4. Nonworkaholic	Yes
van Beek et al. (2011)	Workaholism and work engagement	1. Engaged workaholic 2. Workaholic 3. Engaged employee 4. Nonworkaholic/NonEngaged	Yes
Malinowska & Tokarz (2013)	Workaholism, general satisfaction, satisfaction with life situation, and satisfaction with self-realization	1. Partially satisfied workaholic 2. Satisfied nonworkaholic 3. Dissatisfied workaholic	Yes
Guidetti et al. (2019)	Workaholism, work engagement, exhaustion, and job satisfaction	1. Engaged workaholic 2. Exhausted workaholic 3. Engaged-satisfied worker 4. Detached worker	Yes

Oates (1971) was the first to delineate different types of workaholics. He classified *Dyed-in-the-wool Workaholics* as perfectionists who take their work seriously, are overcommitted, and loathe incompetence in others. *Pseudo Workaholics,* on the other hand, superficially have the characteristics of the Dyed-in-the-wool type but their orientation toward advancement in an organization is one of power rather than

productivity. *Converted Workaholics* are those who are no longer workaholics and set limits on their working hours (e.g., work 9 a.m. to 5 p.m.) as a means to avoid additional work assignments and having to work overtime. *Situational Workaholics* are those who do not have a workaholic personality but manifest workaholic tendencies of working excessively and compulsively to achieve job security. Lastly, the *Escapists* are those who pose as workaholics and simply stay late on the job rather than go home because work is an escape from an unhappy home life. Oates' work has been criticized for identifying only one 'true' type of workaholic (i.e., Dyed-in-the-wool) while mislabeling other employee groups as workaholics (e.g., Robinson, 2000) which is misleading and perhaps creates confusion. He also did not specify defining dimensions in his attempt to classify workers. To date, these types of workers have not been empirically tested.

Naughton (1987) later proposed four types of workers based on two key dimensions of commitment and obsession-compulsion. *Job-involved Workaholics* are those who work long hours because they are satisfied with their job and prefer work activities over other alternatives. These individuals are low in obsession-compulsion but are highly committed to their jobs and are assumed to perform well in challenging and demanding roles. *Compulsive Workaholics*, in contrast, exert considerable time and energy in their work due to ritualized patterns of thoughts and behaviours. This type of workaholic is high in both commitment and obsession-compulsion and is thought of as potentially poor job performers. *Compulsive Nonworkaholics* are not committed to their job and compulsively spend their time and energy in nonwork-related activities while *Nonworkaholics* are low on both variables and work solely out of necessity. Naughton advised career counseling goals to target and treat the root cause of workaholism.

A few years later, Fassel (1990) distinguished between four types of workaholics: Compulsive Worker, Binge Worker, Closet Worker, and Anorexic Worker – names of which allude to disordered behaviours. The *Compulsive Worker* is the 'stereotypical' workaholic and is driven to work all the time. The *Binge Worker*, on the other hand, will work compulsively for days on end and then take long breaks from work rather than display consistent workaholic behaviours. The *Closet Worker* keeps their work hidden from others but will pull it out when alone in an attempt to not be discovered by others. And lastly, the *Anorexic Worker* is a nonworkaholic who is characterized as being obsessed with avoiding their work responsibilities. Like Oates, Fassel did not specify defining dimensions in the attempt to classify workers, and these proposed typologies were never empirically tested. They do, however, align with some conceptualizations of workaholic typologies in later work (e.g., Robinson, 2000).

Scott, Moore and Miceli (1997) proposed three categories of workaholics based on underlying personality traits and based on the following elements: discretionary time spent in work activities, thinking about work when not at work, and working beyond organizational or economic requirements. The *Compulsive-Dependent Workaholics* are those who work longer than they originally intended because they find it difficult to disconnect, are unable to reduce or control their excessive work even though they recognize it as a problem, and they continue to work despite negative impact on health and relationships. These individuals may exhibit some behaviours suggestive of obsessive-compulsive disorder and may experience consequences such as stress, pessimism, anxiety, low self-esteem, life dissatisfaction and poor job performance. In contrast, *Perfectionistic Workaholics* are those who have a strong need to be in control of

their work, leading to inflexibility, rigidity and behaviours aimed at gaining control. Perfectionist Workaholics have a preoccupation with details, rules and lists – to a fault. Especially in organizations where there are inadequate opportunities to gain control, those who are perfectionists may experience hostile interpersonal relationships with colleagues; they are less effective at delegating tasks to others because they feel their own work is of superior quality; and may experience poorer job performance. Lastly, *Achievement-Oriented Workaholics* are those who desire upward mobility and have a strong need for achievement. These individuals strive for success, recognition, dominance, leadership and money, and may display Type A behaviour patterns such as competitiveness, aggression and impatience. Achievement-oriented workaholics may experience higher levels of job performance and greater organizational commitment but have poorer relationships with colleagues. Unfortunately, Scott and colleagues' typology model has not been empirically tested.

Robinson's (2000) critique of previous classifications of misleading work styles labeled as 'workaholics' led to a new development. He presented a paradigm based on level of work initiation and level of work completion. Combining dichotomous dimensions yielded four types of workaholics: Relentless Workaholics, Bulimic Workaholics, Attention-Deficit Workaholics, and Savoring Workaholics. The *Relentless Workaholics*, characterized as the stereotypical workaholic, are those who work compulsively day and night, including weekends and holidays. These individuals are highly productive, overcommitted, perfectionistic, and feel work is more important than their relationships. This group of workers resembles descriptions of Oates' Dyed-in-the-wool Workaholic and Fassel's Compulsive Worker. The *Bulimic Workaholics* are those

who have out of control work patterns characterized by procrastination and frantic working patterns. These individuals tend to over-commit to tasks, wait until approaching deadlines to begin the work, and then work frantically to get the job done. Bulimic workers go through extended periods where they do not put in many hours of work, however, while they outwardly engage in behaviours that distract them from the task at hand, they internally obsess about the work that needs to get done. This group's characterization resembles a combination of Fassel's Binge and Anorexic workaholics. The *Attention-Deficit Workaholics* are those who are constantly seeking stimulation because they get bored easily. These individuals are likely to initiate many projects because they have a desire for something new and exciting but tend to leave projects unfinished and will move on to their next big idea before completing the task at hand. Finally, *Savoring Workaholics* are those who, in contrast to the Attention-Deficit group, are slow, deliberate and methodical. Individuals in this group have trouble discerning whether a project is incomplete or finished because they deep down fear that the finished project is never good enough. They also have trouble working in teams because when others are ready to move on from the task at hand, they tend to hold the group back by over-analyzing, taking ideas apart and thinking them through from every angle. Though the term perfectionist was not used in the description of this workaholic typology, many perfectionists also take longer on projects or have trouble completing projects due to over-analyzing their work or fear that they are missing something. While Robinson's work has merit and offers suggestions for counsellors, this model has not been empirically tested.

Spence and Robbins (1992) were the first to propose an empirical-based classification of worker profiles and their work has been replicated in many subsequent studies. Their self-report scale as described above, the WorkBAT, is used to identify profiles of workers based on a combination of three dimensions known as the workaholism triad: Work Involvement, Work Drive, and Work Enjoyment. Work Involvement assesses time spent at work and attitudes toward time-use. An individual who is highly involved in work devotes themselves wholeheartedly to productive projects and prefers to make constructive use of time. Work Drive corresponds with feeling compelled to work not because of external demands or pleasure in work, but due to inner pressures. This dimension is associated with the addictive aspects of compulsive work or compulsive thoughts about work. Lastly, Work Enjoyment corresponds to feelings associated with work-related activities. An individual who is high in work enjoyment does more than what is reasonably expected simply because they enjoy it.

These three dimensions are considered to be highly independent of one another. Using cluster analysis in independent samples of men and women social workers, Spence and Robbins (1992) identified six conceptually distinct profiles of workers (summarized in Table 4) which have since been identified in diverse occupational and national samples (e.g., Aziz et al., 2010; Buelens & Poelmans, 2004; Burke & Mathiesen, 2004; Haar & Roche, 2013; Yilmaz, 2014).

Table 4

Worker Profiles of Spence and Robbins' Workaholism Triad

	Workaholism Triad Dimensions		
Worker Profile	Work Involvement	Work Drive	Work Enjoyment
Enthusiastic Workaholics	High	High	High
Workaholics	High	High	Low
Work Enthusiasts	High	Low	High
Unengaged Workers	Low	Low	Low

Relaxed Workers	Low	Low	High
Disenchanted Workers	Low	High	Low

Spence and Robbins' approach distinguished between two workaholic groups, named *Enthusiastic Workaholics* and *Workaholics*, in contrast to four groups of nonworkaholics. Both workaholic groups score above the mean in Work Involvement and Work Drive but differ in their level of Work Enjoyment. Enthusiastic Workaholics enjoy their work whereas their non-enthusiastic counterparts do not derive pleasure from work. Both of these workaholic subtypes appear to be highly prevalent across occupations with an aggregate prevalence ranging from 36% to 50% of workaholics in samples of psychologists (Burke et al., 2004a), information technology employees (Bonebright et al., 2000), journalists (Burke & Mattheisen, 2004), mixed-occupation professionals (Aziz et al., 2010) and academics (Hogan et al., 2016).

It should be noted that some scholars have applied slightly different labels to refer to Spence and Robbins' typologies. For example, Aziz and Zickar (2006) refer to the Enthusiastic Workaholics as *Positively Engaged Workaholics* and Bonebright et al. (2000) refer to Workaholics as *NonEnthusiastic Workaholics*. Moreover, other scholars have characterized groups of workaholics using a revised version of the WorkBAT and have applied the same labels to characterize different types of workaholics despite missing items or subdimensions. For instance, even though the WorkBAT-R entirely excludes the Work Involvement subdimension, both Hogan et al. (2016) and Ontrup and Patrzek (2019) have labelled Enthusiastic Workaholics as those who score high in Work Drive and Work Enjoyment, and labelled Workaholics as those who score high in Work Drive and low in Work Enjoyment. The same labels applied to workaholics who are characterized differently, as well as different labels applied to workaholics who are

characterized by the same dimensions, leads to inconsistencies and confusion in the literature.

Similar to Spence and Robbin's approach, Schaufeli and colleagues (2009) identified four types of workers based on a combination of dichotomous dimensions from their two DUWAS subscales: Working Excessively and Working Compulsively. The four types of workers were named: Workaholics, Hard Workers, Compulsive Workers and Relaxed Workers. *Workaholics* are those who scored above the median in both domains and, in contrast, the *Relaxed Workers* scored below the median in both domains. The *Hard Workers* scored above the median in Working Excessively and below the median in Working Compulsively, whereas the opposite is true for *Compulsive Workers.* Many scholars have replicated these four profiles of workers, and the Workaholics group has ranged in prevalence from 16% to 41% across samples of Spanish healthcare workers (Salanova et al., 2016), Dutch medical residents (Schaufeli et al., 2009a), nurses in Japan (Kubota et al., 2011) and samples from mixed occupations (Kravina et al., 2010; Schaufeli et al., 2011). The four profiles have also been found when comparing employee self-reports and observer reports from one's partner (Falco et al., 2012). However, a criticism can be made that the DUWAS only identifies one group of workaholics that is distinguished from three other groups of nonworkaholic employees.

More recently, van Beek, Taris and Schaufeli (2011) empirically distinguished two types of workaholics by incorporating a measure of work engagement with the DUWAS measure of workaholism. A strength of this work is that it was one of the first to empirically incorporate a separate construct into the conceptualization of workaholic subtypes. Combining the dichotomous high/low scores on both work engagement and

workaholism scales yielded four types of workers: Engaged Workaholics, Workaholics, Engaged Employees, and Nonworkaholic/NonEngaged employees. Similar to the WorkBAT workaholic typologies, the two types of workaholics scored similarly on behavioural and cognitive dimensions with the difference among them in their feelings toward work, but in this case work engagement rather than work enjoyment. In their sample of cross-occupational employees, the two workaholic groups were comparable in size, with Workaholics being slightly more prevalent (25%) than Engaged Workaholics (22%). Schaufeli, Shimazu and Taris (2010) described work engagement as a positive fulfilling state of mind, and they suggested that the underlying motivation between engaged and nonengaged workaholics differ. Whereas Workaholics are propelled by an obsessive pressure they cannot resist and are pushed toward work, Engaged Workaholics are intrinsically motivated and are pulled toward work. Thus, the latter group is immersed because of the pleasure they get from the work itself. Their description of Engaged Workaholics shares similar conceptualizations with the Enthusiastic Workaholics identified by Spence and Robbins (1992), and the terms ‘engaged’ and ‘enthusiastic’ are often used interchangeably across the literature.

Malinowska and Tokarz (2013) incorporated three components of satisfaction to distinguish between functional and dysfunctional workaholic subtypes. The measures of satisfaction were related to self-realization, life situation and general satisfaction. A hierarchical cluster analysis revealed three clusters of workers: Partially Satisfied Workaholics, Satisfied Nonworkaholics, and Dissatisfied Workaholics. Using a sample of managers, they found the Dissatisfied Workaholic group to be most prevalent (44%) followed by the Satisfied Nonworkaholics (27%) and Partially Satisfied Workaholics

(22%). The two types of workaholics differed in their levels of satisfaction. *Partially Satisfied Workaholics*, for instance, scored high in satisfaction with self-realization and general satisfaction, but scored low in satisfaction with life situation, whereas *Dissatisfied Workaholics* scored low in all three types of satisfaction. A legitimate concern with this work is that the two workaholic groups also fundamentally differed in their workaholic tendencies. For example, the Partially Satisfied group scored high on the behavioural and affective dimensions of workaholism but low on the cognitive dimension, whereas the Dissatisfied Workaholic group scored high on the cognitive dimension of workaholism but scored low on both the behavioural and affective dimensions of workaholism. As discussed by many scholars, workaholics should be characterized by high scores on both cognitive and behavioural dimensions, therefore, assigning a label of 'workaholic' to a group that only possesses one of these characteristics may not be identifying 'true' workaholics.

Finally, a noteworthy recent study published by Guidetti, Viotti and Converso (2019) identified worker profiles by incorporating three subjective well-being scales with the DUWAS measure of workaholism: work engagement, job satisfaction and emotional exhaustion. Cluster analysis yielded four profiles of workers: Engaged Workaholics, Exhausted Workaholics, Engaged-Satisfied Workers, and Detached Workers. In their academic sample, the Engaged Workaholics (26%) were slightly more prevalent than the Exhausted Workaholics (21%). While both workaholic groups had similar scores on the Working Excessively and Working Compulsively subdimensions of workaholism, the *Exhausted Workaholics* scored higher on exhaustion and scored lower on work engagement and job satisfaction, whereas the *Engaged-Workaholics* scored higher on

work engagement and scored lower job satisfaction and exhaustion. This study adds much value to the workaholism literature by identifying an 'Exhausted' cluster that had not been previously proposed nor identified. Further, this study highlights the importance of including additional separate constructs when distinguishing workaholic subtypes to gain a deeper understanding of how these subgroups fundamentally differ from one another based on underlying characteristics or outcomes.

Taken together, these findings indicate that there is utility in identifying workaholic subtypes rather than using a single label of 'workaholic' to describe those highly involved and dedicated to their work. While the manifestation of workaholic thoughts and behaviours may appear to be the same on the surface, the underlying motivations for such thoughts and behaviours likely differ. In the empirical literature, many researchers have attempted to identify types of workers, however, the emphasis on empirically differentiating between workaholic subtypes has been limited. Most researchers differentiate between Enthusiastic or Engaged Workaholics from NonEnthusiastic or NonEngaged Workaholic, while limited empirical work has critically examined the existence of other subtypes based on varying antecedents and how they might differ on outcomes. Further, workaholic typologies have rarely been based on solid theoretical or empirical underpinnings (Andreassen, 2014; Ng et al., 2007). Most researchers adopt the worker typologies proposed by developing authors of the WorkBAT and DUWAS measures and use mean or median splits of workaholism subscales rather than looking for workaholic patterns or profiles based on a combination of additional variables, such as personal attributes or situational characteristics.

Comparisons of Workaholic Subtypes on Outcomes

Studies that empirically distinguished between types of workaholics and other employees tend to examine how the groups differ on personal and organizational-related outcomes. Many comparisons have been made between Enthusiastic or Engaged Workaholics with their NonEnthusiastic or NonEngaged counterparts as these two groups are the most often cited in the literature. There appears to be consensus that NonEnthusiastic/NonEngaged Workaholics are dysfunctional in nature and experience serious consequences as a result, while Enthusiastic/Engaged groups have more favorable outcomes. Enthusiastic/Engaged Workaholics, for example, have shown to have significantly higher levels of general well-being and emotional health (Burke et al., 2004; Hogan et al., 2016), job and career satisfaction (Burke & MacDermid, 1999; Hogan et al., 2016; Ontrup & Patrzek, 2019), and occupational self-efficacy (Ontrup & Patrzek, 2019). These types of workaholics also tended to report significantly lower levels of job stress (Burke, 1999; Spence & Robbins, 1992), physical health complaints (Burke, 2000c), and work-life imbalance (Aziz et al., 2010; Aziz & Zickar, 2006; Hogan et al., 2016) Many studies have pointed to the Heavy Work Investment (HWI) literature as an explanation for these findings (e.g., Converso, et al., 2019; DiStefano & Gaudino, 2018). The HWI literature posits that work engagement, a positive, fulfilling, work-related state of mind, serves as a protective factor that can buffer against negative consequences of excessive work, such as work-family conflict (Bakker et al., 2014). Work engagement, as described by HWI, consists of vigor (one's desire to devote time and effort to work) and dedication (one's perception that work is a significant and meaningful pursuit) which can explain these findings as those who are resilient, persistent, and take pride in challenge likely

have better outcomes than individuals who do not possess these characteristics. Enthusiastic/Engaged Workaholics can also be distinguished from Workaholics as they scored higher on measures of autonomous motivation (van Beek et al., 2011) and scored lower on perfectionism (Burke et al., 2004; Spence & Robbins,1992), which, as described above, are characteristics that tend to be related to more favourable outcomes.

Studies have shown that these two workaholic groups did not significantly differ on demographic variables such as age, gender, marital status, or education level (Buelens & Poelmans, 2004; Burke & Mathiesen, 2004). They also did not significantly differ on the number of hours worked (Malinowska & Tokarz, 2013; Ontrup & Patrzek, 2019), absenteeism (Burke & Matthiesen, 2004), obsessive-compulsive behaviour (Aziz et al., 2010), or work-family conflict (Russo & Waters, 2006). Inconsistent results have been shown for comparisons between these two workaholics groups on variables such as burnout (Burke & Matthiesen, 2004; van Beek et al., 2011) and life satisfaction (Aziz & Zickar, 2006; Bonebright et al., 2000; Ontrup & Patrzek, 2019). While some of these cited studies indicated Enthusiastic/Engaged Workaholics have lower levels of burnout and higher levels of life satisfaction, other studies have reported that two groups did not significantly differ on these outcomes.

In terms of the other empirically identified clusters of workaholics discussed previously, Guidetti and colleagues (2019) investigated the differences in work quality among an academic sample from an Italian university. Multivariate analysis of variance tests showed that Engaged and Exhausted Workaholics did not significantly differ from one another on research and public engagement, didactic work, and career development and competition. Malinowska and Tokarz (2013) did not compare their three subtypes of

workaholic on any outcome variables and instead used satisfaction measures as a means to describe their cluster profiles.

CHAPTER III
THE CURRENT STUDY

Rationale for the Current Study

Based on a review of the existing workaholism literature, it is evident that workaholism is highly prevalent amongst employees in various occupations and is a construct worth studying due to its link to negative outcomes. Different personal and environmental factors are known to fuel workaholic tendencies and scholars suggest there is utility in distinguishing between individuals who are highly involved and driven in their work rather than grouping them together under a single label of 'workaholic'. To date, many of the proposed workaholic typologies have not been empirically tested or validated, and the vast majority of studies that have taken an empirical approach tend to identify groups of workers with only one or two types of workaholics distinguished from groups of nonworkaholic employees. Further, with the exception of the few studies cited above, the method of identifying worker subtypes has predominantly used high or low cut off scores on the subdimensions of workaholism measures. As such, the development of workaholic typologies has been atheoretical or lacked empirical rigor and have often overlooked the combination of dispositional and contextual factors that could fundamentally differentiate workaholics from one another, which perpetuates a limited scope in understanding workaholic employees. This gap in the literature could explain the

inconsistent findings regarding the relationship between workaholism and the host of outcomes cited above.

The purpose of the current study was to further our empirical understanding of workaholic typologies by uncovering different subtypes of workaholics and comparing these groups on health and wellness variables. Similar to Schaufeli, Shimazu and Taris (2009) approach, the current study defined a workaholic as someone who works excessively hard and obsesses over work which manifests itself in working compulsively. This perspective assumes that workaholism is not only about devoting excessive time to work (behavioural), but must also involve constant thoughts about work (cognitive) as well.

Guided by aspects of social psychology theories as well as previous empirical work that has identified core dispositional and contextual antecedents of workaholism, the present work was the first to empirically distinguish a typology of workaholics based on a combination of work engagement, motivation, self-oriented perfectionism, and job insecurity. Comparisons were then made between the identified workaholic subtypes on health and wellness outcomes that have shown inconsistent relationships with workaholism across the literature to build on work that indicates some types of workaholics are more prone to negative outcomes than are others. Outcomes including anxiety, depression, physical health, stress, burnout, life satisfaction and job satisfaction were of particular interest.

Further, the current study was the first to examine employees' perception of work-life balance and organizational factors such as overwork climate, competitive climate and work pressure culture for a better understanding of whether these variables

contribute to different outcomes that workaholic subtypes experience. To build on the limited qualitative work in this area, the current study asked workaholics to provide explanations for feeling overworked and to report different barriers to their work which may be contributing to workaholic tendencies and poorer health and wellness outcomes.

Sample of Interest

The current study consisted of an academic sample recruited from universities across Ontario, Canada. The rationale for the selection of this sample was two-fold. First, since this study consisted exclusively of a workaholic sample, it was important to choose a sector, such as academia, where workaholism is highly prevalent. Guidetti et al. (2019), for example, reported workaholics comprised 48% of their sample (n = 871 academics) and Hogan et al. (2016) reported workaholics comprised 50% of their sample (n = 410 academics). Further, Bartczak and Oginska-Bulilk (2012) indicated 66% of their academic sample (n = 126 academics) were at moderate to high risk of workaholism.

Academic careers often involve working long hours, heavy workloads, and pressure for high performance and productivity at all stages of one's career. Spence and Robbins (1992) posited that academics are employed in a demanding profession where their duties and responsibilities are unrestricted by time and place, and the number of job-related activities they can take on is unlimited. Moreover, Misra et al. (2012) indicated that an overwork climate is typical within higher education institutions with expectations to juggle the demands of teaching, research, mentoring and service, and many professors have reported working more than 60 hours per week with substantial time spent working evenings and weekends. Competitiveness for research funding and publication pressures places additional strain on faculty members (Converso et al., 2019) and tenure-track and

nontenured academics may feel added pressure for good performance in their research and teaching to obtain career security. While the public perception is that academic work is relatively lower stress than other careers, university employees have reported psychological distress (Hogan et al., 2016), physical health complaints (Kinman & Jones, 2008), high levels of work-family conflict (Torp et al., 2018) and experiences of burnout (Lackritz, 2004).

Further, the selection of a sample exclusive to one sector was deliberately chosen to remove potential bias associated with varying job characteristics or demands in other sectors. Despite data collection from academics in multiple universities and from various disciplines, the nature of practices, roles and responsibilities within academia were expected to be fairly consistent in Ontario universities in terms of teaching, research, and service. This study is a first attempt in developing a workaholic typology of this type and the focus was placed on ensuring internal validity of results.

Research Questions and Outcome Expectations

RQ1: How many types of workaholics are there and how do their profiles differ?

At least four clusters of workaholics were expected to emerge when classifying individuals on a combination of workaholism, work engagement, motivation, perfectionism, and job insecurity variables. Each workaholic cluster was expected to score high on workaholism but differ on other defining traits or characteristics (summarized in Table 5).

Table 5

Proposed Typologies and Distinguishing Characteristics

Workaholic Typology	Distinguishing Characteristics
Engaged Workaholics	High levels of work engagement and self-determined motivation, low to average level of self-oriented perfectionism, and low level of job insecurity
Perfectionist Workaholics	High level of self-oriented perfectionism, average level of self-determined motivation and work engagement and low level of job insecurity
Situationally Insecure Workaholics	High levels of job insecurity and nonself-determined motivation, low levels of work engagement and self-oriented perfectionism
Stereotypical Workaholic	High level of nonself-determined motivation, average level of self-oriented perfectionism, low levels of work engagement and job insecurity

First, an *Engaged Workaholic* cluster was expected to emerge based on the abundance of research studies that have previously distinguished this group of workaholics from other employees (e.g., Aziz et al., 2010; Aziz & Zickar, 2006; van Beek et al., 2011). In the current study, the Engaged Workaholic profile was expected to differ from other workaholic subtypes based on their high levels of work engagement (e.g., Guidetti et al., 2019) and self-determined motivation (van Beek et al., 2011). They were also expected to be less perfectionistic than other clusters (Burke et al., 2004a; Spence & Robbins,1992) and their workaholic tendencies were not expected to manifest as a result of job insecurity. Rather than achievement-oriented personality traits and situational work-related factors that drive excessive and compulsive work behaviours, workaholic tendencies for this group were expected to result from the positive, fulfilling emotions that are associated with one's work, and internal motivation to engage in behaviours that they find personal value in or consider enjoyable. This group was

expected to be highly prevalent as other studies have reported Engaged Workaholics comprised more than 20% of the sample (e.g., 22% of workers from mixed occupations reported by van Beek et al., 2011 and 26% of academics reported by Guidetti et al., 2019).

A group of *Perfectionist Workaholics* were also expected to emerge in the sample. A few scholars have proposed a workaholic subtype characterized by perfectionistic traits (i.e., Dyed-in-the-Wool Workaholics, Oates, 1971; Perfectionistic Workaholics, Scott et al., 1997; and Relentless Workaholics, Robinson, 2000) but never empirically tested this notion. In the current study, Perfectionistic Workaholics were expected to differ from other subtypes due to high levels of self-oriented perfectionism, average levels of self-determined motivation and work engagement, and low levels of job insecurity. In this cluster, workaholic tendencies were expected to manifest as a result of one's perfectionistic personality with a strong desire for high standards; to be in control of their work; preoccupation with details, rules and lists; and an inability to delegate tasks to others. This cluster was expected to be sizable, though less prevalent than the Engaged Workaholic cluster.

A third expected cluster was the *Situationally Insecure Workaholics.* This cluster was assumed to be distinguished from other groups based on their high level of job insecurity, high level of nonself-determined motivation, and lower levels of perfectionism and work engagement. Like the Situational Workaholics proposed by Oates (1971), individuals in this group were not expected to have workaholic personality traits nor be driven to work long and hard because of engagement in their work. Instead, their workaholic tendencies were expected to manifest as a result of their work situation, and

in this case, their perceived job-related uncertainty and desire to obtain financial or career security. Working excessively and compulsively may be seen as a means to possibly achieve security (Burke, 2000a; Douglas & Morris, 2006) by showing others the value they bring to their office or the organization. This cluster was expected to be predominantly comprised of nontenured faculty and the size of this cluster would depend on the number of participants in the sample who hold nontenured teaching or research positions.

Lastly, a *Stereotypical Workaholic* group was expected to emerge. This group of workaholics was similarly described as Schaufeli and colleagues (2009) where individuals are overcommitted to their work, as evidenced by excessive time spent at work and compulsive thoughts about work. Like Spence and Robbins (1992) characterization of a 'true' workaholic, this group does not tend to exhibit enjoyment or engagement with their work. They are expected to work long hours due to pressure and conflict from their work demands (Deci & Ryan, 2000) and they may work hard to avoid feelings of guilt, shame, or anxiety (van den Brock et al., 2011). In the current study, this workaholic cluster was expected to score low in work engagement and high in nonself-determined motivation. Individuals were expected to have an average level of self-oriented perfectionism where they score lower than Perfectionistic Workaholics but higher than the Engaged Workaholics (Burke et al., 2004a; Spence & Robbins,1992). The Stereotypical Workaholics differ from the Situational Workaholics in that although both groups may feel external work pressures, the former have more job security within the organization. It was assumed that this group would be prevalent within the current sample and of comparable size to that of the Engaged Workaholics. Previous studies have

reported a range in prevalence of NonEngaged Workaholics, with a higher prevalence in samples of employees in white-collar professions (e.g., 30% in sample of hospital workers, Salanova et al., 2016).

RQ2: How do workaholic subtypes differ on health and wellness variables?

Past literature has firmly established that Enthusiastic/Engaged Workaholics have more favourable outcomes compared to their NonEnthusiastic/NonEngaged counterparts. Enthusiastic/Engaged Workaholics, for instance, have tended to report significantly higher levels of well-being and emotional health (Burke et al., 2004a; Hogan et al., 2016) and job and career satisfaction (Burke & MacDermid, 1999; Hogan et al., 2016; Ontrup & Patrzek, 2019). They also have reported lower levels of job stress (Burke, 1999; Spence & Robbins, 1992), and physical health complaints (Burke, 2000c). These relationships were expected to be replicated in the current study, and in addition, this cluster was expected to score lower on burnout and higher on life satisfaction. This cluster was presumably protected from psychological distress and other negative consequences that are typically associated with workaholism due to their underlying characteristics associated with freedom and enjoyment (Deci & Ryan, 2000). Further, being highly engaged with work was expected to serve as a buffer against negative consequences that are typically experienced by nonengaged employees (Converso et al., 2019; Distefano & Gaudino, 2018).

The Perfectionist Workaholic cluster was expected to experience more detrimental consequences than other subtypes. This was assumed based on the fact that perfectionism is linked to feelings of pressure and conflict, and that the construct has been linked to poor mental health and well-being. Previous empirical work from both

clinical and nonclinical samples have linked high levels of perfectionism to anxiety (Cox et al., 2001: Gnilka et al., 2012) and scholars have particularly linked self-oriented perfectionism to high levels of depression (Hewitt & Flett, 1990). Furthermore, perfectionistic concerns have been directly linked to burnout (Taris & Schaufeli, 2010) and indirectly linked to burnout through controlled motivation (Jowett et al., 2013). These relationships were similarly expected in the current study.

Feeling external pressure from job insecurity and lacking work engagement were expected to contribute to higher levels of stress and anxiety and lower levels of satisfaction, but otherwise there were no specific *a priori* hypotheses for the Situational Workaholics and Stereotypical Workaholics. It was expected that both clusters would report poorer outcomes than Engaged Workaholics on many variables but that they perhaps may not fare as poorly as the Perfectionist cluster since their distinguishing features are more situational or temporary in nature.

RQ3: How does work-life balance influence workaholic subtypes' outcomes?

Work-life imbalance has been described as a key component and a symptom of workaholism (Aziz et al., 2013). An underlying assumption is that one's over involvement in work results in an imbalance, or conflict, with other important areas outside of work (Clark et al., 2013; Matuska, 2010). Scholars have empirically linked workaholism to higher levels of work-life imbalance and conflict (e.g., Bonebright et al., 2000; Clark et al., 2014) and a number of studies have shown that work-life imbalance is related to many of the same outcomes of workaholism including anxiety and depression (Hammig & Bauer, 2009), stress and burnout (Nie & Sun, 2016), physical ailments

(Kinman & Jones, 2008), as well as higher levels of life satisfaction (Haar, 2013; Virick et al., 2007) and job satisfaction (Haar et al., 2014).

To date, only a few studies have assessed how groups of workaholics differ on work-life balance. Both Aziz and Zickar (2006) and Aziz, Wuench and Brandon (2010), for example, found that NonEngaged Workaholics reported significantly lower levels of work-life balance compared to Positively Engaged Workaholics. Despite these findings, however, previous work has not assessed the role of perceived work-life balance in understanding how workaholic subtypes differ on health and wellness outcomes. It is reasonable to suspect that perceptions of work-life balance help explain the relationship between workaholic subtypes and outcomes such that those who perceive higher levels of work-life balance would have more favourable outcomes compared to those who perceive lower levels of work-life balance.

RQ4: How do organizational factors impact workaholic subtypes' outcomes?

Organizational culture is defined as shared values, norms, and expectations (Ostroff et al., 2013) whereas organizational climate is defined as shared meanings that employees attach to policies, practices, events, and behaviours that are expected and rewarded (Ehrhart et al., 2014). Both culture and climate influence individual and group behaviour within organizations. Past research has acknowledged that environmental factors lead to the onset of workaholic tendencies (e.g., Molino et al., 2016) and can exacerbate workaholic behaviour (Scott et al., 1997). Mazzetti et al. (2014) examined the interaction between personal characteristics and overwork climate and found increased workaholism for employees who are high in conscientiousness, self-efficacy, and achievement motivation when they perceived their organization to have a high overwork

climate. Similarly, Girardi et al. (2018) reported that workaholism was higher for self-oriented perfectionists, especially for those who perceived a heavy workload. Keller et al., (2016) found that competitive climate within the organization was associated with workaholism and was stronger for workaholics who were future-oriented (i.e., preference for attention to future events) and experienced high levels of work calling (i.e., a strong inner impulse toward one's work). Buelens and Polemans (2004) appear to be one of the only studies to compare groups of workers on organizational culture variables, and they reported that Enthusiastic Workaholics perceived strong organizational growth culture whereas NonEnthusiastic workaholics perceived low growth culture and a high-pressure culture.

In the current study, the role of perceived overwork climate and pressure cultures was examined to better understand the context in which the workaholic groups are embedded. Situational Workaholics were expected to perceive more competitive culture than other groups due to the perceived uncertainty or instability of their job within academia. Perfectionistic Workaholics, on the other hand, were expected to perceive higher overwork climates since perfectionists tend to overcomplicate tasks and create more work for themselves (Schaufeli et al., 2009b). Further, the Engaged Workaholics were assumed to perceive aspects of climate and culture more favourably, such as lower overwork climate since they may not feel burdened by heavy workloads. Differences amongst the groups in their perceptions of organizational climate and culture were used to help understand better or poorer outcomes of workaholism.

RQ5: Why do workaholics feel overworked? What are common job barriers?

It has been recommended by previous scholars that studies combine quantitative and qualitative methods to arrive at workaholic descriptions that are more substantial (Buelens & Poelmans, 2004). In the current study, participants were asked to identify and describe barriers that they face in conducting research and teaching effectively. They were also asked to describe reasons why they feel overworked. Common barriers in academic settings that were expected to emerge in participants' written responses were related to heavy teaching course loads, large class sizes, reduced funding or depleted resources, demands of student research supervision, and time strains associated with other service commitments such as committee work. Reasons why one may feel overworked were expected to be especially related to navigating the demands and challenges during the Covid-19 pandemic. The qualitative responses were used to enrich the understanding of workaholic clusters found in the current study.

Work During the Pandemic

The timeframe in which this research was conducted should be considered when interpreting the study findings. In March of 2020, the Covid-19 pandemic caused unprecedented disruptions to workplaces around the world. After a brief shut down, universities continued their operations by quickly pivoting from traditional working modalities to remote work as a means to protect the health and safety of students, staff and faculty. While dealing with fear and uncertainty of the coronavirus and adjusting to government mandates, faculty members and instructors were required to continue teaching, research and supervision remotely to limit disruptions to students' academic and research progress, despite well-known limitations such as lack of access to laboratory space, equipment, and in-person gatherings (Ghislieri et al., 2022). This abrupt,

mandatory shift to remote work created challenges for those working and learning in virtual environments, particularly for those unfamiliar with virtual tools. In addition to technical challenges of teaching and research, many faced additional stress due to caring for young children at home who were learning remotely, and dealing with health and safety concerns for themselves and their loved ones. Like in other industries, many academics experienced stress, anxiety, and discomfort from initial unpreparedness for new responsibilities, as well as feelings of work overload, fatigue, and burnout as a result of increased demands and constant connectivity to work through internet, email and phone (Spagnoli et al., 2020). Though students, staff and faculty eventually adapted to imposed institutional changes, individuals' experiences during the pandemic may have had lasting physical, mental and psychosocial impacts.

Since the onset of the pandemic, scholars have recognized the detrimental impact that Covid-19 and remote work has had on work behaviours, organizational outcomes, and health and wellness. While studies specific to an academic context are limited, Tecau and colleagues (2020) reported decreased heavy work investment (HWI) in their cross-occupational sample in the early phases of the pandemic. At the time of study, employees indicated significantly lower levels of both workaholism and work engagement compared to their retrospect self-assessments prior to Covid-19. Notably, their decreased work engagement at that time significantly predicted negative personal evaluations of work performance. On the other hand, Shkoler and colleagues (2021) found higher levels of heavy work investment (HWI) among cross-occupational samples during the pandemic compared to pre-pandemic times. The authors rationale for such findings were that

employees feared losing their job during uncertain times or used work as a distraction from the adversities, difficulties, and stress experienced from the pandemic.

In studies investigating academic samples, Allam et al. (2021) found workaholism increased during the pandemic. Ghislieri and colleagues (2022) found academic employees perceived increased job demands and "additional" work demands through use of new technologies during Covid-19 lockdowns, and the high demand environment led to greater difficulty with recovery (i.e., relaxation, detachment and control). Similarly, Morkeviciute and Endriulaitiene (2021b) found employees' perception of heavy workload during the pandemic predicted increased workaholism. In comparison to employees working on-site, the authors found that the relationship between workload and workaholism was stronger for employees who worked remotely during the pandemic. They concluded that remote work is an important variable that increases the risk of workaholism when employees experience a heavy workload. The authors also found that the relationship between perfectionism and workaholism was stronger for employees who worked remotely but noted that working remote or working in-person did not significantly impact the relationship between Type A personality and workaholism during the pandemic (Morkeviciute & Endriulaitiene, 2021c).

Many studies have highlighted the impact of Covid-19 on mental health, particularly noting increased anxiety, depression, and psychological distress (e.g., Aknin et al., 2022; Chen et al., 2021; Fournier et al., 2022; Hernandez-Diaz et al., 2022; Xiong et al., 2020). Allam and colleagues (2021) found that workaholic faculty members experienced significantly greater sleep difficulties and insufficient sleep during the pandemic compared to nonworkaholic faculty members, and Loscalzo (2021) found that

workaholics who worked remotely during lockdown experienced higher levels of work-family conflict and negative affect. Many studies have also reported gender differences in workaholism, where women tended to score higher (e.g., Ghisleri et al., 2022; Krumov et al., 2021; Orfei et al., 2022a), suggesting that they particularly struggled with work demands and perhaps suffered blurred work-life boundaries during the Covid-19 pandemic. Taken together, the timing of data collection in the present study has important implications and must be considered when understanding employees' work behaviours, work environment, and health and wellness outcomes.

CHAPTER IV
METHODOLOGY

Participant Recruitment and Procedural Overview

In April 2021, this study received ethics clearance from the University of Windsor's Research Ethics Board (#21-038). Participant recruitment methods involved selecting Ontario universities and searching their online departmental directories for faculty members' and sessional instructors' contact information. Names and email addresses were compiled into a database and mass email communication was used for direct outreach. A total of 4,476 invitations were sent between May and December of 2021, and 341 participants (7.6%) responded to the study advertisement.

The study advertisement invited participants who were 1) currently employed at a university in Ontario and 2) held a tenured, tenure-track, or nontenured teaching or research position to complete a 25-minute online survey on work behaviours, organizational characteristics, and health and wellness. Participants electronically

provided consent to participate in the study, responded to a series of self-report questionnaires described below, and submitted their contact information to be entered into a draw for a chance to win 1 of 10 cash prizes of $250.00. Ten draw winners were randomly selected and received their prize in December 2021. This study was funded by a SSHRC Explore grant.

The Online Survey

The online survey consisted of several self-report questionnaires (see Appendix A-Q). Some measures were used for the purpose of clustering participants while others were used to validate the clusters and provide descriptive information in supplemental analyses.

Workaholism. The 10-item Dutch Work Addiction Scale (DUWAS; Schaufeli et al., 2009b) was used to measure workaholism. This brief scale consists of two subdimensions: Working Excessively and Work Compulsively. As indicated in the literature review above, some researchers have used the DUWAS to assess the two subscales separately while others have opted for a composite score of workaholism. The latter approach was used in the current study since workaholism is considered a syndrome where the two components go together. Example items include "I find myself continuing to work after my coworkers have called it quits" (Working Excessively) and "It is important to me to work hard even when I do not enjoy what I am doing" (Working Compulsively). The items are rated on a 4-point Likert scale ranging from 1 (*totally disagree*) to 4 (*totally agree*), with higher scores indicating higher levels of workaholic tendencies. A median split of the scale point was used as a statistical criterion to discriminate between those who scored high and low on workaholism. Only those who

scored above the median scale point on both dimensions were used in the cluster analysis. The authors of this scale reported good internal consistency in samples of Dutch employees (Cronbach's alpha = 0.78 for both dimensions) and Japanese employees (Cronbach's alphas = 0.73, Working Excessively and 0.68, Working Compulsively). The authors also demonstrated convergent validity with measures of excessive time spent working, and demonstrated discriminant validity with measures of work engagement and burnout. Since the DUWAS does not explicitly mention the term 'workaholic' but instead describes attitudes and behaviours of workaholism, an additional item, "I consider myself to be a workaholic", was included to assess whether participants' workaholism score on the DUWAS corresponded to their perception of being a workaholic.

Perfectionism. The Self-oriented Perfectionism subscale from the Big Three Perfectionism Scale (BTPS; Smith et al., 2016) was used to measure perfectionism. Self-oriented perfectionism stems from excessively high standards for oneself. The BTPS consists of 45 items that capture three higher-order global factors (Rigid Perfectionism, Self-critical Perfectionism, and Narcissistic Perfectionism) through 10 lower-order facets: Self-oriented Perfectionism, Self-worth Contingencies, Concern Over Mistakes, Doubt About Actions, Self-criticism, Socially Prescribed Perfectionism, Other-oriented Perfectionism, Hypercriticism, Grandiosity, and Entitlement. The 5-item Self-oriented Perfectionism subscale, which falls under the higher-order Rigid Perfectionism factor, was used to cluster workaholics. Example items from this subscale include "I have a strong need to be perfect" and "I never settle for less than perfection from myself". Items are rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) with higher scores indicating higher levels of the trait. The authors of the scale reported

good internal consistency for the three global factors (Cronbach's alphas ranged from 0.92 to 0.93) and for the 10 facets (Cronbach's alphas ranged from 0.79 to 0.89).

Motivation. The Work Extrinsic and Intrinsic Motivation Scale (WEIM; Tremblay et al., 2009) was used to measure underlying motivations for work. This scale is comprised of 18 items and contains six subscales that correspond to different types of motivation described by Self-Determination Theory: Intrinsic, Integrated, Identified, Introjected, External, and Amotivation. The items are framed in the context of the reasons why one is presently involved with their work and include statements such as "Because I derive much pleasure from learning new things" (Intrinsic) and "Because this type of work provides me with security" (External). Items are rated on a 7-point Likert scale ranging from 1 (*does not correspond at all)* to 7 (*corresponds exactly*) with higher scores indicating higher levels of motivation.

The authors of the scale described multiple ways that WEIM can be used but in the current study, the Intrinsic, Integrated and Identified subscales were used to generate a Self-Determined Motivation score and the Introjected, External, and Amotivation subscales were used to generate a NonSelf-Determined Motivation score. Both Self-Determined and NonSelf-Determined Motivation were used to cluster workaholics. The authors of the scale reported good internal consistency of these two types of motivation (Cronbach's alphas = 0.87 and = 0.72, respectively), they reported factorial invariance across two samples, and demonstrated construct validity with measures of organizational involvement, commitment, citizenship behaviours and deviant behaviours.

Work Engagement. The Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2002) was used to measure engagement with work. This measure consists of 17 items

that captures three subdimensions: Vigor, Dedication, and Absorption. A total score is often used to form a composite score of work engagement (e.g., Guidetti et al., 2019) and this approach was adopted in the current study for the purpose of clustering workaholics. Example items include "At my work, I feel bursting with energy" (Vigor), "I find the work that I do full of meaning and purpose" (Dedication), and "It is difficult to detach myself from my job" (Absorption). Items are rated on a 7-point Likert scale ranging from 0 (n*ever*) to 6 (a*lways*) with higher scores suggesting higher levels of work engagement. The authors of the scale reported good internal consistency for the three subscales (Cronbach's alphas from 0.72 to 0.89). Schaufeli, Taris and Van Rhenen (2003) demonstrated discriminant validity of the UWES as distinct from measures of workaholism and burnout, and showed that work engagement, workaholism and burnout each have unique relationships with variables representing long work hours, job characteristics, work outcomes, social relations and perceived health.

Job Insecurity. Job insecurity was assessed using the 18-item Job Insecurity Measure (JIM; O'Neill & Sevastos, 2013). This measure captures four dimensions: Job Loss, Job Changes, Marginalization, and Organizational Survival. Example items include "The probability of losing my job occupies my thoughts constantly" (Job Loss), "I expect to have fewer resources to meet the performance requirements of my job" (Job Change), "I am often excluded from discussions or meetings that affect me" (Marginalization) and "Management appears to be preparing in advance and planning for the future" (Organizational Survival). Items are rated on a 7-point Likert scale ranging from 1 (v*ery inaccurate*) to 7 (v*ery accurate*) with higher scores indicating greater job insecurity. The authors of the measure reported good internal consistency for the subscales (Cronbach's

alphas ranged from 0.87 to 0.90). Both convergent and discriminant validity were established, and criterion-related validity was demonstrated using measures of job-related affective well-being, job satisfaction, organizational commitment, trust in management and turnover intention. The authors also reported measurement invariance across two samples.

Anxiety. Anxiety was measured using the 40-item State-Trait Anxiety Inventory (STAI- Form Y; Spielberger et al., 1970). The STAI captures the intensity of feelings of anxiety and distinguishes between State and Trait Anxiety. State Anxiety, which is a temporary condition experienced in certain situations, is measured in the context of how one currently feels and includes items such as "I feel at ease*" and "I feel upset". Items are rated on a 4-point Likert scale ranging from 1 (*not at all*) to 4 (*very much so*). Trait Anxiety, on the other hand, is a general tendency to perceive situations as threatening and is measured in the context of how one generally feels. Example items include "I am a steady person*" and "I lack self-confidence". Items are rated on a 4-point Likert scale ranging from 1 (*almost never*) to 4 (*almost always*). Higher scores on the subscales indicate higher levels of state and trait anxiety. Good internal consistency has been reported across many samples, including a sample of working adults (Cronbach's alphas were reported as 0.93 and 0.91 for State and Trait Anxiety, respectively; Spielberger, 1983). Convergent and discriminant validity have also been reported across many studies. The STAI is a trademark of Mind Garden Inc. and a license was purchased to use this inventory in the current study.

Depression. The Depression Symptoms Measure (DSM; Balog et al., 2003) was used to measure depressive mood. This measure consists of 10 items framed in the

context of their occurrence in the past week. Items include “During the past week, did you feel bored or have little interest in doing things?” and “During the past week, did you cry easily or feel like crying?”. Items responses are on a dichotomous scale of 0 (*no*) or 1 (*yes*), with higher scores indicating higher levels of depression. The authors reported good internal consistency (Cronbach’s alpha = 0.85) and demonstrated strong concurrent validity with the Beck Depression Inventory ($r = 0.71$, $p < .001$).

Burnout. Burnout was measured using the Oldenburg Burnout Inventory (OLBI; Demerouti, 1999). This scale consists of 16 items that measure two subdimensions of burnout: Disengagement and Exhaustion. Example items include “It happens more and more often that I talk about my work in a negative way*” (Disengagement) and “There are days when I feel tired before I arrive at work*” (Exhaustion). Items are rated on a 4-point Likert scale from 1 (*strongly disagree*) to 4 (*strongly agree*) with higher scores indicating higher levels of burnout. The developing authors reported good internal consistency for both Disengagement and Exhaustion subscales (Cronbach’s alphas = 0.77 and 0.81, respectively). The OLBI is based off a model similar to the Maslach’s Burnout Inventory (MBI). Demerouti et al., (2003) reported high convergent validity of the OLBI with the MBI-General Survey, and discriminant validity with measures of mental fatigue and satiation. Further, Halbesleben and Demerouti (2007) reported good internal consistency for the OLBI subscales in two different samples (Cronbach's alphas ranged from .74 to .87), test-retest reliability ($r = .51$, $p < .001$ for exhaustion and $r = .34$, $p < .01$ for exhaustion) as well as convergent and discriminant validity against the MBI with related measures of burnout.

Stress. Stress was measured using the Perceived Stress Scale (PSS-10; Cohen et al., 1983). The PSS contains 10 items regarding stressful experiences that are unpredictable, uncontrollable and overwhelming. Items are framed in the context of their occurrence in the past month such as "How often have you found that you could not cope with all the things that you had to do?" and "How often have you felt difficulties were piling up so high that you could not overcome them?" The items are rated on a 5-point Likert scale ranging from 0 (*never*) to 4 (*very often*) with higher scores indicating higher levels of stress. Good internal consistency for the measure (Cronbach's alpha = 0.84) was reported by the authors, and construct validity has been demonstrated with related constructs including depression, anxiety and fatigue.

Physical Health. The 29-item Subjective Health Complaints Inventory (SHC; Eriksen et al., 1999) was used to assess physical health. The items are framed in the context of their occurrence in the past month and include common subjective somatic and physiological complaints such as headaches, sleep problems, heart burn, and allergies. Items are answered on a 4-point Likert scale ranging from 1 (*not at all*) to 4 (*frequently*), with higher scores suggesting more health complaints. The authors reported good internal consistency for the measure (Cronbach's alpha = 0.82).

Life Satisfaction. Life satisfaction was measured using the Satisfaction with Life Scale (SWLS; Diener et al., 1985). The 5-item measure assesses global life satisfaction as a cognitive-judgmental process by asking participants about their overall satisfaction with life. Example items include "In most ways my life is close to my ideal" and "So far I have gotten the important things I want in life." Items are rated on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) with higher scores indicating

greater life satisfaction. The authors reported good internal consistency (Cronbach's alpha = 0.87) and good test-retest reliability ($r = 0.82$, $p < .001$), as well as moderate to high correlations with other measures of subjective well-being.

Job Satisfaction. Job satisfaction was measured using the Aggregate Job Satisfaction Scale (AJSS; Gonzalez-Roma & Hernadez, 2016). The scale consists of 13 items that measure satisfaction with different aspects of work features such as salary, promotion opportunities, and physical working conditions. Items are rated on a 6-point Likert scale ranging from 1 (*very dissatisfied*) to 6 (*very satisfied*) with higher scores suggesting greater job satisfaction. The developing authors reported good internal consistency (Cronbach's alpha = 0.91). In addition to the AJSS, a commonly used single item (e.g., Aiken, Clarke, & Sloane, 2002) that assesses overall job satisfaction was included.

Work-Life Balance. Work-life balance was assessed using the Work-Life Balance Scale (WLBS; Brough et al., 2014). This brief unidimensional scale consists of 4 items including "I currently have a good balance between the time I spend at work and the time I have available for non-work activities" and "Overall, I believe that my work and non-work life are balanced". Items are rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) with higher scores indicating higher levels of perceived work-life balance. Good internal consistency has been reported by the scale authors in two different samples (Cronbach's alphas = 0.84 and 0.94), and criterion-related validity was demonstrated through relationships with measures of work demands, work satisfaction, strain and turnover intention.

Organizational Climate. Competitive climate was measured using an adapted version of the Competitive Work Environment Scale (CWES-short form; Fletcher & Nusbaum, 2010). The full measure consists of 20 items that captures five subdimensions of workplace competition: Tangible Rewards, Nontangible Rewards, Recognition, Status, and Influenced by Coworkers. Example items include "My accomplishments are only recognized if they are better than those of my coworkers" (Recognition) and "Rank and privilege are based on outperforming others" (Status). Items are rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) with higher scores indicating a higher competitive work environment. The authors of the scale reported good reliability for the subscales (Cronbach's alphas ranged from 0.86 to 0.94) as well as preliminary evidence for convergent and discriminant validity through correlations with competitive psychological climate, supervisor ratings of performance and trait competitiveness. To ensure that the items were relevant to the academic sample, items were selected from the Recognition, Status, and Influenced by Coworkers subscales only.

In addition, overwork climate was measured using the Overwork Climate Scale (OWES; Mazzetti et al., 2016). The scale consists of 11 items that capture two subdimensions: Overwork Endorsement and Lacking Overwork Rewards. Example items include "Most employees work beyond their official work hours" (Overwork Endorsement) and "A policy exists to restrict overtime work*" (Lacking Overwork Rewards). Items are rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) with higher scores suggesting higher overwork climate. The authors reported good internal consistency for Overwork Endorsement subscale and acceptable internal consistency for the Lacking Overwork Rewards subscale (Cronbach's alphas =

0.80 and 0.66, respectively). Participants were also asked "Do you currently feel overworked" by indicating 1 (*yes*) or 0 (*no*). For those who responded 'yes', a follow up question asked participants to elaborate on the reasons why they felt overworked to provide additional context.

Organizational Culture. Work pressure culture was measured using 4 items described in Dolcos and Daley (2009). The items were developed by the Families and Work Institute in collaboration with experts in the field and drew from pre-existing measures. The work pressure culture scale intends to assess negative work demands and excessive workloads. Two items (e.g., "My job requires that I work very hard") are rated on a 4-point Likert scale from 1 (*strongly agree*) to 4 (*strongly disagree*) and two items (e.g., "How often have you felt overwhelmed by how much you had to do at work in the last 3 months?") are rated on a 5-point Likert scale from 1 (*very often*) to 5 (*never*). Dolcos and Daley (2009) reported good internal consistency of the scale (Cronbach's alpha = 0.70). Two additional open-ended items were included that asked participants about barriers they face in conducting research and effective teaching.

Demographics, Work Characteristics, and Covid-19. The demographics questionnaire asked participants to indicate their age, gender, ethnicity, marital status, number of children living at home, education level, and whether they have workaholic family members, friends, partners, and/or colleagues in their lives. Participants were also asked about work-related characteristics such as their faculty, size of institution, position within their department, number of years working in academia, number of years working at their current institution, and number of hours worked per week. At the time of this study, institutions across Ontario were not yet back to operating under normal work

conditions due to safety protocols. Thus, the questionnaire asked participants about the impact that Covid-19 had on their work behaviours and the impact that Covid-19 had on their mental and physical health.

Data Cleaning Procedures

A total of 341 participants responded to the study advertisement, though 61 cases (17.9%) were later discarded through data cleaning procedures. Data cleaning involved analyses of missing data and survey response time (Meade & Craig, 2012). As expected with online surveys, many cases had null data. This included participants who opened the survey and closed it shortly thereafter. Of the 61 cases discarded, 49 respondents completed less than 50% of the survey and six participants made it to the end of the survey but were missing more than 20% of their data. A response time cut-off of 5 seconds per Likert scale item was established based on pilot testing and six cases were eliminated for not meeting this cut-off. A total of 280 cases were retained for further analyses. Little's MCAR test indicated that the data retained were missing completely at random, ($\chi^2 = 9870.965$, $df = 14496$, $p > 0.05$) and multiple imputation with five iterations was used to handle missing data. Multiple imputation is a common approach and three to five imputations have been deemed sufficient to yield excellent results (e.g., Graham et al., 2007; Shafer & Olson, 1998).

Participants were not formally screened for workaholism prior to their participation in this study so while a large proportion of workaholics were expected to be amongst the sample, nonworkaholics were also expected to be present. A median split of the scale point was used as a statistical criterion to discriminate between those who scored high and low on workaholism. Using a cut-off score of 2.5, 188 participants

(67.1%) scored above the median scale point, 79 participants (28.2%) scored below the median scale point, and 13 participants (4.6%) scored equal to the median scale point. Given that the research questions in the current study focus on workaholics, the analyses and interpretations that follow were on the workaholic sample only.

Sample Characteristics

Demographic characteristics are reported in Tables 6, 7 and 8 for the total sample, workaholic sample, and nonworkaholic sample, respectively, however the summary that follows exclusively describes workaholic respondents. Workaholics made up about two-thirds of the total sample (n = 188; 67.1%) and ranged from 27 to 78 years old (M = 47.59, SD = 10.16). Approximately half of the workaholic sample (n = 98, 52.1%) self-identified as female, 85 participants (45.2%) identified as male, and 5 participants (2.7%) as non-binary or another gender. Most participants indicated White/European Canadian ethnicity (n = 156, 83.4%), disclosed that they were married or cohabiting (n = 152, 82.6%), and indicated that they had children under the age of 18 years old living at home (n = 99, 52.2%).The vast majority of workaholic participants held a doctoral degree (n = 175, 93.6%) and worked at an institution with more than 15,000 students enrolled (n = 156, 84.3%). The faculty in which participants work varied, however, the Faculty of Arts, Humanities and Social Sciences (n = 83, 44.4%) and Faculty of Science and Engineering (n = 40, 21.4%) were most commonly reported. About 3 in 5 participants (n = 113, 61.4%) held a tenured teaching or research position at the time of participation, while fewer held a tenure-track position (n = 40, 21.7%) or nontenured position (n = 31, 16.8%). The number of years that respondents worked in academia ranged between 0-10 years (n = 66, 35.3%), 11-20 years (n = 72, 38.5%), 21-30 years (n = 26, 13.9%) and 30+

years (n = 23, 12.3%). However, most participants reported being employed at their current institution for either 0-10 years (n = 102, 54.4%) or 11-20 years (n = 61, 32.6%).

As expected, most workaholics reported working beyond a typical 40-hour work week. More than one third (n = 65, 34.8%) noted they worked 41-50 hours per week, 38% (n = 78) said they worked 51-60 per week, and 18.2% (n = 34) indicated they worked more than 60 hours per week. Approximately 80.0% of respondents indicated they have workaholic colleagues, friends and partners. Interestingly, 19.1% (n = 36) of the workaholic sample said that they 'almost never' consider themself to be a workaholic and approximately 9% (n = 17) reported working fewer than 40 hours per week. There was overlap in these variables as 22.0% of those who did not self-identify as a workaholic indicated they worked less hours than the typical work week. This was part of the rationale for not screening workaholism prior to study, as some employees may not consider themselves as workaholics when they are asked directly.

T-test and chi-square statistics suggested that workaholics and nonworkaholics did not significantly differ from each other in terms of age, gender, ethnicity, education, the size of their institution, length of time employed in academia, or length of time employed at their current institution. However, chi-square statistics did suggest the two samples differed on whether they had children living at home, $\chi^2(1) = 7.39$, $p = .007$, their status in the department, $\chi^2(1) = 6.91$, $p = .009$, hours worked per week, $\chi^2(1) = 28.06$, $p < .001$, and having workaholic family, friends or colleagues ($\chi^2(1) = 16.25$, $p < .001$).

Follow-up analyses to significant chi-square tests included odd's ratio calculations which suggested that, compared to nonworkaholic respondents, workaholics were 2.14 times more likely to indicate they had young children living at home, 95% CI [1.23,

3.72], and were 2.26 times more likely to have less secure positions in their department (i.e., tenure-track or nontenured), 95% CI [1.22, 4.17]. Compared to nonworkaholic participants, workaholics were 5.60 times more likely to report they worked more than 40 hours per week, 95% CI [2.84, 11.06], and 3.14 times more likely to report having close others in their lives that they consider to be workaholics, 95% CI [1.78, 5.55].

Table 6

Demographic Characteristics by Frequency (n) and Valid Percentage (%)
Total Sample (n = 280)

Demographic Characteristics		
Age (*Min* = 27 and *Max* = 78, *Range* = 51, *Median* = 48.00, *M* = 48.24, SD = 10.38)		
Age Group	*n*	%
35 and under	34	12.5
36 to 45 years old	84	30.8
46 to 55 years old	83	30.4
56 to 65 years old	55	20.1
Over 65	17	6.2
Gender	*n*	%
Male	135	48.2
Female	134	47.9
Non-Binary/Other	6	3.9
Racial/Ethnic Background	*n*	%
White or European Canadian	230	83.0
First Nations or Aboriginal or Inuit or Metis	1	0.4
Black or African Canadian or Caribbean Canadian	4	1.4
East Asian or Pacific Islander or East Asian Canadian	7	2.5
South Asian or South Asian Canadian	7	2.5
Middle Eastern or Middle Eastern Canadian	10	3.6
Mixed Race or Ethnicity	9	3.2
A Race or Ethnicity Not Listed	9	3.2
Marital Status	*n*	%
Single	40	14.7
Living together/Married	220	80.6
Separated/Divorced	10	3.7
Widowed	3	1.1
Number of Children (< 18 years old) Living at Home	*n*	%
0	149	54.2
1	41	14.9

2	62	22.5
3	19	6.9
4 or more	4	1.5

Highest Level of Education	*n*	%
Master's Degree	12	4.3
Doctoral Degree	263	94.6
Other	3	1.1

Faculty	*n*	%
Arts, Humanities and Social Sciences	123	44.6
Business	24	8.7
Education	21	7.6
Human Kinetics	19	6.9
Law	3	1.1
Science or Engineering	60	21.7
Nursing	15	5.4
Other	11	4.0

Size of University	*n*	%
Less than 5,000 students	2	0.7
Between 5,000 – 15,000 students	45	16.4
More than 15,000 students	228	82.9

Teaching/Research Position in Department	*n*	%
Tenured	179	65.3
Tenure-Track	53	19.3
Nontenured	42	15.3

Number of Years in Profession	*n*	%
10 years or less	90	32.4
11-20 years	102	36.7
21-30 years	50	18.0
More than 30 years	36	12.9

Number of Years in Institution	*n*	%
10 years or less	137	49.3
11-20 years	96	34.5
21-30 years	33	11.9
More than 30 years	12	4.3

Average Number of Hours Worked Per Week	*n*	%
30 hours or less	6	2.2
31-40 hours	43	15.5
41-50 hours	103	37.2

51-60 hours	88	31.8
More than 60 hours	37	13.4
Workaholic Close Others	*n*	%
Yes (Parents, Siblings, Friends, Colleagues, Children)	200	71.4
No	80	28.6

Table 7

Demographic Characteristics by Frequency (n) and Valid Percentage (%) Workaholic Sample (n = 188)

Demographic Characteristics		
Age (*Min* = 27 and *Max* = 78, *Range* = 51, *Median* = 47.00, *M* = 47.59, *SD* = 10.16)		
Age Group	*n*	%
35 and under	21	11.3
36 to 45 years old	63	33.9
46 to 55 years old	58	31.2
56 to 65 years old	32	17.2
Over 65	12	6.5
Gender	*n*	%
Male	85	45.2
Female	98	52.1
Non-Binary/Other	5	2.7
Racial/Ethnic Background	*n*	%
White or European Canadian	156	83.4
First Nations or Aboriginal or Inuit or Metis	1	0.5
Black or African Canadian or Caribbean Canadian	2	1.1
East Asian or Pacific Islander or East Asian Canadian	3	1.6
South Asian or South Asian Canadian	6	3.2
Middle Eastern or Middle Eastern Canadian	5	2.7
Mixed Race or Ethnicity	6	3.2
A Race or Ethnicity Not Listed	8	4.3
Marital Status	*n*	%
Single	23	12.5
Living together/Married	152	82.6
Separated/Divorced	9	4.9
Widowed	0	0
Number of Children (< 18 years old) Living at Home	*n*	%
0	89	47.8
1	31	16.7
2	48	25.8
3	15	8.1
4 or more	3	1.6

Highest Level of Education	*n*	%
Master's Degree	8	4.3
Doctoral Degree	175	93.6
Other	4	2.1

Faculty	*n*	%
Arts, Humanities and Social Sciences	83	44.4
Business	12	6.4
Education	16	8.6
Human Kinetics	12	6.4
Law	3	1.6
Science or Engineering	40	21.4
Nursing	14	7.5
Other	7	3.7

Size of University	*n*	%
Less than 5,000 students	1	0.5
Between 5,000 – 15,000 students	28	15.1
More than 15,000 students	156	84.3

Teaching/Research Position in Department	*n*	%
Tenured	113	61.4
Tenure-Track	40	21.7
Nontenured	31	16.8

Number of Years in Profession	n	%
10 years or less	66	35.3
11-20 years	72	38.5
21-30 years	26	13.9
More than 30 years	23	12.3

Number of Years at Current Institution	*n*	%
10 years or less	102	54.5
11-20 years	61	32.6
21-30 years	17	9.1
More than 30 years	7	3.7

Average Number of Hours Worked Per Week	n	%
30 hours or less	1	0.5
31-40 hours	16	8.6
41-50 hours	65	34.8
51-60 hours	71	38.0
More than 60 hours	34	18.2

Workaholic Close Others	*n*	%
Yes (Parents, Siblings, Friends, Colleagues, Children)	150	79.8
No	38	20.2

Table 8

Demographic Characteristics by Frequency (n) and Valid Percentage (%)
Nonworkaholic Sample (n = 79)

Demographic Characteristics		
Age (*Min* = 31 and *Max* = 73, *Range* = 42, *Median* = 50.00, *M* = 49.53, *SD* =10.73)		
Age Group	*n*	%
35 and under	11	14.5
36 to 45 years old	19	25.0
46 to 55 years old	22	28.9
56 to 65 years old	19	25.0
Over 65	5	6.6
Gender	*n*	%
Male	43	54.4
Female	32	40.5
Non-Binary/Other	4	5.0
Racial/Ethnic Background	*n*	%
White or European Canadian	65	83.3
First Nations or Aboriginal or Inuit or Metis	0	0.0
Black or African Canadian or Caribbean Canadian	2	2.6
East Asian or Pacific Islander or East Asian Canadian	3	3.8
South Asian or South Asian Canadian	1	1.3
Middle Eastern or Middle Eastern Canadian	4	5.1
Mixed Race or Ethnicity	2	2.6
A Race or Ethnicity Not Listed	1	1.3
Marital Status	*n*	%
Single	14	18.2
Living together/Married	59	76.6
Separated/Divorced	1	1.3
Widowed	3	3.9
Number of Children (< 18 years old) Living at Home	*n*	%
0	51	66.2
1	8	10.4
2	13	16.9
3	4	5.2
4 or more	1	1.3
Highest Level of Education	*n*	%
Master's Degree	4	5.1

Doctoral Degree	75	94.9
Other	0	0.0
Faculty	*n*	%
Arts, Humanities and Social Sciences	37	47.4
Business	11	14.1
Education	1	1.3
Human Kinetics	7	9.0
Law	0	0.0
Science or Engineering	17	21.8
Nursing	1	1.3
Other	4	5.1
Size of University	*n*	%
Less than 5,000 students	1	1.3
Between 5,000 – 15,000 students	13	16.7
More than 15,000 students	64	82.1
Teaching/Research Position in Department	*n*	%
Tenured	61	78.2
Tenure-Track	9	11.5
Nontenured	8	10.3
Number of Years in Profession	*n*	%
10 years or less	20	25.3
11-20 years	27	34.2
21-30 years	21	26.6
More than 30 years	11	13.9
Number of Years in Institution	*n*	%
10 years or less	30	38.0
11-20 years	32	40.5
21-30 years	13	16.5
More than 30 years	4	5.1
Average Number of Hours Worked Per Week	*n*	%
30 hours or less	5	6.4
31-40 hours	23	29.5
41-50 hours	35	44.9
51-60 hours	12	15.4
More than 60 hours	3	3.8
Workaholic Close Others	*n*	%
Yes (Parents, Siblings, Friends, Colleagues, Children)	44	55.7
No	35	44.3

Clustering Strategy

RQ1: How many types of workaholics are there and how do their profiles differ?

Although cluster analysis is an exploratory technique, several considerations were made *a priori*. According to Milligan and Hirtle (2003), key steps in cluster analysis include variable selection, variable standardization, choice of clustering methods, and choice of cluster solution. The first consideration was to include only variables believed to discriminate amongst clusters in the data and to avoid irrelevant variables that could mask clusters or distort results. The variables selected were based on previous studies that have either shown relations to workaholism or have been included in theoretical work but were never tested. The variables included in the cluster analysis were workaholism, self-oriented perfectionism, work engagement, job insecurity, self-determined motivation and nonself-determined motivation.

The next consideration was how to standardize the data to avoid issues with scale variability. While there are several ways to standardize data, methods that involve division by range have been regarded as a superior approach (Milligan & Cooper, 1988; Mirkin, 2000). The following formula was used to standardize the data: $z = [x - Min(x)] / [Max(x) - Min(x)]$, where the transformed *z*-score ranges from 0 to 1, x is the variable being transformed, and *Min* and *Max* are the minimum and maximum observed values.

The next consideration was the clustering approach. Both hierarchical and k-means clustering approaches were used as they provide different information. A hierarchical cluster analysis was conducted as a first step. Visual inspection of the dendrogram and a scree plot of coefficient differences from the agglomeration schedule helped identify the number of potential clusters in the data. Then, a k-means cluster

analysis was conducted by specifying the number of clusters suggested by the hierarchical cluster analysis results. An advantage to using a k-means clustering approach is that cases can be moved from one cluster to another during the iterative stages to maximize isolation and cohesion of the clusters (Jackson et al., 2020). This approach can find clusters of workaholics who are similar to each other but are distinct from others.

The final consideration was choosing a cluster solution. This decision was based on profile interpretability and cluster size. To better interpret the clusters, each solution was graphed to assess patterns in the cluster profiles for high and low scores on each variable in the analysis. Solutions that contained expected clusters were retained and solutions with clusters that were difficult to interpret were abandoned. Cluster solutions with small cluster sizes were also abandoned as small clusters would likely not replicate in future studies. Lastly, analysis of variance (ANOVA) and Bonferroni post-hoc tests were conducted to assess whether the clusters statistically differed from one another on their key distinguishing features.

Cluster Validation Analyses

RQ2: How do workaholic subtypes differ on health and wellness variables?

To validate the clusters, group differences on several health and wellness variables were examined. It was of interest to assess whether certain workaholic subtypes are more prone to negative consequences than others. Both ANOVAs and multivariate analysis of variance (MANOVAs) were used to differentiate the groups. Workaholic subtypes were entered into the analyses as the independent variable and the dependent variables included state anxiety, trait anxiety, depression, burnout, stress, physical health complaints, life satisfaction, and job satisfaction. This approach is common practice in

the workaholism literature as many previous studies investigating differences amongst worker typologies have conducted either ANOVAs (e.g., Aziz & Zickar, 2006; Bonebright et al., 2000; Burke & Matthiesen, 2004; Yilmaz et al., 2014; Spence & Robbins, 1992) or MANOVAs (e.g., Guidetti et al., 2019). Bonferroni post-hoc tests and discriminant function analysis were conducted to better interpret significant ANOVA and MANOVA findings, respectively. The first approach identified how workaholic clusters differed from one another on a single variable while the latter approach assessed how the clusters differed from one another on a linear combination of variables.

RQ3: How does work-life balance influence workaholic subtypes' outcomes?

An ANOVA was conducted to assess whether workaholic clusters significantly differed from one another on their perception of work-life balance and a Bonferroni post-hoc test followed to better interpret significant findings. Simple mediation analyses were performed to assess whether perceived work-life balance mediated the relationship between workaholic subtypes and outcomes. In this analysis, workaholic subtype was used as the categorical independent variable, work-life balance as the mediator, and the dependent variables included those that significantly differentiated the clusters in RQ2. The workaholic cluster variable was dummy coded to create a set of pairwise comparisons in the mediation analysis. Formal significance testing of the indirect effect, the effect of X on Y through M, and Sobel's test were conducted as is recommended by Preacher and Hayes (2004). As mentioned previously, the current study was the first to compare workaholic subtypes by assessing the impact of perceived work-life balance on health and wellness variables.

RQ4: How do organizational factors impact workaholic subtypes' outcomes?

Similar to RQ3, the impact of organizational factors on outcomes were assessed. ANOVAs were first conducted to examine whether workaholic clusters significantly differed on their perceptions of their work environment and Bonferroni post-hoc tests followed to better interpret significant findings. Simple mediation analyses were performed to assess whether organizational climate and organizational culture played a role in the relationship between workaholic subtype and outcomes. In these analyses, workaholic subtype was used as the categorical independent variable, competitive climate, overwork climate, and work pressure culture were used as separate mediator variables, and the dependent variables included those that significantly differentiated the clusters in RQ2. Similar to RQ3, the workaholic cluster variable was dummy coded to create a set of pairwise comparisons, and as noted above, the current study was the first to compare workaholic subtypes by assessing the impact of work environment on health and wellness variables.

RQ5: Why do workaholics feel overworked? What are common job barriers?

Thematic analysis was used to analyze open-ended survey items regarding explanations for feeling overworked, barriers to effective teaching, and barriers to conducting research. A research assistant was employed to help code and analyze written responses. The six phases to conducting thematic analysis outlined by Braun and Clarke (2006) were followed, which include familiarizing yourself with your data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and writing the results. The advantages to using thematic analysis include flexibility, approachability to researchers with minimal or no qualitative experience, can identify

similarities and differences within the data, and can inform policy (Braun & Clarke, 2006). Frequency analyses were conducted on the coded responses to see if certain themes emerged for some workaholic clusters compared to others.

Supplemental Analyses

Supplemental analyses such as ANOVA and chi-square tests were conducted to compare workaholic subtypes on variables such as age and gender, status in the department, length of time in the organization, and number of hours worked per week. The question in the demographics survey that asked about relationships with other workaholics (e.g., close family members, friends, partners, and colleagues) were assessed to see whether subtypes reported differences in these relationships, and to investigate whether workaholic tendencies might be learned or influenced through observing others' behaviours (e.g., learning theory; McMillan et al., 2001).

CHAPTER V
RESULTS

The data analyses reported below were conducted using SPSS v. 29.0.2.0. Means, standard deviations, scale reliabilities, and intercorrelations of all study variables for the workaholic sample are shown in Table 9, and descriptive statistics for the clustering variables are shown in Table 10. Of the variables used in the cluster analyses, workaholism significantly correlated with job insecurity, r (186) = .305, $p < .01$, and nonself-determined motivation, r (186) = .182, $p < .05$, but was not significantly correlated with self-oriented perfectionism, work engagement or self-determined

Table 9

Means, Standard Deviations, Scale Reliabilities and Intercorrelations (Workaholic Sample: n = 188)

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9
1. Workaholism	3.14	.37	**.740**	.136	.014	.305**	.029	.182*	.324**	.329**	.264**
2. Perfectionism	3.07	.81		**.871**	.023	-0.13	.193**	.307**	.047	.167*	.183*
3. Work Engagement	4.27	.74			**.910**	-.280**	.596**	-.181*	-.453**	-.436**	-.398**
4. Job Insecurity	2.90	1.03				**.916**	-.291**	.139	.456**	.466**	.391**
5. Self-Determined	5.53	.79					**.788**	.153*	-.364**	-.286**	-.156*
6. NonSelf-Determined	4.10	.84						**.588**	.326**	.344**	.212**
7. State Anxiety	2.10	.65							**.953**	.743**	.568**
8. Trait Anxiety	2.17	.53								**.928**	.610**
9. Depression	0.46	.29									**.789**
10. Physical Health Complaints	1.20	.53									
11. Burnout	2.28	.46									
12. Stress	1.83	.64									
13. Life Satisfaction	5.17	1.28									
14. Job Satisfaction	4.44	1.03									
15. Work-Life Balance	2.57	.99									
16. Overwork Climate	3.87	.70									
17. Competitive Climate	2.95	.93									
18. Pressure Culture	3.28	.71									

Variable	10	11	12	13	14	15	16	17	18
1. Workaholism	.302**	.299**	.383**	-.176*	-.270**	-.364**	.167*	.104	.311**
2. Perfectionism	.056	.078	.225**	-.017	-.021	-.037	.012	.092	.088
3. Work Engagement	-.256**	-.626**	-.356**	.397**	.276**	.263**	-.152*	-.129	-.230**
4. Job Insecurity	.477**	.486**	.489**	-.428**	-.721**	-.326**	.304**	.159*	.271**
5. Self-Determined	-.102	-.430**	-.203**	.312**	.285**	.122	-.180*	.027	-.178*
6. NonSelf-Determined	.159**	.328**	.352**	-.116	-.039	-.239**	.055	.071	.137
7. State Anxiety	.449**	.603**	.674**	-.491**	-.401**	-.461**	.155*	.102	.323**
8. Trait Anxiety	.468**	.612**	.724**	-.530**	-.438**	-.449**	.187**	.135	.395**
9. Depression	.378**	.520**	.595**	-.365**	-.369**	-.367**	.127	.153*	.355**
10. Physical Health Compl.	**.887**	.451**	.441**	-.258**	-.415**	-.195**	.145*	.105	.243**
11. Burnout		**.882**	.592**	-.460**	-.478**	-.501**	.291**	.205**	.388**
12. Stress			**.859**	-.492**	-.445**	-.506**	.264**	.256**	.429**
13. Life Satisfaction				**.904**	.395**	.398**	-.095	-.060	-.131
14. Job Satisfaction					**.928**	.269**	-.286**	-.210**	-.349**
15. Work-Life Balance						**.893**	-.250**	-.126	-.360**
16. Overwork Climate							**.861**	.291**	.433**
17. Competitive Climate								**.942**	.139
18. Pressure Culture									**.760**

Cronbach's alpha scale reliability is indicated in bold. **Significant at the 0.01 level (2-tailed) * Significant at the 0.05 level (2-tailed)

Table 10

Descriptive Statistics of Clustering Variables (Workaholic Sample: n = 188)

Clustering Variables	*N*	*M*	*SD*	Min Score	Max Score	Scale Rating
Workaholism	188	3.14	.37	2.60	4.00	1-4
Perfectionism	188	3.07	.81	1.00	5.00	1-5
Work Engagement	188	4.27	.74	1.47	5.76	0-6
Job Insecurity	188	2.90	1.03	1.17	5.67	1-7
Self-Determined Motivation	188	5.53	.79	2.33	7.00	1-7
NonSelf-Determined Motivation	188	4.10	.84	2.00	6.33	1-7

motivation (p values < .05). Workaholism significantly correlated with all variables used for external validation (ranging from r (186) = .167, p < .05 to r (186) = .383, p < .01) except for competitive work climate, r (186) = .104, p > .05.

RQ1: How many types of workaholics are there and how do their profiles differ?

A hierarchical cluster analysis was conducted as a first step to identify clusters of workaholics. Visual inspection of the dendrogram of rescaled variables and a scree plot of agglomeration schedule distances suggested three to six clusters were present in the data. K-means cluster analyses were then carried out by specifying cluster solutions to include three, four, five and six clusters, respectively, each with 10 iterations. Discussed below are the results of the hypothesized four-cluster solution and the preferred three-cluster solution.

The Hypothesized Four-Cluster Solution. Hypothesis 1 was partially supported as some clusters emerged as expected and others did not. Shown in Figure 1, the anticipated 'Engaged' workaholic cluster (n = 59, 31.4%) was present among the sample. As expected, Engaged Workaholics were distinguished from other subtypes by their high scores on work engagement and self-determined motivation, and relatively lower scores on all other variables in the cluster analysis including perfectionism, job insecurity and nonself-determined motivation. Notably, Engaged Workaholics also scored lower than other subtypes on workaholism.

Unexpectedly, the majority of workaholic respondents in the sample (80.4%) scored high on work engagement (M = 4.27, SD = .74, Min = 1.47, Max = 5.76) and, as a result, two additional clusters showed elevated work engagement scores. Additionally, work engagement and self-determined motivation were highly correlated with one

another, r (186) = .596, $p < .01$, and consequently, the two variables showed nearly identical patterns in each cluster profile for each of the cluster solutions tested. Nonetheless, the expected 'Perfectionist' workaholic cluster (n = 67, 35.6%) was present, distinguished from others by higher scores on self-oriented perfectionism. This group expectedly scored low on job insecurity but scored higher than anticipated on both work engagement and self-determined motivation. Perfectionist Workaholics were the largest cluster to emerge, with more than one third of the sample characterized by this typology.

While 'Situationally Insecure' workaholics were hypothesized to be distinguished from other clusters by external factors such as job insecurity and nonself-determined motivation, this was not entirely the case. This cluster did score high on job insecurity but also scored relatively high on work engagement and self-determined motivation, and scored average on perfectionism and nonself-determined motivation. Thus, they could not truly be distinguished by external factors alone as both personal and situational factors appeared to contribute to their workaholic tendencies. It should be noted that this cluster, renamed 'Job Insecure Workaholics' (n = 33, 17.6%) scored higher on workaholism than all other workaholic subtypes.

Lastly, the hypothesized 'Stereotypical' (n = 29, 15.4%) workaholics, generally described in the literature by patterns of low work enjoyment and high external motivation, did not entirely emerge as expected. While this group did score lower than other subtypes on work engagement and self-determined motivation as anticipated, they scored average on perfectionism, job insecurity and nonself-determined motivation. The Stereotypical group of workaholics was the smallest cluster to emerge in the

hypothesized four-cluster solution. Cluster size, rescaled means and standard deviations for the hypothesized cluster solution are reported in Table 11.

The Preferred Three-Cluster Solution. As noted above, the preferred three-cluster solution was chosen based on variable contribution, cluster size and profile interpretability. The main differences between the hypothesized four-cluster solution and the preferred three-cluster solution was that the latter excluded self-determined motivation from the cluster analysis and the Stereotypical Workaholic group was no longer present. Subsequent analyses in the current study were conducted using the preferred three-cluster solution only. As shown in Figure 2, the preferred solution contains three clusters named 'Engaged', 'Perfectionist' and 'Job Insecure'.

In the preferred three-cluster solution, *Engaged Workaholics* (n = 81, 43.0%) were distinguished by their high score on work engagement and significantly lower scores on all other clustering variables including perfectionism, job insecurity, nonself-determined motivation and workaholism. This cluster was now the largest cluster in the sample, with approximately 2 in 5 workaholics characterized by this typology. On the other hand, *Perfectionist Workaholics* (n = 59, 31.4%) were distinguished by having significantly higher scores on self-oriented perfectionism. They expectedly had low scores on job insecurity but scored higher than expected on work engagement. Of the three clusters, this group scored average on workaholism. And lastly, *Job Insecure Workaholics* (n = 48, 25.5%) were distinguished by significantly higher scores on job insecurity. They scored significantly lower on work engagement compared to Engaged Workaholics and significantly lower on perfectionism compared to Perfectionist Workaholics though did not differ from the latter on nonself-determined motivation. Notably, this group scored

the highest on workaholism compared to other subtypes. Cluster size, rescaled means and standard deviations for the preferred cluster solution are reported in Table 12.

Rationale for the Preferred Cluster Solution. As noted above, work engagement and self-determined motivation showed nearly identical patterns across cluster profiles, and the inclusion of both variables did not meaningfully contribute to the cluster solution. Of the two variables, work engagement was retained in an effort to uncover an engaged cluster that has been commonly cited across the literature and to test hypotheses of the anticipated Engaged Workaholics in the current study. Further, the removal of self-determined motivation maximized cluster distance. A discriminant analysis was used to assess cluster cohesion by comparing group centroids on a linear combination of variables, and cluster separation was assessed by percentage of cases that were correctly classified in their respective cluster (see Table 13).

The three-cluster solution yielded the cleanest interpretation and produced cluster sizes large enough for subsequent analyses. Both the five- and six-cluster solutions contained small clusters with *ns* ranging from 7 to 16 respondents, and some patterns of their typologies lacked clear meaning and interpretation. The five- and six-cluster solutions were deemed unsuitable as small clusters would likely not replicate in future studies, would lack power for further analyses in the current study, and for lacking clear interpretability.

Figure 1

Final Cluster Centers in the Hypothesized Four-Cluster Solution

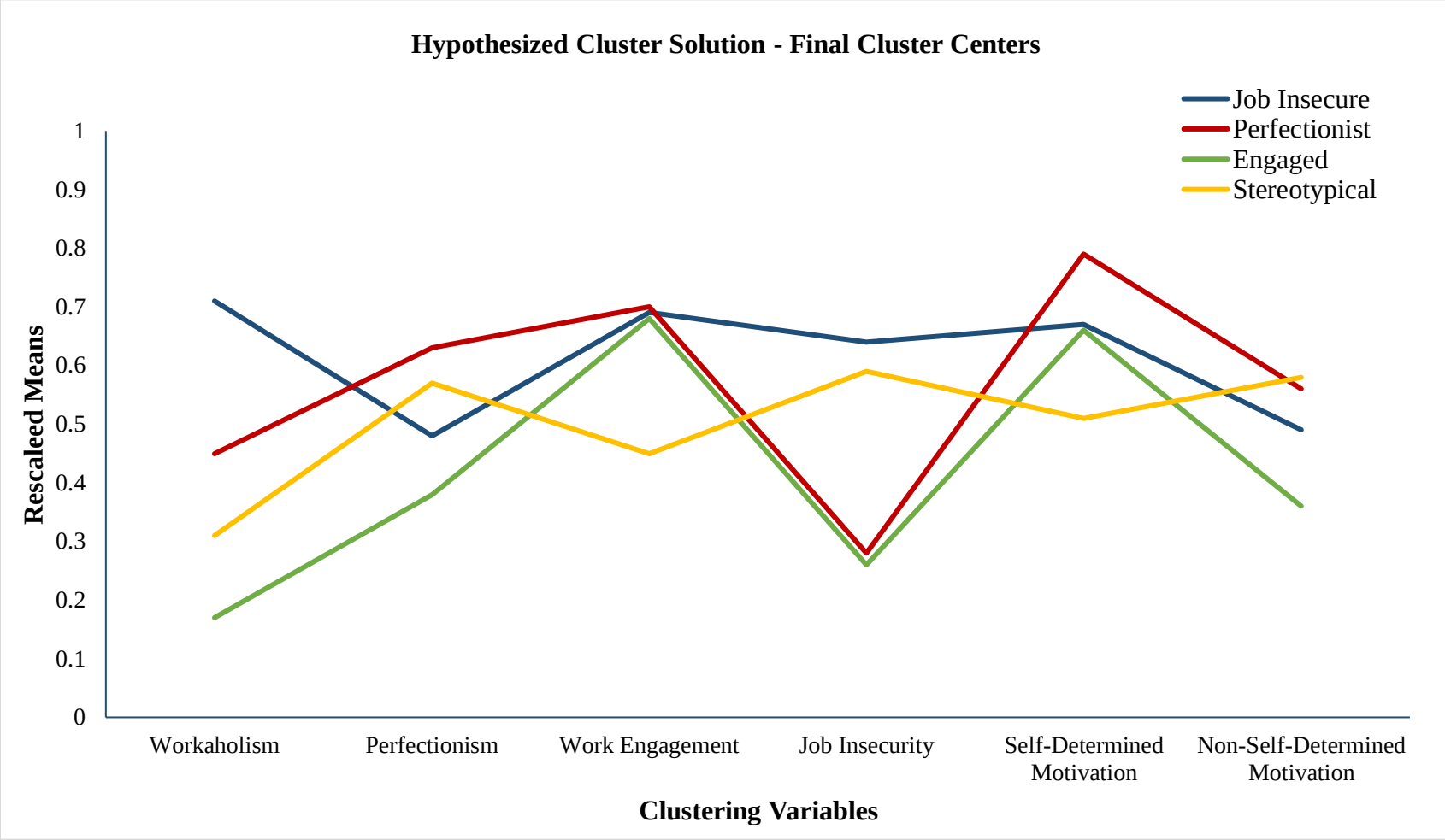


Figure 2

Final Cluster Centers in the Preferred Three-Cluster Solution

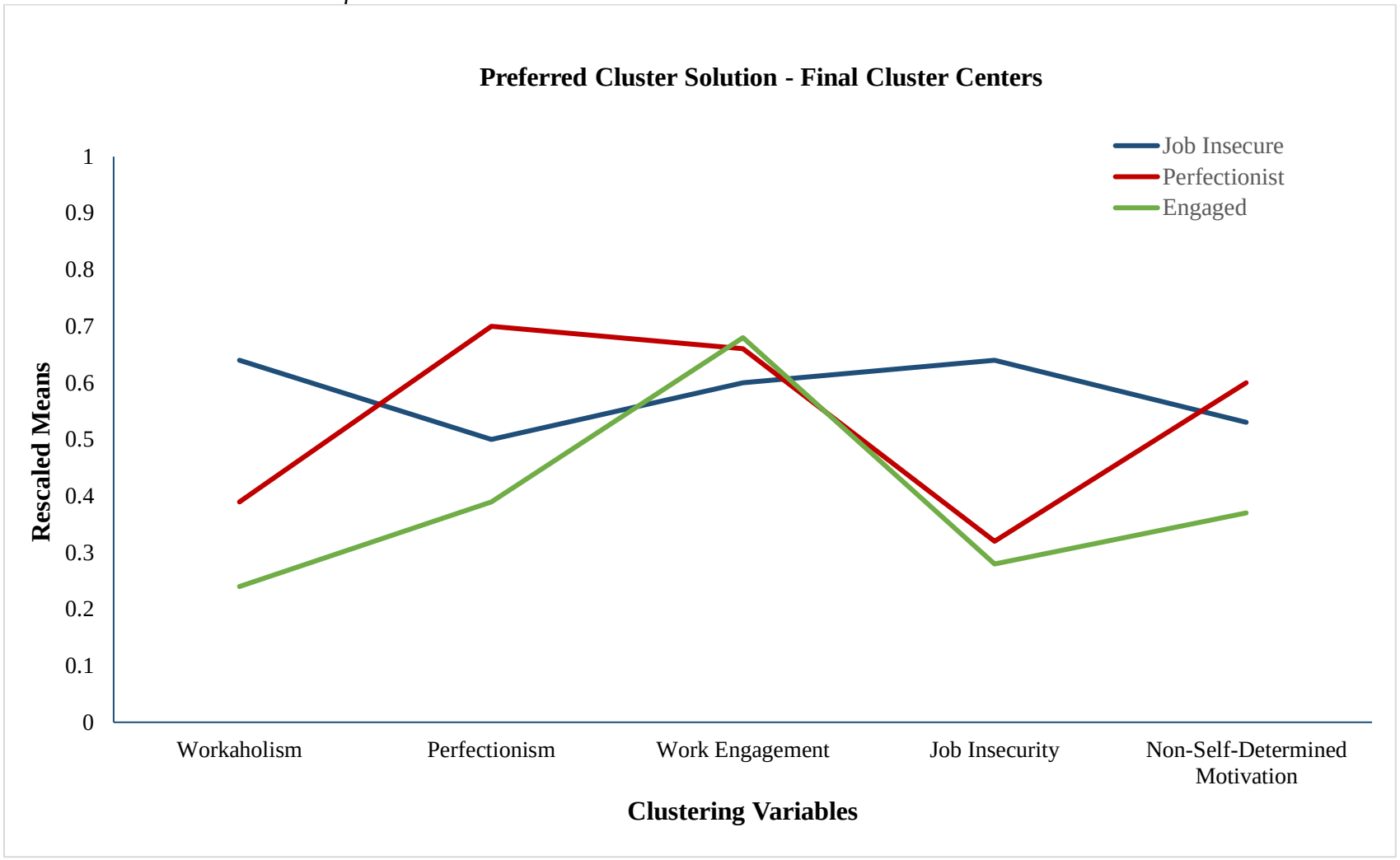


Table 11

Cluster Size, Rescaled Means and Standard Deviations for the Hypothesized Cluster Solution

	Cluster of Workaholics			
	Job Insecure	Perfectionist	Engaged	Stereotypical
	n = 33 (17.6%)	*n* = 67 (35.6%)	*n* = 59 (31.4%)	*n* = 29 (15.4%)
Clustering Variable	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
Workaholism	.71 (.18)	.45 (.20)	.17 (.15)	.31 (.20)
Perfectionism	.48 (.19)	.63 (.17)	.38 (.17)	.57 (.17)
Work Engagement	.69 (.14)	.70 (.15)	.68 (.16)	.45 (.15)
Job Insecurity	.64 (.19)	.28 (.13)	.26 (.17)	.59 (.17)
Self-Determined Motivation	.67 (.16)	.79 (.12)	.66 (.12)	.51 (.18)
NonSelf-Determined Motivation	.49 (.20)	.56 (.17)	.36 (.16)	.58 (.16)

Table 12

Cluster Size, Rescaled Mean and Standard Deviation for the Preferred Cluster Solution

	Cluster of Workaholics		
	Job Insecure	Perfectionist	Engaged
	n = 48 (25.5%)	*n* = 59 (31.4%)	*n* = 81 (43.0%)
Clustering Variable	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
Workaholism	.64 (.21) [a b]	.39 (.24) [a c]	.24 (.18) [b c]
Perfectionism	.50 (.16) [a b]	.70 (.12) [a c]	.39 (.17) [b c]
Work Engagement	.60 (.20) [a]	.66 (.17)	.68 (.16) [a]
Job Insecurity	.64 (.19) [a b]	.32 (.14) [a]	.28 (.18) [b]
NonSelf-Determined Motivation	.53 (.20) [a]	.60 (.15) [b]	.37 (.16) [a b]

Note. ANOVA and Bonferroni post-hoc analyses were conducted to assess group differences in the preferred cluster solution. Subscripts denote significant differences ($p < .001$) between the clusters on each clustering variable.

Table 13

Cluster Distance, Cohesion and Separation Indices

Distance Between Cluster Centers			
Cluster	Job Insecure	Perfectionist	Engaged
Job Insecure		.463	.584
Perfectionist			.419
Engaged			

Cluster Cohesion		
Structure Matrix	Function 1	Function 2
Workaholism	.551	-.480
Perfectionism	.533	-.193
Work Engagement	-.124	.056
Job Insecurity	.340	.775
NonSelf-determined Motivation	.340	.383
Functions at Group Centroids	Function 1	Function 2
Job Insecure	1.936	-.970
Perfectionist	.503	1.350
Engaged	-1.513	-.408

Cluster Separation			
Classification Results (Original)			
	Predicted Group Membership		
	Job Insecure	Perfectionist	Engaged
Job Insecure	95.8%	2.1%	2.1%
Perfectionist	.0%	100.0%	.0%
Engaged	.0%	.0%	100.0%
*98.9% of original grouped cases were correctly classified.			

Supplemental Analyses

Additional ANOVA and chi-square tests revealed differences between the workaholic clusters (Table 14). Significant differences in age were found, $F(3, 268) = 3.56$, $p = .015$, $\eta^2 = .046$. Bonferroni post-hoc analysis revealed that Job Insecure Workaholics ($M = 44.81$, $SD = 8.69$) were significantly younger than Engaged Workaholics ($M = 49.98$, $SD = 11.02$), however, neither cluster significantly differed in age from Perfectionist Workaholics ($M = 46.57$, $SD = 9.41$). The clusters did not significantly differ from each other in terms of gender, $\chi^2 (2) = .404$, $p = .817$; ethnicity,

χ^2 (14) = 15.27, p = .360; marital status, χ^2 (4) = 1.49, p = .828; number of children living at home, χ^2 (2) = 2.69, p = .261; or education level, χ^2 (4) = 2.05, p = .726.

On work-related variables, the three clusters did not significantly differ in regards to their faculty, χ^2 (14) = 17.34, p = .238, or the size of the institution in which they worked, χ^2 (4) = 1.46, p = .834. Significant differences were found, however, on tenure status in their department, χ^2 (4) = 18.32, p < .001, length of time in the profession, χ^2 (6) = 14.93, p = .021; length of time employed at their institution, χ^2 (6) = 15.51, p = .017; and number of hours worked per week, χ^2 (6) = 15.51, p = .017. Odds ratio calculations of pairwise comparisons, reported in Table 14, suggested that, compared to Engaged Workaholics, Job Insecure were more likely to hold nontenured positions, be newer to the profession (i.e., fewer than 10 years), and newer to their institution (i.e., fewer than 10 years). Perfectionist Workaholics did not differ from either group on any of these characteristics. Job Insecure Workaholics also reported working more hours per week (i.e., more than 50 hours per week) than the other two subtypes, which aligns with their significantly higher scores on workaholism.

Lastly, Job Insecure Workaholics were more likely than Engaged Workaholics to report having workaholic parents, χ^2 (1) = 4.61, p = .032, and more likely than Perfectionist Workaholics to report having workaholic partners, χ^2 (1) = 4.87, p = .029. Perfectionist Workaholics, on the other hand, were more likely than both Job Insecure Workaholics, χ^2 (1) = 4.29, p = .037, and Engaged Workaholics, χ^2 (1) = 6.57, p = .010, to report having workaholic colleagues. These findings align with previous assumptions that workaholic tendencies can be learned from others or influenced by situational or environmental circumstances.

Table 14

Summary of Cluster Differences on Demographic Variables

Variable	Cluster Comparisons
Age	Job Insecure Workaholics (*M* = 44.81, *SD* = 8.69) were significantly younger in age than Engaged Workaholics (*M* = 49.98, *SD* = 11.02). Perfectionist Workaholics (*M* = 46.57, *SD* = 9.41) did not significantly differ from either cluster.
Gender	No significant group differences.
Ethnicity	No significant group differences.
Marital Status	No significant group differences.
Children at Home	No significant group differences.
Highest Level of Education	No significant group differences.
Faculty	No significant group differences.
Size of Institution	No significant group differences.
Status in Department	Job Insecure Workaholics were 1.95 times more likely to hold nontenured positions compared to Engaged Workaholics, 95% CI [1.25, 3.02]. Perfectionist Workaholics did not differ from either cluster.
Employment in Profession	Job Insecure Workaholics were 1.61 times more likely to be new to the profession (i.e., 0-10 years) compared to Engaged Workaholics, 95% CI [1.02, 2.56]. Perfectionist Workaholics did not differ from either cluster.
Employment at Institution	Job Insecure Workaholics were 1.61 times more likely to be new to the institution (i.e., 0-10 years) compared to Engaged Workaholics, 95% CI [1.02, 2.56]. Perfectionist Workaholics did not differ from either cluster.
Hours Worked per Week	Job Insecure Workaholics were 1.60 times more likely than Engaged Workaholics, 95% CI [1.22, 2.11], to report working 50 hours or more per week. Job Insecure Workaholics were 1.54 times more

	likely than Perfectionist Workaholics, 95% CI [1.14, 2.08], to report working 50 hours or more per week.
Workaholic Family (Parents, Partner)	Job Insecure Workaholics were 1.91 times more likely than Engaged Workaholics to report having workaholic parents, 95% CI [1.05, 3.45]. Job Insecure Workaholics were 1.95 times more likely than Perfectionist Workaholics to report having a workaholic partner, 95% CI [1.05, 3.60].
Workaholic Colleagues	Perfectionist Workaholics were 1.48 times more likely than Job Insecure Workaholics to report having workaholic colleagues, 95% CI [1.02, 2.13]. Perfectionist Workaholics were 1.61 times more likely than Engaged Workaholics to report having workaholic colleagues, 95% CI [1.12, 2.32].

RQ2: How do workaholic subtypes differ on health and wellness variables?

The assumptions of ANOVA and MANOVA were tested prior to conducting data analyses. Shapiro-Wilk and Kolmogorov-Smirnov tests of univariate normality suggested normal distributions for each cluster on state anxiety, trait anxiety, physical health, burnout and stress (p values > .05); however, non-normal distributions were found for the clusters on depression, life satisfaction and job satisfaction. Mild deviations of multivariate normality were also shown in bivariate matrix scatterplots of combinations of the dependent variables for each cluster.

Univariate outliers with z-scores greater than +/- 3.0 were identified in four cases and two additional cases contained multivariate outliers identified by Mahalanobis distance scores exceeding a critical value of 26.13, $p < .001$. All outliers were found in the Job Insecure cluster but were retained for analysis as their exclusion did not correct violated assumptions nor alter research findings. Levene's test suggested homogeneity of variance between clusters for all dependent variables except for trait anxiety ($p = .010$)

and life satisfaction ($p < .001$). Box's test of equality of covariance matrices also suggested violations of this assumption, $F(72, 8295.949) = 1.352$, $p = .025$, Box's M = 104.213. Despite these violations, analyses were deemed to be robust to mild deviations of nonnormality and heterogeneity of variance (i.e., the variance of the largest and smallest groups did not exceed 4:1), and observations were assumed to be independent from one another.

The results of a one-way ANOVA and MANOVA indicated that the three workaholic clusters differed from each other on all health and wellness variables. Follow up Bonferroni post-hoc tests and discriminant function analysis (DFA), respectively, provided support for Hypothesis 2, suggesting that Engaged Workaholics tend to report better health and wellness outcomes compared to other subtypes of workaholics. The results from the one-way ANOVA and Bonferroni post-hoc tests are reported in Table 15 and shown in Figure 3, and the results from the MANOVA and DFA are reported in Tables 16-18.

ANOVA and Bonferroni Post-hoc Results

State Anxiety. The results of a one-way ANOVA suggested significant differences between the clusters on state anxiety, $F(2, 185) = 12.772$, $p < .001$, $\omega^2 = .111$. Bonferroni post-hoc analyses revealed that Job Insecure Workaholics ($M = 2.46$, $SD = .71$) scored significantly higher on state anxiety than both Perfectionist ($M = 2.09$, $SD = .64$), $p = .006$, and Engaged Workaholics ($M = 1.90$, $SD = .52$), $p < .001$. Perfectionist and Engaged Workaholics did not significantly differ from each other on state anxiety scores, $p = .219$.

Trait Anxiety. Significant differences were found between the clusters on trait anxiety, Welch's $F(2, 101.69) = 17.136$, $p < .001$, $\omega^2 = .146$. Engaged Workaholics ($M = 1.95$, $SD = .41$) scored significantly lower on trait anxiety than both Job Insecure ($M = 2.45$, $SD = .55$), $p < .001$, and Perfectionist Workaholics ($M = 2.23$, $SD = .53$), $p = .002$; however, Job Insecure and Perfectionist Workaholics did not significantly differ from each other, $p = .062$.

Depression. Significant differences were found between the clusters on depression, $F(2, 185) = 13.047$, $p < .001$, $\omega^2 = .114$. Engaged Workaholics ($M = 0.36$, $SD = .28$) scored significantly lower on depression than both Job Insecure ($M = 0.60$, $SD = .25$), $p < .001$, and Perfectionist Workaholics ($M = 0.49$, $SD = .28$), $p = .010$. Job Insecure and Perfectionist workaholic subtypes did not significantly differ from each other on depression scores, $p = .123$.

Physical Health Complaints. Significant differences were evident between the clusters on physical health complaints, $F(2, 185) = 15.803$, $p < .001$, $\omega^2 = .136$. Job Insecure Workaholics ($M = 1.52$, $SD = .60$) reported significantly more physical health complaints than both Perfectionist ($M = 1.18$, $SD = .47$), $p = .002$, and Engaged Workaholics ($M = 1.02$, $SD = .43$), $p < .001$. Perfectionist and Engaged Workaholics did not significantly differ from each other on their reports of physical health complaints, $p = .149$.

Burnout. The three subtypes significantly differed on burnout, $F(2,185) = 19.406$, $p < .001$, $\omega^2 = .164$. Job Insecure Workaholics ($M = 2.55$, $SD = .45$) scored significantly higher on burnout compared to both Perfectionist ($M = 2.33$, $SD = .39$), $p = .023$, and Engaged Workaholics ($M = 2.08$, $SD = .43$), $p < .001$. Further, Perfectionist

Workaholics scored significantly higher on burnout than Engaged Workaholics, $p = .002$. In other words, Engaged Workaholics scored significantly lower on burnout than both other types of workaholics.

Stress. The three clusters significantly differed on stress, $F(2,185) = 23.050$, $p < .001$, $\omega^2 = .190$. Job Insecure Workaholics ($M = 2.23$, $SD = .63$) scored significantly higher on stress than both Perfectionist ($M = 1.90$, $SD = .50$, $p = .011$) and Engaged Workaholics ($M = 1.53$, $SD = .60$), $p < .001$. Further, Perfectionist Workaholics scored significantly higher on stress than Engaged Workaholics, $p < .001$. Evidently, Engaged Workaholics scored significantly lower on stress than both other subtypes of workaholics.

Life Satisfaction. Significant differences were found between the clusters on life satisfaction, Welch's $F(2,102.054) = 6.485$, $p = .002$, $\omega^2 = .083$. Job Insecure Workaholics ($M = 4.52$, $SD = 1.64$) scored significantly lower on life satisfaction compared to Perfectionist ($M = 5.27$, $SD = 1.02$), $p = .005$, and Engaged Workaholics ($M = 5.48$, $SD = 1.06$), $p < .001$; however, Perfectionist and Engaged Workaholics did not significantly differ from each other on life satisfaction scores, $p = 1.000$.

Job Satisfaction. Significant differences were found between the clusters on job satisfaction, $F(2,185) = 35.090$, $p < .001$, $\omega^2 = .266$. Job Insecure Workaholics ($M = 3.52$, $SD = .99$) scored significantly lower on job satisfaction than Perfectionist ($M = 4.70$, $SD = .87$), $p = .005$, and Engaged Workaholics ($M = 4.79$, $SD = .83$), $p < .001$. Perfectionist and Engaged Workaholics, however, did not significantly differ from each other, $p = 1.000$.

Table 15

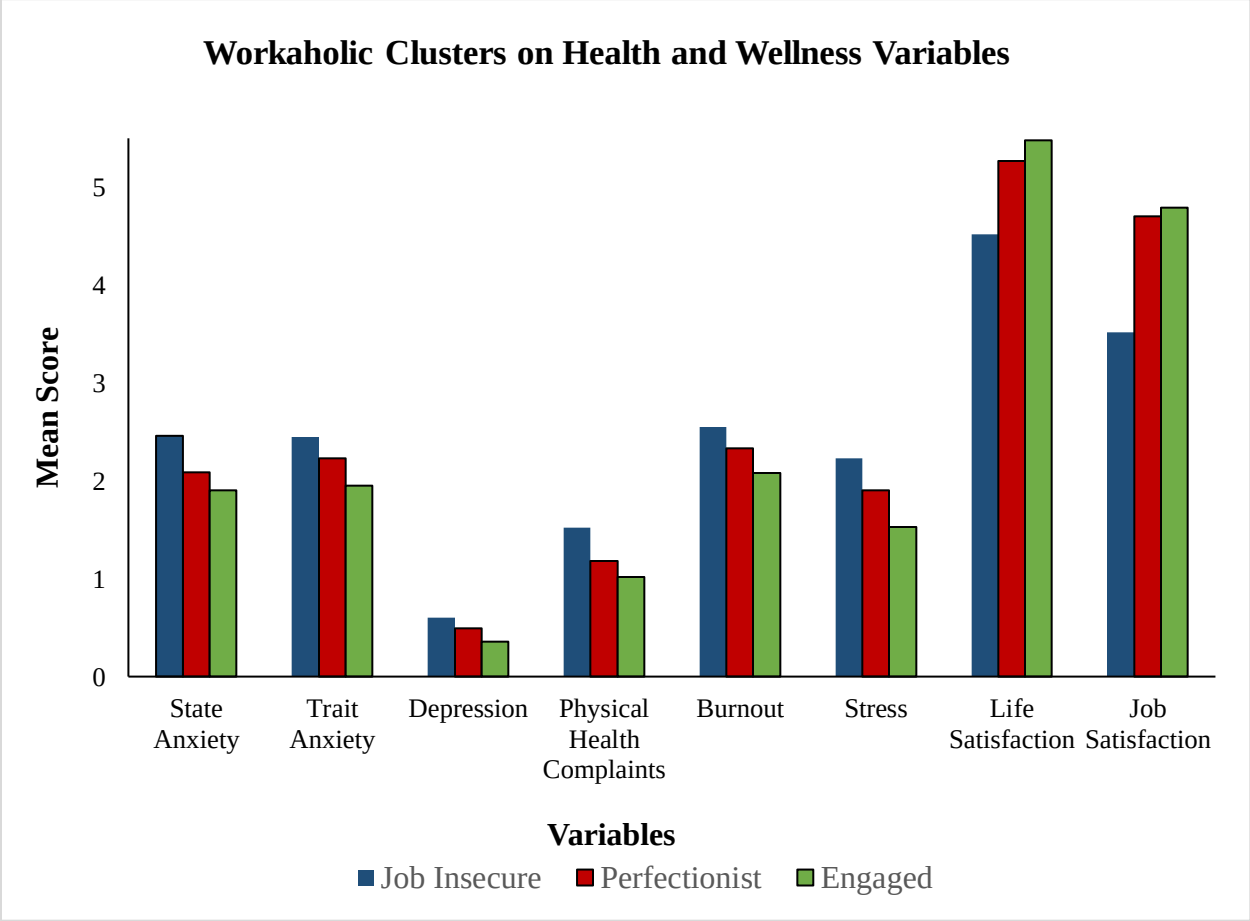
Bonferroni Post-hoc Cluster Differences on Health and Wellness Variables

	Cluster of Workaholics		
	Job Insecure	Perfectionist	Engaged
	n = 48	*n* = 59	*n* = 81
Variable	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
State Anxiety	2.46 (.71) [a b]	2.09 (.64) [a]	1.90 (.52) [b]
Trait Anxiety	2.45 (.55) [a]	2.23 (.53) [b]	1.95 (.41) [a b]
Depression	0.60 (.25) [a]	0.49 (.28) [b]	0.36 (.28) [a b]
Physical Health Complaints	1.52 (.60) [a b]	1.18 (.47) [a]	1.02 (.43) [b]
Burnout	2.55 (.45) [a b]	2.33 (.39) [a c]	2.08 (.43) [b c]
Stress	2.23 (.63) [a b]	1.90 (.50) [a c]	1.53 (.60) [b c]
Life Satisfaction	4.52 (1.64) [a b]	5.27 (1.02) [a]	5.48 (1.06) [b]
Job Satisfaction	3.52 (.99) [a b]	4.70 (.87) [a]	4.79 (.83) [b]

Note. Subscripts denote significant differences ($p < .05$) between the clusters on each variable

Figure 3

Cluster Mean Differences on Health and Wellness Variables



MANOVA and Discriminant Function Analysis Results

The results of a MANOVA suggested a significant difference between the three workaholic subtypes on a linear combination of health and wellness variables, $F(16, 358) = 6.112$, $p < .001$, Pillai's Trace = .429, $\omega^2 = .215$. A follow-up DFA was conducted to interpret differences between the clusters. The first two canonical discriminant functions were used in the discriminant analysis. Function 1 accounted for 82.0% of variance (Canonical Correlation = .575, $\omega^2 = .331$, $\chi^2(16) = 91.69$, $p < .001$, $\Lambda = .603$) and Function 2 accounted for 18.0% of variance (Canonical Correlation = .313, $\omega^2 = .098$, $\chi^2(7) = 18.750$, $p = .009$, $\Lambda = .902$).

The results of the structure matrix correlations (reported in Table 16) suggested key differences between the two functions, though they both included higher scores on job satisfaction (see Table 17 for unique contributions of each variable on the functions). Function 1 was characterized by mental and physical well-being with higher scores on job satisfaction ($R = .859$) and lower scores on stress ($R = -.674$), burnout ($R = -.618$), physical health complaints ($R = -.585$) and trait anxiety ($R = -.572$). Function 2, in contrast, was generally characterized by distress and dysfunction with higher scores on stress ($R = .474$), trait anxiety ($R = .452$), burnout ($R = .437$) depression ($R = .393$) and, interestingly, higher scores on job satisfaction ($R = .365$).

The functions at group centroids (reported in Table 18) revealed that Engaged Workaholics ($M = .577$) scored the highest on Function 1, characterized by mental and physical well-being, while Job Insecure Workaholics ($M = -1.149$) scored the lowest on this function. These findings align with the previously reported Bonferroni post-hoc results that suggested Engaged Workaholics report significantly better health and

wellness outcomes compared to Insecure Workaholics on all outcome variables. On the other hand, Perfectionist Workaholics (M = .479) scored the highest on Function 2, characterized by distress and dysfunction, while Engaged Workaholics (M = -.261) scored the lowest on this function. This finding also aligns with the previously reported Bonferroni post-hoc results that indicated Perfectionist Workaholics scored significantly higher than Engaged Workaholics on stress, burnout, depression, trait anxiety, but scored similarly to Engaged Workaholics on job satisfaction.

Table 16
Discriminant Analysis Structure Matrix

Variable	Function 1	Function 2
Job Satisfaction	.859	.365
Stress	-.674	.474
Burnout	-.618	.437
Physical Health Complaints	-.585	.112
Trait Anxiety	-.572	.452
State Anxiety	-.526	.108
Depression	-.501	.393
Life Satisfaction	.456	.044

Table 17
Standardized Canonical Discriminant Function Coefficients

Variable	Function 1	Function 2
State Anxiety	.037	-.671
Trait Anxiety	.069	.600
Depression	-.067	.206
Physical Health Complaints	-.262	-.035
Burnout	-.129	.540
Stress	-.329	.476
Life Satisfaction	.068	.316
Job Satisfaction	.629	.680

Table 18
Functions at Group Centroids

Cluster	Function 1	Function 2
Job Insecure Workaholics	-1.149	-.149
Perfectionist Workaholics	.142	.479
Engaged Workaholics	.577	-.261

RQ3: How does work-life balance influence workaholic subtypes' outcomes?

Prior to conducting data analyses, assumptions of ANOVA and mediation analyses were tested. In addition to the assumptions for the variables reported in RQ2, Shapiro-Wilk and Kolmogorov-Smirnov tests of univariate normality suggested a normal distribution for Perfectionist Workaholics on perceived work-life balance (p value > .05) but nonnormal distributions for both Job Insecure ($p < .001$) and Engaged ($p < .010$) Workaholics. Levene's test also suggested violations of homogeneity of variance between the clusters for perceived work-life balance ($p = .029$). Observations were expected to be independent of each other. Visual inspection of histograms of residuals for each outcome variable suggested normal distributions for the three workaholics subtypes. Further, scatterplots of residuals and predicted values revealed assumptions of homoscedasticity and linearity were met. One univariate outlier on work-life balance was identified by a z-score greater than +/- 3.0 and two multivariate outliers were identified by Mahalanobis distance scores that exceeded a critical value of 27.88, $p < .001$. No influential observations were identified (Cook's distance < 1). Outliers were retained as their exclusion did not correct violated assumptions nor alter the research findings.

ANOVA and Bonferroni Post-hoc Results

The results of a one-way ANOVA suggested significant differences between the clusters on work-life balance, Welch's $F(2, 116.879) = 116.879$, $p < .001$, $\omega^2 = .101$. A Bonferroni post-hoc analysis revealed that Job Insecure Workaholics ($M = 2.03$, $SD = .83$) reported significantly lower scores on perceived work-life balance compared to Perfectionist ($M = 2.65$, $SD = .87$), $p = .002$, and Engaged Workaholics ($M = 2.83$, $SD =$

1.04), $p < .001$. Perfectionist and Engaged Workaholics did not significantly differ from each other on perceived work-life balance, $p = .764$.

Mediation Analysis Results

Hypothesis 3 was supported as perceived work-life balance significantly mediated the relationship between workaholic subtypes and many health and wellness outcomes. Descriptive statistics for variables used in the mediation analyses are reported in Table 19. The mediation results for each outcome variable are reported below (summarized in Table 20) and model paths are illustrated in Figures 4-11. Job Insecure Workaholics were used as the reference group in each mediation analysis since they significantly differed from the other two clusters on perceived work-life balance.

Table 19

Cluster Mean (Standard Deviation) of Mediator and Outcome Variables

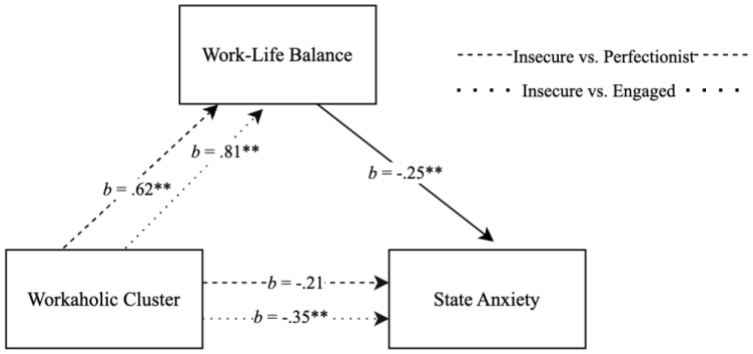
	Workaholic Cluster		
	Job Insecure	Perfectionist	Engaged
	n = 48	*n* = 59	*n* = 81
	M (*SD*)	*M* (*SD*)	*M* (*SD*)
Work-Life Balance	2.03 (.83) [a b]	2.65 (.87) [a]	2.83 (1.04) [b]
Health and Wellness Variables			
State Anxiety	2.46 (.71)	2.09 (.64)	1.90 (.52)
Trait Anxiety	2.45 (.55)	2.23 (.53)	1.95 (.41)
Depression	0.60 (.25)	0.49 (.28)	0.36 (.28)
Physical Health Complaints	1.52 (.60)	1.18 (.47)	1.02 (.43)
Burnout	2.55 (.45)	2.33 (.39)	2.08 (.43)
Stress	2.23 (.63)	1.90 (.50)	1.53 (.60)
Life Satisfaction	4.52 (1.64)	5.27 (1.02)	5.48 (1.06)
Job Satisfaction	3.52 (.99)	4.70 (.87)	4.79 (.83)

Note. Subscripts denote significant differences ($p < .05$) on work-life balance.

State Anxiety. Work-life balance mediated the relationship between workaholic clusters and state anxiety. A significant indirect effect was found when comparing Job Insecure Workaholics to both Perfectionist, $b = -.16$, Boot*SE* = .05, 95% BootCI [-.26, -.07], Sobel's test = 2.95, $p = .003$, and Engaged Workaholics, $b = -.21$, Boot*SE* = .05,

95% BootCI [-.31, -.11], Sobel's test = 3.66, $p < .001$. In both comparisons, Job Insecure reported lower levels of perceived work-life balance and higher levels of state anxiety.

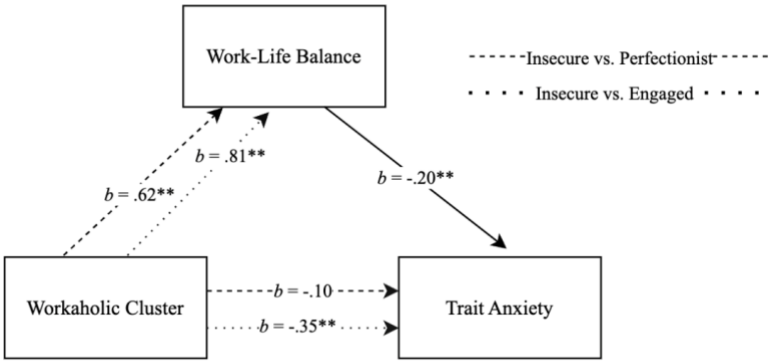
Figure 4
Simple Mediation Model for Workaholic Clusters and State Anxiety



Note. ** indicates significance level $p < .001$.

Trait Anxiety. Work-life balance mediated the relationship between workaholic clusters and trait anxiety. A significant indirect effect was found when comparing Job Insecure Workaholics to Perfectionist, $b = -.12$, Boot*SE* = .04, 95% BootCI [-20, -.06], Sobel's test = 2.92, $p = .004$, and Engaged Workaholics, $b = -.16$, Boot*SE* = .04, 95% BootCI [-.25, -.09], Sobel's test = 3.60, $p < .001$. Job Insecure Workaholics reported lower levels of perceived work-life balance and higher levels of trait anxiety.

Figure 5
Simple Mediation Model for Workaholic Clusters and Trait Anxiety

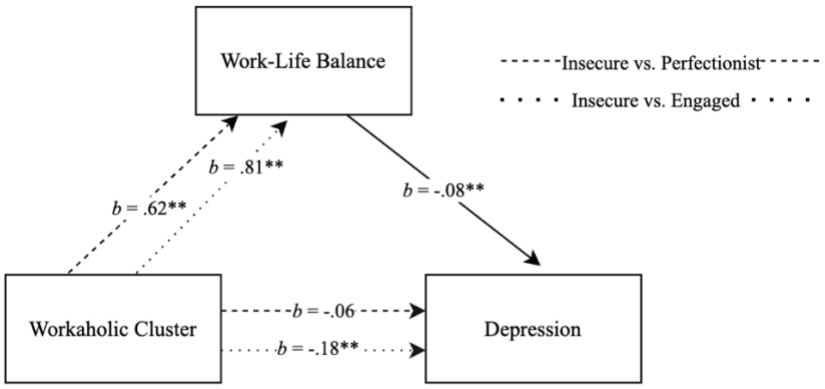


Note. ** indicates significance level $p < .001$.

Depression. Work-life balance mediated the relationship between workaholic clusters and depression. A marginally significant indirect effect was found when comparing Job Insecure Workaholics to Perfectionist Workaholics, b = -.05, Boot*SE* = .02, 95% BootCI [-.09, -.02], Sobel's test = 2.64, p = .008, and when comparing Job Insecure Workaholics to Engaged Workaholics, b = -.07, Boot*SE* = .02, 95% BootCI [-.11, -.03], Sobel's test = 3.12, p < .001. In both comparisons, Job Insecure Workaholics reported lower levels of perceived work-life balance and higher levels of depression.

Figure 6

Simple Mediation Model for Workaholic Clusters and Depression

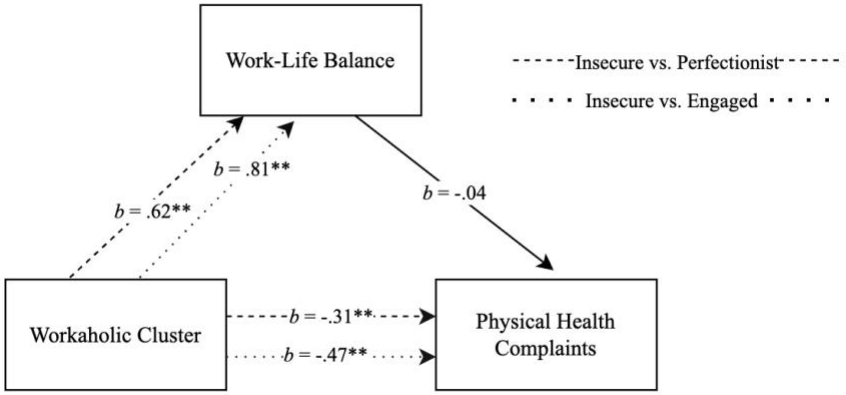


Note. ** indicates significance level p < .001.

Physical Health Complaints. Despite Job Insecure workaholics reporting significantly lower levels of perceived work-life balance and significantly more physical health complaints than others, work-life balance did not mediate the relationship between workaholic clusters and physical health complaints. The indirect effects were not statistically significant when comparing Job Insecure to Perfectionist Workaholics, b = -.03, Boot*SE* = .03, 95% BootCI [-.08, .02] nor to Engaged Workaholics, b = -.03, Boot*SE* = .03, 95% BootCI [-.11, .03].

Figure 7

Simple Mediation Model for Workaholic Clusters and Physical Health Complaints

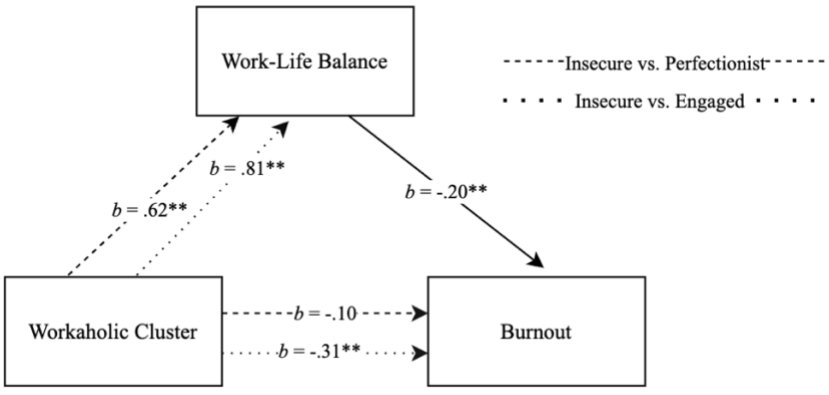


Note. ** indicates significance level $p < .001$.

Burnout. Work-life balance mediated the relationship between workaholic clusters and burnout. A significant indirect effect was found when comparing Job Insecure Workaholics to Perfectionist Workaholics, b = -.12, Boot*SE* = .04, 95% BootCI [-.20, -.05], Sobel's test = 3.03, p = .002, and when comparing Job Insecure Workaholics to Engaged Workaholics, b = -.16, Boot*SE* = .04, 95% BootCI [-.24, -.09], Sobel's test = 3.83, $p < .001$. The Job Insecure subtype reported lower levels of perceived work-life balance and higher levels of burnout compared to both other subtypes.

Figure 8

Simple Mediation Model for Workaholic Clusters and Burnout

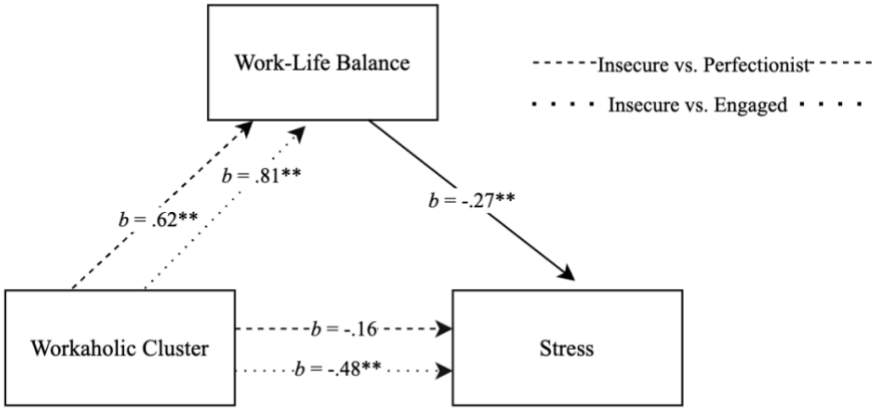


Note. ** indicates significance level $p < .001$.

Stress. Work-life balance mediated the relationship between workaholic clusters and stress. A significant indirect effect was found when comparing Job Insecure to Perfectionist Workaholics, *b* = -.17, Boot*SE* = .05, 95% BootCI [-.28, -.07], Sobel's test = 3.04, *p* = .002, and when comparing Job Insecure to Engaged Workaholics, *b* = -.22 Boot*SE* = .05, 95% BootCI [-.33, -.12], Sobel's test = 3.84, *p* < .001. In both comparisons, Job Insecure Workaholics reported lower levels of perceived work-life balance and higher levels of stress.

Figure 9

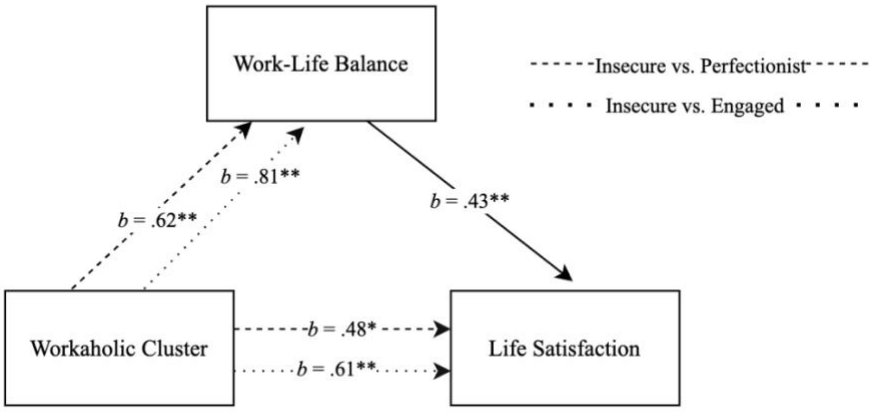
Simple Mediation Model for Workaholic Clusters and Stress



Note. ** indicates significance level *p* < .001.

Life Satisfaction. Significant indirect effects were found when comparing Job Insecure to Perfectionist Workaholics, *b* = .27, Boot*SE* = .09, 95% BootCI [.12, .45], Sobel's test = 2.78, *p* = .005, and to Engaged Workaholics, *b* = .35 Boot*SE* = .09, 95% BootCI [.18, .55], Sobel's test = 3.36, *p* < .001. In both instances, Job Insecure Workaholics reported lower levels of perceived work-life balance and lower levels of life satisfaction. Compared to other mediation models tested thus far, the largest effect sizes were found in this model.

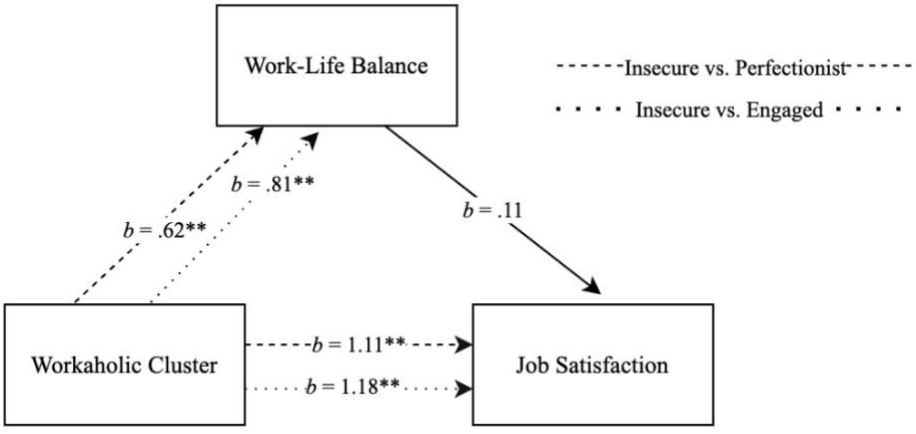
Figure 10
Simple Mediation Model for Workaholic Clusters and Life Satisfaction



Note. ** indicates significance level $p < .001$, * indicates significance level $p < .05$.

Job Satisfaction. Despite Job Insecure Workaholics reporting significantly lower levels of perceived work-life balance and significantly lower levels of job satisfaction compared to others, work-life balance did not mediate this relationship. Indirect effects were not statistically significant when comparing Job Insecure Workaholics to Perfectionist Workaholics, $b = .07$, Boot$SE = .05$, 95% BootCI [-.01, .18] nor to Engaged Workaholics, $b = .09$, Boot$SE = .06$, 95% BootCI [-.01, 22].

Figure 11
Simple Mediation Model for Workaholic Clusters and Job Satisfaction



Note. ** indicates significance level $p < .001$.

Table 20

Summary of Indirect Effects for Work-Life Balance Mediation Models

Model	Effect	BootSE	95% BootCI
State Anxiety			
Job Insecure vs. Perfectionist	-.16	.05	-.26, -.07
Job Insecure vs. Engaged	-.21	.05	-.31, -.11
Trait Anxiety	-.12	.04	-.20, -.06
Job Insecure vs. Perfectionist	-.16	.04	-.25, -.09
Job Insecure vs. Engaged			
Depression	-.05	.02	-.09, -.02
Job Insecure vs. Perfectionist	-.07	.02	-.11, -.03
Job Insecure vs. Engaged			
Physical Health Complaints	-.03	.03	-.08, .02
Job Insecure vs. Perfectionist	-.03	.03	-.11, .03
Job Insecure vs. Engaged			
Burnout	-.12	.04	-.20, -.05
Job Insecure vs. Perfectionist	-.16	.04	-.24, -.09
Job Insecure vs. Engaged			
Stress	-.17	.05	-.28, -.07
Job Insecure vs. Perfectionist	-.22	.05	-.33, -.12
Job Insecure vs. Engaged			
Life Satisfaction	.27	.09	.12, .45
Job Insecure vs. Perfectionist	.35	.09	.18, .55
Job Insecure vs. Engaged			
Job Satisfaction	.07	.05	-.01, .18
Job Insecure vs. Perfectionist	.09	.06	-.01, .22
Job Insecure vs. Engaged			

Note. Job Insecure Workaholics were dummy coded as the reference group.

RQ4: How do organizational factors impact workaholic subtypes' outcomes?

Prior to conducting data analyses, assumptions of ANOVA and mediation analyses were tested. In addition to the assumptions for the outcome variables reported in RQ2, Shapiro-Wilk and Kolmogorov-Smirnov tests of univariate normality suggested normal distributions for the three clusters on organizational culture and climate variables

(p value > .05). Further, Levene's test suggested homogeneity of variance between the clusters for overwork climate (p = .80), competitive climate (p = .08) and pressure culture (p = .56), and observations were expected to be independent of each other.

Visual inspection of histograms of residuals for each outcome variable suggested normal distributions for the three workaholics subtypes. Scatterplots of residuals and predicted values also revealed homoscedasticity and linearity assumptions were met. Three multivariate outliers were identified by Mahalanobis distance scores that exceeded a critical value of 31.26, $p < .001$ and were removed from analyses as their exclusion slightly influenced results. No influential observations were identified (Cook's distance values < 1).

ANOVA and Bonferroni Post-hoc Results

The results of a one-way ANOVA suggested that workaholic subtypes significantly differed on perceptions of overwork climate, $F(2, 182) = 7.93$, $p < .001$, $\omega^2 = .070$. A Bonferroni post-hoc analysis revealed that Job Insecure Workaholics (M = 4.19, SD = .67) scored significantly higher on overwork climate compared to Perfectionist Workaholics (M = 3.86, SD = .69), p = .041, and Engaged Workaholics (M = 3.70, SD = .66), p = .001; however, Perfectionist and Engaged Workaholics did not significantly differ from each other, p = .459.

Significant differences were also found between the subtypes on competitive climate, $F(2, 182) = 3.54$, $p = .031$, $\omega^2 = .027$. Perfectionist Workaholics (M = 3.15, SD = .88) scored significantly higher on competitive climate compared to Engaged Workaholics (M = 2.74, SD = .82), p = .027. Job Insecure Workaholics (M = 2.96, SD =

1.05) did not, however, significantly differ from Perfectionist nor Engaged Workaholics (p values > .05).

Lastly, significant differences were found between the clusters on work pressure culture, $F(2, 182) = 12.12$, $p < .001$, $\omega^2 = .107$. Job Insecure Workaholics ($M = 3.66$, $SD = .62$) reported significantly higher scores on work pressure culture compared to both Perfectionist ($M = 3.31$, $SD = .68$), $p = .024$, and Engaged Workaholics ($M = 3.06$, $SD = .66$), $p = .001$. Perfectionist and Engaged Workaholics, however, did not significantly differ from each other on their perception of overwork climate, $p = .082$.

Mediation Analysis Results

The results of the mediation analyses partially supported Hypothesis 4. Despite small effect sizes, work pressure culture significantly mediated the relationship between workaholic subtypes and many health and wellness outcomes, whereas overwork climate and pressure culture did not. Descriptive statistics for variables used in mediation models are reported in Table 21. The indirect effects of the mediation results for each outcome variable are reported below and model statistics are reported in Tables 22-24. Based on Bonferroni post-hoc findings, Job Insecure Workaholics were used as the reference group in mediation analyses involving overwork climate and work pressure culture whereas Perfectionist Workaholics were used as the reference group in the mediation analysis involving competitive climate.

Table 21

Cluster Mean (Standard Deviation) on Mediators and Outcome Variables

	Workaholic Cluster		
	Job Insecure $n = 46$	Perfectionist $n = 59$	Engaged $n = 80$
Organizational Variables			
Overwork Climate	4.19 (.67) [a b]	3.86 (.69) [a]	3.70 (.66) [b]
Competitive Climate	2.96 (1.05)	3.15 (.88) [a]	2.74 (.82) [a]

Work Pressure Culture	3.66 (.62) [a b]	3.31 (.68) [a]	3.06 (.66) [b]
Health and Wellness Variables			
State Anxiety	2.42 (.70)	2.09 (.64)	1.90 (.52)
Trait Anxiety	2.46 (.55)	2.23 (.53)	1.95 (.41)
Depression	0.60 (.25)	0.49 (.28)	0.35 (.27)
Physical Health Complaints	1.47 (.56)	1.18 (.47)	1.02 (.43)
Burnout	2.54 (.45)	2.33 (.39)	2.07 (.43)
Stress	2.21 (.63)	1.90 (.50)	1.51 (.56)
Life Satisfaction	4.53 (1.61)	5.27 (1.02)	5.51 (1.02)
Job Satisfaction	3.50 (1.00)	4.70 (.87)	4.78 (.83)

Note. Subscripts denote significant differences ($p < .05$) on mediator variables.

State Anxiety. The results of the mediation analyses suggested that work pressure culture mediated the relationship between workaholic clusters and state anxiety. Significant indirect effects were found when comparing Job Insecure Workaholics to Perfectionist Workaholics, b = -.09, Boot*SE* = .04, 95% BootCI [-.18, -.02], Sobel's test = 2.19, p = .028, and to Engaged Workaholics, b = -.15 Boot*SE* = .05, 95% BootCI [-.26, -.07], Sobel's test = 3.01, p = .003. In both instances, Job Insecure reported higher levels of work pressure and higher levels of state anxiety. Neither overwork climate nor competitive climate mediated this relationship.

Trait Anxiety. Work pressure culture mediated the relationship between workaholic clusters and trait anxiety. Significant indirect effects were found when comparing Job Insecure Workaholics to Perfectionist Workaholics, b = -.09, Boot*SE* = .04, 95% BootCI [-.17, -.02], Sobel's test = 2.37, p = .018, and to Engaged Workaholics, b = -.16, Boot*SE* = .04, 95% BootCI [-.25, -.08], Sobel's test = 3.54, $p < .001$. In both comparisons, Job Insecure Workaholics reported higher levels of work pressure and higher levels of trait anxiety. Neither overwork climate nor competitive climate mediated the relationship between the subtypes and trait anxiety.

Depression. Work pressure culture mediated the relationship between workaholic

clusters and depression. Significant indirect effects were found when comparing Job Insecure Workaholics to Perfectionist Workaholics, *b* = -.04, Boot*SE* = .02, 95% BootCI [-.08 -.01], Sobel's test = 2.21, *p* = .027, and to Engaged Workaholics, *b* = -.07, Boot*SE* = .02, 95% BootCI [-.12, -.03], Sobel's test = 3.08, *p* = .002. Job Insecure Workaholics reported higher levels of work pressure and higher levels of depression compared to the other subtypes. Neither overwork climate nor competitive climate mediated the relationship between the clusters and depression.

Physical Health Complaints. Work pressure culture mediated the relationship between workaholic clusters and physical health complaints. Significant indirect effects were found when comparing Job Insecure Workaholics to Perfectionist, *b* = -.06, Boot*SE* = .03, 95% BootCI [-.12, -.01], Sobel's test = 2.02, *p* = .043, and to Engaged Workaholics, *b* = -.10, Boot*SE* = .04, 95% BootCI [-.18, -.04], Sobel's test = 2.62, *p* = .008. In both comparisons, Job Insecure Workaholics reported higher levels of work pressure and more physical health complaints. Neither overwork climate nor competitive climate mediated the relationship between the clusters and depression.

Burnout. Work pressure culture mediated the relationship between workaholic clusters and burnout. Significant indirect effects were found when comparing Job Insecure Workaholics to Perfectionist Workaholics, *b* = -.07, Boot*SE* = .03, 95% BootCI [-.13, -.02], Sobel's test = 2.28, *p* = .022, and to Engaged Workaholics, *b* = -.12, Boot*SE* = .04, 95% BootCI [-.20, -.05], Sobel's test = 3.26, *p* < .001.

In addition, overwork climate mediated the relationship between workaholic clusters and burnout but only when comparing Job Insecure Workaholics to Engaged workaholics, *b* = -.06, Boot*SE* = .03, 95% CI [-.14, -.01], Sobel's test = 2.28, *p* = .022. In

all comparisons, Job Insecure Workaholics reported higher levels of work pressure culture, overwork climate and burnout. Competitive climate did not mediate the relationship between the clusters and burnout.

Stress. Work pressure culture mediated the relationship between workaholic clusters and stress. Significant indirect effects were found when comparing Job Insecure Workaholics to Perfectionist Workaholics, b = -.11, BootSE = .05, 95% BootCI [-.21, -.03], Sobel's test = 2.41, p = .034, and to Engaged Workaholics, b = -.19, BootSE = .05, 95% BootCI [-.31, -.10], Sobel's test = 3.68, p < .001.

Furthermore, overwork climate mediated the relationship between workaholic clusters and burnout but only when comparing Job Insecure to Engaged Workaholics, b = -.08, BootSE = .04, 95% BootCI [-.16, -.02], Sobel's test = 2.21, p = .027. In all comparisons, Job Insecure Workaholics reported higher levels of work pressure culture, overwork climate, and stress. Competitive climate did not mediate the relationship between workaholic clusters and stress.

Life Satisfaction. Work pressure culture, overwork climate and competitive climate did not mediate the relationship between workaholic clusters and life satisfaction.

Job Satisfaction. Work pressure culture mediated the relationship between workaholic clusters and job satisfaction. Significant indirect effects were found when comparing Job Insecure Workaholics to Perfectionist Workaholics, b = .11, BootSE = .06, 95% BootCI [.02, .26], Sobel's test = 2.09, p = .034, and to Engaged Workaholics, b = .19, BootSE = .08, Boot95% CI [.06, .36], Sobel's test = 2.75, p = .006.

Overwork climate also mediated the relationship between clusters and job satisfaction but only when comparing Job Insecure to Engaged Workaholics, b = .11,

Boot*SE* = .07, 95% BootCI [.01, .27], Sobel's test = 2.04, p = .041. In all comparisons, Job Insecure workahlolics reported higher levels of work pressure culture and overwork climate and lower levels of job satisfaction. Competitive climate did not mediate this relationship between the clusters and job satisfaction.

Table 22
Path Models for Mediation Analysis with Work Pressure Culture

Model	Model Statistics					
	b	SE	t	p	BootLLCI	BootULCI
State Anxiety						
X on M						
Job Insecure vs. Perfectionist	-.35	.13	-2.70	.008	-.60	-.09
Job Insecure vs. Engaged	-.60	.12	-4.91	.001	-.84	-.36
X and M on Y						
Job Insecure vs. Perfectionist	-.25	.12	-2.12	.035	-.48	-.02
Job Insecure vs. Engaged	-.37	.12	-3.25	.001	-.60	-.15
Work Pressure Culture	.25	.07	3.81	.002	.12	.38
Trait Anxiety						
X on M						
Job Insecure vs. Perfectionist	-.35	.13	-2.68	.008	-.60	-.09
Job Insecure vs. Engaged	-.60	.12	-4.91	.001	-.84	-.36
X and M on Y						
Job Insecure vs. Perfectionist	-.14	.09	-1.48	.140	-.32	.05
Job Insecure vs. Engaged	-.36	.09	-3.95	.001	-.53	-.18
Work Pressure Culture	.26	.05	5.11	.001	.16	.36
Depression						
X on M						
Job Insecure vs. Perfectionist	-.35	.13	-2.68	.008	-.60	-.09
Job Insecure vs. Engaged	-.60	.12	-4.91	.001	-.84	-.36
X and M on Y						
Job Insecure vs. Perfectionist	-.06	.05	-1.22	.222	-.17	.04
Job Insecure vs. Engaged	-.18	.05	-3.55	.001	-.28	-.08
Work Pressure Culture	.12	.03	3.96	.001	.06	.17
Physical Health Complaints						
X on M						
Job Insecure vs. Perfectionist	-.35	.13	-2.68	.008	-.60	-.09
Job Insecure vs. Engaged	-.60	.12	-4.91	.001	-.84	-.36
X and M on Y						
Job Insecure vs. Perfectionist	-.23	.09	-2.45	.015	-.41	-.04

Job Insecure vs. Engaged	-.35	.09	-3.80	.001	-.53	-.17
Work Pressure Culture	.16	.05	3.09	.002	.06	.27
Burnout						
X on M						
Job Insecure vs. Perfectionist	-.35	.13	-2.70	.008	-.60	.09
Job Insecure vs. Engaged	-.60	.12	-4.91	.001	-.84	-.36
X and M on Y						
Job Insecure vs. Perfectionist	-.14	.08	-1.73	.085	-.30	.02
Job Insecure vs. Engaged	-.34	.08	-4.34	.001	-.50	-.19
Work Pressure Culture	.20	.04	4.37	.001	.11	.28
Stress						
X on M						
Job Insecure vs. Perfectionist	-.35	.13	-2.70	.008	-.60	.09
Job Insecure vs. Engaged	-.60	.12	-4.91	.001	-.84	-.36
X and M on Y						
Job Insecure vs. Perfectionist	-.20	.10	-1.91	.057	-.40	.01
Job Insecure vs. Engaged	-.51	.10	-5.02	.001	-.71	-.31
Work Pressure Culture	.32	.06	5.56	.001	.21	.44
Life Satisfaction						
X on M						
Job Insecure vs. Perfectionist	-.35	.13	-2.70	.008	-.60	.09
Job Insecure vs. Engaged	-.60	.12	-4.91	.001	-.84	-.36
X and M on Y						
Job Insecure vs. Perfectionist	.69	.24	2.88	.004	.22	1.16
Job Insecure vs. Engaged	.88	.23	3.76	.001	.42	1.35
Work Pressure Culture	-.16	.13	-1.21	.228	-.43	.10
Job Satisfaction						
X on M						
Job Insecure vs. Perfectionist	-.35	.13	-2.70	.008	-.60	.09
Job Insecure vs. Engaged	-.60	.12	-4.91	.001	-.84	-.36
X and M on Y						
Job Insecure vs. Perfectionist	1.09	.17	6.29	.001	.75	1.43
Job Insecure vs. Engaged	1.09	.17	6.43	.001	.76	1.43
Work Pressure Culture	-.32	.10	-3.32	.001	-.51	-.13

Note. X = Workaholic cluster, M = Work pressure culture, Y = Personal and job-related variables. Insecure workaholics were dummy coded as the reference group.

Table 23

Path Models for Mediation Analysis with Overwork Climate

Model	Model Statistics					
	b	*SE*	*t*	*p*	Boot LLCI	Boot ULCI
State Anxiety						
X on M						
Job Insecure vs. Perfectionist	-.33	.13	-2.49	.014	-.59	-.07
Job Insecure vs. Engaged	-.49	.12	-3.98	.001	-.74	-.25
X and M on Y						
Job Insecure vs. Perfectionist	-.31	.12	-2.59	.010	-.55	-.07
Job Insecure vs. Engaged	-.49	.12	-4.20	.001	-.72	-.26
Overwork Climate	.07	.07	.99	.322	-.07	.20
Trait Anxiety						
X on M						
Job Insecure vs. Perfectionist	-.33	.13	-2.49	.014	-.59	-.07
Job Insecure vs. Engaged	-.49	.12	-3.98	.001	-.74	-.25
X and M on Y						
Job Insecure vs. Perfectionist	-.20	.10	-2.03	.043	-.39	-.01
Job Insecure vs. Engaged	-.47	.09	-5.01	.001	-.65	-.28
Overwork Climate	.09	.05	1.70	.091	-.01	.20
Depression						
X on M						
Job Insecure vs. Perfectionist	-.33	.13	-2.49	.014	-.59	-.07
Job Insecure vs. Engaged	-.49	.12	-3.98	.001	-.74	-.25
X and M on Y						
Job Insecure vs. Perfectionist	-.10	.05	-1.84	.067	-.21	.01
Job Insecure vs. Engaged	-.24	.05	-4.69	.001	-.35	-.14
Overwork Climate	.01	.03	.43	.666	-.05	.07
Physical Health Complaints						
X on M						
Job Insecure vs. Perfectionist	-.33	.13	-2.49	.014	-.59	-.07
Job Insecure vs. Engaged	-.49	.12	-3.98	.001	-.74	-.25
X and M on Y						
Job Insecure vs. Perfectionist	-.26	.10	-2.77	.006	-.45	-.08
Job Insecure vs. Engaged	-.41	.09	-4.50	.001	-.59	-.23
Overwork Climate	.06	.05	1.24	.215	-.04	.17
Burnout						
X on M						
Job Insecure vs. Perfectionist	-.33	.13	-2.49	.014	-.59	-.07
Job Insecure vs. Engaged	-.49	.12	-3.98	.001	-.74	-.25
X and M on Y						

Job Insecure vs. Perfectionist	-.17	.08	-2.01	.046	-.33	-.00
Job Insecure vs. Engaged	-.40	.08	-4.99	.001	-.56	-.24
Overwork Climate	.13	.05	2.79	.006	.04	.22
Stress						
X on M						
Job Insecure vs. Perfectionist	-.33	.13	-2.49	.014	-.59	-.07
Job Insecure vs. Engaged	-.49	.12	-3.98	.001	-.74	-.25
X and M on Y						
Job Insecure vs. Perfectionist	-.26	.11	-2.35	.020	-.48	-.04
Job Insecure vs. Engaged	-.63	.11	-5.90	.001	-.84	-.42
Overwork Climate	.16	.07	2.65	.009	.04	.28
Life Satisfaction						
X on M						
Job Insecure vs. Perfectionist	-.33	.13	-2.49	.014	-.59	-.07
Job Insecure vs. Engaged	-.49	.12	-3.98	.001	-.74	-.25
X and M on Y						
Job Insecure vs. Perfectionist	.71	.24	2.97	.003	.24	1.18
Job Insecure vs. Engaged	.93	.23	4.03	.001	.47	1.38
Overwork Climate	-.11	.13	-.80	.425	-.37	.15
Job Satisfaction						
X on M						
Job Insecure vs. Perfectionist	-.33	.13	-2.49	.014	-.59	-.07
Job Insecure vs. Engaged	-.49	.12	-3.98	.001	-.74	-.25
X and M on Y						
Job Insecure vs. Perfectionist	1.12	.18	6.43	.001	.78	1.47
Job Insecure vs. Engaged	1.17	.17	6.94	.001	.84	1.50
Overwork Climate	-.23	.10	-2.38	.018	-.42	-.04

Note. X = Workaholic cluster, M = Overwork climate, Y = Personal and job-related variables. Insecure workaholics were dummy coded as the reference group.

Table 24

Path Models for Mediation Analysis with Competitive Climate

	Model Statistics					
Model	*b*	*SE*	*t*	*p*	Boot LLCI	Boot ULCI
State Anxiety						
X on M						
Perfectionist vs. Job Insecure	.41	.15	2.64	.009	.10	.72
Perfectionist vs. Engaged	.22	.17	1.33	.186	-.11	.55
X and M on Y						
Perfectionist vs. Job Insecure	.17	.11	1.64	.102	-.04	.38
Perfectionist vs. Engaged	.52	.11	4.58	.001	.29	.74
Competitive Climate	.04	.05	.70	.482	-.06	.13

Trait Anxiety						
X on M						
Perfectionist vs. Job Insecure	.41	.15	2.64	.009	.10	.72
Perfectionist vs. Engaged	.22	.17	1.33	.186	-.11	.55
X and M on Y						
Perfectionist vs. Job Insecure	.27	.09	3.13	.002	.10	.43
Perfectionist vs. Engaged	.50	.09	5.55	.001	.32	.68
Competitive Climate	.05	.04	1.24	.218	-.03	.13
Depression						
X on M						
Perfectionist vs. Job Insecure	.41	.15	2.64	.009	.10	.72
Perfectionist vs. Engaged	.22	.17	1.33	.186	-.11	.55
X and M on Y						
Perfectionist vs. Job Insecure	.14	.05	2.90	.004	.04	.23
Perfectionist vs. Engaged	.24	.05	4.90	.001	.15	.32
Competitive Climate	.02	.02	1.09	.276	-.02	.07
Physical Health Complaints						
X on M						
Perfectionist vs. Job Insecure	.41	.15	2.64	.009	.10	.72
Perfectionist vs. Engaged	.22	.17	1.33	.186	-.11	.55
X and M on Y						
Perfectionist vs. Job Insecure	.15	.08	1.80	.074	-.01	.31
Perfectionist vs. Engaged	.44	.09	4.95	.001	.26	.61
Competitive Climate	.03	.04	.66	.513	-.05	.10
Burnout						
X on M						
Perfectionist vs. Job Insecure	.41	.15	2.64	.009	.10	.72
Perfectionist vs. Engaged	.22	.17	1.33	.186	-.11	.55
X and M on Y						
Perfectionist vs. Job Insecure	.23	.07	3.07	.003	.08	.37
Perfectionist vs. Engaged	.45	.08	5.74	.001	.29	.60
Competitive Climate	.07	.03	2.10	.037	.00	.14
Stress						
X on M						
Perfectionist vs. Job Insecure	.41	.15	2.64	.009	.10	.72
Perfectionist vs. Engaged	.22	.17	1.33	.186	-.11	.55
X and M on Y						
Perfectionist vs. Job Insecure	.35	.10	3.63	.001	.16	.54
Perfectionist vs. Engaged	.68	.10	6.65	.001	.48	.88
Competitive Climate	.11	.05	2.43	.016	.02	20
Life Satisfaction						

X on M						
Perfectionist vs. Job Insecure	.41	.15	2.64	.009	.10	.72
Perfectionist vs. Engaged	.22	.17	1.33	.186	-.11	.55
X and M on Y						
Perfectionist vs. Job Insecure	-.24	.21	-1.12	.262	-.65	.18
Perfectionist vs. Engaged	-.98	.22	-4.40	.001	-1.42	-.54
Competitive Climate	-.00	.10	-.02	.978	-.20	.19
Job Satisfaction						
X on M						
Perfectionist vs. Job Insecure	.41	.15	2.64	.009	.10	.72
Perfectionist vs. Engaged	.22	.17	1.33	.186	-.11	.55
X and M on Y						
Perfectionist vs. Job Insecure	.01	.15	.08	.936	-.29	.31
Perfectionist vs. Engaged	-1.23	.16	-7.69	.001	-1.55	-.92
Competitive Climate	-.24	.07	-3.35	.001	-.37	-.10

Note. X = Workaholic cluster, M = Competitive climate, Y = Personal and job-related variables. Perfectionist workaholics were dummy coded as the reference group.

RQ5: Why do workaholics feel overworked? What are common job barriers?

Reasons for Feeling Overworked

A total of 112 written responses were provided to the question that asked respondents to provide reasons why they currently felt overworked. Of the total responses, *n* = 37 (33.0%) were provided by Job Insecure Workaholics, *n* = 36 (32.1%) from Perfectionist Workaholics, and *n* = 39 (34.8%) from Engaged Workaholics. Thirteen themes were identified though many responses contained multiple themes. The themes, frequencies and example responses are presented in Table 25. The five most frequent themes to emerge were related to heavy workloads and competing task demands; disruptions and changes in work dynamics as a result of the pandemic; high expectations from administration or the department; self-imposed overwork or personal goals; and workplace culture or systemic factors. Less frequent themes to emerge revolved around overuse of technology; colleagues not doing enough; and aging or health.

Responses characterized by heavy workloads and competing demands (*n* = 42, 37.5%) described feeling overworked from having too many tasks and commitments on the go. Respondents noted having to balance teaching, research and publishing, student supervision, and involvement in committee work. The three workaholic subtypes shared the sentiment of feeling overwhelmed due to heavy workloads and competing demands. Many respondents stated that their typical heavy workloads were heightened by changing work dynamics and disruptions as a result of the Covid-19 pandemic (*n* = 31, 27.7%). Respondents indicated that the boundaries between work and home became blurred while working remotely which made it difficult to disconnect from work, and that pivoting to online formats required much more time and effort compared to typical in-person interactions.

Of the responses regarding overwork from Covid-19 disruptions, approximately half came from Engaged Workaholics (*n* = 16, 51.6%). Respondents also noted they felt overworked due to high expectations placed upon them from administration or their department (*n* = 22, 19.6%). Many described feeling pressured to meet expectations for the work downloaded on them by administrators, such as student recruitment, obtaining research funds, and meeting other performance-based metrics. Almost half of the responses related to feeling overworked due to high expectations came from Job Insecure Workaholics (*n* = 10, 45.5%). Other respondents indicated that they felt overworked as a result of their own self-imposed behaviour (*n* = 18, 16.1%). Responses, most frequently provided by Engaged Workaholics (*n* = 11, 61.1%), cited self-drive, personal career goals, high standards for oneself, and love for work as factors that contributed to feeling overworked. It should be noted that respondents indicated they feel fortunate in their

career and are not particularly complaining about feeling overworked because it is ultimately their choice to take on many tasks and responsibilities.

Lastly, respondents indicated that they felt overworked due to workplace culture or systemic factors within the institution (n = 17, 15.2%). Many alluded to there being no limits in academia, that there is always more work than can be done, and that "feeling overworked is just the nature of the job." Others indicated that success in the profession requires working overtime, that the environment is competitive, that colleagues and senior leaders instill values of overwork by working on evenings and weekends, and that overwork is rewarded in the institution.

Barriers to Effective Teaching

A total of 110 written responses were provided to the question that asked respondents to identify barriers to teaching effectively. Of the total responses, n = 30 (27.3%) were provided by Job Insecure Workaholics, n = 37 (33.6%) from Perfectionist Workaholics, and n = 43 (39.1%) from Engaged Workaholics. A total of 14 themes were identified and many responses contained multiple themes. Themes, frequencies and example responses are presented in Table 26. The five most frequent themes were related to challenges of online teaching; time constraints; workplace culture or systemic factors; student entitlement; and large class sizes. Less frequent responses involved lack of resources and support from administration; increased prevalence of student mental health issues; and issues with graduate assistants (GAs) and teaching assistants (TAs).

Responses regarding challenges of online teaching (n = 29, 26.4%) often cited issues with pivoting to video recordings and asynchronous lectures as a result of the pandemic, inability to truly engage and connect with students in a virtual environment,

issues with teaching students in different time zones, poor internet connection and technology interruptions while teaching, and not being able to "read the room" to assess whether students are grasping course material. Responses related to challenges of online teaching were more frequently provided by Engaged Workaholics (n = 14, 48.3%) and Perfectionist Workaholics (n = 12, 41.4%).

Respondents also frequently stated that time constraints (n = 23, 20.9%) were also a major barrier to effective teaching. Many noted that they feel they are constantly scrambling to prepare for courses and have little time to devote to grading and feedback on students' exams and assignments. They stated that there is not enough time to try new approaches in their teaching to better engage students, and that they lack dedicated time to improve their pedagogical skills. Respondents also noted insufficient time to keep up with current literature and trends so that teaching content can be updated regularly and appropriately. Responses related to challenges of time constraints were most commonly provided by Perfectionist Workaholics (n = 10, 43.5%) and Engaged Workaholics (n = 9, 39.1%).

Other respondents stated that workplace culture or systemic factors (n = 14, 12.7%) posed a significant barrier to teaching effectively. Respondents expressed that they felt as though teaching is not considered a top priority and is not valued as much as it should be by university administrators, and that administrators have no commitment to evidence-informed teaching practices. Respondents also indicated that teaching excellence is not appropriately recognized nor encouraged by way of funding or other supports, and that there is no drive for institutions to improve academic excellence. They stated that mediocre teaching is typically expected and accepted. Others cited political

correctness, the commercialization of education, and colonial institutionalism as hindrances to teaching effectively. Responses regarding workplace culture and systemic factors were most frequently provided by Perfectionist Workaholics (*n* = 7, 50.0%) and Job Insecure Workaholics (*n* = 6, 42.9%).

Student entitlement (*n* = 14, 12.7%) was another common theme to emerge as a barrier to effective teaching. Respondents noted students' unrealistic expectations and consumer mentality as impeding effective teaching practices. Many noted that students are not engaged in course

material and are unmotivated to learn; that they are unprepared for class and ask questions about things that are directly outlined in the syllabus; and that they are demanding of professors' time and resources. They also noted that many students believe they are deserving of high grades without achievement, and that they complain about professors on social media or other online forums which has negative implications for course evaluations.

Lastly, respondents noted large class sizes (*n* = 14, 12.7%) a barrier to teaching effectively. Respondents indicated that class sizes have substantially increased over the years and that having many students consequently results in inadequate space for teaching; challenges the types of pedagogical activities that one can do; affects the ability to deeply engage students in course material; and results in overreliance on multiple choice examinations as opposed to oral and written assessments. Both Job Insecure Workaholics (*n* = 6, 42.9%) and Engaged Workaholics (*n* = 6, 42.9%) frequently provided responses regarding large class sizes.

Barriers to Conducting Research

A total of 128 written responses were provided to the question that asked respondents to identify barriers to conducting research. Of the total responses, *n* = 33 (25.8%) were provided by Job Insecure Workaholics, *n* = 45 (35.1%) from Perfectionist Workaholics, and *n* = 50 (39.1%) from Engaged Workaholics. Twelve themes were identified and many responses contained multiple themes. Table 27 presents the themes, frequencies and example responses. The five most frequent themes to emerge when asked about barriers to conducting research were related to workload and competing task demands; restrictions to research imposed by the pandemic; insufficient time to conduct research; lack of funding; and workplace culture or systemic factors within the institution. Less frequent responses involved lack of support from administration, lack of research space or equipment needed, and lack of connection to community or industry.

Responses characterized by workload and competing demands (*n* = 44, 34.4%) as a barrier to research commonly mentioned teaching commitments and heavy course loads as consuming the majority of their work. In addition to teaching, many noted responsibilities of student supervision, service commitments, and increased administrative tasks as competing demands that produce barriers to conducting research. The three workaholic clusters indicated difficulty in balancing competing work demands and felt frustrated that their research often gets put on the backburner.

Respondents also frequently stated that their research was disrupted by restrictions and safety protocols from the pandemic (*n* = 41, 32.0%). Some indicated that barriers were unique to the pandemic while others cited a host of typical barriers that were heightened by the pandemic. Respondents cited limited access to participants and

slower data collection, gathering restrictions in labs and in clinical settings, and travel restrictions as barriers. Perfectionist (*n* = 16, 39.0%) and Engaged Workaholics (*n* = 15, 36.6%) particularly felt the disruptions of the pandemic on their research.

Many workaholics also noted insufficient time as a significant hindrance (*n* = 33, 25.8%). Respondents stated that "time to read, think and write is scarce" and that there is simply not enough time in the day to do research because other commitments are more time sensitive and often take precedence. The inability to attend research conferences due to lack of time was also noted as a barrier. More than half (*n* = 18, 54.5%) of the responses related to insufficient time for research were provided by Engaged Workaholics. Others stated that lack of funding (*n* = 26, 13.8%) posed a significant challenge. Respondents expressed that it is difficult to conduct research or pay graduate research assistants without having funding and which in turn impacts student recruitment. Others stated that funding is always an issue for quality research, that opportunities for grants are often limited, and that the process is competitive. Limited funding also posed barriers for obtaining equipment and technology needed for research. Job Insecure (*n* = 10, 38.5%) and Engaged (*n* = 10, 38.5%) Workaholics mostly provided these responses.

Lastly, respondents described workplace culture or systemic factors within the institution (*n* = 17, 13.3%) as barriers to conducting research. Respondents noted that their accomplishments go unacknowledged by colleagues; that the University privileges some faculties and departments over others; and that bureaucracy, policies, and delays in ethics approval often pose significant challenges. Almost two-thirds of responses characterized by workplace culture and systemic factors were provided by Engaged Workaholics (*n* = 11, 64.7%).

Table 25

Themes Identified for Reasons Why Workaholics Feel Overworked (n = 112)

Theme	Frequency (*n*)	Example Responses
Heavy Workload/ Competing Demands	Total *n* = 42 Job Insecure *n* = 13 Perfectionist *n* = 16 Engaged *n* = 13	"I'm so tired that I feel the smallest tasks are taking forever. And there is such a long list of tasks I can't ever get finished. I keep thinking about times I can "sneak away" to work (when I am parenting or with family). How pathetic is that??? Not even sneaking away for a juicy bad habit, but stolen time to review an article or give feedback on a student's work."
Workplace Disruptions or Changes due to Pandemic	Total *n* = 31 Job Insecure *n* = 7 Perfectionist *n* = 8 Engaged *n* = 16	"The scope of the job has increased exponentially during COVID. My role is not just to teach or do research, but my role has become counsellor and support person to a larger extent. The nature of teaching and research has also changed. I am also doing more administrative work and in more meetings than before. I would have said I was overworked before the pandemic, but with the pandemic the overwork has hit a level that is going to result in many in my field needing to take short- or long-term disability leaves."
High Expectations from Administration or Department	Total *n* = 22 Job Insecure *n* = 10 Perfectionist *n* = 6 Engaged *n* = 6	"As faculty, we are caught up in a series of seemingly endless 'innovations' imposed by (fleeting) members of university administration. This is the key area that robs me of my energy, enthusiasm, and optimism. I am demoralized by interactions with administration, and the stress of (often ill-conceived) service demands results in overwork and has undermined the esprit de corps of my unit."
Self-imposed/ Personal Goals	Total *n* = 18 Job Insecure *n* = 3 Perfectionist *n* = 4 Engaged *n* = 11	"As an unapologetic perfectionist, I feel internally motivated and compelled to produce the highest possible quality in my work: research, teaching, and service. High quality takes time and effort, and these result in my feeling of overwork. Also, when I am not

		actually engaged in work, I am thinking about it. I am engulfed in my work. (Some of my best research ideas have come to me in the shower).
Workplace Culture/ Systemic Factors	Total *n* = 17 Job Insecure *n* = 6 Perfectionist *n* = 7 Engaged *n* = 4	"There are no limits. You could always be doing more research, supervising more students, attending more conferences, and internal/external service expectations are endless. This creates a situation where you feel like you constantly need to work and have no clear expectations on what is enough. Colleagues make comments that suggest taking a day off is a "luxury they don't have". Everyone works 24/7 or at least makes you feel that if you are not working 24/7 you are being lazy."
Work-life Imbalance	Total *n* = 14 Job Insecure *n* = 5 Perfectionist *n* = 3 Engaged *n* = 6	"I feel I have more work to do than I have time or energy for and that my work demands aren't balanced with my personal life as a single parent to a young child."
Limited Resources	Total *n* = 12 Job Insecure *n* = 6 Perfectionist *n* = 3 Engaged *n* = 3	"The demands of what is needed to support one's area for future success and recruitment are without sufficient resources from above admin (because they are also working at max capacity). So, we must somehow progress without resources, such as adequate staff and/or full-time faculty, yet also maintain what is already established. Maintain (keep current courses and one's research profile) + progress towards current needs (more recruitment initiatives, add courses that are more current, apply for more research grants that promote you and the faculty) + zero additional help (no staff or faculty are added, no funding in the budget for more LD hours, no Taships, scholarship money is low...)."

Colleagues Not Doing Enough	Total *n* = 9 Job Insecure *n* = 3 Perfectionist *n* = 3 Engaged *n* = 3	"Taking on more and more, because colleagues/team members keep taking on less and less as they become cynical about the organization."
Job Insecurity/ Financial	Total *n* = 8 Job Insecure *n* = 7 Perfectionist *n* = 1 Engaged *n* = 0	"Lack of job security and benefits from university position plus no institutional support for promotion/career-building require me to take on a significant amount of freelance work for financial and professional reasons."
Time Pressures	Total *n* = 7 Job Insecure *n* = 1 Perfectionist *n* = 5 Engaged *n* = 1	"In my present position, it seems as though the work expected cannot be completed in a 40-hour work week and find that often times I am rushing to complete work that cannot be rushed! For example, research or teaching preparations."
Overuse of Technology	Total *n* = 3 Job Insecure *n* = 2 Perfectionist *n* = 1 Engaged *n* = 0	"Not enough time away from 24/7 constant digital expectations."
Minority/Marginalized Group	Total *n* = 3 Job Insecure *n* = 2 Perfectionist *n* = 1 Engaged *n* = 0	"I am an equity seeking person in a male-white-cis-gendered industry. Overwork is expected for me to succeed, and I need to succeed so that I can bring other equity-seeking people with me. That is my privilege and my responsibility."
Aging/Health Reasons	Total *n* = 2 Job Insecure *n* = 1 Perfectionist *n* = 1 Engaged *n* = 0	"Aging and just don't have the energy I used to have to keep up with the workload."

Table 26

Themes Identified for Barriers to Effective Teaching (n = 110)

Theme	Frequency (*n*)	Example Responses
Challenges of Online Teaching	Total *n* = 29 Job Insecure *n* = 3 Perfectionist *n* = 12 Engaged *n* = 14	"Teaching online is difficult because the faces of students are not visible and it is hard to know if they are grasping what I am teaching or if they already know it. Lack of facial cues makes teaching quite challenging in this way. There is no way to read the room."
Time Constraints	Total *n* = 23 Job Insecure *n* = 4 Perfectionist *n* = 10 Engaged *n* = 9	"I would like to try some new approaches to assignments but there is little time to do so. I don't want to spend non-teaching terms doing teaching work as I need to do my research, but then it's difficult to find time to focus on making changes when in the midst of teaching."
Workplace Culture/ Systemic Factors	Total *n* = 14 Job Insecure *n* = 6 Perfectionist *n* = 7 Engaged *n* = 1	"The systems in place reward things that do not benefit students and actively impede innovation in learning. There is little reward for improving and trying new things, engaging students in new ways – in fact, such measures are often penalized. There is equal reward for "dialing it in" as opposed to trying to create a truly engaging learning environment, so it is up to my own internal motivation to make innovative learning happen. And when you give the extra effort for no reward, you often ask yourself why you bother..."
Student Entitlement	Total *n* = 14 Job Insecure *n* = 3 Perfectionist *n* = 6 Engaged *n* = 5	"Students who believe they are customers and are deserving of a certain grade. The students do not want to learn for learning's sake."

Large Classes/ Many Students	Total *n* = 14 Job Insecure *n* = 6 Perfectionist *n* = 2 Engaged *n* = 6	"Class sizes that only get larger and larger – this makes written and oral assessments almost impossible, with heavy reliance on standard tests with multiple-choice questions."
Insufficient Resources/ Lack of Support	Total *n* = 13 Job Insecure *n* = 6 Perfectionist *n* = 3 Engaged *n* = 4	"Lack of financial support for new tools or software licenses to enable better support for teaching activities and use of tools/software that could potentially help improve students' learning experiences."
Curriculum and Course Design	Total *n* = 11 Job Insecure *n* = 7 Perfectionist *n* = 2 Engaged *n* = 2	"Poor, out-dated curriculum that does not match the current level of incoming students."
Disrespect, Racism, Sexism, Harassment, Hostility	Total *n* = 7 Job Insecure *n* = 2 Perfectionist *n* = 2 Engaged *n* = 3	"As a woman, I garner less respect from students than my male colleagues (demonstrated through interpersonal interactions and course evaluations), so they are less likely to take my courses and arguments seriously. As I age, students are less likely to credit me with a plausible understanding of the social world."
Mental Health/Lack of Motivation	Total *n* = 6 Job Insecure *n* = 1 Perfectionist *n* = 3 Engaged *n* = 2	"I am extremely burnt out and basically am now counting down my days until retirement."
Issues with GAs/TAs	Total *n* = 6 Job Insecure *n* = 3 Perfectionist *n* = 2 Engaged *n* = 1	"Unfortunately, taking on a GA is often more work. There are so many GAs that are really bad at that job – yet they keep getting paid and there is little you can do about it."

Emotional Labour	Total *n* = 3 Job Insecure *n* = 3 Perfectionist *n* = 0 Engaged *n* = 0	"Emotional labour has increased in the last 10 years and remains unacknowledged. It is now expected that professors "care" for the student as opposed to provide them opportunities to learn. Professors are judged on whether or not they are nurturing and, related to this, students are not treated as competent grown-ups, but as fragile "customers", which not only increases a professor's workload, but also causes confusion in the student who is disappointed when a professor rejects this model/role."
Pressure for Student Enrolment	Total *n* = 3 Job Insecure *n* = 1 Perfectionist *n* = 1 Engaged *n* = 1	"Although there are entire departments on campus that deal with recruitment, part of the service creep we experience as professors is to get more "bums in seats". As our disciplinary worth is often tied to these statistics, the changes professors are encouraged to make in their pedagogy risks undermining the challenge (and quality) of university courses. The result of a value system based on enrolments is that there are so many more students accepted into programs who are not equipped to deal with the demands of university. These students take up the majority of professors' time and when they don't succeed, it is our teaching that is judged."
Student Mental Health	Total *n* = 3 Job Insecure *n* = 2 Perfectionist *n* = 0 Engaged *n* = 1	"An alarming trend is the increase in students who suffer from mental illness who are placed into university courses without proper supports. Personally, I have experienced an increase in students who suffer from crippling anxiety, behave aggressively and violently, and I've had three students in the past two years who suffer from depression."
Work-Life Imbalance	Total *n* = 3 Job Insecure *n* = 1 Perfectionist *n* = 2 Engaged *n* = 0	"Mostly, I would say, balancing young children at home with work priorities."

Table 27

Themes Identified for Barriers to Conducting Research (n = 128)

Theme	Frequency (*n*)	Example Responses
Teaching and Service Workload/ Competing Demands	Total *n* = 44 Job Insecure *n* = 16 Perfectionist *n* = 15 Engaged *n* = 13	"Teaching semesters and high expectations of time spent with students. Supporting student success and experience often comes at the expense of research and my own health and well-being."
Covid-19 Restrictions	Total *n* = 41 Job Insecure *n* = 10 Perfectionist *n* = 16 Engaged *n* = 15	"My research is stopped on many fronts because of Covid restrictions. This is not the fault of the system, only the circumstances."
Time Constraints	Total *n* = 33 Job Insecure *n* = 6 Perfectionist *n* = 9 Engaged *n* = 18	"Time is a major barrier. I was once told the workload was to be 40% research, 40% teaching, and 20% service. I feel that it is actually 100% research, 100% teaching, and 100% service – and that still isn't good enough."
Lack of Funding/Grants	Total *n* = 26 Job Insecure *n* = 10 Perfectionist *n* = 6 Engaged *n* = 10	"When I was hired, I received a few thousand dollars to start my research program. This is barely enough to hire a graduate research assistant for a single semester. Faculty are expected to fund their research with external grants, which are very competitive to obtain. If you don't have external funds, you are going to find it very challenging to do research or pay graduate students.
Workplace Culture/ Systemic Factors	Total *n* = 17 Job Insecure *n* = 5 Perfectionist *n* = 1 Engaged *n* = 11	"Paperwork for the sake of paperwork. Colonialist research ethics and finance protocols/systems that show contempt and ignorance to the Indigenous populations with whom I work. University systems privilege particular faculties and disciplines."

Work-Life Obligations	Total *n* = 14 Job Insecure *n* = 4 Perfectionist *n* = 6 Engaged *n* = 4	"Family responsibilities impact my ability to immerse myself in my work. This type of work required deep connection and immersion into tasks – interruptions occur often with family responsibilities- especially when individuals in my position move for work away from support systems."
Lack of Personnel/Collaborative Colleagues/Quality Graduate Students	Total *n* = 10 Job Insecure *n* = 2 Perfectionist *n* = 3 Engaged *n* = 5	"Finding good (domestic) graduate students is the biggest challenge, and lack of collaborations with colleagues or access to colleagues to generate collective work."
Lack of Support from Administration	Total *n* = 9 Job Insecure *n* = 3 Perfectionist *n* = 2 Engaged *n* = 4	"Minimal supports at the institutional level including teaching releases. Another challenge is fitting my research interests with the priorities of the school."
Lack of Research Space/ Equipment	Total *n* = 7 Job Insecure *n* = 6 Perfectionist *n* = 0 Engaged *n* = 1	"Access to facilities – availability of research space to accommodate activities and meeting areas."
Mental Health/ Lack of Motivation	Total *n* = 6 Job Insecure = 4 Perfectionist = 1 Engaged = 1	"I've struggled with a bit of anxiety and depression which affects motivation to work."
Challenges Faced by Minority/Marginalized Groups	Total *n* = 2 Job Insecure *n* = 1 Perfectionist *n* = 0 Engaged *n* = 1	"I am equity-seeking person in a research field dominated by non-equity seeking people and, in my situation, the field is led by a senior bully who has committed his resources and efforts to ensure

		that I don't succeed in my country. My work, therefore, has to happen outside Canada and is expensive and resource consuming."
Lack of Connection to Community/Industry	Total *n* = 2 Job Insecure *n* = 0 Perfectionist *n* = 2 Engaged *n* = 0	"Connection with industry."

CHAPTER VI
DISCUSSION

Scholars generally agree that workaholism is highly prevalent amongst employees in various occupations, including academia, and is an important construct worth studying due to its link to detrimental outcomes. Different personal and environmental factors are known to fuel workaholic tendencies and there is utility in distinguishing between individuals who are highly involved and driven in their work rather than grouping them together under a single label of 'workaholic'. Despite previous attempts to differentiate subtypes of workaholics, empirical work in this area has been limited. With the exception of a few studies (i.e., Guidetti et al., 2019; Malinowska & Tokarz, 2013, van Beek et al., 2011), the method of identifying workaholic subtypes has predominantly relied on a combination of high/low cut off scores on subdimensions of workaholism measures, which is atheoretical, lacks empirical rigor, and perpetuates a limited scope in understanding the complexity and multifaceted nature of workaholic employees.

The current study defined a workaholic as someone who works excessively hard and obsesses over work which manifests itself in working compulsively. This work was the first attempt to empirically distinguish a typology of workaholics based on a combination of personal and situational factors: work engagement, motivation, self-oriented perfectionism, and job insecurity, and was the first to investigate this phenomenon using a sample exclusively comprised of workaholics. The purpose of this work was to differentiate subtypes and compare them on health and wellness outcomes that have shown inconsistent relationships with workaholism across the literature, in effort to build on the notion that some workaholics are more prone to negative outcomes than are others.

Moreover, the current study contributes to the literature by examining employees' perception of work-life balance and organizational factors such as overwork climate, competitive climate and work pressure culture, for a better understanding of how these variables contribute to different outcomes that different subtypes of workaholics experience. Further, to build on the limited qualitative work in this area, the current study asked workaholics to provide explanations for feeling overworked and to report barriers to their work which may be contributing to increased workaholic tendencies and poorer health and wellness outcomes.

Subtypes of Workaholics

The results of a cluster analysis revealed the presence of three distinct workaholic subtypes in the data, which were named Engaged Workaholics, Perfectionist Workaholics and Job Insecure Workaholics. The findings of this research support previous studies that have identified workaholics who are highly work engaged (e.g., Aziz et al., 2010; Aziz & Zickar, 2006; Burke et al., 2004a; Guidetti et al., 2019; Spence & Robbins,1992; van Beek et al., 2011), and supports previous scholars who have proposed the existence of workaholics who possess perfectionistic traits (i.e., Dyed-in-the-Wool Workaholics, Oates, 1971; Perfectionistic Workaholics, Scott et al., 1997; and Relentless Workaholics, Robinson, 2000) or are driven by external pressures from their job (i.e., Situational Workaholics, Oates, 1971).

As expected and similar to previous studies that have distinguished Engaged or Enthusiastic workers from other types of employees, Engaged Workaholics in this study were distinguished from others by high levels of work engagement as their sole defining characteristic. Rather than having perfectionistic qualities, feeling insecure in their career,

or being motivated by external rewards, Engaged Workaholics were driven solely by their dedication, absorption and enthusiasm toward their work. This cluster was highly prevalent and comprised 43.0% of the workaholic sample (28.9% of the total sample), which is similar to reports in other studies (e.g., Guidetti et al., 2019; van Beek et al., 2011).

While a few scholars have proposed a workaholic subtype characterized by perfectionistic personality, the current study was the first to empirically distinguish a cluster of Perfectionist Workaholics. Perfectionist Workaholics scored significantly higher on self-oriented perfectionism compared to the other subtypes, which means that they have a strong desire to be perfect and tend to set high standards for themselves. They also scored high on work engagement, low on job insecurity and high on nonself-determined motivation which suggests that they are also dedicated and absorbed in their work, feel secure in their career, and are motivated by external factors such as income, rewards and recognition. The profile of this cluster is supported by previous research that has linked perfectionistic strivings with higher levels of work engagement (Stoeber & Lavinia, 2016) and controlled motivation (Stoeber & Lavina, 2017). As expected, this cluster was sizable (31.4%) though less prevalent than their Engaged Workaholic counterparts.

Lastly, the current study was the first to empirically identify a cluster of Job Insecure Workaholics. Job Insecure Workaholics scored significantly higher on job insecurity than other subtypes and scored average on nonself-determined motivation. They notably scored significantly lower on perfectionism and work engagement compared to Perfectionist and Engaged Workaholics, respectively. Like the Situational

Workaholics proposed by Oates (1971), individuals in this group differed from others because they were mostly driven by external pressures from their work situation, and in this case, their job-related uncertainty or economic insecurity.

Though they were the smallest cluster to emerge (25.5% of the workaholic sample), they warrant further investigation because of the detrimental outcomes that they disclosed in comparison to other subtypes. The presence of this subtype supports the notion that workaholic tendencies can be established from pressures of external factors such as perceived career threats or financial strains (Oates, 1971), and despite a purely academic sample in this study, job insecure employees are likely not unique to academic institutions. In this study, their significantly higher scores on workaholism coupled with the fact that they are relatively newer in their careers supports the belief that career uncertainty is highly stressful and may encourage employees to invest more time and effort into their work (Matuska, 2010) to prove themselves, their competency and their abilities (An et al., 2020) as a means to achieve personal career goals and progress (Douglas & Morris, 2006).

Differences between Workaholic Subtypes

The three workaholic clusters significantly differed from one another on many health and wellness variables which, as anticipated, suggests that outcomes of workaholism are not the same for all. Expectedly, the Engaged subtype reported better health and well-being overall, as well as more positive perceptions of their institution's culture and climate in comparison to the other two subtypes. In contrast, Job Insecure Workaholics reported the most negative and detrimental outcomes.

In summary, Engaged Workaholics indicated significantly lower levels of anxiety, depression, burnout, stress, and work pressure culture compared to both Perfectionist and Job Insecure subtypes. Moreover, compared to Job Insecure Workaholics, they also reported better physical health, perceived lower levels of overwork climate, and indicated significantly higher levels of life satisfaction, job satisfaction and perceived work-life balance. In other words, Job Insecure Workaholics significantly differed, for worse, from Engaged Workaholics on all variables in this study, with the exception of perceived competitive work climate. Notably, Job Insecure Workaholics also significantly differed from Perfectionist Workaholics on all the same variables with the exception of depression.

The findings of the current study align with previous scholars who suggests that some workaholics can still remain healthy despite their excessive and compulsive work habits. This study also aligns with previous work that suggests work engagement is a crucial factor in determining positive outcomes, though provides a nuanced view to this traditional assumption. Work engagement is typically viewed as a variable that positively affects employee mental and physical well-being and organizational outcomes. It has been characterized as a positive, fulfilling, state of mind (Schaufeli et al., 2010) whereby those who possess this characteristic generally tend to be happier and healthier at work and in life. While work engagement was associated with more positive outcomes in this study, it did not necessarily buffer all negative consequences when workaholics possessed other traits, such as perfectionism, that are more maladaptive in nature.

On one hand, differences found between Engaged and Job Insecure Workaholics aligns with previous research that has compared engaged employees to less engaged

workers. The general consensus in the literature is that work engagement is a "good" type of heavy work investment, and Engaged/Enthusiastic Workaholics report lower levels of job stress (Burke, 1999; Spence & Robbins, 1992), physical health complaints (Burke, 2000c), and work-life imbalance (Aziz et al., 2010; Aziz & Zickar, 2006; Hogan et al., 2016), and higher levels of well-being and emotional health (Burke et al., 2004a; Hogan et al., 2016), job and career satisfaction (Burke & MacDermid, 1999; Hogan et al., 2016; Ontrup & Patrzek, 2019; Seppälä et al., 2012) compared to workers who are less engaged. The explanation for these findings is often attributed to engaged employees deriving great pleasure from work (Taris, vanBeek, & Schaufeli, 2020) and perceiving their work as interesting, enjoyable, and satisfying (Van Beek et al., 2011). Further, despite their high investments in their work, they tend to participate in social activities, hobbies, and volunteer (Burke, 2000; Bakker et al., 2008) which results in work-life balance and possibilities for rest and recovery (Van Beek et al., 2011).

The negative outcomes that Job Insecure Workaholics endure could be explained by the fact that they experience additional pressures from career uncertainty and their desire to obtain external rewards. Greater work pressure is known to contribute to feeling overwhelmed, anxious and depressed (Boya et al., 2008),and creates job stress (Storseh, 2006) and burnout (Soelton et al., 2019; Tilakdharee et al., 2010). Moreover, over a prolonged period of time, chronic job insecurity is related to reduced job satisfaction and poorer physical health (Heaney et al., 1994). Thus, these factors, coupled with the fact that Job Insecure Workaholics are significantly less engaged than other workaholic subtypes can likely explain such detrimental outcomes in comparison to those who do not possess these same characteristics.

On the other hand, the findings suggested that high work engagement is simply not enough to produce positive health and wellness outcomes, and that other characteristics or traits may counteract its positive effects in some cases. In the current study, Engaged and Perfectionist Workaholics did not significantly differ in their level of work engagement, and while many outcomes were similar for the two, Perfectionist Workaholics scored significantly higher on trait anxiety, depression, burnout, and stress. These findings may suggest that, despite being engaged in work, the high standards that perfectionists impose on themselves creates more pressure for achievement and consequently negatively impacts mental health and well-being. Previous research has linked self-oriented perfectionism to trait anxiety (Flett et al., 1989), higher levels of depression (Hewitt & Flett, 1990), stress and burnout (Childs & Stoeber, 2010; Farjami & Rahmani, 2016), all outcomes in which Perfectionist Workaholics significantly differed from Engaged Workaholics in this study. Thus, it cannot be assumed that work engagement alone buffers against all negative consequences of workaholism, particularly mental health-related variables, when individuals also possess more maladaptive traits.

Importance of Mediating Variables

As suspected, perception of work-life balance played a critical role in understanding workaholic subtypes and their outcomes. Work-life imbalance has been described as a key component and a symptom of workaholism (Aziz et al., 2013) as over-involvement in work results in the exclusion of other important areas outside of work (Clark et al., 2013; Matuska, 2010). Several studies have linked work-life balance to many of the same outcomes of workaholism including anxiety and depression (Hammig & Bauer, 2009), stress and burnout (Nie & Sun, 2016), physical ailments (Kinman &

Jones, 2008), life satisfaction (Haar, 2013; Virick et al., 2007) and job satisfaction (Haar et al., 2014). However, this study was the first to compare subtypes of workaholics on their perceptions of work-life balance and assess its impact on health and wellness outcomes.

The results of the current study revealed that Job Insecure Workaholics reported significantly lower levels of perceived work-life balance compared to other workaholic subtypes, which may explain their experiences of poorer health and wellness. It is likely that the unique pressures they experience while in the early stages of their career coupled with their higher scores on workaholism may result in more difficulty balancing work and life demands, and this in turn may contribute to psychological distress and lower life and job satisfaction. To some extent, Job Insecure Workaholics may feel guilty when not working since they are trying to establish themselves and reach career goals. It should be noted that Perfectionist and Engaged Workaholics did not differ on perceptions of work-life balance and, thus, work-life balance did not mediate the relationship between these two clusters and their outcomes.

The findings of the current study also provided evidence that perceptions of high work pressure culture could explain poorer health and wellness outcomes. Organizational culture is defined as shared values, norms, and expectations (Ostroff et al., 2013). Past research has acknowledged that environmental factors lead to the onset of workaholic tendencies (e.g., Molino et al., 2016) and can exacerbate workaholic behaviours (Scott et al., 1997). Buelens and Polemans (2004) was one of the only studies to compare workers on organizational culture variables and they found that Enthusiastic Workaholics more positive organizational culture Nonenthusiastic Workaholics.

The results of the current work revealed that Job Insecure Workaholics perceived both higher work pressure culture and overwork climate compared to Perfectionist and Engaged Workaholics. Perceptions of work pressure and overwork is likely related to the unique pressures and demands they face as they experience career uncertainty while trying to establish themselves in their career. And, the added pressure in addition to higher levels of workaholism is likely what contributes to feelings of anxiety, depression, stress and burnout, and reduced satisfaction with work and life. In the current study, Perfectionist and Engaged Workaholics did not significantly differ on perceptions of work pressure culture or overwork climate, perhaps because they are equally established in their career, and thus, this variable did not mediate the relationship between the clusters and their outcomes.

Interestingly, while Perfectionist Workaholics scored higher than Engaged Workaholics on perceptions of competitive climate, competitive climate did not significantly influence differences in their outcomes. Higher perceptions of competitiveness may be due to the personal standards they set for themselves and their drive for external rewards, which in turn creates real or perceived competition in their department or institution. Perfectionist and Job Insecure Workaholics did not differ in their perception of competitive climate, and thus, this variable did not mediate any of the relationships between the clusters and their outcomes.

Barriers to Teaching and Research, and Reasons for Overwork

Responses regarding barriers to work were unique to an academic context but were intended to provide more rich information regarding workaholic behaviours and outcomes in the current study. Respondents noted many barriers to effective teaching and

conducting research, and attributed feelings of overwork to a variety of factors. Their responses were aligned with previous researchers who have indicated academic work involves long hours, heavy workloads, and pressure for high performance and productivity at all stages of one's career. While the public perception is that academic work is relatively low stress compared to other careers, university employees have reported psychological distress (Hogan et al., 2016), physical health complaints (Kinman & Jones, 2008), work-family conflict (Torp et al., 2018) and burnout (Lackritz, 2004).

Respondents' written responses aligned with Spence and Robbins (1992) who posited that academics are employed in a demanding profession where their duties and responsibilities are unrestricted by time and place, and number of activities one can undertake is unlimited. Many respondents in this study noted a key challenge to effective teaching and conducting research is lack of time and having to balance the workload of teaching, research and service demands. The findings are also supported by Misra et al. (2012) who noted that an overwork climate is common in academic institutions because there are expectations to juggle competing demands and as a result, some professors work more than 60 hours per week including evenings and weekends. Competitiveness for research funding and publication pressures were noted by respondents as well, which places additional stress on faculty members, especially those who have not yet made tenure (Converso et al., 2019). Unexpected frequent responses revolved around student entitlement, colleagues not doing enough, pressure from university administrators to do more, and issues with GAs and TAs.

While barriers to effective teaching and research are unique to the academic sector, reasons for feeling overworked may be common among other professions. For

example, factors such as heavy workloads with competing demands, dealing with challenges of Covid-19 and blurred boundaries while working remotely, high expectations from leaders within the organization, self-imposed overwork or personal goals, and workplace culture could all be experiences that workaholics in other types of professions face, and these factors should be considered when understanding the root causes of workaholism and its outcomes.

Implications of the Findings

While some implications of this work are unique to academics in higher education institutions, other implications extend to employees in other types of organizations. First, since many workaholics experience negative mental and physical health consequences, individuals should reflect on their work behaviours, thoughts and emotions, and consider the potential factors that contribute to their workaholic tendencies. They can then make efforts to establish more healthy work behaviours, for example, through reducing workload or not taking on additional responsibilities than can be handled effectively; setting clear and appropriate boundaries for work hours; participating in projects and initiatives that they find interesting, enjoyable and fulfilling; reducing self-imposed internal pressures; and establishing better balance work-life balance so that they can make time for rest, recovery, as well as hobbies and interests outside of work.

Workplaces play a critical role in promoting and protecting the mental health of employees. As employees spend a considerable amount of time at work, the workplace can and should provide individuals with a purpose, financial security, a sense of identity, and social connections. Since work engagement is often linked to more beneficial outcomes at the individual and organizational levels (Schaufeli & Salanova,

2007a; Schaufeli et al., 2008), organizations should attempt to promote this type of job-related well-being through employee engagement strategies that focus on personal and professional development opportunities. Fostering self-determined motivation within the organization, could be another avenue for improving work engagement among employees by making aspects of one's jobs more attractive and enjoyable, and adopting an autonomy-supportive management style that includes empathy, choices, and meaningful rationales for doing particular tasks (Gagné & Deci, 2005) and by creating more social opportunities so that faculty are not constantly operating in silos.

Job Insecure Workaholics appear to be particularly struggling with workaholism and the added pressures that come from the uncertainty or instability related to their job situation. As a result, they are more likely to struggle with work-life imbalance and experience detrimental mental and physical health outcomes compared to other workaholic subtypes. Organizations should ensure that they are providing adequate support to those who are in the early stages of their career and are experiencing job insecurity. Support should include, but is not limited to, promoting confidence and control in the workplace, and fostering a sense of belonging to ensure that employees feel more connected to their colleagues and their organization as opposed to feeling temporary, isolated, excluded and replaceable.

Specific to academic institutions, the results from this study may serve as a guide for the development of policies and initiatives that aim to improve mental health by considering multiple aspects of academic work that contribute to detrimental health and wellness consequences. As suggested by Guidetti et al. (2019), using a person-centred approach can allow for more accurate identification of employees that are most at risk of

detrimental outcomes and targeted interventions can then be established. University administration could intervene through health promotion strategies, such as building a culture and modeling behaviours that are less focused on overwork; promoting health education policies for consequences of maladaptive attitudes and behaviours with work; promoting work engagement and autonomous motivation; and creating initiatives that support healthy work-life balance.

More generally, it may be beneficial for organizations to diagnose functional or dysfunctional types of workaholics in their workplaces and assess performance and professional efficacy. Human resource practitioners could disseminate knowledge about workaholism and types of workaholic employees. Malinowska & Tokarz (2013) suggests that, in this way, individuals can be more aware of workaholism and its short- and long-term impact on health and wellness. Further, human resources policies should address both physically and psychologically safe and healthy workplaces and ensure that job descriptions clearly articulate job expectations, responsibilities and demands.

Lastly, organizations should establish employee mental health strategies to promote healthy workplaces, minimize workplace risks for poor health, and provide wholistic wellness services and supports that are equitable and accessible for all employees. Effective strategies must ensure leaders and supervisors within the organization have an awareness and understanding of mental health, are equipped with the tools to care of themselves and their colleagues, collectively work to help reduce stigma surrounding mental health, and establish a psychologically safe and healthy workplace culture through day-to-day practices and actions.

Study Limitations

The current research is not without methodological and statistical limitations. First, this study is based on a convenience sample and therefore only provides modest insight into the type of workaholics that participated in this research. Further, this study relied on self-report data exclusively from an academic sample which limits the generalizability of findings to other sectors. While this work was a first attempt at developing a workaholic typology of this nature and the focus was intentionally placed on ensuring internal validity of results, future studies should now attempt to replicate the three workaholic clusters in other types of organizations or occupational samples.

Another limitation was that the vast majority of respondents who participated in this study were highly work engaged which led to a restricted range of scores on work engagement. Consequently, multiple clusters showed elevated work engagement scores and a truly nonengaged cluster of workaholics could not be established. As a result, hypotheses regarding differences between engaged and nonengaged workaholics and group comparisons on health and wellness outcomes could not be tested. On a positive note, however, this study unintentionally distinguished Engaged Workaholics from Perfectionist Workaholics who scored similarly in work engagement and found that outcomes of those high in engagement may differ depending on other defining characteristics of the workaholic. This study is the first to empirically distinguish multiple types of workaholics that are engaged and is worth further investigation.

Participants were not screened for workaholism *a priori* and, thus, a cut-off score was established to determine workaholics from nonworkaholic employees. The current study used a median split of the scale point as a statistical criterion to discriminate

between those who scored high and low on dimensions of workaholism. This criterion is based on an arbitrary cut-off and, as recommended by Schaufeli et al. (2009b), future studies should establish cut-off scores for workaholism dimensions that are based on external criteria such as ratings from colleagues, friends, family members, or by assessments from professionals.

Lastly, the risk of family-wise Type 1 error was inflated due to the number of variables and statistical analyses conducted in this study. Given that this study was exploratory in nature, Type 1 error was not controlled. While more conservative *p* values ($p < .001$) were reported, findings of this research should be interpreted cautiously. Future research can build on this work by using more stringent alpha values, using *a priori* hypotheses, increasing the precision of variables used for analysis, or using one-tailed tests.

Future Directions

Future research should attempt to replicate the three workaholic clusters identified in the current work and compare them on outcomes to establish further evidence of cluster reliability and validity, respectively. As mentioned previously, an attempt to establish external validity should also be made by replicating the three clusters in samples outside of academia where workaholism is known to be highly prevalent, perhaps in healthcare settings or in the private sector. Further, replicating the findings in a post-Covid-19 context may be beneficial to assess whether there are changes in cluster profiles, mental and physical health, or perceptions of work environment and job barriers.

Future research should also consider work-family conflict as a potential mediator in the relationship of workaholic subtypes and outcomes. A number of studies have

shown that workaholics experience greater work-family conflict (e.g., Del Libano et al., 2012; Russo & Waters, 2006; Shimazu et al., 2011) as well as marital dissatisfaction, family dissatisfaction and poorer family functioning (Clark et al., 2014). These findings may contribute to many of the health and wellness outcomes that were examined in this study, similar to that of work-life balance. Further, open-ended responses in the current study highlighted that family obligations and caregiving of young children contribute to workaholics' feelings of overwork and produce job barriers, and this was particularly the case for women. This warrants further attention to better understand experiences of workaholic women, and age range of children should also be considered (e.g., under 6, 6-12, and 13-17) as the presence of younger children requires more caregiving responsibilities and time, and is detrimental to women's career progression (McIntosh et al., 2012).

Longitudinal work in this area is currently lacking but could offer insight into whether or not workaholic clusters are stable. For instance, it is currently unknown whether workaholics characterized by a particular typology will maintain those defining characteristics over time and place. It may be the case that Perfectionist Workaholics remain in the same cluster over time since perfectionism is a trait that is relatively stable in nature. On the other hand, Job Insecure Workaholics may be in a transitionary period and their placement in this cluster could be temporary until they become more established and achieve career security. It is also unknown if workaholics become more or less engaged in their work, or become motivated by different internal or external factors, over time and place.

Another avenue for future research could be to distinguish other subtypes of workaholics by using a different combination of clustering variables. For example, Guidetti et al. (2019) distinguished Exhausted Workaholics from other types of employees by including a measure of burnout in their cluster analysis. Similarly, Malinowska and Tokarz (2013) identified clusters that were Partially Satisfied Workaholics and Dissatisfied Workaholics by including measures of satisfaction with self-realization, life situation and general satisfaction. Given that the three clusters identified in this study significantly differed on many outcomes, it may be worth including some of these outcome variables such as anxiety, stress, burnout, and satisfaction to differentiate between other potential workaholic typologies on these characteristics.

Lastly, the aim of the current research predominately focused on psychosocial and health outcomes of workaholism. Future research should aim to better understand the implications of workaholic subtypes on organizational variables such as job performance, work productivity, leadership styles, organizational commitment, and assess how different workaholics subtypes impact their colleagues' work attitudes and behaviours. Scott, Moore and Miceli (1997) noted that workaholics are not more productive than their nonworkaholics colleagues, however, some types of workaholics may have better job performance than others. Though never empirically tested, the authors proposed that workaholics who are perfectionists have poorer job performance than others, and that achievement-oriented workaholics have higher job performance than others. For example, while Engaged Workaholics are known to perform well at work (Shimazu et al., 2019), have higher levels of organizational commitment (Knight et al., 2017), and

occupational self-efficacy (Ontrup & Patrzek, 2019), it is currently unknown how other subtypes compare to Engaged Workaholics on job performance, and if poorer mental and physical health outcomes influence outcomes such as productivity, absenteeism or turnover intention. Further, it is currently unknown whether certain workaholics subtypes impact their colleagues work attitudes, behaviour and day-to-day workplace experiences for better or worse, if at all.

Conclusion

Different personal and environmental factors drive workaholic tendencies and there is utility in distinguishing between individuals who are highly involved and driven in their work. The current study empirically distinguished three clusters of workaholics in an academic sample on varying personal and situational dimensions. Inconsistent findings regarding outcomes of workaholism that are cited across the literature may be attributed to the fact that different types of workaholics exist and outcomes are not the same for all. While work engagement generally acts a buffer against detrimental health and wellness outcomes, those who experience internal or external pressure in their work may not be as well protected. Both perceptions of work-life balance and work pressure culture are important in understanding how subtypes of workaholics differ on health and wellness outcomes. The findings of this work have important implications for both individuals and organizations and can be used to inform policies and initiatives that are targeted at establishing healthy workplaces.

REFERENCES

Aiken, L. H., Clarke, S. P., & Sloane, D. M. (2002). Hospital staffing, organization, and quality of care: Cross-national findings. *International Journal for Quality in Health Care*, *14*(1), 5-13. https://doi.org/10.1093/intqhc/14.1.5

Aknin, L. B., De Neve, J-E., Dunn, E. W., Fancourt, D. E., Goldberg, E., Helliwell, J. F., Jones, S. P., Karam, E., Layard, R., Lyubomirsky, S., Rzepa, A., Saxena, S., Thornton, E. M., VanderWeele, T, J., Whillans, A. V., Zaki, J., Karadag, O., & Amor, Y, B. (2022). Mental health during the first year of the COVID-19 pandemic: A review and recommendations for moving forward. *Perspectives on Psychological Sciences*, *17*(4), 915-936. https://doi.org/10.1177/17456916211029964

Al-Mashaan, O. S. (2003). Comparison between Kuwaiti and Egyptian teachers in Type A behaviour and job satisfaction: A cross-cultural study. *Social Behaviour and Personality: an International Journal*, *31*(5), 523-533. https://doi.org/10.2224/sbp.2003.31.5.523

Allam, H. K., Helmy, M. S., El Badry, A, S., & Younis, F. E. (2021). Workaholism, sleep disorders, and potential e-learning impacts among Menoufia University staff during COVID-19 pandemic. Journal of Public Health Research, 10(4), 639-646. https://doi.org/ 10.4081/jphr.2021.2203

An, Y., Sun, X., Wang, K., Shi, H., Liu, Z., Zhu, Y., & Lui, F. (2020). Core self-evaluations associated with workaholism: The mediating role of perceived job demands. *Personnel Review*, *50*(1), 303-318. https://doi.org/10.1108/PR-05-2019-0263

Andreassen, C. S. (2014). Workaholism: An overview and current status of the research. *Journal of Behavioural Addictions, 3*(1), 1-11. https://doi.org/10.1556/JBA.2.2013.017

Andreassen, C. S., Griffiths, M. D., Hetland, J., & Pallesen, S. (2012a). Development of a work addiction scale. *Scandinavian Journal of Psychology, 53*, 265-272. http://doi.org/10.1111/j.1467-9450.2012.00947.x

Andreassen, C. S., Hetland, J., & Pallesen, S. (2010). The relationship between 'workaholism', basic needs satisfaction at work and personality. *European Journal of Personality, 24*(1), 3-17. https://doi.org/10.1002/per.737

Andreassen, C. S., Hetland, J., & Pallesen, S. (2014). Psychometric assessment of workaholism measures. *Journal of Managerial Psychology, 29*(1), 7–24. https://doi.org/10.1108/JMP-05-2013-0143

Andreassen, C.S., Hetland, J., Molde, H., Pallesen, S. (2011). 'Workaholism' and potential outcomes in well-being and health in a cross-occupational sample. *Stress and Health, 27*(3), 209-214. https://doi.org/10.1002/smi.1366

Andreassen, C. S., Hetland, J., & Pallesen, S. (2012b). Coping and workaholism. Results from a large cross-occupational sample. *TPM-Testing, Psychometrics, Methodology in Applied Psychology, 19*(4), 281-290. https://doi.org/10.4473/TPM19.4.3

Andreassen, C. S., Pallesen, S., & Torsheim, T. (2018). Workaholism as a mediator between work-related stressors and health outcomes. *International Journal of Environmental Research and Public Health, 15*(1), 73-85, https://doi.org/10.3390/ijerph15010073

Andreassen, C. S., Ursin, H., & Eriksen, H. R. (2007). The relationship between strong motivation to work, ‘‘workaholism’’, and health. *Psychology and Health, 22*(5), 615–629. https://doi.org/10.1080/14768320600941814

Ariapooran, S. (2019). Sleep problems and depression in Iranian nurses: The predictive role of workaholism. *Iranian Journal of Nursing and Midwifery Research, 24*(1), 30-37. https://doi.org/10.4103/ijnmr.IJNMR_188_17

Aziz, S., & Tronzo, C. L. (2011). Exploring the relationship between workaholism facets and personality traits: A replication in American workers. *The Psychological Record, 61*(2), 269-286. https://doi.org/10.1007/BF03395760

Aziz, S., Wuensch, K. L., & Brandon, H. R. (2010). A comparison among worker types using a composites approach and median splits. *The Psychological Record, 60*(4), 627–642. https://doi.org/10.1007/BF03395736

Aziz, S., & Zickar, M. J. (2006). A cluster analysis investigation of workaholism as a syndrome. *Journal of Occupational Health Psychology, 11*(1), 52–62. https://doi.org/10.1037/1076-8998.11.1.52

Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology, 22*(3), 309-328. https://doi.org/10.1108/02683940710733115

Bakker, A. B., Shimazu, A., Demerouti, E., Shimada, K., & Kawakami, N. (2014). Work engagement versus workaholism: A test of the spillover-crossover model. *Journal of Managerial Psychology, 29*(1), 63-80. https://doi.org/10.1108/JMP-05-2013-0148

Balducci, C., Avanzi, L., Consiglio, C., Fraccaroli, F., & Schaufeli, W. (2017). A cross-

national study on the psychometric quality of the Italian version of the Dutch Work Addiction Scale (DUWAS). *European Journal of Psychological Assessment, 33*(6), 422-428. https://doi.org/10.1027/1015-5759/a000300

Balducci, C., Avanzi, L., & Fraccaroli, F. (2016). The individual "costs" of workaholism: An analysis based on multisource and prospective data. *Journal of Management, 44*(7), 2961-2986. https://doi.org/10.1177/0149206316658348

Balducci, C., Spagnoli, P., Toderi, S., & Clark, M. A. (2022). A within-individual investigation on the relationship between day level workaholism and systolic blood pressure. *Work Stress, 36*(4), 337-354. https://doi.org/10.1080/02678373.2021.1976883

Balog, P., Janszky, I., Leineweber, C., Blom, M., Wamala, S. P., & Orth-Gomer, K. (2003). Depressive symptoms in relation to marital and work stress in women with and without coronary heart disease. The Stockholm female coronary risk study. *Journal of Psychosomatic Research, 54*(2), 113-119. http://doi.org/10.1016/s0022-3999(02)00485-3.

Bandura, A., & McClelland, D. C. (1977). *Social learning theory* (Vol. 1). Prentice Hall: Englewood Cliffs.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182. https://doi.org/10.1037/0022-3514.51.6.1173

Bartczak, M., & Ogińska-Bulik, N. (2012). Workaholism and mental health among Polish academic workers. *International Journal of Occupational Safety and*

Ergonomics, *18*(1), 3-13. https://doi.org/10.1080/10803548.2012.11076910

Boatemaa, M. A., Asante, K. O., Agyemang, C. B. (2019). The moderating role of psychological flexibility in the relationship between organizational commitment, workaholism, job security, and corporate entrepreneurship among information technology workers in Accra, Ghana. *SAGE Open, 9*(3), 1-8. https://doi.org/10.1177/2158244019871063

Booket, E. J., Dehghan, F., & Alizadeh, Z. (2018). The role of predicting the formation of workaholism based on personality factors and perfectionism in academics. *Cogent Psychology*, *5*(1), 1-10. https://doi.org/10.1080/23311908.2018.1527200

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*(4), 469–477. https://doi.org/10.1037/0022-0167.47.4.469

Boya, F. O., Demiral, Y., Ergor, A., Akvardar, Y., & DeWitte, H. (2008). Effects of perceived job insecurity on perceived anxiety and depression in nurses. *Industrial Health, 46*(6), 613-619. https://doi.org/10.2486/indhealth.46.613

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Buelens, M., & Poelmans, S. A. Y. (2004). Enriching the Spence and Robbins' typology

of workaholism: Demographic, motivational and organizational correlates. *Journal of Organizational Change Management, 17*(5), 440–458. https://doi.org/10.1108/09534810410554470

Burke, R. J. (1999). Workaholism in organizations: Measurement validation and replication. *International Journal of Stress Management, 6*(1), 45–55. https://doi.org/10.1023/A:1021910303807

Burke, R. J. (2000a). Workaholism among women managers: Personal and workplace correlates. *Journal of Managerial Psychology, 15*(6), 520–530. https://doi.org/10.1108/02683940010373374

Burke, R. J. (2000b). Workaholism in organizations: The role of personal beliefs and fears. Anxiety, *Stress and Coping, 13*(1), 53-64. https://doi.org/10.1080/10615800008248333

Burke, R. J. (2000c). Workaholism in organizations: Psychological and physical well-being consequences. *Stress Medicine, 16*(1), 11–16. https://doi.org/10.1002/(SICI)1099-1700(200001)16:1<11::AID-SMI825>3.0.CO;2-U

Burke, R. J. (2001). Workaholism components, job satisfaction, and career progress. *Journal of Applied Social Psychology, 31*(11), 2339–2356. https://doi.org/10.1111/j.1559-1816.2001.tb00179.x

Burke, R. J., Burgess, Z., & Oberklaid, F. (2003). Predictors of workaholic behaviours among Australian psychologists. *The Career Development International, 8*(6), 301–308. https://doi.org/10.1108/13620430310496116

Burke, R.J., Oberklaid, F., Burgess, Z. (2004a). Workaholism among Australian women

psychologists: antecedents and consequences. *Women in Management Review, 19*(5), 252-259. https://doi.org/10.1108/09649420410545971

Burke, R. J., & MacDermid, G. (1999). Are workaholics job satisfied and successful in their careers? *The Career Development International, 4*(5), 277–282. https://doi.org/10.1108/13620439910279761

Burke, R. J., & Matthiesen, S. (2004). Short communication: Workaholism among Norwegian journalists- antecedents and consequences. *Stress and Health: Journal of the International Society for the Investigation of Stress, 20*(5), 301–308. https://doi.org/10.1002/smi.1025

Burke, R. J., Matthiesen, S. B., & Pallesen, S. (2006a). Personality correlates of workaholism. *Personality and Individual Differences, 40*(6), 1223–1233. https://doi.org/10.1016/j.paid.2005.10.017

Burke, R. J., Matthiesen, S. B., & Pallesen, S. (2006b). Workaholism, organizational life and well-being of Norwegian nursing staff. *The Career Development International, 11*(5), 463–477. https://doi.org/10.1016/j.paid.2005.10.017

Burke, R. J., Richardsen, A. M., & Mortinussen, M. (2004b). Workaholism among Norwegian managers: Work and well-being outcomes. *Journal of Organizational Change Management, 17*(5), 459–470. https://doi.org/10.1108/09534810410554489

Brough, P., Timms, C., O'Driscoll, M. P., Kalliath, T., Siu, O., Sit, C., & Lo, D. (2014). Work-life balance: A longitudinal evaluation of a new measure across Australia and New Zealand workers. *The International Journal of Human Resource Management, 25*(19), 2724-2744. https://doi.org/10.1080/09585192.2014.899262

Caesens, G., Stinglhamber, F., Luyoaert, G. (2014). The impact of work engagement and workaholism on well-being. The role of work-related social support. *Career Development International, 19(*7), 813-835. https://doi.org/10.1108/CDI-09-2013-0014

Carroll, J. J. & Robinson, B. E. (2000). Depression and parentification among adults as related to parental workaholism and alcoholism. *The Family Journal, 8*(4), 360-367. https://doi.org/10.1177/106680700084005

Chen, P. J., Pusica,Y., Sohaei, D., Prassas, I., & Diamandis, E. P. (2021). An overview of mental health during the COVID-19 pandemic. *Diagnosis, 8*(4), 403-412. https://doi.org/10.1515/dx-2021-0046

Childs, J. H., & Stoeber, J. (2010). Self-oriented, other-oriented, and socially prescribed perfectionism in employees: Relationships with burnout and engagement. *Journal of Workplace Behavioural Health, 25*(4), 269-281, https://doi.org/10.1080/15555240.2010.518486

Cherington, D. J. (1980). *The work ethic*. New York: AMACOM, American Management Association.

Clark, M. A., Michel, J. S., Zhdanova, L., Pui, S. Y., Baltes, B. B. (2014). All work no play? A meta-analytic examination of the correlates and outcomes of workaholism. *Journal of Management, 42(*7), 1836-1873. https://doi.org/10.1177/0149206314522301

Clark, M. A., Smith, R. W., & Haynes, N. J. (2020). The Multidimensional Workaholism Scale: Linking the conceptualization and measurement of workaholism. *Journal of Applied Psychology*, *105*(11), 1281–1307. https://doi.org/10.1037/apl0000484

Cohen, S., Kamarck, T., and Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24*, 386-396. https://doi.org/10.2307/2136404

Converso, D., Sottimano, I., Molinengo, G., Loera, B. (2019). The unbearable lightness of the academic work: The positive and negative sides of heavy work investment in a sample of Italian university professors and researchers. *Sustainability (Switzerland), 11*(8), 2439. https://doi.org/10.3390/su11082439

Costa, P. T., & McCrae, R. R. (1992). Normal personality assessment in clinical practice: The NEO personality inventory. *Psychological Assessment, 4*(1), 5-13. https://doi.org/10.1037/1040-3590.4.15

Dazzi, C., Colledani, D., Falvo, R., & Boin, J. (2015). Individual differences, subjective well-being, and job satisfaction: The mediating role of workaholism. *TPM-Testing, Psychometrics, Methodology in Applied Psychology, 22*(4), 523-536. https://doi.org/10.4473/TPM22.4.6

Deci, E. L., & Ryan, R. M. (1980). Self-determination theory: When mind mediates behaviour. *The Journal of Mind and Behaviour, 1*(1), 33-43. https://www.jstor.org/stable/43852807

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behaviour. *Psychological Inquiry, 11*(4), 319–338. https://doi.org/10.1207/S15327965PLI1104_01

Demerouti, E., Mostert, K., & Bakker, A. B. (2010). Burnout and work engagement: A thorough investigation of the independency of both constructs. *Journal of*

Occupational Health Psychology, *15*(3), 209-222. https://doi.org/10.1037/a0019408

Del Líbano, M., Llorens, S., Salanova, M., & Schaufeli, W. B. (2012). About the dark and bright sides of self-efficacy: Workaholism and work engagement. *The Spanish Journal of Psychology*, *15*(2), 688-701. https://doi.org/10.5209/rev_SJOP.2012.v15.n2.38883

De Rijk, A. E., Le Blanc, P. M., Schaufeli, W. B., De Jonge, J. (1998). Active coping and need for control as moderators of the job demanding control model: effects on burn out. *Journal of Occupational Organizational Psychology, 71*(1), 1-18. https://doi.org/10.1111/j.2044-8325.1998.tb00658.x

Diener, E. D., Emmons, R. A., Larsen, R. J., Griffen, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*(1), 71-75. https://doi.org/10.1207/s15327752jpa4901_13

DiStefano, G., Gaudino, M. (2018). Differential effects of workaholism and work engagement on the interference between life and work domains. *European Journal of Psychology*, *14*(4), 863-879. https://doi.org/10.5209/rev_SJOP.2012.v15.n2.38883

Dijkhuizen, J., van Veldhoven, M., & Schalk, R. (2016). Four types of well-being among entrepreneurs and their relationships with business performance. *Journal of Entrepreneurship, 25*(2), 184-210. https://doi.org/10.1177/0971355716650369

Dolcos, S., & Daley, D. M. (2009). Work pressure, workplace social resources, and work-family conflict: The tale of two sectors? *International Journal of Stress Management, 16*(4), 291-311. https://doi.org/10.1037/a0017319

Dordoni, P., Kraus-Hoogeveen, S., Van Der Heijden, B.I., Peters, P., Setti, I., & Fiabane, E. (2019). Live to work or work to live? An age-moderated mediation model on the simultaneous mechanisms prompted by workaholism among healthcare professionals. *Frontiers in Psychology, 10*(868), 1-12. https://doi.org/10.3389/fpsyg.2019.00868

Douglas, E. J., & Morris, R. J. (2006). Workaholic, or just hard worker? *Career Development International, 11*(5), 394-417. https://doi.org/10.1108/13620430610683043

Ehrhart, M. G., Aarons, G. A., Farahnak, L. R. (2014). Assessing the organizational context for EBP implementation: The development and validity testing of the Implementation Climate Scale, *Implementation Science, 9, 157*, 1-11. https://doi.org/10.1186/s13012-014-0157-1

Engelbrecht, G. J., Beer, L. T., & Schaufeli, W. B. (2019). The relationships between work intensity, workaholism, burnout, and self-reported musculoskeletal complaints. *Human Factors and Ergonomics in Manufacturing & Service Industries, 30*(1), 59-70. https://doi.org/10.1002/hfm.20821

Erden, N. S., Toplu, D., & Yashoglu, M. M. (2013). Mediating effects of job demands on the relationship between type A personality and workaholism: A study on Turkish workers. *IUP Journal of Organizational Behaviour, 12*(2), 7-21.

Eriksen, H. R., Ihlebæk, C., & Ursin, H. (1999). A scoring system for subjective health complaints (SHC). *Scandinavian Journal of Public Health, 27*, 63–72. https://doi.org/10.1177/14034948990270010401

Eysenck, H. J. (1997). Addiction, personality and motivation. *Human Psychopharmacology: Clinical and Experimental*, *12*(2), 79-87. https://doi.org/10.1002/(SICI)1099-1077(199706)

Falco, A., Kravina, L., Girardi, D., Dal Corso, L., Di Sipio, A., & De Carlo, N. A. (2012). The convergence between self and observer ratings of workaholism: A comparison between couples. *TPM-Testing, Psychometrics, Methodology in Applied Psychology, 19*(4), 311-324. https://doi.org/10.4473/TPM19.4.5

Falco, A., Piccirelli, A., Girardi, D., Di Sipio, A., & De Carlo, N. A. (2014). "The best or nothing": The mediating role of workaholism in the relationship between perfectionism and burnout. *TPM-Testing, Psychometrics, Methodology in Applied Psychology*, *21*(2), 213-232. https://doi.org/10.4473/TPM21.2.7

Falvo, R., Visintin, E. P., Capozza, D., Falco, A., & De Carlo, A. (2013). The relationships among workaholism, proactivity, and locomotion in a work setting. *Social Behaviour and Personality: An International Journal, 41*(9), 1557-1569. https://doi.org/10.2224/sbp.2013.41.9.1557

Farjami, H., & Rahmani, S. (2016). Self-oriented, other-oriented, and socially prescribed perfectionism in Iranian EFL teachers: Relationship with burnout and engagement. *Journal of Teaching English Language and Literature Society of Iran, 10*(1), 165-187. https://doi.org/10.22132/TEL.2016.53618

Fassel, D. (1990). Working ourselves to death: The high cost of workaholism, the rewards of recovery. San Fransciso, CA: Harper Collins Publishers.

Fournier, A., Laurent, A., Lheureux, F., Ribeiro-Marthoud, M. A., Ecarnot, F., Binquet, C., & Quenot, J. P. (2022). Impact of the COVID-19 pandemic on the mental

health of professionals in 77 hospitals in France. PLOS ONE, 17(2), 1-19. https://doi.org/10.1371/journal.pone.0263666

Fletcher, T. D., & Nusbaum, D. N. (2010). Development of the competitive work environment scale: A multidimensional climate construct. *Educational and Psychological Measurement, 70*(1), 105-124. https://doi.org/10.1177/0013164409344492

Flett, G. L., Hewitt, P. L., & Dyck, D. G. (1989). Self-oriented perfectionism, neuroticism, and anxiety. Personality and Individual Differences, 10(7), 731-735. https://doi.org/10.1016/0191-8869(89)90119-0

Gagné, M., & Deci, E.L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behaviour, 26*(4), 331-362. https://doi.org/10.1002/job.322

Ghislieri, C., Sanseverino, D., Addabbo, T., Bochicchio, V., Musumeci, R., Picardi, I., Tomio, P., Guidetti, G., & Converso, D. (2022). The show must go on: A snapshot of Italian academic working life, during, mandatory work from home through the results of a national survey. *Social Sciences, 11*(111), 1-22. https://doi.org/10.3390/socsci11030111

Girardi, D., De Carlo, A., Dal Corso, L., Andreassen, C. S., & Falco, A. (2019). Is workaholism associated with inflammatory response? The moderating role of work engagement. *TPM-Testing, Psychometrics, Methodology in Applied Psychology*, *26*(2), 305-322. https://doi.org/10.4473/TPM26.2.9

Girardi, D., Falco, A., De Carlo, A., Dal Corso, L., & Benevene, P. (2018). Perfectionism and workaholism in managers: The moderating role of workload. *TPM-Testing, Psychometrics, Methodology in Applied Psychology*, *25*(4), 571-588.

https://doi.org/10.4473/TPM25.4.7

Girardi, D., Falco, A., Piccirelli, A., Dal Corso, L., Bortolato, S., & de Carlo, A. (2015). Perfectionism and presenteeism among managers of a service organization: The mediating role of workaholism. *TPM-Testing, Psychometrics, Methodology in Applied Psychology, 22*(4), 507-521. https://doi.org/10.4473/TPM22.4.5

Gonzalez-Roma, V., & Hernandex, A. (2016). Uncovering the dark side of innovation: The influence of the number of innovations on work teams' satisfaction and performance. *European Journal of Work and Organizational Psychology, 25*, 570-582. https://doi.org/10.1080/1359432X.2016.1181057

Graham, J. W., Olchowski, A. E., Gilreath, T. D. (2007). How many imputations are really needed? Some practical clarifications of multiple imputation theory. *Prevention Science, 8,* 206-213. https://doi.org/10.1007/s11121-007-0070-9

Graves, L. M., Ruderman, M. N., Ohlott, P. J., & Weber, T. J. (2012). Driven to work and enjoyment of work: Effects on managers' outcomes. *Journal of Management, 38*(5), 1655-1680. https://doi.org/10.1177/0149206310363612

Greenhaus, J. H., Collins, K. M., & Shaw, J. D. (2003). The relationship between work-family balance and quality of life. *Journal of Vocational Behaviour,* 63(3), 510-531. https://doi.org/10.1016/s0001-8791(02)00042-8.

Grzegorek, J. L., Slankey, R. B., Franze, S., & Rice, K. G. (2004). Self-criticism, dependency, self-esteem, and grade point average satisfaction among clusters of perfectionists and non-perfectionists. *Journal of Counseling Psychology, 51*(2), 192-200. https://doi.org/10.1037/0022-0167.51.2.192

Guidetti, G., Viotti, S., Converso, D. (2019). The interplay between work engagement,

workaholism, emotional exhaustion and job satisfaction in academics: A person-centred approach to the study of occupational well-being and its relations with job hindrances and job challenges in an Italian university. *Higher Education Quarterly*, *74*, 224-239. https://doi.org/10.1111/hequ.12239

Guglielmi, D., Simbula, S., Schaufeli, W. B., & Depolo, M. (2012). Self-efficacy and workaholism as initiators of the job demands-resources model. *The Career Development International*, *17(*4), 375-389. https://doi.org/10.1108/13620431211255842

Hameed, F., Amjad, S., Hameed, A. (2013). The relationship between workaholism and personality. *Middle East Journal of Scientific Research*, *17*(7), 898-907. https://doi.org/10.5829/idosi.mejsr.2013.17.07.12235

Haar, J. M. (2013). Testing a new measure of work–life balance: A study of parent and non-parent employees from New Zealand. *The International Journal of Human Resource Management*, *24*(17), 3305-3324. https://doi.org/10.1080/09585192.2013.775175

Haar, J., & Roche, M. (2013). Three-way interaction effects of workaholism on employee well-being: Evidence from blue-collar workers in New Zealand. *Journal of Management & Organization*, *19*(2), 134-149. https://doi.org/10.1017/jmo.2013.10

Haar, J. M., Russo, M., Sune, A., Ollier-Malaterre, A. (2014). Outcomes of work-life balance on job satisfaction, life satisfaction and mental health: A study across

seven cultures. J*ournal of Vocational Behaviour, 85*, 361-373. http://doi.org/10.1007/s11205-018-1875-6

Heaney, C. A., Israel, B. A., & House, J. S. (1994). Chronic job insecurity among automobile workers: Effects on job satisfaction and health. *Social Science and Medicine, 38*(10), 1431-1437. https://doi.org/10.1016/0277-9536(94)90281-X

Hernandez-Diaz, Y., Genis-Mendoza, A. D., Ramos-Mendez, M. A., Juarez-Rojop, I. E., Tovilla-Zarate, C. A., Gonzalez-Castro, T. B., Lopez-Narvaez, M. L., & Nicolini, H. (2022). Mental health impact of the COVID-19 pandemic on Mexican population: A systematic review. *International Journal of Environmental Research and Public Health, 19*(11), 1-10. https//doi.org/10.3390/ijerph19116953

Hewitt, P. L., & Flett. G. L. (1990). Perfectionism and depression: A multidimensional analysis. *Journal of Social Behaviour and Personality*, *5*(5), 423-438.

Hogan, V., Hogan, M., & Hodgins, M. (2016). A study of workaholism in Irish academics. *Occupational Medicine, 66*(6), 460-465. https://doi.org/10.1093/occmed/kqw032

Jackson, S. S., Fung, M.C., Moore, M. A. C., & Jackson, C. J. (2016). Personality and workaholism. *Personality and Individual Differences, 95*, 114-120. https://doi.org/10.1016/j.paid.2016.02.020

Johnstone, A., & Johnston, L. (2005). The relationship between organizational climate, occupational type and workaholism. *New Zealand Journal of Psychology, 34*(3), 181–188.

Jowett, G. E., Hill, A. P., Hall, H. K., & Curran, T. (2013). Perfectionism and junior athlete burnout: The mediating role of autonomous and controlled motivation. *Sport, Exercise, and Performance Psychology, 2*(1), 48–61. https://doi.org/10.1037/a0029770

Kanai, A., & Wakabayashi, M. (2001). Workaholism among Japanese blue-collar employees. *International Journal of Stress Management, 8*(2), 129–145. https://doi.org/1072-5245/01/0400-0129

Karapinar, P. B., Camgoz, S. M., & Ekmekci, O, T. (2019). Employee well-being, workaholism, work–family conflict and instrumental spousal support: A moderated mediation model. *Journal of Happiness Studies, 21, 2451-2471*. https://doi.org/10.1007/s10902-019-00191-x

Keown, L. A. (2007). Time escapes me. Workaholics and time perception. Canadian Social Trends. No. 83. *Statistics Canada, Catalogue #11-008*, pp. 28-32.

Keller, A. C., Spurk, D., Baumeler, F., & Hirschi, A. (2016). Competitive climate and workaholism: Negative sides of future orientation and calling. *Personality and Individual Differences*, *96,* 122-126. https://doi.org/10.1016/j.paid.2016.02.061

Khalidi, S., Sheikhzakariaie, N., Olyaee, N., Moridi, G., Nasab, G. E., Khosravi, F., Gharibi, F. (2016). Relationships between workaholism and personality factors among nurses: A questionnaire-based cross-sectional study. *Journal of Chemical and Pharmaceutical Sciences, 9*(4), 3129-3135.

Kilroy, L. T. (2008). Analysis of the damaging effects of workaholism in managers

versus non-managers. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 68*(10), 7011. https://doi.org/10.1007/s10902-019-00191-x

Kinman, G., & Jones, F. (2008). A life beyond work? Job demands, work-life balance, and well-being in UK academics. *Journal of Human Behaviour in the Social Environment, 17*(1-2), 41-60. https://doi.org/10.1080/10911350802165478

Kodinariya, T. M., & Makwana, P. R. (2013). Review on determining number of clusters in k-means clustering. *International Journal of Advance Research in Computer Science and Management Studies, 1*(6), 90-95.

Kravina, L., Falco, A., Girardi, D., & De Carlo, N. A. (2010). Workaholism among management and workers in an Italian cooperative enterprise. *TPM-Testing, Psychometrics, Methodology in Applied Psychology, 17*(4), 201-216.

Krumov, K. D., Larsen, K. S., Liu, J., Schneider, J. F., Kemmelmeier, M., Krumova, A. K., Widodo, E., Gungov, A. L., Juhasz, M., Garvanova, M. Z., Kumar, S., Repaczki, R., & Paul, M. (2021). Workaholism across European and Asian cultures during the COVID-19 pandemic. *Psychology Journal, 11*, 85-96. https://doi.org/10.1002/pchj.501

Kubota, K., Shimazu, A., Kawakami, N., (...), Nakata, A., Schaufeli, W.B. (2011). Association between workaholism and sleep problems among hospital nurses. *Industrial Health, 48*(6), 864-871. https://doi.org/1006240015-1006240015

Kubota, K., Shimazu, A., Kawakami, N., & Takahashi, M. (2014). Workaholism and sleep quality among Japanese employees: A prospective cohort

study. *International Journal of Behavioural Medicine, 21*(1), 66-76. https://doi.org/10.1007/s12529-012-9286-6

Lackritz, J. R. (2004). Exploring burnout among university faculty: Incidence, performance and demographic issues. *Teaching and Teacher education, 20*(7), 713-729. https://doi.org/10.1016/j.tate.2004.07.002

Langseth-Eide, B. (2019). It's been a hard day's night and I've been working like a dog: Workaholism and work engagement in the JD-R model. *Frontiers in Psychology, 10,* 1-14. https://doi.org/10.3389/fpsyg.2019.01444

Levy, D. V. (2016). Female-specific effects of workaholism on well-being outcomes. Palo Alto University. ProQuest Dissertation, UMI Number: 3687307

Loscalzo, Y. (2021). The impact of workaholism and work engagement on distant learning and work-family conflict during the COVID-19 lockdown. *Amfiteatru Economic, 23*(58), 752-769. https://doi.org/10.24818/EA/2021/58/752

Machelowitz, M. M. (1980). *Workaholics. Living with them, Working with them.* Addison-Wiley.

Malinowska, D., & Tokarz, A. (2014). The structure of workaholism and types of workaholic. *Polish Psychological Bulletin, 45*(2), 211-222. https://doi.org/10.2478/ppb-2014-0027

Malinowska, D., & Tokarz, A. (2013). Understanding functional and dysfunctional types of workaholic: An investigation based on motivational characteristics. *Acta Neuropsychologica, 11*(1), 19-36.

Matsudaira, K., Shimazu, A., Fujii, T., Kubota, K., Sawada, T., Kikuchi, N., & Takahashi, M. (2013). Workaholism as a risk factor for depressive mood,

disabling back pain, and sickness absence. *PLoS ONE*, *8*(9). https://doi.org/10.1371/journal.pone.0075140

Matuska, K. M. (2010). Workaholism, life balance, and well-being: A comparative analysis. Journal of Occupational Science, 17(2), 104-111. https://doi.org/10.1080/14427591.2010.9686681

Mazzetti, G., Schaufeli, W. B., & Guglielmi, D. (2014). Are workaholics born or made? Relations of workaholism with person characteristics and overwork climate. *International Journal of Stress Management*, *21*(3), 227-254. https://doi.org/10.1037/a0035700

Mazzetti, G., Schaufeli, W. B., & Guglielmi, D. & Depolo, M. (2016). Overwork climate scale: Psychometric properties and relationships with working hard. *Journal of Managerial Psychology*, *31*(4), 880-896. https://doi.org/10.1108/JMP-03-2014-0100

Mazzetti, G., Vignoli, M., Schaufeli, W.B., Guglielmi, D. (2019). Work addiction and presenteeism: The buffering role of managerial support. *International Journal of Psychology*, *54*(2), 174-179. https://doi.org/10.1002/ijop.12449

McIntosh, B., McQuaid, R., Munro, A., & Dabir-Alai, P. (2012). Motherhood and its impact on career progression. *Gender in Management*, *27*(5), 346-364. https://doi.org/10.1108/17542411211252651

McMillan, L. W., O'Driscoll, M. P, & Burke, R. J. (2003). Workaholism: A review of theory, research, and future directions. In C. L. Cooper & I. T. Robertson (Eds.), *International review of industrial and organizational psychology, Vol. 18* (pp. 167-190). John Wiley & Sons, Inc.

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*(2), 69-91. https://doi.org/10.1023/A:1009573129142

Midje, H. H., Nafstad, I. T., Syse, J., & Torp, S. (2014). Workaholism and mental health problems among municipal middle managers in Norway. *Journal of Occupational and Environmental Medicine, 56*(10), 1042-1051. https://doi.org/10.1097/JOM.0000000000000223

Milligan G. W., & Cooper, M. C. (1988). A study of variable standardization. *Journal of Classification, 5*, 181-204. https://doi.org/10.1007/BF01897163

Milligan, G. W., & Hirtle, S. C. (2003). Clustering and classification methods. In J. A. Schinka & W. F. Velicer (Eds.), *Handbook of psychology, research methods in psychology* (pp.189-210). John Wiley & Sons, Inc.

Mirkin, B. (2000, June). Data driven classification and clustering. Paper presented at the meeting of the Classification Society of North America. University of Montreal, Canada.

Misra, J. Hickes-Landquist, J., & Templer, A. (2012). Gender, work time, and care responsibilities among faculty. *Sociological Forum, 27* (2), 300-323. https://doi.org/10.1111/j.1573-7861.2012.01319.x

Molino, M., Bakker, A. B., & Ghislieri, C. (2016) The role of workaholism in the job demands-resources model. *Anxiety, Stress, & Coping, 29*(4), 400-414. https://doi.org/10.1080/10615806.2015.1070833

Molino, M., Ghislieri, C., & Colombo, L. (2012). Working excessively: Theoretical and

methodological considerations. *Giornale Italiano di Medicina del Lavoro ed Ergonomia, 34*(1), A5-A10.

Morkeviciute, M., & Endriulaitiene, A. (2021a). Workaholism and work addiction: The differences in motivational factors. *Socialiniai Tyrimai, 44*(2), 98-109. https://doi.org/10.15388/Soctyr.44.2.6

Morkeviciute, M., & Endriulaitiene, A. (2021b). Can remote work during COVID-19 pandemic strengthen the link between workload and workaholism? *Socialiniai Tyrimai, 44*(2), 129-138. https://doi.org/10.15388/Soctyr.44.2.8

Morkeviciute, M., & Endriulaitiene, A. (2021). The link between personal factors and workaholism: The role of remote working during the COVID-19 pandemic. *Psichologija, 64,* 12-22. https://doi.org/10.15388/Psichol.2021.37

Mosier, S. K. (1983). Workaholics: An analysis of their stress, success, and priorities. Unpublished Master's Thesis. University of Texas at Austin.

Mudrack, P. E. (2006). Understanding workaholism: The case of behavioural tendencies. In R. Burke (Ed.), *Research companion to working time and work addiction* (pp. 108-128). Cheltenham, UK: Edward Elgar

Mudrack, P. E., & Naughton, T. J. (2001). The assessment of workaholism as behavioural tendencies: Scale development and preliminary empirical testing. *International Journal of Stress Management, 8*(2), 93–111. https://doi.org/10.1023/A:1009525213213

Naughton, T. J. (1987). A conceptual view of workaholism and implications for career counseling and research. *The Career Development Quarterly, 35*(3), 180-187. https://doi.org/10.1002/j.2161-0045.1987.tb00912.x

Nie, Y., & Sun, H. (2016). Why do workaholics experience depression? A study with Chinese University teachers. *Journal of Health Psychology, 21*(10), 2339-2346. https://doi.org/10.1177/1359105315576350

Nonnis, M., Massidda, D., Cuccu, S., & Cortese, C. G. (2018). The impact of workaholism on nurses' burnout and disillusion. *The Open Psychology Journal, 11,* 77-88. https://doi.org/10.2174/1874350101811010077

Oates, W. E. (1968). On being a "workaholic" (a serious jest). *Pastoral Psychology, 19*(8), 16-20.

Oates, W. E. (1971). Confessions of a workaholic: The facts about work addiction. New York: The World Publishing Company.

O'Neill, P., & Sevastos, P. (2013). The development and validation of a new multidimensional Job Insecurity Measure (JIM): An inductive methodology. *Journal of Occupational Health Psychology, 18*(3), 338-349. https://doi.org/10.1037/a0033114

Omar, A. G., Salessi, S. M., Vaamonde, J. D., Urteaga, O., & Florencia, A. (2018). Psychometric qualities of the Argentine version of the Dutch Work Addiction Scale (DUWAS). *Current Psychology, 9*, 1-11. https://doi.org/10.1007/s12144-018-9999-z

Ontrup, G, & Patrzek, J. (2019). On the nomological net of (non-)workaholic subtypes. *Career Development International, 27*(7), 672-685. https://doi.org/10.1108/CDI-12-2018-0327

Orfei, M. A., Pocari, D. E., D'Arcangelo, S., Maggi, F., Russignaga, D., Lattanzi, N.,

Malizia, A. P., & Ricciardi, E. (2022a). COVID-19 and stressful adjustment to work: A long-term perspective study about homecoming for bank employees in Italy. *Frontiers in Psychology, Organizational Psychology, 13*, 1-15. https://doi.org/103389/fpsyf.2022.843095

Orfei, M. A., Bossi, F., D'Arcangelo, S., Maggi, F., Lattanzi, N., Malizia, A. P., & Ricciardi, E. (2022). Mental health in the post-lockdown pandemic phase: Relief or exacerbation of psychological distress? A cross-sectional study in the general population in Italy. *Acta Psychologica, 225*. 1-7. https://doi.org/10.1016/j.actpsy.2022.103555

Ostroff, C., Kinicki, A. J., Muhammad, R. S. (2013). Organizational culture and climate. In I. B. Weinger (Eds.), *Handbook of Psychology* (pp. 643-676). John Wiley & Sons, Inc. Quinones, C., & Griffiths, M. D. (2015). Addiction to work: A critical review of the workaholism construct and recommendations for assessment. *Journal of Psychosocial Nursing and Mental Health Services, 53*(10), 48-59. https://doi.org/10.3928/02793695-20150923-04

Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavioural Research Methods, Instruments, & Computers, 36*(4), 717-731. https://doi.org/10.3758/BF-32-6553

Rabenu, E., Shkoler, O., Lebron, M. J., & Tabak, F. (2019). Heavy-work investment, job engagement, managerial role, person-organization value congruence, and burnout: a moderated-mediation analysis in USA and Israel. *Current Psychology*, 1-18. https://doi.org/10.1007/s12144-019-00423-6.

Roberts, B. W., & DelVecchio, W. F. (2000). The rank-order consistency of personality traits from childhood to old age: A quantitative review of longitudinal studies. *Psychological Bulletin, 126*(1), 3–25. https://doi.org/10.1037/0033-2909.126.1.3

Robinson, B. E. (1999). The work addiction risk test: Development of a tentative measure of workaholism. *Perceptual and Motor Skills*, *88*(1), 199-210. https://doi.org/10.2466/pms.1999.88.1.1999

Robinson, B. E. (2000). A typology of workaholics with implications for counsellors. *Journal of Addictions and Offender Counseling*, *21*, 1-15. https://doi.org/10.1002/j.2161-1874.2000.tb00150.x

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*(5), 397-410. https://doi.org/10.1080/01926180127624

Robinson, B. E., Flowers, C., & Ng, K. M. (2006). The relationship between workaholism and marital disaffection: Husband's perspective. *The Family Journal*, *14*(3), 213-220. https://doi.org/10.1177/1066480706287269

Robinson, B. E., & Kelley, L. (1998). Adult children of workaholics: Self-concept anxiety, depression, and locus of control. *American Journal of Family Therapy*, *26*(3), 223-238. https://doi.org/10.1080/01926189808251102

Robinson, B. E., & Post, P. (1995). Split-half reliability of the work addiction risk test: Development of a measure of workaholism. *Psychological Reports*, *76*, 1226. https://doi.org/10.2466/pr0.1995.76.3c.1226

Robinson, B. E., Post, P., & Khakee, J. F. (1992). Test-retest reliability of the work addiction risk test. *Perceptual and Motor Skills, 74*, 926. https://doi.org/10.2466/PMS.74.3.926-926

Russo, J. A., & Waters, L. E. (2006). Workaholic worker type differences in work-family conflict: The moderating role of supervisor support and flexible work scheduling. *The Career Development International, 11*(5), 418–439. https://doi.org/10.1108/13620430610683052

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and facilitation of intrinsic motivation, social development and well-being. *American Psychologist, 55*(1), 66-78. https://doi.org/10.1037/0003-066X.55.1.68

Sandarin, É., Gillet, N., Fernet, C., Depint-Rouault, C., Leloup, M., & Portenard, D. (2019). Effects of workaholism on volunteer firefighters' performance: A moderated mediation model including supervisor recognition and emotional exhaustion. *Anxiety, Stress & Coping, 32*(5), 568 580. https://doi.org/10.1080/10615806.2019.1638683

Salanova, M., López-González, A. A., Llorens, S., Del Líbano, M., Vicente-Herrero, M. T., & Tomás-Salvá, M. (2016). Your work may be killing you! Workaholism, sleep problems and cardiovascular risk. *Work and Stress, 30*(3), 228-242. https://doi.org/10.1080/02678373.2016.1203373

Schaufeli, W. B. (2016). Heavy work investment, personality and organizational climate. *Journal of Managerial Psychology, 31*(6), 1057-1073. https://doi.org/10.1108/JMP-07-2015-0259

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement, 66*(4), 701-716. https://doi.org/10.1177/0013164405282471

Schaufeli, W. B., Bakker, A. B., Van der Heijden, F. M. M. A., & Prins, J. T. (2009)a. Workaholism among medical residents: It is the combination of working excessively and compulsively that counts. *International Journal of Stress Management, 16*(4), 249-272. https://doi.org/10.1037/a0017537

Schaufeli, W. B., Salanova, M., Gonzalez-Roma, V., and Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach, *Journal of Happiness Studies*, 3, 71-92. https://doi.org/10.1023/A:1015630930326

Schaufeli, W. B., Shimazu, A., & Taris, T. W. (2009b). Being driven to work excessively hard: The evaluation of a two-factor measure of workaholism in the Netherlands and Japan. *Cross-Cultural Research, 43*(4), 320-348. https://doi.org/10.1177/1069397109337239

Schaufeli, W. B., Taris, T. W., & Bakker, A. B. (2008). It takes two to tango: Workaholism is working excessively and working compulsively. In R. J. Burke and C. L. Cooper (Eds.), *The long work hours culture: Causes, consequences and choices* (pp.203-226). Bingley, UK: Emerald. https://doi.org/10.1016/B978-1-84855-038-4.00009-9

Schaufeli, W. B., van Wijhe, C. I., Peeters, M. C. W. & Taris, T. W. (2011). Reek's psychological instruments. Work addiction, a concept measured. *Gedrag and*

Organisatie, 24, 43–63.

Scott, K. S., Moore, K. S., & Miceli, M. P. (1997). An exploration of the meaning and consequences of workaholism. *Human Relations, 50*(3), 287–314. https://doi.org/10.1023/A:1016986307298

Serrano-Fernández, M. J., Boada-Grau, J., Gil-Ripoll, C., & Vigil-Colet, A. (2016). A predictive study of antecedent variables of workaholism. *Psicothema, 28*(4), 401-406. https://doi.org/10.7334/psicothema2015.345

Schafer, J. L., & Olsen, M. K. (1998). Multiple imputation for multivariate missing data problems: A data analyst's perspective. *Multivariate Behavioural Research, 33*(4), 545-571. https://doi.org/10.1207/s/15327906mbr3304_5

Sharma, J., & Sharma, P. (2011). Workaholism and its correlates: A study of academicians. *International Journal of Management and Business Research, 1*(3), 151-160.

Shimazu, A., Demerouti, E., Bakker, A. B., Shimada, K., & Kawakami, N. (2011). Workaholism and well-being among Japanese dual-earner couples: A spillover-crossover perspective. *Social Science and Medicine, 73*(3), 399-409. https://doi.org/10.1016/j.socscimed.2011.05.049

Shimazu, A., Schaufeli, W. B., Kamiyama, K., & Kawakami, N.(2015). Workaholism vs. work engagement: The two different predictors of future well-being and performance. *International Journal of Behavioural Medicine, 22*(1), 18-23. https://doi.org/10.1007/s12529-014-9410-x

Shimazu, A., Schaufeli, W.B., Kubota, K., Kawakami, N. (2012). Do workaholism and

work engagement predict employee well-being and performance in opposite directions? *Industrial Health, 50*(4), 316-321. https://doi.org/10.2486/indhealth.MS1355

Shimazu, A., Schaufeli, W. B., & Taris, T. W. (2010). How does workaholism affect worker health and performance? The mediating role of coping. *International Journal of Behavioural Medicine, 17*(2), 154-160. https://doi.org/10.1007/s12529-010-9077-x

Shimazu, A., & Schaufeli, W.B. (2009). Is workaholism good or bad for employee well-being? The distinctiveness of workaholism and work engagement among Japanese employees. *Industrial Health, 47*(5), 495-502. https://doi.org/10.2486/indhealth.47.495

Shkoler, O., Rabenu, E., Iqbal, M. Z., Ferrari, F., Hatipoglu, B., Roazzi, A., Kimura, T., Tabak, F., Moasa, H., Vasiliu, C., Tziner, A., & Lebron, M. J. (2021). Heavy-work investment: Its dimensionality, invariance across 9 countries and levels before and during the COVID-19's pandemic. *Journal of Work and Organizational Psychology, 37*(2), 67-83. https://doi.org/10.5093/jwop2021a8

Skinner, B. F. (1963). Operant behaviour. *American psychologist, 18*(8), 503-515. https://doi.org/10.1037/h0045185

Slaney, R. B., Rice, K. G., Mobley, M., Trippi, J., & Ashby, J. S. (2001). The Almost Perfect Scale–Revised. *Measurement and Evaluation in Counseling and Development, 34*, 130-145. https://doi.org/10.1080/07481756.2002.12069030

Smith, M. M., Saklofske, D. H., Stoeber, J., & Sherry, S. B. (2016). The big three perfectionism scale: A new measure of perfectionism. *Journal of Psychoeducational Assessment, 34*(7), 670-687. https://doi.org/10.1177/073428291665153

Smith, D. E. & Seymour, R. B. (2004). The nature of addiction. In R. H. Coombs (Ed.), *Handbook of addictive disorders: A practical guide to diagnosis and treatment* (pp. 3–30). New Jersey: John Wiley & Sons, Inc.

Soelton, M., Amaelia, P., & Prasetyo, H. (2019). Dealing with job Insecurity, work stress and family conflict of employees. *Advances in Economics, Business and Management Research, 120*, 167-174.

Spagnoli, P., & Molinaro, D. (2020). Negative (workaholic) emotions and emotional exhaustion: Might job autonomy have played a strategic role in workers with responsibility during the COVID-19 crisis lockdown? *Behavioural Sciences, 10*(112), 192-203. https://doi.org/10.3390/bs10120192

Sparks, K., Cooper, C., Fried, Y., & Shirom, A. (1997). The effects of hours of work on health: A meta-analytic review. *Journal of Occupational and Organizational Psychology*, *70*(4), 391-408. https://doi.org/10.1111/j.2044-8325.1997.tb00656.x

Spielberger, C. D., Gorsuch, R. L., Lushene, R. E. (1970). *The State-Trait Anxiety Inventory. (Test Manual)*. Palo Alto: CA: Consulting Psychologists Press.

Spielberger, C. D. (1983). *Manual for the State-Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists Press.

Spence, J. T., & Robbins, A. S. (1992). Workaholism: Definition, measurement, and preliminary results. *Journal of Personality Assessment, 58*(1), 160-178.

https://doi.org/10.1207/s15327752jpa5801_15

Spurk, D., Hirschi, A., & Kauffeld, S. (2016). A new perspective on the etiology of workaholism: The role of personal and contextual career-related antecedents. *Journal of Career Assessment, 24(*4), 747-764. https://doi.org/10.1177/1069072715616127

Stoeber, J., & Damian, L. E. (2016). Perfectionism in employees: Work engagement, workaholism, and burnout. In: Sirois, Fuschia M. and Molnar, Danielle S., eds. Perfectionism, health, and well-being. Springer, New York, pp. 265-283. https://doi.org.10.1007/978-3-319-18582-8_12

Stoeber, J., Damian, L. E, & Madigan, D. J. (2017). Perfectionism: A Motivational Perspective. In: Stoeber, Joachim, (ed.) The psychology of perfectionism: Theory, research, applications. Routledge, pp. 19-43. https://orcid.org/0000-0002-9937-1818

Stoeber, J., Davis, C. R., & Townley, J. (2013). Perfectionism and workaholism in employees: The role of work motivation. *Personality and Individual Differences, 55*(7), 733-738. https://doi.org/10.1016/j.paid.2013.06.001

Sussman, S. (2012). Workaholism: A Review. *Journal of Addiction Research and Therapy, 6*(1), 1-10. https://doi.org/10.4172/2155-6105.S6-001

Sussman, S., & Sussman, A. N. (2011). Considering the definition of addiction. International *Journal of Environmental Research and Public Health, 8*(10), 4025-4038. https://doi.org/10.3390/ijerph8104025

Sverke, M., Hellgren, J. (2002). The nature of job insecurity: Understanding employment uncertainty on the brink of a new millennium. *Applied Psychology, 51*(1), 23-42

https://doi.org/10.1111/1464-0597.0077z

Tahir, S., & Aziz, S. (2019). Workaholism as predictor of work-family conflict and mental well-being: Comparison of public and private sector employees. *Pakistan Journal of Commerce and Social Science, 13*(2), 419-435.

Taris, T. W., & Schaufeli, W. B. (2010). Why do perfectionists have a higher burnout risk than others? The mediational effect of workaholism. *Romanian Journal of Applied Psychology, 12*(1), 1-7.

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(*1), 37-60. https://doi.org/10.1111/j.1464-0597.2005.00195.x

Taris, T. W., van Beek, I., & Schaufeli, W. B. (2020). The motivational make-up of workaholism and work engagement: A longitudinal study on need satisfaction, motivation, and heavy work investment. *Frontiers in Psychology*, 11, 1-17. https://doi.org/10.3389/fpsyg.2020.01419

Tecau, A. S., Constantin, C. P., Lixandroiu, R. C., Chitu, I. B., & Bratucu, G. (2020). Impact of COVID-19 crisis on heavy work investment in Romania. *Amfiteatru Economic, 22*(14), 1049-1067. https://doi.org/10.24818/EA/2020/S14/1049

Tilakdharee, N., Ramidial, S., & Parumasur, S. B. (2010). The relationship between job insecurity and burnout. *South African Journal of Economic and Management Sciences, 13*(3), 254-271. https://doi.org/10.4102/sajems.v13i3.103

Torp, S., Lysfjord, L., Midje, H. H. (2018). Workaholism and work–family conflict among university academics. *Higher Education, 76(*6), 1071-1090.

https://doi.org/10.1007/s10734-018-0247-0

Tremblay, M. A., Blanchard, C. M., Taylor, S., Pelletier, L. G., & Villeneuve, M. (2009). Work Extrinsic and Intrinsic Motivation Scale: Its value for organizational psychology research. *Canadian Journal of Behavioural Science, 41*(4), 213-226. https://doi.org/10.1037/a0015167

Tziner, A., & Tanami, M. (2013). Examining the links between attachment, perfectionism, and job motivation potential with job engagement and workaholism. *Journal of Work and Organizational Psychology, 29*, 65-74. https://doi.org/10.5093/tr2013a10

van Beek, I., Taris, T. W., & Schaufeli, W. B. (2011). Workaholic and work engaged employees: Dead ringers or worlds apart? *Journal of Occupational Health Psychology, 16*(4), 468-482. https://doi.org/10.1037/a0024392

van Beek, I., Taris, T. W., Schaufeli, W. B., & Brenninkmeijer, V. (2014). Heavy work investment: Its motivational make-up and outcomes. *Journal of Managerial Psychology, 29*(1), 46-62. https://doi.org/10.1108/JMP-06-2013-0166

van den Broeck, A., Schreurs, B., De Witte, H., Vansteenkiste, M., Germeys, F., & Schaufeli, W. (2011). Understanding workaholics' motivations: A self-determination perspective. *Applied Psychology: An International Review, 60*(4), 600-621. https://doi.org/10.1111/j.1464-0597.2011.00449.x

van Wijhe, C. I., Peeters, M. C. W., & Schaufeli, W. B. (2014). Enough is enough: Cognitive antecedents of workaholism and its aftermath. *Human Resource Management, 53*(1), 157-177. https://doi.org/10.1002/hrm.21573

Vazquez, A. C. S., de Freitas, C. P. P., Cyrre, A., Hutz, C. S., & Schaufeli, W. B. (2018).

Validity evidence of the Dutch Work Addiction Scale—Brazilian Version. *Avaliação Psicológica, 17*(1), 69–78. https://doi.org/10.15689.ap/2017.1701.08.13288

Virick, M., Lilly, J. D., & Casper, W. J. (2007). Doing more with less. *Career Development International*, 12(5), 463-480. https://doi.org/10.1108/13620430710773772

Weer, C., & Greenhaus, J.H. (2014) Work-to-family conflict. In A.C. Michalos (Eds.), *Encyclopedia of quality of life and well-being research* (pp.7244-7245). Springer, Dordrecht. https://doi.org/10.1007/978-94-007-0753-5_3274

Xiong, J., Lipsitz, O., Nasri, F., Lui, L. M. W., Gill, H., Phan, L., Chen-Li, D., Iacobucci, M., Ho, R., Majeed, A., & McIntyre, R. S. (2020). Impact of COVID-19 pandemic on mental health in the general population: A systematic review. *Journal of Affective Disorders, 277*(1), 55-64. https://doi.org/10.1016/j.jad.2020.08.001

Yilmaz, K., Altinkurt, Y., Kesim, E. (2014). The relationship between school climate and the workaholism tendencies of teachers. *Anthropologist, 18*(2), 277-288. https://doi.org/10.1080/09720073.2014.11891545

APPENDICES

APPENDIX A

Dutch Work Addiction Scale (DUWAS; Schaufeli, Shimazu, & Taris, 2009)

Please read each statement carefully and indicate how often you feel this way about your job.

		Almost Never			Almost Always
1.	I seem to be in a hurry and racing against the clock.	1	2	3	4
2.	I find myself continuing to work after my coworkers have called it quits.	1	2	3	4
3.	I stay busy and keep many irons in the fire.	1	2	3	4
4.	I spend more time working than on socializing with friends, on hobbies, or on leisure activities.	1	2	3	4
5.	I find myself doing two or three things at one time such as eating lunch and writing a memo, while taking on the telephone.	1	2	3	4
6.	It is important to me to work hard even when I do not enjoy what I am doing.	1	2	3	4
7.	I feel that there is something inside me that drives me to work hard.	1	2	3	4
8.	I feel obliged to work hard, even when it is not enjoyable.	1	2	3	4
9.	I feel guilty when I take time off work.	1	2	3	4
10.	It is hard for me to relax when I am not working.	1	2	3	4
	Additional Item:				
11.	I consider myself to be a workaholic.	1	2	3	4

APPENDIX B

Self-Oriented Perfectionism (BTPS; Smith et al., 2016)

Using the scale below, please indicate your agreement by selecting the response option that best corresponds with each statement.

	Strongly Disagree				Strongly Agree
1. I have a strong need to be perfect.	1	2	3	4	5
2. I strive to be as perfect as possible.	1	2	3	4	5
3. I never settle for less than perfection from myself.	1	2	3	4	5
4. It is important to me to be perfect in everything I attempt.	1	2	3	4	5
5. I do things perfectly, or I don't do them at all.	1	2	3	4	5

APPENDIX C

Work Extrinsic and Intrinsic Motivation Scale (WEIM; Tremblay et al., 2009)

Please indicate the extent to which each of the following items corresponds to the reasons why you are presently involved in your work.

		Does not Correspond at All						Corresponds Exactly
1.	Because this is the type of work I chose to do to attain a certain lifestyle.	1	2	3	4	5	6	7
2.	For the income it provides me.	1	2	3	4	5	6	7
3.	I ask myself this question, I don't seem to be able to manage the important tasks related to this work.	1	2	3	4	5	6	7
4.	Because I derive much pleasure from learning new things.	1	2	3	4	5	6	7
5.	Because it has become a fundamental part of who I am.	1	2	3	4	5	6	7
6.	Because I want to succeed at this job, if not I would be very ashamed of myself.	1	2	3	4	5	6	7
7.	Because I chose this type of work to attain my career goals.	1	2	3	4	5	6	7
8.	For the satisfaction I experience from taking on interesting challenges.	1	2	3	4	5	6	7
9.	Because it allows me to earn money.	1	2	3	4	5	6	7
10.	Because it is part of the way in which I have chosen to live my life.	1	2	3	4	5	6	7
11.	Because I want to be very good at this work, otherwise I would be very disappointed.	1	2	3	4	5	6	7
12.	I don't know why, we are provided with unrealistic working conditions.	1	2	3	4	5	6	7
13.	Because I want to be a "winner" in life.	1	2	3	4	5	6	7
14.	Because it is the type of work I have chosen to attain certain important objectives.	1	2	3	4	5	6	7
15.	For the satisfaction I experience when I am successful at doing difficult things.	1	2	3	4	5	6	7
16.	Because this type of work provides me with security.	1	2	3	4	5	6	7
17.	I don't know, too much is expected of us.	1	2	3	4	5	6	7
18.	Because this job is part of my life.	1	2	3	4	5	6	7

APPENDIX D

Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2002)

Please read each statement carefully and decide if you ever feel this way about our job. If you have never had this feeling, select 0. If you have had this feeling, indicate how often you felt it by choosing 1-6 that best describes how frequently you feel that way.

		Never						Always
1.	At my work, I feel bursting with energy.*	0	1	2	3	4	5	6
2.	I find the work that I do full of meaning and purpose.	0	1	2	3	4	5	6
3.	Time flies when I am working.	0	1	2	3	4	5	6
4.	At my job, I feel strong and vigorous.*	0	1	2	3	4	5	6
5.	I am enthusiastic about my job.*	0	1	2	3	4	5	6
6.	When I am working, I forget everything else around me.	0	1	2	3	4	5	6
7.	My job inspires me.*	0	1	2	3	4	5	6
8.	When I get up in the morning, I feel like going to work.*	0	1	2	3	4	5	6
9.	I feel happy when I am working intensely.*	0	1	2	3	4	5	6
10.	I am proud of the work that I do.*	0	1	2	3	4	5	6
11.	I am immersed in my work.*	0	1	2	3	4	5	6
12.	I can continue working for very long periods of time.	0	1	2	3	4	5	6
13.	To me, my job is challenging.	0	1	2	3	4	5	6
14.	I get carried away when I am working.*	0	1	2	3	4	5	6
15.	At my job, I am very resilient, mentally.	0	1	2	3	4	5	6
16.	It is difficult to detach myself from my job.	0	1	2	3	4	5	6
17.	At my work, I always persevere, even when things do not go well.	0	1	2	3	4	5	6

APPENDIX E

Job Insecurity Measure (JIM; O'Neill & Sevastos, 2013)

Using the scale below, please indicate your agreement by selecting the response option that best corresponds with each statement.

		Very Inaccurate						Very Accurate
1.	The possibility of losing my job occupies my thoughts constantly.	1	2	3	4	5	6	7
2.	No matter how hard I work there is no guarantee that I am going to keep my job.	1	2	3	4	5	6	7
3.	I am certain of losing my job.	1	2	3	4	5	6	7
4.	I'm not sure of how long my job will last.	1	2	3	4	5	6	7
5.	I am uncertain about my future with this organization.	1	2	3	4	5	6	7
6.	The probability of being laid-off is high.	1	2	3	4	5	6	7
7.	Senior management is really trying to build this organization and make it successful.*	1	2	3	4	5	6	7
8.	Management appears to be preparing in advance and planning for the future.*	1	2	3	4	5	6	7
9.	This organization seems to have clear goals and a definite strategy for achieving them.*	1	2	3	4	5	6	7
10.	Overall, my physical working conditions are likely to deteriorate.	1	2	3	4	5	6	7
11.	I am expecting unfavorable changes to my job.	1	2	3	4	5	6	7
12.	I expect to have fewer resources to meet the performance requirements of my job.	1	2	3	4	5	6	7
13.	The rewards of my job are likely to diminish.	1	2	3	4	5	6	7
14.	I will probably lose many features of my job that I value the most.	1	2	3	4	5	6	7
15.	I wish my job could go back to the way it used to be.	1	2	3	4	5	6	7
16.	I feel like I am being given the "silent treatment" in this organization.	1	2	3	4	5	6	7
17.	I am often excluded from discussions or meetings that affect me.	1	2	3	4	5	6	7
18.	I feel as though management is avoiding me.	1	2	3	4	5	6	7

APPENDIX F

State-Trait Anxiety Scale (STAI; Spielberger et al., 1970)

Read each statement and then select the corresponding answer to best indicate how you feel right now, that is, at this moment.

		Not at All			Very Much So
1.	I feel calm.*	1	2	3	4
2.	I feel secure.*	1	2	3	4
3.	I am tense.	1	2	3	4
4.	I feel sustained.	1	2	3	4
5.	I feel at ease.*	1	2	3	4
6.	I feel upset.	1	2	3	4
7.	I am presently worrying over possible misfortunes.	1	2	3	4
8.	I feel satisfied.*	1	2	3	4
9.	I feel frightened.	1	2	3	4
10.	I feel comfortable.*	1	2	3	4
11.	I feel self-confident.*	1	2	3	4
12.	I feel nervous.	1	2	3	4
13.	I am jittery.	1	2	3	4
14.	I feel indecisive.	1	2	3	4
15.	I am relaxed.*	1	2	3	4
16.	I feel content.*	1	2	3	4
17.	I am worried.	1	2	3	4
18.	I feel confused.	1	2	3	4
19.	I feel steady.*	1	2	3	4
20.	I feel pleasant.*	1	2	3	4

Read each statement and then select the corresponding answer to best indicate how you generally feel.

		Almost Never			Almost Always
21.	I feel pleasant.*	1	2	3	4
22.	I feel nervous and restless.	1	2	3	4
23.	I feel satisfied with myself.*	1	2	3	4
24.	I wish I could be as happy as others seems to be.	1	2	3	4
25.	I feel like a failure.	1	2	3	4
26.	I feel rested.*	1	2	3	4
27.	I am “calm, cool, and collected”.*	1	2	3	4
28.	I feel that difficulties are piling up so that I cannot overcome them.	1	2	3	4
29.	I worry too much over something that really doesn’t matter.	1	2	3	4
30.	I am happy.*	1	2	3	4
31.	I have disturbing thoughts.	1	2	3	4

32.	I lack self-confidence.	1	2	3	4
33.	I feel secure.*	1	2	3	4
34.	I make decisions easily.*	1	2	3	4
35.	I feel inadequate.	1	2	3	4
36.	I am content.*	1	2	3	4
37.	Some unimportant thoughts run through my mind and bothers me.	1	2	3	4
38.	I take disappointments so keenly that I can't put them out of my mind.	1	2	3	4
39.	I am a steady person.*	1	2	3	4
40.	I get in a state of tension or turmoil as I think over my recent concerns and interests.	1	2	3	4

Note: License obtained from MindGarden on April 30, 2021 and December 14, 2021

APPENDIX G

Depression Symptoms Measure (DSM; Balog et al., 2003)

During the past week, did you…

	No	Yes
1. Lack enthusiasm for doing anything?	0	1
2. Have a poor appetite?	0	1
3. Feel lonely?	0	1
4. Feel bored or have little interest in doing things?	0	1
5. Have trouble getting to sleep or staying asleep?	0	1
6. Cry easily or feel like crying?	0	1
7. Feel downhearted or blue?	0	1
8. Feel low in energy or slowed down?	0	1
9. Feel hopeless about the future?	0	1

APPENDIX H

Subjective Health Complaints Inventory (Eriksen, Ihebaek, & Ursin, 1999)

On scale from 0 (Never) to 4 (Frequently), how often do you experience the following subjective health complaints?

		Never				Frequently
1.	Cold, flu	0	1	2	3	4
2.	Coughing	0	1	2	3	4
3.	Shoulder pain	0	1	2	3	4
4.	Neck pain	0	1	2	3	4
5.	Upper back pain	0	1	2	3	4
6.	Arm pain	0	1	2	3	4
7.	Headache	0	1	2	3	4
8.	Low back pain	0	1	2	3	4
9.	Leg pain during physical activity	0	1	2	3	4
10.	Migraine	0	1	2	3	4
11.	Anxiety	0	1	2	3	4
12.	Sad/depression	0	1	2	3	4
13.	Sleep problems	0	1	2	3	4
14.	Tiredness	0	1	2	3	4
15.	Extra heartbeats	0	1	2	3	4
16.	Heat flushes	0	1	2	3	4
17.	Dizziness	0	1	2	3	4
18.	Stomach discomfort	0	1	2	3	4
19.	Heartburn	0	1	2	3	4
20.	Ulcer/ non-ulcer dyspepsia	0	1	2	3	4
21.	Stomach pain	0	1	2	3	4
22.	Gas discomfort	0	1	2	3	4
23.	Diarrhea	0	1	2	3	4
24.	Obstipation (severe constipation)	0	1	2	3	4
25.	Asthma	0	1	2	3	4
26.	Breathing difficulties	0	1	2	3	4
27.	Allergies	0	1	2	3	4
28.	Eczema	0	1	2	3	4
29.	Chest pain	0	1	2	3	4

APPENDIX I

Oldenburg Burnout Inventory (OLBI; Demerouti, 1999)

Below are a series of statements with which you may agree or disagree. Using the scale, please indicate the degree of your agreement by selecting the response option that best corresponds with each statement.

		Strongly Agree			Strongly Disagree
1.	I always find new and interesting aspects in my work.	1	2	3	4
2.	There are days when I feel tired before I arrive at work.*	1	2	3	4
3.	It happens more and more often that I talk about my work in a negative way.*	1	2	3	4
4.	After work, I tend to need more time than in the past in order to relax and feel better.*	1	2	3	4
5.	I can tolerate the pressure of my work very well.	1	2	3	4
6.	Lately, I tend to think less at work and do my job almost mechanically.*	1	2	3	4
7.	I find my work to be a positive challenge.	1	2	3	4
8.	During my work, I often feel emotionally drained.*	1	2	3	4
9.	Over time, one can become disconnected from this type of work.*	1	2	3	4
10.	After working, I have enough energy for my leisure activities.	1	2	3	4
11.	Sometimes I feel sickened by my work tasks.*	1	2	3	4
12.	After my work, I usually feel worn out and weary.*	1	2	3	4
13.	This is the only type of work that I can imagine myself doing.	1	2	3	4
14.	Usually, I can manage the amount of my work well.	1	2	3	4
15.	I feel more and more engaged in my work.	1	2	3	4
16.	When I work, I usually feel energized.	1	2	3	4

APPENDIX J

Perceived Stress Scale (PSS; Cohen, 1994)

In the last month, how often have you…

		Never				Very Often
1.	been upset because of something that happened unexpectedly?	0	1	2	3	4
2.	felt that you were unable to control the important things in your life?	0	1	2	3	4
3.	felt nervous and "stressed"?	0	1	2	3	4
4.	felt confident about your ability to handle your personal problems?*	0	1	2	3	4
5.	felt that things were going your way?*	0	1	2	3	4
6.	found that you could not cope with all the things that you had to do?	0	1	2	3	4
7.	been able to control irritations in your life?*	0	1	2	3	4
8.	felt that you were on top of things?*	0	1	2	3	4
9.	been angered because of things that were outside your control?	0	1	2	3	4
10.	felt difficulties were piling up so high that you could not overcome them?	0	1	2	3	4

APPENDIX K

Satisfaction with Life Scale (SWLS; Diener et al., 1985)

Below are five statements that you may agree or disagree with. Using the scale below, indicate your agreement with each item by selecting the best corresponding response option.

		Strongly Disagree						Strongly Agree
1.	In most ways my life is close to my ideal.	1	2	3	4	5	6	7
2.	The conditions of my life are excellent.	1	2	3	4	5	6	7
3.	I am satisfied with my life.	1	2	3	4	5	6	7
4.	So far I have gotten the important things I want in life.	1	2	3	4	5	6	7
5.	If I could live my life over, I would change almost nothing.	1	2	3	4	5	6	7

APPENDIX L

Aggregate Job Satisfaction Scale (JSS; Gonzales-Roma & Hernadez, 2016)

Please indicate how satisfied you are with the following work features by choosing the best corresponding response option.

		Very Dissatisfied					Very Satisfied
1.	The work you do.	1	2	3	4	5	6
2.	The salary you get.	1	2	3	4	5	6
3.	The promotion opportunities you have.	1	2	3	4	5	6
4.	The training opportunities provided by your company	1	2	3	4	5	6
5.	The physical working conditions you have (e.g., light, temp, noise, etc.)	1	2	3	4	5	6
6.	The direct supervision you receive.	1	2	3	4	5	6
7.	The human resources management in your company.	1	2	3	4	5	6
8.	The company management.	1	2	3	4	5	6
9.	The personal relationships with your coworkers.	1	2	3	4	5	6
10.	The company considered overall.	1	2	3	4	5	6
11.	The functioning of your work team.	1	2	3	4	5	6
12.	The coordination among members of your team.	1	2	3	4	5	6
13.	The opportunities to participate in the decisions that affect your work team.	1	2	3	4	5	6

APPENDIX M

Work-Life Balance Scale (WLBS; Brough et al., 2014)

Reflect over your work and non-work activities over the past three months, and respond to the following items.

		Strongly Disagree				Strongly Agree
1.	I currently have a good balance between the time I spend at work and the time I have available for non-work activities.	1	2	3	4	5
2.	I have difficulty balancing my work and non-work activities.*	1	2	3	4	5
3.	I feel that the balance between my work demands and non-work activities is currently about right.	1	2	3	4	5
4.	Overall, I believe that my work and non-work life are balanced.	1	2	3	4	5

APPENDIX N

Overwork Climate (OWES; Mazzetti et al., 2016)

Think about your work environment and, using the scale below, please indicate your agreement by selecting the response option that best corresponds with each statement.

		Strongly Disagree				Strongly Agree
1.	Almost everybody expects that employees perform overtime work.	1	2	3	4	5
2.	Management encourages overtime work.	1	2	3	4	5
3.	It is considered normal for employees to take work home.	1	2	3	4	5
4.	Most employees work beyond their official work hours.	1	2	3	4	5
5.	Performing overwork is important for being promoted.	1	2	3	4	5
6.	It is considered normal to work on weekends.	1	2	3	4	5
7.	It is difficult to take a day off or paid holidays.	1	2	3	4	5
8.	Overtime work is fairly compensated by extra time off work or by other perks.*	1	2	3	4	5
9.	Working overtime is fairly compensated financially.*	1	2	3	4	5
10.	Almost nobody needs to do unpaid overtime work.*	1	2	3	4	5
11.	A policy exists to restrict overtime work.*	1	2	3	4	5

Additional Item:

		No	Yes
12.	Do you currently feel overworked?	0	1
	If so, please elaborate on the reasons for which you feel overworked. _____		

APPENDIX O

Competitive Work Environment Scale (CWES; Fletcher & Nusbaum, 2010)

Using the scale below, please indicate your agreement by selecting the response option that best corresponds with each statement.

		Strongly Disagree				Strongly Agree
1.	I am acknowledged for my accomplishments only when I outperform my coworkers.	1	2	3	4	5
2.	My coworkers and I are acknowledged for our accomplishments only when we outperform each other.	1	2	3	4	5
3.	My accomplishments are only recognized if they are better than those of my coworkers.	1	2	3	4	5
4.	Good performance is only recognized when it is better than someone else's performance.	1	2	3	4	5
5.	My status at work depends on my performance relative to others.	1	2	3	4	5
6.	I am only able to obtain high status if I outperform my coworkers.	1	2	3	4	5
7.	My standing is based on my performance relative to others.	1	2	3	4	5
8.	Rank and privilege are based on outperforming others.	1	2	3	4	5
9.	My coworkers are very competitive individuals.	1	2	3	4	5
10.	My coworkers work hard to outperform each other.	1	2	3	4	5
11.	My coworkers are constantly competing with one another.	1	2	3	4	5
12.	Everyone at work wants to win by outperforming their coworkers.	1	2	3	4	5

APPENDIX P

Work Pressure Culture (Dolcos & Daley, 2009)

Using the scale below, please indicate your agreement by selecting the response option that best corresponds with each statement.

		Strongly Disagree				Strongly Agree
1.	My job requires that I work very hard.	1	2	3		4
2.	My job is very emotionally demanding and tiring.	1	2	3		4
		Never				Very Often
3.	In the past 3 months, how often have you felt overwhelmed by how much you had to do at work?	1	2	3	4	5
4.	In the past 3 months, how often have you been asked by others to do excessive amounts of work?	1	2	3	4	5

Work Barriers

1. Please describe any barriers you have to conducting research: _____
2. Please describe any barriers to effectively teaching: _____

APPENDIX Q

Demographics Questionnaire

1. What is your age? ____

2. What is your gender? _____

3. Which of the following categories best describes your racial/ethnic background?
   - White or European-Canadian
   - First Nations or Aboriginal or Inuit or Metis
   - Black or African-Canadian or Caribbean-Canadian
   - East Asian or Pacific Islander or Asian Canadian
   - South Asian or South Asian Canadian
   - Middle Eastern or Middle Eastern Canadian
   - Mixed Race
   - A race or ethnicity not identified here

4. What is your current marital status?
   - Single
   - Living together/Married
   - Separated/Divorced
   - Widowed

5. How many children (< 18 years old) do you have living at home?
   - 0
   - 1
   - 2
   - 3
   - 4 or more

6. What is your highest education level?
   - Master's degree
   - Doctoral degree
   - Other _____

7. Do you have any significant others in your life that you would consider to be a workaholic? Please select all that apply.
   - Parents
   - Siblings
   - Partner
   - Friends
   - Colleagues
   - Other _____

8. Which faculty are you in?

Arts, Humanities, and Social Sciences
Business
Education
Human Kinetics
Law
Science and Engineering
Nursing
Other _____

9. What is the size of the University that you work at?
Less than 5000 students
Between 5000 and 15000 students
More than 15000 students

10. What is your teaching/research position in the department?
Tenured
Tenure-track
Nontenured

11. Please indicate the percentage (0-100%) of your time in the following areas:
__% teaching
__% research
__% service

12. How long have you been employed in this profession?
1-10 years
11-20 years
21-30 years
31 or more years

13. How long have you been employed at this organization?
1-10 years
11-20 years
21-30 years
31 or more years

14. On average, how many hours per week do you work?
30 hours or less
31-40 hours
41-50 hours
51-60 hours
More than 60 hours per week

Covid-19 Pandemic Questions
1. How has the Covid-19 pandemic impacted your work attitudes and behaviours? _____
2. How has the Covid-19 pandemic impacted your mental health? _____

VITA AUCTORIS

NAME:	Carolyn Francis
PLACE OF BIRTH:	Windsor, ON
YEAR OF BIRTH:	1989
EDUCATION	University of Western Ontario, London, ON BA, Honors Specialization in Psychology 2011 - 2015 University of Windsor, Windsor, ON MA, Applied Social Psychology 2015 - 2017 University of Windsor, Windsor, ON PhD, Applied Social Psychology 2018 - 2024