

**What do Resources have to do with it? A Within-Person Examination of the Interplay
Between Demands, Workaholism, and Burnout**

by

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Abstract

Existing research highlights associated constructs that involve sustained effort at work, such as job demands and workaholism, and how these can lead to negative outcomes such as burnout. Traditionally, these associations have been examined at the between-person level. Considering the dynamic nature of these constructs, it is pertinent that these associations be explored at the within-person level using experience sampling methodology. In my dissertation, I employed a daily diary design to examine the association between job demands and end of workday burnout through daily engagement in workaholic behaviors. I also explored the conditional function of four job- and personal-related resources on this proposed indirect effect. Data was collected through 17 surveys: two for determining eligible participants and gathering baseline data, and 15 administered over a five-day workweek. Results demonstrated that daily demands were positively related to both daily engagement in workaholic behaviors and end of workday burnout. However, daily engagement in workaholic behaviors did not explain this association at the overall level. Supplemental analyses revealed that the motivational and cognitive dimensions of workaholism explained the relationship between daily demands and end of workday burnout. Additionally, the four cross-level resources (autonomy, direct supervisor support, work colleague support, and core-self evaluations) did not function as the link among the three variables of interest. This suggests the need to explore the dynamic nature of these resources or to identify different ones that may be more theoretically and empirically related to the variables at hand.

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Chapter One

Introduction

The occupational health literature is rich with research and practice pertaining to employees' experiences of job-related stress. Researchers have explored various individual and organizational associations of stress experiences which have informed the targeted interventions used to prevent and/or mitigate such stress. A common theoretical framework used by researchers and practitioners alike is the job demands-resources (JD-R) model; this model details how two sets of working conditions, demands and resources, impact employee well-being through dual, underlying processes of health impairment and motivation (Bakker & Demerouti, 2007). While both sets of working conditions are considered in relation to job-related stress, demands are the aspects of one's job that are associated with sustained effort and are physically and psychologically burdensome. Demands can "lead to constant overtaxing and, in the long run, to exhaustion" as these organizational factors can result in inadequate recovery periods that cause stress (Bakker & Demerouti, 2007, p. 275). For example, workload, a demand which encompasses quantitative, qualitative, mental, and physical sub-dimensions, has been found to be related to employee well-being experiences like emotional exhaustion, strain, and depersonalization (Bowling et al., 2015). Researchers have found that employees with greater demands experience higher levels of burnout (and its facets) (Michel et al., 2022). Burnout, which describes how individuals experience and react to job-related stress (Freudenberger, 1974; Maslach, 1976), is a construct of interest because it is associated with negative outcomes like decreased subjective well-being and job satisfaction and increased job withdrawal behaviors (Michel et al., 2022).

Importantly, demands are not the only organizational factors that can result in job-related burnout. Workaholism, a construct that encompasses an individual's uncontrollable need or desire to work (Oates, 1971), has been found to be positively and significantly associated with job-related burnout (Balducci et al., 2020, 2021; Englebrecht et al., 2019; Taris et al., 2008). Theoretically, workaholics partake in a considerable amount of cognitive, emotional, and physical efforts at work which can result in greater burnout experiences (Cheung et al., 2018; Clark et al., 2016). The primary conceptualizations and measurements of workaholism have long captured aspects of compulsive and excessive workaholic behaviors (Schaufeli et al., 2008). Importantly, this research has evolved, further expanding the construct of workaholism by (1) identifying distinct motivational, cognitive, emotional, and behavioral subdimensions and (2) distinguishing overall workaholism from related yet distinct constructs like work engagement, work addiction, and work enjoyment (Aziz & Zickar, 2006; Clark et al., 2016, 2020).

This multidimensional approach allows for a more holistic view of workaholic experiences and the negative outcomes associated with those. For example, those engaging in cognitive workaholic behaviors are privy to persistent thoughts about work failures and insecurities; this proneness to negative thoughts about work and a lack of mental separation between work and other aspects of their lives makes it difficult for them to combat stress (Clark et al., 2020; Cheung et al., 2018). Employees high in emotional workaholism tend to hyperfixate on their negative feelings when they are unable to work, which can result in less time for creating relationships with other employees, more interpersonal conflict at work, and poorer social relationships outside of work; these feelings lend themselves to outcomes like emotional exhaustion (Bonebright et al., 2000; Mudrack, 2006). And the excessive work patterns that workaholics partake in beyond their job duties can take a physical toll on them. Their inability to

replenish and have time to participate in exercise or get adequate sleep can be detrimental to their health (Bakker et al., 2013; Ng et al., 2007).

There are situational and contextual factors that precede, affect, and reinforce workaholism over time, including dispositional traits, achievement-related personality traits, values, socio-cultural experiences, rewards, and highly engaging work environments (Ng et al., 2007). These factors may include demands, and recent research identified the relationship between demands and workaholism over time, concluding that higher demands, like mental workload, were related to an increase in workaholic tendencies (Balducci et al., 2018). Importantly, the impact of such demands was more strongly correlated with workaholism than personality dispositions were, reaffirming the notion that workaholism can be affected by such contextual and situational factors. In addition, researchers have identified positive relationships between not only workload and workaholism but also cognitive and emotional demands and workaholism (Molino et al., 2016).

Despite such findings being used to explore these constructs in other research studies and to inform best practices in organizations, most of the empirical associations are limited to between-person level assessment. This type of assessment does not allow for the examination of the dynamic, complex nature of constructs. An individual's experiences can be influenced by the differences between that individual and others, "such that one's standing relative to others might modulate within-person processes" (Gabriel et al., 2019, p. 3). Most of the theories researchers use to explore their proposed associations between occupational health constructs describe how something produces a reaction within a person, yet their methodology may not account for these within-person processes. According to Demerouti and Bakker (2011), the use of daily diary study designs allows for exploration of the "more proximal situation and person-related predictors of

JD-R outcomes...[which] is crucial to create a setting that optimally supports positive states in volatile organizational environments” (p. 5). The use of experience sampling methodology (ESM) in study design allows for within-person level measurement of constructs of interest. ESM research dates back to the 1930s and has been used to assess a variety of constructs like job engagement, stressors, and well-being (Gabriel et al., 2019).

Contributions

The research that exists that has explored the aforementioned constructs of interest, being demands, workaholism, and burnout, have notable theoretical and empirical limitations that are addressed in the design and methodology of the present study. First, researchers have identified a need to examine how demands, such as workload, not only relate to employee well-being outcomes between individuals but also within individuals (Bowling et al., 2015). Importantly, previous studies that have explored demands at the within-individual level have either limited their measurements to quantitative demands only (i.e., work pressures, excluding cognitive or emotional demands) or have captured data very late in the workday or post-workday (e.g., Butler et al., 2005; Ilies et al., 2007; Rodell & Judge, 2009). The present study’s measures of demands consider quantitative, emotional, and cognitive components during the middle of one’s workday. This allows ample time for employees to assess their daily demands since arriving at work while also providing temporal separation with their evaluation of end of workday stress experiences. And again, while the demands-burnout relationship exists at the between-person level, there is a need to further explore this relationship at the within-person level using a daily diary design.

Clark et al. (2021) examined how employees’ engagement in workaholic behaviors fluctuates on the daily level in relation to anticipated workload, further exploring the effects these constructs have on evening fatigue. The researchers found evidence to support both the

stability and variability of workaholism at the within-person level while also finding a significant relationship between daily fluctuations in workaholism and evening fatigue. They also found anticipated workload and evening fatigue to be significantly correlated. Future researchers were encouraged to expand upon this type of research, measuring multidimensional experiences of workaholism and exploring other factors that might be related to and interact with daily workaholism. The present study follows both of these recommendations and incorporates the exploration of other factors considered to interact with daily workaholism as job and personal resources. This is in line with the exploration of demands as the JD-R model is the theoretical framework for this research. I briefly highlight reasoning for the inclusion of resources in this model but will elaborate in the next chapter.

Most of the literature remains unclear on how workaholics use or rely on certain resources in their work. Schaufeli et al. (2008) argued that workaholics do not tend to rely on certain types of “typical” job resources, like job control. A common argument is that there is an emphasis within the conceptualization and measurement of workaholism on employees’ inner compulsion to work, which tends to result in a devaluing of certain resources. However, the most recent conceptualization and measurement of workaholism, used in the present study, addresses the multidimensionality of the construct, highlighting the importance of considering not only this inner drive (motivation) but also the cognitive, emotional, and behavioral aspects of the workaholic experience (Clark et al., 2020). Therefore, there is reason to analyze how workaholics are using the resources they have available to them because these resources may help mitigate certain negative outcomes like burnout. This can further inform theory and how organizations incorporate this knowledge into interventions and best practices.

Chapter Two

A Model of Demands, Workaholism, Resources, and Burnout: A JD-R Perspective

An Introduction to Resources

Resources can reduce demands and their associated costs, stimulating employee growth and development and aiding in the achievement of work goals (Demerouti & Bakker, 2011). One way that resources do so is by acting as buffers for the negative effects of demands, and these buffering effects can help employees during periods of recovery (Bakker & Demerouti, 2007). According to conservation of resources (COR) theory, individuals “with greater resources are less vulnerable to resource loss and more capable of resource gain,” and thus the opposite being true for those lacking resources (p. 106). Additionally, those who do not have access to strong pools of resources can experience even greater resource loss (Hobfoll, 1989; 2018). In line with COR theory, resources become most salient to the employee when they are experiencing demands. And as has been discussed thus far, demands can be associated with negative outcomes like burnout. Demerouti and Bakker (2011) proposed that employees may be at a greater risk for burnout if they have high demands and low resources. Researchers have identified the role of resources in reducing stress-related experiences, like burnout, for employees (Bakker et al., 2004; Crawford et al., 2010; Michel et al., 2022).

And as it relates to workaholism, employees engaging in workaholic behaviors have a harder time disengaging from their work. Therefore, their chance to recover and gain the necessary resources to disengage is lower; this means they can be more likely to experience stress (Clark et al., 2020). Considering workaholic behaviors as additional stressors that negatively impact one’s recovery experience means that resources may be even more important for those individuals. If individuals have more resources available to them, it can be argued that

those resources can influence how one's perceptions of demands and engagement in workaholic behaviors leads to burnout experiences. It appears to be critical that individuals have a stable set of resources available to them, as empirical evidence supports job- and personal-resources as significant buffers of stress experiences (Michel et al., 2022). In hopes to alleviate concerns of workaholic behaviors leading to burnout experiences, the present study considers how stable resources may exert cross-level effects on the proposed within-person relationships, assessing four specific resources: autonomy, direct supervisor support, work colleague support, and core-self evaluations.

Autonomy. Autonomy describes to what extent a job allows the employee to freely make decisions about their schedule, tasks, etc., allowing for greater role flexibility and greater role discretion (Hack & Oldham, 1974). This construct is relatively stable and is related to individual outcomes like increased job and supervisory satisfaction (Breugh, 1999). Autonomy represents a resource within the JD-R model, enabling employees to cope in stressful situations more effectively because of their ability to be flexible in using certain skills and resources (Fried & Ferris, 1987). Research has shown that high levels of autonomy relate to lower levels of burnout (Michel et al., 2022). And an employee who is inclined to engage in workaholic behaviors may benefit greatly from autonomy as this type of freedom would allow them to work in such ways that they see fit, whether these workaholic tendencies are due to their inner desire to work or guilty and sad feelings when not working.

Social Support: Direct Supervisors and Work Colleagues. Social support, which can come from different sources like supervisors, coworkers, and family, helps individuals cope with their stress and reduce the negative consequences of stress outcomes like burnout (Bakker & Demerouti, 2007; Michel et al., 2022). Considered a resource, social support can impact how an

individual determines whether a situation is stressful and can function as a coping response to alleviate the effects of stressful situations. Lawrence et al. (2007) created a measure of perceived available support in the work context, as this tends to produce more buffering effects as compared to objective conceptualizations of social support. Existing research tends to be mixed about the association between sources of support and workaholism. There is empirical evidence that supervisor support may encourage or facilitate excessive involvement with work, yet additional contradictory evidence finding those high in workaholism reporting lower perceived organizational, supervisor, and coworker support (Clark et al., 2016; Ng et al., 2007).

Lawrence et al.'s (2007) assessment of support appraisal regarding work stressors takes into consideration multiple components of the appraisal process, like emotions, which can be more comprehensive when considering an employee's daily experiences. The items used to measure this support appraisal address an individual's need for support once this individual has already identified their work-related problems and stressors. Therefore, this conceptualization of social support is unique in that exceeds more general perceptions of available support, allowing for an employee to assess what support they need in more pressing, stressful work scenarios (i.e., a coworker or supervisor spending time to help with or resolve one's work problems). This conceptualization of support is thus more reactive to an employees' problems, which may occur in a scenario where someone has high demands and is therefore inclined to engage in more workaholic behaviors. It is apparent that the relationship between workaholism and social support needs to be further explored, especially with a multidimensional conceptualization of workaholism.

Core Self-Evaluations. Core self-evaluations (CSEs) encompass a higher order construct and act as a personal resource that represent how individuals appraise their self-worth and

capabilities. CSEs are comprised of self-esteem, generalized self-efficacy, emotional stability, and locus of control (Chang et al., 2012). Personal resources are aspects of an individual that refer to one's resiliency and sense of ability to control and impact their environment (Hobfoll et al., 2003). CSEs can be the prime determinants in how employees adapt at work. These evaluations can impact individuals directly through a positive self-view that can extend to affect other outcomes. CSEs impact individuals indirectly by shaping one's appraisals of various attributes, such as job characteristics, or by moderating relationships between variables, such as reactions to events (Chang et al., 2012; Judge et al., 1998).

Components of CSEs, such as locus of control and emotional stability, include psychological resources that can prevent employees from perceiving intense workloads (An et al., 2021). These components could help mitigate if, when, and how employees choose to respond to their work demands and ultimately partake in behaviors or tendencies such as those characteristic of workaholism. And as it relates to workaholism, the cognitive and emotional dimensions pertain to persistent thoughts about work and feelings of guilt and anger as it relates to work, predicting high amounts of variance in negative rumination (Clark et al., 2020). These feelings and thoughts may be fueled by low levels of self-esteem, which has been found to be related to negative rumination (Phillips & Hine, 2016). It can be argued that the linkage between demands and burnout through engagement in workaholic behaviors is a function of such a resource, and that a high CSE would help to decrease burnout experiences.

Day-Level Mediation Model

With empirical evidence supporting the relationships between demands and workaholism, and workaholism and burnout, it is worth exploring workaholism as an explanatory mechanism in the relationship between demands and burnout, especially at the daily level. According to the

JD-R model, demands may not be overtly negative but can become stressors when they require high effort, thus impacting an employee's ability to recover (Bakker & Demerouti, 2007). In line with this theory, workaholism may act similarly to a demand because of the sustained psychological and physical efforts a workaholic engages in, resulting in certain costs such as burnout (Bakker & Demerouti, 2007). Like demands, workaholism may not be an entirely negative construct, but those engaging in workaholic behaviors have less time to disengage from their work, both psychologically and physically, which creates opportunity for inadequate recovery (Clark et al., 2020).

Therefore, employees who experience workday demands and engage in workaholic behaviors lack the periods of recovery needed to prevent stress experiences like end of workday burnout. Exploring workaholism as the explanatory mechanism in this relationship allows for a clearer understanding of how employees react to and behave in response to demands. If an individual perceives high demands and is constantly thinking about work, upset when not at work, or overworking themselves beyond their job responsibilities, it could result in high levels of fatigue and exhaustion. Therefore, the following is hypothesized:

Hypothesis 1: Daily engagement in workaholic behaviors mediates the relationship between workday demands and end of workday burnout.

Cross-Level Moderated Mediation Model

While I expect a positive link between daily engagement in workaholic behaviors and end of workday burnout, this link may be a function of an individual's resources. I examine resources as between-person moderators of the within-person links because of the relatively stable nature of the four resources included. It is proposed that individuals engaging in workaholic behaviors who have high resources available will experience less strain and lower

levels of burnout, with the resources buffering the relationship and allowing for more opportunities to recover.

Individuals may perceive that their demands (including quantitative, emotional, and cognitive components) at work on a given day are high, and therefore, they may engage in workaholic behaviors such that they constantly think about their work tasks and are upset if they cannot continue their work during their free time. Interestingly, research has shown that employees with high autonomy need thwarting, meaning that they feel undermined as it relates to autonomy within their job, often feel an inner pressure to work and meet external demands; this can result in workaholic behaviors (Gillet et al., 2017). Therefore, not only does autonomy have a negative relationship with burnout, but it also may assuage employees' tendencies to overwork themselves if they perceive high levels of autonomy within their job. Also, the appraisal of support from coworkers and/or supervisors can provide these individuals with relief in some of their job-related problems and when they need to evaluate their feelings at work (Lawrence et al., 2007). Then, although the employee may have engaged in workaholic tendencies to meet certain demands, the additional support for such work problems received from organizational sources may lower this opportunity for burnout.

Finally, those with high CSEs will have the necessary components of self-esteem, perceived control, emotional stability, and confidence to combat the negative effects that demands and workaholism can bring on a daily basis. Individuals low in CSEs feel levels of incompetence, doubt, and depression, which may only increase their resulting burnout experiences because they have no opportunity to recover from such thoughts or feelings. The interactions between workaholism and resources in the proposed demands-burnout relationship

are visually outlined in Figure 1, a conceptual moderated mediation model. The following are hypothesized:

Hypothesis 2: Autonomy will moderate the positive indirect effect of workday demands and end of workday burnout via daily engagement in workaholic behaviors such that the mediated relationship will be weaker when autonomy is high versus low.

Hypothesis 3: Direct supervisor support will moderate the positive indirect effect of workday demands and end of workday burnout via daily engagement in workaholic behaviors such that the mediated relationship will be weaker when direct supervisor support is high versus low.

Hypothesis 4: Work colleague support will moderate the positive indirect effect of workday demands and end of workday burnout via daily engagement in workaholic behaviors such that the mediated relationship will be weaker when work colleague support is high versus low.

Hypothesis 5: Core self-evaluations will moderate the positive indirect effect of workday demands and end of workday burnout via daily engagement in workaholic behaviors such that the mediated relationship will be weaker when core self-evaluations are high versus low.

The present study aims to explore prominent job-related experiences at the daily level in a moderated-mediation model, assessing the conditional indirect effect of workaholism and resources on the relationship between demands and burnout. In other words, this research will include the investigation of proximal and distal predictors of burnout at the within-person level while also examining whether the relationships are contingent upon stable resources at the between-person level.

Chapter Three

Method

This chapter provides a comprehensive overview of this research, covering data collection processes, participant characteristics, measures, and analytic procedures. Prior to the main data collection, I conducted a pilot study to test my procedures. Across both the pilot and main data collections, I maintained the same survey and participant platforms, qualification criteria, measures, and rate of payment. Minimal, yet valuable, adjustments were made to the full study based on the pilot study, enhancing the research quality.

Recruitment

Data Collection Platforms. For this research, I employed experience sampling methodology using a daily diary design which required a detailed recruitment process to determine eligible participants. I used Qualtrics for survey creation and distribution. Participants were recruited from Prolific, a crowdsourcing platform that ensures the collection of high-quality data with representative samples, as well as provides ethically-based rewards for study participants (\$6.50 USD per hour compensation rate). A crowdsourcing platform, such as Prolific, was determined to be most appropriate for this research. Crowdsourcing platforms offer several benefits as they allow access to large and diverse participant pools, provide a means of quick data collection, and are relatively cost-effective (Behrend et al., 2011). These benefits were especially desirable for the present study as it was crucial to recruit as large a number of individuals to participate with the means to collect only five days of daily data. And while researchers use other crowdsourcing platforms, such as Amazon Mechanical Turk (Mturk), for their explorations in occupational health, the quality of data from Prolific is notably different. Researchers have identified that Prolific participants tend to exhibit higher levels of attention and

effort compared to other platforms (Palan & Schitter, 2018). And, since around 8% of participants on Prolific use the site as their main source of income as opposed to 41% of participants using Mturk and CloudResearch (Peer et al., 2022), Prolific is arguably advantageous for researchers aiming to collect data on employee samples with diverse occupations.

Along with these aforementioned reasons, Prolific was well-suited for conducting a study incorporating ESM. Prolific allowed for the creation of individual study pages to house each Qualtrics survey and its corresponding instructions, totaling 17 study pages including the qualification, time 1, and 15 daily surveys. Apart from the qualification study page, which was visible to a wide range of Prolific users for initial recruitment, the remaining 16 study pages had a set screening list of IDs for those deemed eligible to move forward in the study process. Once a study page was activated with the live survey link included, those listed in that set of IDs received an invitation on their personal Prolific dashboard. Participants were able to access all surveys via computer, tablet, or mobile phone. Participation was easily trackable during active survey periods as the dashboard showed participant activity regardless of whether submissions were complete. Messaging with participants was simple and timely due to Prolific's anonymous messaging system, and this system allowed for prompt responses to all participants' concerns and questions as the nature of a daily diary design is quite different than other study designs. Participants who completed surveys were automatically redirected from Qualtrics to the Prolific dashboard for submission review and compensation approval. Of note, to ensure fair pay, Prolific requires the appropriate funds to be loaded into your personal account in order to activate a study. Prolific also provides an Excel file with demographic information after each study page closes, which aids in the data cleaning and demographic verification process. While Prolific is

not exclusively used for repeated measures studies, it effectively supported this study, and I learned how to use the platform to the best of my ability throughout the process.

Eligibility Criteria. The eligibility of participants was mainly determined from their responses to a 5-minute qualification survey, with additional checks included in the time 1 survey before the daily survey process began. Of note, a few of Prolific's basic pre-screeners were included in the qualification survey and are as follows: U.S. resident, regular 9 am-5 pm working hours, full-time employment status, 30+ hours per week of work, and engagement with other employees in some capacity. As a note, the pre-screener for engagement with others was included since there was interest in social support as a resource; this question was asked again in a more detailed manner when the qualification survey was actually distributed, but the responses to those questions did not determine elimination of people from being eligible for the remaining 16 surveys. Overall, the pre-screener information was still verified later on from similar questions being asked in the qualification and time 1 surveys. Since there was no way to guarantee that Prolific's information on these users was completely accurate in the pre-screeners or that the users information had not changed since joining the site, this precautionary measure was taken. Around 8,000 Prolific users who were deemed eligible and were active on the platform within the 90 days leading up to the qualification survey were able to view the invitation and participate.

Participants who met the following criteria from their responses to the qualification survey were retained and invited to participate in the time 1 survey: those who (1) had complete responses to the qualification survey, (2) were 18 years or older, (3) resided in the United States, (4) indicated full-time employment in a job outside of Prolific (i.e., 30+ hours per week), (5) started work between the hours of 6:00am-10:00am during the week (indicating somewhat

“traditional” working hours), (6) specified working in a time zone within the continental United States that was not affected by travel, (7) were not taking vacation during the daily data collection week, (8) were available to complete both midday and end of workday surveys, and (9) stated interest in participating in the study. Importantly, participants were eligible to participate in and be compensated for completed surveys if they indicated they were working that day. A question was included to capture this in each midday survey as a check; if they indicated they were not working that day, they were asked to close out of the survey and not participate in remaining surveys that day. The next two sections will describe study details in full, with a brief discussion about an initial pilot study that helped inform adjustments to the larger study that is analyzed in this research.

Payment. Based on Prolific’s calculations for fair pay regarding the average time to complete surveys, I outline the compensation for every participant who completed a survey in both the pilot and full studies. Participants who completed the qualification survey, which took around 5 minutes, received \$0.75. Participants who completed the time 1 survey, which took around 15 minutes, received \$2.00. And each completed daily survey, which took approximately 5 minutes, resulted in \$1.00. The bonus payment structure varied between the pilot and full studies. I chose to include bonuses in the current study as the majority of ESM studies with a high rate of responses not only use some type of monetary incentive but also employ a bonus of some sort to motivate interest (Gabriel et al., 2019). In the pilot study, participants who completed 13 out of 15 daily surveys were compensated an additional \$4.50. For the full study, I adjusted the qualifications and payment for the bonus due to budget considerations and the additional fee required by Prolific for processing these payments. Those who completed at least four full days of surveys during the full study were compensated an additional \$2.50 ($n = 304$).

Therefore, participants in the pilot study had the opportunity to be compensated \$22.25 total, and participants in the full study had the opportunity to be compensated \$20.25 total. Both of these totals, while slightly different, were still in line with the average pay required for survey length issued by Prolific; the only difference was in the bonus payment which was a change I personally adjusted to account for the available finances.

Pilot Study

I determined that conducting a pilot study would be beneficial as it would prepare me for the larger data collection process and inform any helpful changes to the study procedures. When I activated the qualification for the pilot, I was transparent with participants that this would inform a larger data collection and any feedback was welcomed. The daily survey process involved a weeklong data collection with three, 5-minute surveys per day (the third survey was distributed at nighttime for lab-related research purposes and will not be discussed further or analyzed within this research).

A total of 34 Prolific users engaged with the qualification survey, resulting in 23 participants eligible to complete the time 1 survey. Seventeen participants engaged with the time 1 survey. The time 1 survey included items that captured participants' demographic information, baseline scores for within-level study variables, and scores for resources which are explored as cross-level moderators in the proposed model. Gathering measures of the study constructs with a stable component at the beginning of the procedure assuages concerns of the study results and their replicability in non-daily diary, between-person studies (Gabriel et al., 2019). Following expert recommendations and procedures, this survey included two instructed-response items and a few of the demographic questions asked in the qualification survey as a means of finalizing those eligible for the daily data collection (Clark et al., 2021; Gabriel et al., 2019; Gummer et al.,

2021). Based on the eligibility criteria for the daily diary study, 16 of those 17 participants were invited to partake in the weeklong data collection. I used the survey responses regarding work hours and work time zones from all 16 participants to inform the set windows of time for the surveys to be posted during the week. During the week of Monday, March 4th through Friday, March 8th, the surveys were posted at the following times, with a 2-hour window to complete the surveys and a 2-hour window after each survey closed: midday, 9:30am PST/10:30am MST/11:30am CST/12:30pm EST; end of workday, 1:30pm PST/2:30pm MST/3:30pm CST/4:30pm EST. The 2-hour window for each survey accommodated participants' varying schedules that were indicated in the qualification survey responses. Study pages were activated 15 minutes before and closed 15 minutes after the two-hour survey window; both Qualtrics and Prolific were closely monitored during the closing time to allow active participants a chance to complete their submissions. I maintained open communication via Prolific's anonymous messaging system, addressing technical issues and reminding participants of survey windows. I monitored participation and reviewed submissions directly within the study pages (i.e., submissions categorized as "awaiting review" for compensation, "timed-out," or "returned").

For the pilot study, I was clear with participants throughout the information letters and messages that their participation in surveys and responses to instructed-response items on a given day would determine their eligibility for surveys later that day. I adjusted this approach in the full data collection as I received expert feedback from committee members to gather as much data as possible and allow the analytic procedures to account for any missing data. Additionally, because my daily surveys were extremely short, taking participants about 5 minutes to complete, I received expert feedback that attention checks were not necessary for those 15 daily surveys. Gabriel et al. (2019) discussed effective ways to motivate participants in ESM studies, including

ways to facilitate responses from participants that are different from manipulation checks; one suggestion that I used in the present study was to ask participants to set their intentions for future participation in surveys throughout the data collection. This aims to improve compliance with ESM protocols that can prompt future responses, so I included this type of “Yes/No” item at the end of each survey: “When I receive the prompt to answer the remaining daily survey(s), I plan to respond to it within 5-10 minutes of my availability.”

I made minor adjustments to the pre-written messages and the timing of sending those out when study pages were activated for the full study. Also, I learned the appropriate ways to troubleshoot certain participant issues, like how to redirect participants to the study page on Prolific when the invitation did not automatically appear on their home dashboard, how to make bulk bonus payments, how to request participants return their surveys when they have incomplete data as to not reject their submission, etc. Pilot participants were excluded from the main study recruitment, and their data was not included in the main analyses due to these procedural adjustments between studies.

Full Study

Participants and procedure. During the week of Monday, March 25th through Friday, March 29th, midday surveys opened at 10:30am PST/11:30am MST/12:30pm CST/1:30pm EST, and end of workday surveys at 2:00pm CST/3:00pm MST/4:00pm CST/5:00pm EST. While the pilot study had a two-hour gap between survey windows, the participants for the full study had a wider range of schedules that required a one-hour gap between survey windows to accommodate, which is still an appropriate gap in ESM studies (Koopman & Dimotakis, 2022). There were 802 individuals who completed the qualification survey on Prolific and of those, 587 participants were invited to the time 1 survey. There were 515 participants who completed the time 1 survey.

Of those 515 participants, 505 were eligible for the daily data collection as they passed the attention and consistency checks and expressed interest in continuing with the daily survey process. Unlike the pilot, they received all surveys during the daily data collection regardless of their participation earlier in the day or the day prior. The only exception to this were participants who did not complete a single survey during the first four days of the daily data collection who were therefore not invited to the final day of surveys ($n = 8$).

Sample. The final sample included participants who completed at least three full days of surveys during the weeklong data collection ($N = 391$), following best practices for modeling within-person relationships (Koopman & Dimotakis, 2022). This resulted in 1955 total observations. Participants were an average of 40.18 years old ($SD = 10.37$ years), and 90.69% of participants reported working in their current position for more than one year, with an average of 7.44 years in said position ($SD = 5.78$ years). Regarding their reported gender identity, 57.88% self-identified as female, 41.03% as male, and 1.10% as non-binary. Most participants were White/Caucasian (non-Hispanic) (68.54%) followed by Asian/Pacific Islander (11.00%), Mixed ethnicities (7.43%), Black/African American (7.42%), Hispanic/Latino (3.84%), and Native American (0.51%). They averaged 41.91 working hours per week ($SD = 4.39$ hours) and all had at least GED/High school proficiency, with 48.65% having a 4-year bachelor's degree and 32.45% having an advanced degree of some kind (MS, MA, JD, etc.). Of these participants, 65.44% were married, and throughout the sample, 66.30% did not have children under the age of 18 living with them, 31.95% had children living with them full-time, and 1.75% had children living with them part-time. The sample includes a range of occupations, including titles such as data scientist, engineer, financial counselor, insurance specialist, physician, and sales associate.

Fraudulent and Problematic Response Detection. To address concerns of fraudulent survey responses, typically in the form of bots mimicking human actions in surveys, I implemented several detection and preventative measures (Kennedy et al., 2021; Pozzar et al., 2020; Zhang et al., 2022). Participants who completed the qualification survey were aware that their eligibility for subsequent surveys would be determined after manual review of their responses. In Qualtrics, I activated bot detection, security scan monitoring, relevantID, and prevent indexing. These settings helped identify duplicate or potentially fraudulent responses. For all participants flagged by these settings, I cross-checked their responses for consistency in demographic questions between the qualification and time 1 surveys. Fortunately, any participant deemed potentially fraudulent from these settings were already to be excluded due to other criteria that did not qualify for the study, whether that be their indicated work hours (i.e., starting work before 6:00am) or inconsistency in their demographic characteristics (i.e. reporting an age in the survey that is 3+ years different from the age listed in Prolific).

I included a script in the qualification survey to capture geolocation of participants to crosscheck their indicated working time zone. Fortunately, there were no participants who had inconsistent geolocations. This was very helpful when planning survey posting times for the week. Of note, I did not have to be concerned with participants taking significantly inappropriate amounts of time on the surveys as Prolific employs its own timed-out procedures (calculating the maximum time to be spent on a survey based on its average time posted to the study). Therefore, those who either were not paying attention or were sitting in the survey without responding were “timed-out” by Prolific and not considered complete for compensation purposes.

Measures

The variables and their measures are listed below, and these along with qualification and demographic questions can be found in Appendices B-D. Resources, proposed as cross-level moderators, were measured in the time 1 survey for between-person assessment. The remaining variables, demands, workaholism, and burnout, were measured in both the time 1 and daily surveys, but they were assessed at the daily level. Most of the scales were rated on a 7-point agreement scale (1 (*strongly disagree*) to 7 (*strongly agree*)) otherwise noted in the respective sections. Because the midday and end of workday surveys took a maximum of 5-minutes to complete and the full measures were relatively short, I did not shorten any measure. I did adjust the instructions and beginning phrases of items to provide time context for the daily level, which is explained further in each section (Koopman & Dimotakis, 2022). The reliabilities for the original measures are listed below, but the reliability coefficients for them in the present study are explored in the results.

Resources. I assessed four resources: autonomy, direct supervisor support, work colleague support, and core self-evaluations.

Autonomy. Autonomy is considered an organizational resource, included as a subdimension to decision latitude, assessing the possibilities for employees to make decisions about their work. This resource was assessed using 3 items from Karasek's (1985) Job Content Questionnaire (JCQ) ($\alpha = .69$). An example item is "I decide myself how to execute my work."

Social Support (Direct Supervisor and Work Colleague). Another job resource, considered interpersonal, is social support. For the present study, I assessed social support using the Support Appraisal for Work Stressors (SAWS) Inventory because there is a theoretical argument about how perceptions of support availability can have a greater capacity to buffer the effects of stress more than perceptions of received support (Lawrence et al., 2007). Additionally,

this inventory includes four functions of perceived available support (emotional, informational, instrumental, and appraisal) that can come from three sources: direct supervisors, work colleagues, and non-work (partner/family/friends). For the present study, I focus on support from two sources: direct supervisors and work colleagues. Sample items for each indicator are as follows, beginning with “How much can you rely on your...[source]: (emotional; ($\alpha = .87$) “...to listen to you when you need to talk about work-related problems;” (informational; ($\alpha = .86$) “...to suggest ways to find out more about a work situation that is causing you problems;” (instrumental; ($\alpha = .88$) “...to spend time helping you resolve your work-related problems;” (appraisal; ($\alpha = .90$) “...to reassure you about our ability to deal with your work-related problems”. Participants rated their agreement with the 12 items on a scale from 1 (*not at all*) to 4 (*very much*) for both sources. For analytic purposes, the sources are explored independently to assess supervisor and coworker support appraisal for participants.

Core Self-Evaluations. Judge et al.’s (2003) 12-item Core Self-Evaluations Scale (CSES) was used to capture CSEs. The CSES encompasses self-esteem, generalized self-efficacy, locus of control, and emotional stability ($\alpha = .85$), with six reverse-coded items. Example items are “I am confident I get the success I deserve in life” and “I complete tasks successfully”.

Demands. Demands were assessed with a modified version of Kristensen et al.’s (2005) Copenhagen Psychosocial Questionnaire (COPSOQ III), including the items for quantitative, cognitive, and emotional demands. This questionnaire’s nomological validity has been supported using the JD-R model, which makes it appropriate for the present study (Berthelsen et al., 2018). There are a total of 11 items, with quantitative ($\alpha=.65$) and cognitive ($\alpha=.78$) demands both having four items and emotional ($\alpha=.87$) demands having three items. Sample items for the dimensions are as follows, including appropriate phrasing for measuring these on the daily level:

(quantitative) “Since arriving at work, my work tasks have been unevenly distributed and piled up;” (cognitive) “Since arriving at work, my work has required me to remember a lot of things;” (emotional) “Since arriving at work, my work has been emotionally demanding”.

Workaholism. Workaholism was assessed using the Multidimensional Workaholism Scale (MWS; Clark et al., 2020). This scale is a 16-item, 4-factor structure with four dimensions of workaholism that, as a whole, adequately represent the construct domain. The dimensions are characterized as follows: motivational workaholism is an “inner compulsion or pressure to work;” cognitive workaholism describes “persistent, uncontrollable thoughts about work;” emotional workaholism characterizes these negative feelings a workaholic has when either not working or prevented from working; behavioral workaholism categorizes excessive work behaviors, being those that go beyond what is both required and expected of one’s work role (Clark et al., 2020, pp. 8-9). Clark et al. (2020) reported Cronbach alpha reliability coefficients for the overall scale ($\alpha = .94$) and each subscale: motivational ($\alpha = .89$), cognitive ($\alpha = .94$), emotional ($\alpha = .91$), and behavioral ($\alpha = .86$). The daily items began with “Today...” per Koopman and Dimotakis’s (2022) suggestion for the temporal ordering of study constructs.

Burnout. Job-related burnout was assessed with the Shirom-Melamed Burnout Measure (SMBM; Shirom & Melamed, 2006). This is a 14-item measure that assesses a single construct score composed of physical fatigue (feelings of tiredness and low levels of energy), emotional exhaustion (feeling a lack of energy needed to invest in relationships), and cognitive weariness (reduced mental agility and slowed thinking). These three subscales are highly intercorrelated: physical fatigue and cognitive weariness ($r = .69$); physical fatigue and emotional exhaustion ($r = .56$); cognitive weariness and emotional exhaustion ($r = .61$; Michel et al., 2022). These three subscales are considered as one single construct score for the purpose of the current study.

Unlike other burnout measures, the SMBM does not show overlap with other constructs, like self-efficacy, detachment, negative coping behaviors, or depressive symptoms (Hobfoll & Shirom, 2001; Shirom & Melamed, 2006). Shirom and Melamed (2006) reported a reliability coefficient of $\alpha = .92$. The daily items with “Since today’s mid-day survey...” per Koopman and Dimotakis’s (2022) suggestion for the temporal ordering of study constructs.

Analyses

Again, participants were included in the analyses if they completed the qualification and time 1 surveys and participated in at least three full days of daily surveys ($N = 391$). For the CSES, I reverse-coded the items that were negatively worded. I calculated Cronbach’s alpha reliability coefficients for each overall scale and also identified the ranges of these values for the scales captured over the course of the five workdays. These values, along with the means, standard deviations, and correlations can be found in Table 1. Level 1 variables included the within-person constructs of demands, workaholism, and burnout that were captured in the daily surveys. Level 2 variables included the between-person constructs of autonomy, direct supervisor support, work colleague support, and CSEs that were captured in the time 1 survey. Demands, workaholism, autonomy, direct supervisor support, work colleague support, and CSEs were grand-mean centered (Enders and Tofighi, 2007; Gabriel et al., 2019). Although the demands and workaholism variables were captured at the daily level and would typically be group-mean centered for analytic purposes, there was a considerable amount of between-individual variability to account for (see Table 2). Therefore, grand-mean centering allowed for the model testing to consider both within- and between-person variability in the constructs.

For hypothesis testing of the mediation and cross-level moderated mediation models, I applied a parametric bootstrapping procedure recommended by Preacher, Zyphur, and Zhang

(2010). Specifically, I ran Monte Carlo (MC) simulations with 20,000 replications to test the 95% bias-corrected confidence interval (CI) around the indirect effects. Traditional bootstrapping methods assume that observations are independent, yet having hierarchical data violates that independence assumption; an alternative method is to construct CIs using a MC method to account for this violation (Bauer et al., 2006). To properly analyze the conditional indirect effects of the model, I used Bayesian estimation because it is more appropriate for complex mediation and multilevel models (Sawyer et al., 2022; Yuan & McKinnon, 2009). The Mplus syntax for the analyses can be found in Appendices E-G.

Chapter Four

Results

Descriptive Statistics and Correlations

The intraclass correlation coefficients (ICCs), descriptive statistics, reliability, and correlation coefficients (between and within-person) are displayed in Table 1. The between and within-person correlations were run using pairwise deletion to account for missing data. The Level 1 variables were person-mean centered to run within-level correlations, and those variables were aggregated to Level 2 to run between-level correlations. The reliability coefficients were calculated using Cronbach's coefficient alpha; while the between-person reliability coefficients are displayed in the diagonal line in the table, the ranges of the within-person reliability coefficients across the five days of data collection are as follows: demands, $\alpha = .90$ through $.91$; workaholism, $\alpha = .93$ through $.95$; burnout, $\alpha = .96$ through $.97$. Overall, the correlations of the study variables were significant and in the expected direction. Of note, I have included the descriptive statistics and correlations for the workaholism dimensions as they will be relevant for a later supplemental dimension-level examination of the models that will be discussed at the end of this chapter.

Demands were positively and significantly correlated with workaholism and its four dimensions at the aggregate and daily levels (demands with workaholism, $r = .40, p < .001$; motivational workaholism, $r = .22, p < .001$; cognitive workaholism, $r = .40, p < .001$; emotional workaholism, $r = .34, p < .001$; behavioral workaholism, $r = .38, p < .001$); (daily demands with daily workaholism, $r = .28, p < .001$; daily motivational workaholism, $r = .16, p < .001$; daily cognitive workaholism, $r = .26, p < .001$, daily emotional workaholism, $r = .21, p < .001$; and daily behavioral workaholism, $r = .25, p < .001$). Demands were positively and significantly

correlated with burnout at the aggregate and daily levels (demands with burnout, $r = .43, p < .001$; daily demands with end of workday burnout, $r = .18, p < .001$).

Workaholism was positively but not significantly related to burnout at the aggregate level ($r = .00, p = .92$), and was negatively and not significantly related to burnout at the daily level ($r = -.01, p = .79$). Motivational workaholism was negatively and significantly related to burnout at the aggregate and daily levels (motivational workaholism with burnout, $r = -.15, p < .001$; daily motivational workaholism with end of workday burnout, $r = -.07, p < .001$). Behavioral workaholism was negatively related to burnout at the aggregate level and positively related to burnout at the daily level, but both correlations were not significant (behavioral workaholism with burnout, $r = -.01, p = .70$; daily behavioral workaholism with end of workday burnout, $r = .00, p = .89$). Cognitive and emotional workaholism were positively related to burnout at the aggregate and daily levels, but daily emotional workaholism and end of workday burnout were not significantly related (cognitive workaholism with burnout, $r = .07, p < .001$; emotional workaholism with burnout, $r = .12, p < .001$; daily cognitive workaholism with end of workday burnout, $r = .05, p < .05$; daily emotional workaholism with end of workday burnout, $r = .00, p = .89$).

At Level 2, the variables were all positively and significantly correlated with one another. Autonomy was significantly and positively correlated with direct supervisor support ($r = .41, p < .001$), work colleague support ($r = .29, p < .001$), and CSEs ($r = .40, p < .001$). Direct supervisor support was significantly and positively correlated with work colleague support ($r = .48, p < .001$) and CSEs ($r = .37, p < .001$). And work colleague support was significantly and positively related to CSEs ($r = .24, p < .001$).

The aggregated daily variables had the following correlations with the Level 2 variables. As expected, demands were negatively and significantly correlated with the four resources (autonomy, ($r = -.08, p < .001$); direct supervisor support, ($r = -.14, p < .001$); work colleague support, ($r = -.06, p < .001$); CSEs, ($r = -.19, p < .001$)). Workaholism had significant, positive correlations with resources (autonomy, ($r = .11, p < .001$); direct supervisor support, ($r = .08, p < .001$); work colleague support, ($r = .07, p < .001$); CSEs, ($r = .09, p < .001$)). Motivational workaholism had significant, positive correlations with resources (autonomy, ($r = .18, p < .001$); direct supervisor support, ($r = .15, p < .001$); work colleague support, ($r = .09, p < .001$); CSEs, ($r = .23, p < .001$)). Cognitive workaholism had significant, positive correlations with resources (autonomy, ($r = .06, p < .05$); direct supervisor support, ($r = .05, p < .05$); work colleague support, ($r = .05, p < .05$); CSEs, ($r = .01, p < .001$)). Emotional workaholism had varying correlations with resources (autonomy, ($r = -.03, p = .23$); direct supervisor support, ($r = .01, p = .84$); work colleague support, ($r = .06, p < .001$); CSEs, ($r = -.05, p = .053$)). Behavioral workaholism had positive correlations with resources, two of the four correlations being significant (autonomy, ($r = .13, p < .001$); direct supervisor support, ($r = .04, p = .09$); work colleague support, ($r = .04, p = .11$); CSEs, ($r = .08, p < .001$)). Burnout was negatively and significantly correlated with resources (autonomy, ($r = -.25, p < .001$); direct supervisor support, ($r = -.29, p < .001$); work colleague support, ($r = -.17, p < .001$); CSEs, ($r = -.50, p < .001$)).

After running the descriptive statistics and correlations for the study variables, I partitioned the variance for all within-person variables. The ICCs are the proportion of variance in the variable that is between units (participants), and in the present study, these ICCs range from .63 to .70. The variance components, displayed in Table 2, indicate that a substantial amount of variance could be attributed to the within-person level for all variables as the

percentages of variability range from 31% to 37%. I also calculated the design effects, which are appropriate as they are all above 2.0. These results indicate that there is enough meaningful variability in the means of the within-person variables, and that multilevel modeling is appropriate to use with the present data.

Multilevel Confirmatory Factor Analyses

Prior to hypothesis testing, I conducted a series of multilevel confirmatory factor analyses (MCFA) to confirm the distinctiveness of each construct measured at the within-person level. MCFA extends beyond a regular CFA technique and explicitly models the hierarchical structure of the data. Researchers such as Sirotnik (1980) brought attention to phases of the research process, such as the “study phase” which includes efforts that take the given measures in the study and pursue statistical analyses that are deemed appropriate based on the research questions; therefore, there is often a unit-of-analysis issue in research, especially when approaching research questions that are multilevel in nature (in this case repeated measures nested within individuals). Using multilevel approaches with multilevel data attempts to address this unit-of-analysis issue, and when individuals are the units of interest with constructs assessed at Level 1, MCFAs are an appropriate approach (Kim et al., 2016).

First, I tested a three-factor model, including demands, workaholism, and burnout at the overall level as indicators with their respective items; this resulted in poor model fit (RMSEA = .08, CFI = .67, SRMR (within) = .12, SRMR (between) = .18). Based on past research exploring multidimensional workaholism, I decided to explore what the model fit would look like for workaholism separated into a four-factor model with each indicator representing a dimension (and including their respective four items each). This resulted in better model fit as compared to

the overall three-factor model (RMSEA = .05, CFI = .96, SRMR (within) = .04, SRMR (between) = .06).

Since separating workaholism into its dimensions resulted in better model fit, I decided to test a six-factor model that incorporated the four indicators of workaholism per dimension and overall demands and burnout as the fifth and sixth indicators, which resulted in unsatisfactory fit (RMSEA = .07, CFI = .80, SRMR (within) = .11, SRMR (between) = .17). It was evident that workaholism needed to be parsed out by its four dimensions as indicators but also that the variables may need to be tested using parcels as opposed to including all individual items.

Creating parcels was appropriate for testing model fit because the measures being used are already validated, yet it is important that I explored the distinctiveness of the constructs; parceling allows for adequate power to run an MCFA in this case (Bandalos, 2002). Within SPSS, I created eight parcels for workaholism, as each of the four dimensions had two parcels created per dimension. Following the order of the items in the scale, the first parcel included the first two motivational workaholism items, the second parcel included the second two motivational workaholism items, and so on. The indicators of burnout and demands also have facets to consider, so I created three parcels for burnout and three parcels for demands as each measure has three facets. For example, the SMBM has physical fatigue, cognitive weariness, and emotional exhaustion items, so I created three parcels that each accounted for those separate groups of items. I did the same for demands, creating three separate parcels for quantitative, cognitive, and emotional demands. This model fit testing resulted in good model fit (RMSEA = .04, CFI = .97, SRMR (within) = .03, SRMR (between) = .07).

Hypothesis Testing

I conducted hypothesis testing in Mplus 8.10 using multilevel path analysis to account for the hierarchical structure of the data (Muthén & Muthén, 2018). The preliminary model testing was conducted at the overall construct level, followed by additional supplemental examinations of the constructs. The supplemental examinations explore workaholism at the dimension-level and resources on the *a* path, with these models not originally hypothesized but interesting to explore for further understanding of the interplay between the study constructs.

Overall Mediation Model. An appropriate first step before testing the larger model was to explore if an indirect effect was present and then layering on the subsequent conditional associations. Hypothesis 1 proposed that daily engagement in workaholic behaviors would mediate the relationship between workday demands and end of workday burnout. The results indicated that daily engagement in workaholic behaviors was not an explanatory mechanism in this relationship, also contradicting the expected direction in Hypothesis 1 (*c'* path; *indirect effect* = -.02, 95% CI [-.040, .010]). As expected, daily demands were positively and significantly related to daily engagement in workaholic behaviors (*a* path; $b = .29, p < .001$) and to end of workday burnout (*c* path; $b = .21, p < .001$). However, daily engagement in workaholic behaviors was negatively and not significantly related to end of workday burnout (*b* path; $b = -.07, p = .14$). Although the mediation model was not significant, I considered it appropriate to explore how this relationship may be conditional based on an individual's resources and their interactions with daily engagement in workaholic behaviors. Because the conditional effects were proposed to be explored on the *b* path of the moderated mediation model, and the *b* path in the initial mediation model was not significant, it felt necessary to explore further. All additional statistical results of the mediation model are detailed in Table 3.

Overall Moderated Mediation Models. Before testing the moderation effects, I began by exploring the variance of the random slope between daily engagement in workaholic behaviors and end of workday burnout because this estimate would deem the appropriateness of adding the moderator variables (Yang & Diefendorff, 2009). The results indicated that the variance estimate was significant (estimate = .13, 95% CI [.087, .187]), and thus, I was able to move forward with the moderated mediation hypothesis testing. For hypotheses 2-5, I proposed that the four resources would moderate the positive indirect effect of workday demands and end of workday burnout via daily engagement in workaholic behaviors such that the mediated relationships would be weaker when resources were high versus low; these proposed moderations were explored on the *b* path. Unfortunately, none of the four hypotheses were supported as the resources did not significantly moderate the interaction of daily engagement in workaholic behaviors and end of workday burnout in the proposed mediation: autonomy ($b = -.01$, 95% CI [-.062, .052]); direct supervisor ($b = .01$, 95% CI [-.087, .096]); work colleague support ($b = .05$, 95% CI [-.048, .152]); CSEs ($b = .06$, 95% CI [-.004, .116]). All additional statistical results of the moderated mediation model (by each resource) are detailed in Tables 4a-d.

Supplemental Explorations

Although not hypothesized, I conducted three sets of supplemental analyses based on exploratory questions that arose from the main analyses and were also posed during the dissertation proposal. These analyses account for the separation of workaholism by its distinct dimensions as four separate mediators in the proposed model as compared to workaholism analyzed at the overall level. They also consider whether the moderator variables have an influence on the *a* path (the interaction between daily demands to daily engagement in

workaholic behaviors). Of note, I explored these moderator variables on the a path in both overall and dimension-level models to align with the rest of my analytic procedures. The next three sections will touch on these supplemental analyses.

Examination of Models at the Dimension-Level. As identified in the multilevel confirmatory factor analyses, the best fitting model included the four dimensions of workaholism separated as four indicators. Therefore, it seemed appropriate to further explore the models using a supplemental dimension-level examination with workaholism. Of note, each dimension was tested within the same model and syntax; separate models were not run, but the dimensions as four mediators were separated out in the syntax.

Mediation Model. When testing daily engagement in motivational workaholic behaviors as a mediator in the relationship between workday demands and end of workday burnout, the results indicated that the indirect effect was significant but negative (c' path; *indirect effect* = -.03, 95% CI [-.048, -.008]). Daily demands were positively and significantly related to daily engagement in motivational workaholic behaviors (a path; $b = .27, p < .001$) and to end of workday burnout (c path; $b = .19, p < .001$). Daily engagement in motivational workaholic behaviors was negatively and significantly related to end of workday burnout (b path; $b = -.11, p < .001$).

When testing daily engagement in cognitive workaholic behaviors as a mediator in the relationship between workday demands and end of workday burnout, the results indicated that the indirect effect was significant and positive (c' path; *indirect effect* = .03, 95% CI [.008, .059]). Daily demands were positively and significantly related to daily engagement in cognitive workaholic behaviors (a path; $b = .38, p < .001$). Daily engagement in cognitive workaholic

behaviors was positively and significantly related to end of workday burnout (b path; $b = .09, p < .05$).

When testing daily engagement in emotional workaholic behaviors as a mediator in the relationship between workday demands and end of workday burnout, the results indicated that the indirect effect was negative and not significant (c' path; *indirect effect* = $-.01$, 95% CI $[-.026, .013]$). Daily demands were positively and significantly related to daily engagement in emotional workaholic behaviors (a path; $b = .28, p < .001$). Daily engagement in emotional workaholic behaviors was negatively and not significantly related to end of workday burnout (b path; $b = -.02, p = .505$).

When testing daily engagement in behavioral workaholic behaviors as a mediator in the relationship between workday demands and end of workday burnout, the results indicated that the indirect effect was negative and not significant (c' path; *indirect effect* = $-.01$, 95% CI $[-.030, .017]$). Daily demands were positively and significantly related to daily engagement in behavioral workaholic behaviors (a path; $b = .38, p < .001$). Daily engagement in behavioral workaholic behaviors was negatively and not significantly related to end of workday burnout (b path; $b = -.03, p = .357$).

Moderated Mediation Models. I explored the variances of the random slopes between daily engagement in workaholic behaviors (including all four dimensions) and end of workday burnout to see if the variances were significant and therefore appropriate to add the moderator variables. The results indicated that the variance estimates were significant (motivational workaholism estimate = $.05$, 95% CI $[.025, .079]$); (cognitive workaholism estimate = $.02$, 95% CI $[.003, .045]$); (emotional workaholism estimate = $.03$, 95% CI $[.003, .072]$); (behavioral workaholism estimate = $.02$, 95% CI $[.004, .047]$).

Therefore, I explored the conditional roles of the four resources on the indirect effect of daily demands and end of workday burnout via the four workaholism dimensions as mediators. Unfortunately, the results did not show support for any of the resources impacting the indirect effects of any of the four workaholism dimensions on the daily demands to end of workday burnout association. The results for autonomy are as follows: motivational workaholism ($b = .01$, 95% CI [-.040, .058]); cognitive workaholism ($b = -.01$, 95% CI [-.063, .056]); emotional workaholism ($b = -.01$, 95% CI [-.063, .046]); behavioral workaholism ($b = -.01$, 95% CI [-.056, .021]). The results for direct supervisor support are as follows: motivational workaholism ($b = .00$, 95% CI [-.074, .076]); cognitive workaholism ($b = -.04$, 95% CI [-.126, .049]); emotional workaholism ($b = .04$, 95% CI [-.052, .129]); behavioral workaholism ($b = .01$, 95% CI [-.049, .062]). The results for work colleague support are as follows: motivational workaholism ($b = .03$, 95% CI [-.054, .112]); cognitive workaholism ($b = -.05$, 95% CI [-.139, .047]); emotional workaholism ($b = -.03$, 95% CI [-.137, .082]); behavioral workaholism ($b = .07$, 95% CI [-.016, .131]). The results for CSEs are as follows: motivational workaholism ($b = .05$, 95% CI [-.004, .092]); cognitive workaholism ($b = -.02$, 95% CI [-.091, .039]); emotional workaholism ($b = .01$, 95% CI [-.050, .076]); behavioral workaholism ($b = .02$, 95% CI [-.027, .057]).

Moderations on the A Path: Overall. While my own review of the literature lead me to propose that the resources would moderate the association between daily engagement in workaholic behaviors and end of workday burnout, for the purpose of the dissertation, I did a supplemental exploration of the resources on the *a* path. The results indicated that the variance estimate of the random slope was significant (estimate = .19, 95% CI [.131, .260]). When exploring these resources as moderators on the *a* path in the larger moderated mediation model, none of the four resources had a significant impact on the indirect effect: autonomy ($b = .02$,

95% CI [-.046, .077]); direct supervisor ($b = -.06$, 95% CI [-.160, .039]); work colleague support ($b = -.08$, 95% CI [-.187, .032]); CSEs ($b = .00$, 95% CI [-.058, .064]).

Moderations on the A Path: Dimension-Level. I explored the variances of the random slopes between daily demands and daily engagement in workaholic behaviors (including all four dimensions) to see if the variances were significant and therefore appropriate to add the moderator variables. The results indicated that the variance estimates were significant (motivational workaholism estimate = .24, 95% CI [.154, .362]); (cognitive workaholism estimate = .30, 95% CI [.208, .414]); (emotional workaholism estimate = .26, 95% CI [.186, .360]); (behavioral workaholism estimate = .20, 95% CI [.122, .319]).

Therefore, I explored the conditional roles of the four resources on the indirect effect of daily demands and end of workday burnout via the four workaholism dimensions as mediators. Unfortunately, the results did not show support for any of the resources impacting the indirect effects of any of the four workaholism dimensions on the daily demands to end of workday burnout association. The results for autonomy are as follows: motivational workaholism ($b = .02$, 95% CI [-.059, .099]); cognitive workaholism ($b = .02$, 95% CI [-.058, .098]); emotional workaholism ($b = .02$, 95% CI [-.051, .094]); behavioral workaholism ($b = .01$, 95% CI [-.067, .084]). The results for direct supervisor support are as follows: motivational workaholism ($b = -.04$, 95% CI [-.165, .084]); cognitive workaholism ($b = -.07$, 95% CI [-.194, .070]); emotional workaholism ($b = -.03$, 95% CI [-.149, .080]); behavioral workaholism ($b = -.11$, 95% CI [-.228, .005]). The results for work colleague support are as follows: motivational workaholism ($b = -.09$, 95% CI [-.221, .060]); cognitive workaholism ($b = -.10$, 95% CI [-.239, .041]); emotional workaholism ($b = -.04$, 95% CI [-.173, .092]); behavioral workaholism ($b = -.10$, 95% CI [-.233, .036]). The results for CSEs are as follows: motivational workaholism ($b = .06$, 95% CI [-.019,

.137]); cognitive workaholism ($b = -.00$, 95% CI $[-.083, .076]$); emotional workaholism ($b = .03$, 95% CI $[-.044, .101]$); behavioral workaholism ($b = -.04$, 95% CI $[-.118, .025]$).

Chapter Five

Discussion

The present study sought to advance our understanding of the interplay between demands, workaholism, and burnout using a daily diary design. I proposed that what links daily demands and end of workday burnout through daily engagement in workaholic behaviors was a function of cross-level resources. While the results of the overall models did not support the proposed hypotheses, there were associations explored within the models that affirm aspects of previous research findings. In line with past research, I observed that demands were positively associated with workaholism and burnout at the daily level (Clark et al., 2021). However, daily engagement in workaholic behaviors had a negative, nonsignificant association with end of workday burnout and did not act as an explanatory mechanism between daily demands and end of workday burnout. Previous research examining the overall association between workaholism and burnout has found that the two are positively and significantly associated (Balducci et al., 2020, 2021; Englebrecht et al., 2019; Taris et al., 2008). This positive and significant association found between workaholism and burnout in the literature has been captured at the between-person level, so the present study findings do highlight something interesting at the within-person level. Fortunately, the supplemental dimension-level examinations did provide more context as to what may be causing this negative and nonsignificant day-level association between workaholism and burnout, highlighting that daily engagement in motivational and cognitive workaholic behaviors significantly mediated the relationship between daily demands and end of workday burnout. These supplemental findings reinforce Clark et al.'s (2020) urgency to use a multidimensional conceptualization and measurement of workaholism in research and practice. While the four resources explored as cross-level moderators in the larger moderated mediation

model did not show significance in the overall or supplemental explorations, there is still reason to further research the role resources play in these types of associations, especially so with workaholism. As it will be discussed throughout this chapter, there are areas of future research worth exploring beyond the constructs in the present study's model.

Theoretical Implications

Theoretically, the results indicate that although overall workaholism does not mediate the relationship between demands and burnout at the daily level, motivational and cognitive workaholism have significant and opposite effects on this association. The use of a multidimensional workaholism measure allows for additional exploration of the specific dimensions of the construct and their associations with occupational health constructs, like demands and burnout. The results of the supplemental dimension-level examination confirm the idea that workaholism is not a “one-size-fits all” construct and should not be researched as one.

The results in the present study, when testing this model with the four distinct workaholism dimensions, highlight certain components of the conceptualization and measurement of this multidimensional scale. Daily engagement in motivational workaholic behaviors acted as an explanatory mechanism between daily demands and end of workday burnout, such that the relationship between the two is negative when one is engaging in daily motivational workaholic behaviors. Clark et al. (2020) defined motivational workaholism as an internalization of the drive to work, being separate from intrinsic motivation. This is characteristic of a type of controlled motivation known as introjected regulation, which describes how individuals have control over their behaviors but behave in certain ways based on the external values or goals that they have internalized. It would appear that this internalization of work very heavily defines one's self-worth. Additionally, Clark et al. (2020) describe how this

dimension is heavily rooted in self-determination theory (SDT; Ryan & Deci, 2000) and that the more controlled a motivation is, the less likely that one's psychological needs are to be met.

So while engaging in these types of workaholic behaviors may seem beneficial on a daily level because these results indicate that there is less concern for burnout to occur when demands are high, one may also wonder what the long term effects are from motivational workaholism.

Regarding the moderating variables in the model, the four resources in the present study (autonomy, direct supervisor support, work colleague support, CSEs) may not be the function in which these variables are linked in the mediation model, but other resources could be worth exploring. Because resources are generally less explored as they relate to workaholism, I chose four that have known empirical and theoretical associations with burnout. These four that I chose to explore are more stable in nature, hence measuring them at time 1 and examining them as cross-level moderators. However, there may be other resources that fluctuate more on the daily level that could significantly interact with variables like the ones in the present study. Examples of potentially relevant and dynamic job- (1a-b) and personal-related (2a-b) resources are as follows: (1a) feedback at work, whether that is from supervisors or coworkers; (1b) skill utilization, which could tap into one's level of confidence in their ability to carry out certain tasks in their roles because of the skills required to complete said tasks; (2a) physical/mental energy based on health; (2b) emotion regulation (Demerouti et al., 2001). And not only will other resources be worth considering because of their dynamic nature, but these also may lend themselves well to theoretical components of the constructs (e.g. emotional dimension of workaholism; emotional exhaustion facet of burnout; emotional demands).

Practical Implications

The results of the dimension-level mediation model lend themselves well to informing interventions and practices. Although those engaging in motivational workaholic behaviors on a given workday facing high demands may be less likely to experience burnout at the end of their day, that does not mean that motivational workaholism cannot be detrimental in the future or with other outcomes. Motivational workaholism may not be as concerning in the short term, but it does call for a reflection on why and how individuals are internalizing so much of their work and basing so much of their self-worth in work. And on the other hand, it is clear that daily engagement in cognitive workaholic behaviors exacerbates the relationship between high daily demands and end of workday burnout. This association indicates the need for interventions to either help individuals reframe their thoughts about demands and how they should approach their tasks or learn techniques to buffer their behaviors from resulting in burnout experiences. While mindfulness is often an intervention used to combat negative consequences such as burnout, the cognitive dimension of workaholism has been found to have the strongest relationship with mindfulness out of the four dimensions, resulting in higher levels of the cognitive dimension of workaholism reflecting a lack of mindfulness (Howard et al., 2022). It appears significant research is needed to understand what changes in behaviors or thoughts can combat the effects of cognitive workaholism, if any.

As previously discussed, workaholism is known to be preceded, affected, and reinforced by factors such as achievement-related personality traits, values, rewards, and highly engaging work environments (Ng et al., 2007). Employers need to consider how they are reinforcing or encouraging these workaholic tendencies. For example, these behaviors may be encouraged by only rewarding or recognizing employees for their work-related accomplishments and ignoring their life-related ones. When other employees also engrained in these mindsets and exhibiting

these behaviors are viewed as role models to new employees, it continues to foster this overworking culture. And if there is insufficient trust and transparency between leaders and followers, employees may feel less likely to have conversations about their emotions and cognitions surrounding work stress.

Not only are there other resources that may elucidate the interplay of these variables, but there is also an opportunity to capture the context of resources in greater detail than was done in the present study. Certain principles and corollaries of COR theory would be useful in measuring one's available resources. For instance, the principle of resource caravans and caravan passageways, as highlighted by Hobfoll (2018), emphasizes that resources do not exist in isolation but are either fostered or hindered within organizational contexts. This suggests that understanding the context of resources extends beyond appraising the resources one perceives that they have. This is especially important in an ESM study as researchers are capturing this information in an employee's daily work life. An organization's influence in fostering or nurturing resources may be even more salient when employees report on these experiences.

Limitations and Future Research

I have outlined notable limitations to the present study along with suggested ways to improve upon these limitations in future research. Firstly, the standard approach for ESM scholars is to collect three self-report surveys a day for an average of ten workdays (Gabriel et al., 2019). While I aimed to follow ESM best practices as closely as possible, the data collection process is expensive and time-consuming. Due to budgetary and time constraints, I was unable to conduct a ten-consecutive-workday data collection for both the pilot and full studies. Fortunately, another best practice recommends collecting at least three full days of data from participants for analytic purposes, which I adhered to. Therefore, the five days of data collection still allowed

participants to contribute three full days of data. However, employees' work fluctuates regardless of job type, some weeks are more challenging or demanding than others, and only collecting data in one week did not account for this variability in participants' work lives.

Secondly, and in line with this mention of gathering data across a larger number of workdays, I do think it would be interesting to capture longitudinal outcomes. More specifically, what are the long-term effects of engaging in such workaholic behaviors? Motivational workaholism specifically seems to be less detrimental as it relates to the present study, but it may be that there are more serious long term effects to consider. I also wonder how a cultural examination could be taken as it relates to the dimensions of workaholism, as it may be more characteristic to western society to take such self-worth in your work. I believe those are feasible next steps in assessing these workaholism dimensions with a closer lens.

Thirdly, while I had individuals appraise their quantitative, emotional, and cognitive demands during each of the five workdays, two important aspects were not considered. Participants held a variety of occupations across different job fields, and while this variety is important for gathering information from a representative population, these occupations naturally will include different and varying levels of demands. For example, some occupations, like those that are patient-facing, may inherently have higher emotional demands than others. Also, this study lacked information on specific tasks associated with these demands (e.g., a participant was assigned a large project that is atypical in relation to their normal work responsibilities). Future research could benefit from collecting information on types of tasks participants consider demanding and exploring these constructs within specific job populations that are generally more physically, emotionally, or cognitively taxing compared to other jobs. This would also account for the subjective nature of appraising such demands, as demands are not always overtly negative

and even two participants who share the same occupation may not assess the same aspects of their jobs as demands (Bakker & Demerouti, 2007).

Fourthly, the resources examined in the present study were considered to be more stable in nature. However, it is worth considering the dynamic nature of resources. Other resources might have been relevant, or it could have been beneficial to assess something like social support during the workday itself rather than just in the time 1 survey. I would suggest in future research that an exploration of resources is much more specific and detailed than in the present study. In order to accurately assess how a resource is interacting with a demand and other behaviors throughout one's workday, it would make sense to identify more of the context surrounding said demands and resources. Including open-ended responses would allow for a mixed-methods approach with the incorporation of qualitative data. From existing evidence, it is very difficult to connect how the resources are truly impacting one's demands and their behavioral responses to said demands. The employee could report that their task load is high on a given day and that they have an important presentation to give to a client while also mentioning that they are relying heavily on their coworkers to delegate the work or they are confident in their abilities to manage their time and be efficient (i.e., tapping into CSEs). I believe that while daunting, this could be an important future direction to take when exploring the function of resources in the interplay of such occupational health topics.

Finally, it would be valuable to explore how various aspects of one's life might affect their day-to-day appraisal of demands and attitudes about their workday or be affected by such negative workday outcomes such as burnout. First, regarding burnout, it would be interesting to also capture factors such as quality of sleep the night before, office ergonomics, and regularity of physical activity. For the larger lab-related research, which included a nighttime daily measure, I

captured several work-family outcomes such as work life balance satisfaction, work-family balance effectiveness, family performance, and positive and negative affect. These familial-based questions would be interesting to explore as they relate to the following day's feelings of stress or behaviors at work. Again, although out of the scope of the current study, including measures of life and familial responsibilities and experiences lend themselves well to a comprehensive view of an employee's daily life. Second, it would be important to understand what more serious outcomes employees are experiencing in their evenings because of burnout, such as depression, anxiety, turnover intentions, etc. And third, while the outcome of interest in the present study is job-related burnout, there are other outcomes of workaholic behaviors that are negative for individuals and organizations, like counterproductive work behaviors and dysfunction in one's familial/home life (Clark et al., 2016). Job-related burnout, specifically using Shirom and Melamed's (2006) SMBM, focuses on outcomes of stress and the direct impact on individuals, so it may be worth exploring how these other workaholism outcomes impact others (e.g., coworkers, family members, friends). It would be worth exploring how certain resources, whether those in the present study or others, may impact such associations and alleviate these types of negative effects.

Conclusion

In conclusion, despite the lack of support for the proposed associations between study variables, this dissertation highlights that an employee who perceives demands during their workday are likely to engage in workaholic behaviors and experience end of workday burnout. The results also suggest that when daily demands are high, individuals engaging in motivational workaholic behaviors creates a sort of buffer against the negative impact of these demands, ultimately leading to lower levels of burnout at the end of the workday. Conversely, when daily demands are high and individuals engage in cognitive workaholic behaviors, this leads to higher

levels of burnout at the end of the workday. This research broadens our understanding of not only the negative, but also the positive, aspects of constructs like workaholism. I believe that research using the MWS has challenged existing perceptions of what a workaholic and their experiences can look like.

To my knowledge, this is the first study to use the MWS to explore workaholism at the daily level, also incorporating multifaceted measures of demands and burnout. Additionally, this research has taken an initial step to better understand the role of resources in impacting workaholic behaviors. There is a plethora of future research endeavors suggested that can further examine the buffering effects of resources on work demands with additional occupational health outcomes such as workaholism and burnout. And finally, this research adds to the extant ESM literature, hopefully informing others to capture both between- and within-person experiences.

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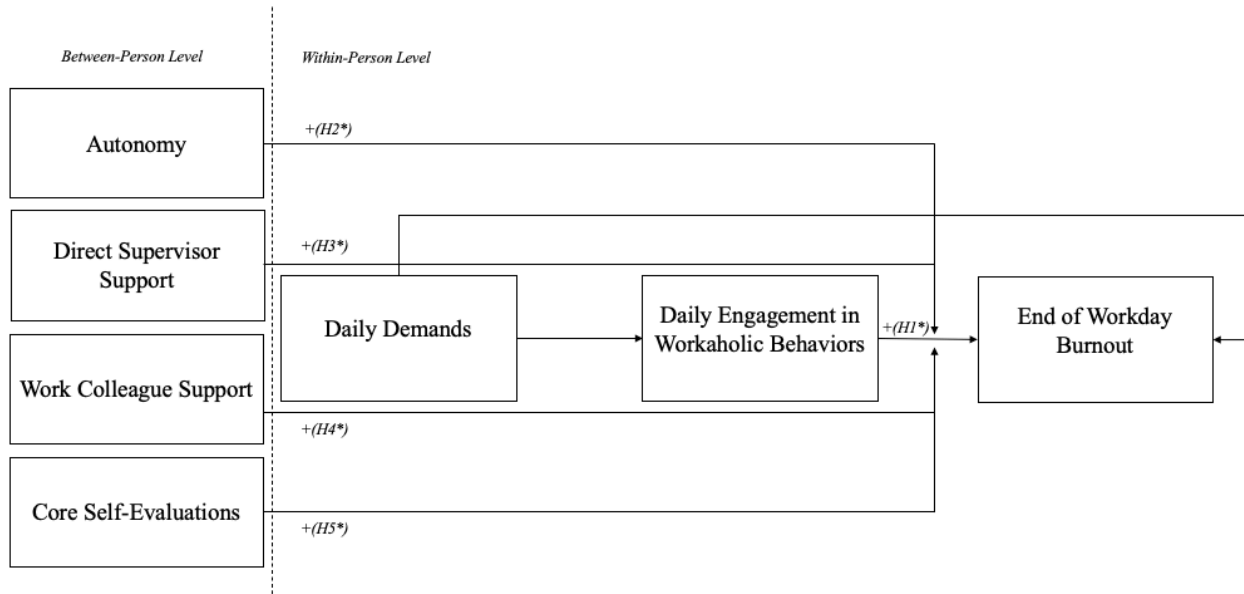
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Appendix A: Conceptual Model

Figure 1

Conceptual model



Notes: + = hypothesized positive path, * = includes an indirect effect

Appendix B: Qualification Survey

What is your Prolific ID? _____

What is your age?

- Younger than 18
- 18
- 19
- 20
- ...
- 100

Is Prolific your main source of income?

- Yes
- No

Are you currently employed at a job other than Prolific or any other crowdsourcing marketplace?

- Yes
- No

What is your current position? _____

How many hours do you work per week? (This does not include the work you complete through Prolific or any other crowdsourcing marketplace). _____

What specific days of the week do you work? (Select all that apply).

- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday
- Sunday

Do you work from home?

- Yes, I work entirely from home.
- Yes, I work in a hybrid environment (a combination of at home and in-office).
- No, I do not work from home.
- Other: _____

Do you frequently interact with other people at work (e.g. supervisor(s), coworker(s))? (This interaction can be online or in-person).

- Yes, I interact with others at work everyday.
- Yes, I interact with others at work fairly often throughout the week.

- No, I rarely/do not interact with others at work.

How many day(s) per week do you interact with your supervisor(s)?

- None
- 1 day
- 2 days
- 3 days
- 4 days
- Everyday

How many day(s) per week do you interact with your coworker(s)?

- None
- 1 day
- 2 days
- 3 days
- 4 days
- Everyday

What is the time zone in which you work?

- Eastern (EST)
- Central (CST)
- Mountain (MST)
- Pacific (PST)
- Outside continental United States (e.g., Alaska, Hawaii, other country...)
- Time zone may differ based on the day (e.g., for travel reasons...)

At what time do you typically start work each day?

- Before 6:00am
- Between 6:00am and 6:29am
- Between 6:30am and 6:59am
- Between 7:00am and 7:29am
- Between 7:30am and 7:59am
- Between 8:00am and 8:29am
- Between 8:30am and 8:59am
- Between 9:00am and 9:29am
- Between 9:30am and 9:59am
- Between 10:00am and 10:29am
- Between 10:30am and 10:59am
- 11:00am or later

Please write the time that you typically start work for the day (e.g., 7:30am, 8:57am, etc.), as well as any other useful details that we should know about your start time. _____

At what time do you typically eat lunch each day during work?

- Before 10:00am
- Between 10am and 10:29am
- Between 10:30am and 10:59am

- Between 11:00am and 11:29am
- Between 11:30am and 11:59am
- Between 12pm and 12:29pm
- Between 12:30pm and 12:59pm
- Between 1:00pm and 1:29pm
- Between 1:30pm and 1:59pm
- Between 2:00pm and 2:29pm
- Between 2:30pm and 2:59pm
- 3:00pm or later

Please write the time that you typically take your lunch break during each work day (e.g., 12:15pm, etc.), as well as any other useful details that we should know about your lunch break (e.g., not at computer during lunch, working during the break, etc.)._____

At what time do you typically end work each day?

- Before 2:00pm
- Between 2:00pm and 2:29pm
- Between 2:30pm and 2:59pm
- Between 3:00pm and 3:29pm
- Between 3:30pm and 3:59pm
- Between 4:00pm and 4:29pm
- Between 4:30pm and 4:59pm
- Between 5:00pm and 5:29pm
- Between 5:30pm and 5:59pm
- Between 6:00pm and 6:29pm
- Between 6:30pm and 6:59pm
- 7:00pm or later

Please write the time that you typically end work each day (e.g., 5:25pm, etc.), as well as any other useful details that we should know about when you end work (e.g., if you leave early on certain days, etc.)._____

At what time do you typically go to sleep on weekdays?

- Before 6:00pm
- Between 6:00pm and 6:29pm
- Between 6:30pm and 6:59pm
- Between 7:00pm and 7:29pm
- Between 7:30pm and 7:59pm
- Between 8:00pm and 8:29pm
- Between 8:30pm and 8:59pm
- Between 9:00pm and 9:29pm
- Between 9:30pm and 9:59pm
- Between 10:00pm and 10:29pm
- Between 10:30pm and 10:59pm
- 11:00pm or later

Please write the time that you typically go to sleep on weekdays (e.g., 9:45pm, 10:15pm, etc.), as well as any other useful details that we should know about when you go to sleep during the week (e.g., when you usually turn off or stop using your phone or computer, etc.). _____

Will you be on vacation on any day from Monday, March 25, 2024 to Friday, March 29, 2024?

- Yes
- No

The next three questions are to determine your general availability in completing fifteen daily surveys over the course of the week (five workdays) during the daily data collection portion of the main research study. We understand that inevitably there are changing circumstances throughout our day-to-day, but please respond with your intended availability based on your knowledge of your current schedule.

Are you able to complete 5, 5-minute surveys MIDDAY DURING WORK from Monday, March 25, 2024 to Friday, March 29, 2024?

- Yes
- No

Are you able to complete 5, 5-minute surveys EVERY EVENING BEFORE YOU LEAVE WORK from Monday, March 25, 2024 to Friday, March 29, 2024?

- Yes
- No

Are you able to complete 5, 5-minute surveys EVERY NIGHT RIGHT BEFORE GOING TO BED from Monday, March 25, 2024 to Friday, March 29, 2024?

- Yes
- No

If eligible, would you be interested in participating in a daily study that will begin **midday on Monday (March 25th)** and end on that **Friday night (March 29th)**?

If yes, you will be invited **Wednesday (March 20th)** to complete a Time 1 survey before the daily process begins, in which you must complete the survey and pass the attention checks by Friday (March 22nd) to be eligible for the daily surveys. You will be compensated **\$2.00** upon a completed Time 1 survey. When the daily survey process begins, **you will be asked to complete each survey within 2 hours of receiving the link.** On average, the surveys will take you 5 minutes to complete. In order to complete a day's worth of surveys and be eligible for compensation, **you must indicate that you are working that day** (this does not affect your eligibility for the rest of the days during the week). *If you do not participate and are therefore completely inactive throughout the first 4 full days of the data collection, you will not be invited back to participate on the fifth and final day.*

Each completed daily survey will result in a payment of **\$1.00**, totaling in a chance for \$15.00. Also, if you complete 4 full days of surveys within the 5-day data collection, you will be

compensated an additional \$2.50 (reflected as a bonus payment). Therefore, with completion of this qualification survey, the Time 1 survey, and all daily surveys, along with the bonus payment, **you can earn up to \$20.25 total in compensation for this research study.**

- I am interested in participating in the study from Monday, March 25th to Friday, March 29th.
- I am not interested in participating in the study.

Appendix C: Time 1 Demographic Questions

What is your Prolific ID? _____

Are you currently employed at a job other than Prolific or any other crowdsourcing marketplace?

- Yes
- No

What is your current position? _____

How long have you worked in your current position?

- Less than 1 year
- About 1 year
- More than 1 year. Please specify the number (in years) below.

How many hours do you work per week? (This does not include the work you complete through Prolific or any other crowdsourcing marketplace). _____

What specific days of the week do you work? (Select all that apply).

- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday
- Sunday

Please indicate your gender identity.

- Male
- Female
- I prefer to self-describe _____
- Prefer not to say

Please indicate your race/ethnicity (check all that apply).

- Black/African American
- White/Caucasian (non-Hispanic)
- Asian/Pacific Islander
- Middle Eastern/West Asian
- Native American
- Hispanic/Latino
- Other: _____
- Prefer not to say

What is your highest level of education? Please enter the highest degree you have obtained.

- Less than high school

- GED/High school proficiency
- Some college education without degree
- 2 year (Associate's) degree
- 4 year (Bachelor's) degree
- Some post graduate education without advanced degree
- Advanced degree (MS, MA, PhD., JD, MD, etc.)

What is your marital status?

- Single, never married
- In a relationship
- Married
- Divorced/Separated
- Widowed

Do you live with members of your family?

- Yes
- No

Please specify family members with whom you live (e.g., spouse, children, parents, partner, etc.). _____

Do you have a child or children under the age of 18 that live(s) with you?

- Yes, full-time.
- Yes, but only part-time.
- No

How many children under the age of 18 live with you? _____

Appendix D: Time 1 and Daily Survey Measures

Time 1 only:

Autonomy items from the Job Content Questionnaire (JCQ; Karasek, 1985)

“Please rate your agreement to the following statements according to your last 30 days of work.”

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

- 1. I decide myself how to execute my work.
- 2. I have the freedom to decide how to do my work.
- 3. I have a lot to say about what happens in my job.

Support Appraisal for Work Stressors (SAWS; Lawrence et al., 2007)

“The following questions ask about the reliability of various people in providing you with support when you experience problems at work. Please respond to each question by agreeing with a number from the rating scale below regarding your last 30 days of work. In this way, for each question, you will rate separately your direct supervisor and your work colleagues. How much can you rely on your... *(will capture responses to these items for two sources, direct supervisor and work colleagues)*”

- 1= Not at all
- 2= A little
- 3= Some-what
- 4= Very much

Emotional:

- 1. ...to help you feel better when you experience work-related problems?
- 2. ...to listen to you when you need to talk about work-related problems?
- 3. ...to be sympathetic and understanding about your work-related problems?

Informational:

- 4. ...to suggest ways to find out more about a work situation that is causing you problems?
- 5. ...to share their experiences of a work problem similar to yours?
- 6. ...to provide information which helps to clarify your work-related problems?

Instrumental:

- 7. ...to give you practical assistance when you experience work-related problems?
- 8. ...to spend time helping you resolve your work-related problems?
- 9. ...to help when things get tough at work?

Appraisal:

10. ...to reassure you about your ability to deal with your work-related problems?
11. ...to acknowledge your efforts to resolve your work-related problems?
12. ...to help you evaluate your attitudes and feelings about your work-related problems?

Core Self-Evaluations Scale (CSES; Judge et al., 2003)

“Please rate your agreement with the following statements regarding the last 30 days.”

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

1. I am confident I get the success I deserve in life.
2. Sometimes I feel depressed. (R)
3. When I try, I generally succeed.
4. Sometimes when I fail I feel worthless. (R)
5. I complete tasks successfully.
6. Sometimes, I do not feel in control of my work. (R)
7. Overall, I am satisfied with myself.
8. I am filled with doubts about my competence. (R)
9. I determine what will happen in my life.
10. I do not feel in control of my success in my career. (R)
11. I am capable of coping with most of my problems.
12. There are times when things look pretty bleak and hopeless to me. (R)

*R indicates reverse-coded items

Daily Only (Midday):

Are you working today?

- Yes
- No

(If “No”: You have indicated that you are not working today, which means you are not eligible to complete or be compensated for today's surveys. You will be invited back to tomorrow's midday survey and can continue to participate in the daily data collection if you continue to provide your consent. Please exit out of the survey.)

Time 1 and Daily:

Modified medium-length version of demands items from the Copenhagen Psychosocial Questionnaire (COPSOQ III; Kristensen et al., 2005)

Time 1: “Please rate your agreement with the following statements as it relates to your experiences with work in the past 30 workdays.”

Midday: “Please rate your agreement to the following statements based on your work today.” At the daily level, items began with “Since arriving at work,...”, and the tense of the verbs was adjusted.

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

Quantitative:

- 1. My work tasks are unevenly distributed and pile up.
- 2. I do not have time to complete all of my work tasks.
- 3. I am behind with my work.
- 4. I do not have enough time for my work tasks.

Cognitive:

- 1. I have to keep my eyes on lots of things while I work.
- 2. My work requires me to remember a lot of things.
- 3. My work demands that I come up with new ideas.
- 4. My work requires me to make difficult decisions.

Emotional:

- 1. My work puts me in emotionally disturbing situations.
- 2. I have to relate to other people’s personal problems as part of my work.
- 3. My work is emotionally demanding.

Multidimensional Workaholism Scale (MWS; Clark et al., 2020)

Time 1: “The following statements are about how you feel, think, and behave about work. Please read each statement carefully and decide how each of the statements is true regarding your job. Please indicate for each statement the alternative that best describes how frequently the statement has been true over the last 30 days.”

End of workday: “The following statements are about how you feel, think, and behave about work. Please read each statement carefully and decide how each of the statements is true regarding your job today. Please indicate for each statement the alternative that best describes how frequently the statement was true today.” At the daily level, items began with “Today,...”, and the tense of the verbs was adjusted.

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Slightly Disagree

- 4 = Neither Agree nor Disagree
- 5 = Slightly Agree
- 6 = Agree
- 7 = Strongly Agree

Motivational Workaholism

1. I always have an inner pressure inside of me that drives me to work.
2. I work because there is a part inside of me that feels compelled to work.
3. I have a strong inner desire to work all of the time.
4. There is a pressure inside of me that drives me to work.

Cognitive Workaholism

1. I feel like I cannot stop myself from thinking about working.
2. In general, I spend my free time thinking about work.
3. At any given time, the majority of my thoughts are work related.
4. It is difficult for me to stop thinking about work when I stop working.

Emotional Workaholism

1. I feel upset if I have to miss a day of work for any reason.
2. I am almost always frustrated when I am not able to work.
3. I feel upset if I cannot continue to work.
4. When something prevents me from working, I usually get agitated.

Behavioral Workaholism

1. When most of my coworkers will take breaks, I keep working.
2. I work more than what is expected of me.
3. I tend to work longer hours than most of my coworkers.
4. I tend to work beyond my job's requirements.

Shirom-Melamed Burnout Measure (SMBM; Shirom & Melamed, 2006)

Time 1: “Below are a number of statements that describe different feelings that you may feel at work. Please indicate how often you have felt each of the following feelings within the last 30 days:”

End of workday: “Below are a number of statements that describe different feelings that you may feel at work. Please indicate how often you have felt each of the following feelings today:”
At the daily level, items began with “Since today’s mid-day survey,...”, and the tense of the verbs was adjusted.

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

Physical Fatigue

1. I feel tired.
2. I have no energy for going to work in the morning.

3. I feel physically drained.
4. I feel fed up.
5. I feel like my “batteries” are “dead.”
6. I feel burned out.

Cognitive Weariness

1. My thinking process is slow.
2. I have difficulty concentrating.
3. I feel I’m not thinking clearly.
4. I feel I’m not focused in my thinking.
5. I have difficulty thinking about complex things.

Emotional Exhaustion

1. I feel I am unable to be sensitive to the needs of coworkers and customers.
2. I feel I am not capable of investing emotionally in coworkers and customers.
3. I feel I am not capable of being sympathetic to coworkers and customers.

Appendix E: Syntax, Overall Models

Hypothesis 1: Daily engagement in workaholic behaviors mediates the relationship between workday demands and end of workday burnout.

TITLE: Basic Overall Mediation Analysis_05202024

DATA: File is ModMedAnalyses_05132024.csv;

VARIABLE: Names =

PID
Day
Dem_G
DemQ_G
DemC_G
DemE_G
Work_G
WorkM_G
WorkC_G
WorkE_G
WorkB_G
Burn_G
BurnPF_G
BurnCW_G
BurnEE_G
Dem
DemQ
DemC
DemE
Work
WorkM
WorkC
WorkE
WorkB
Burn
BurnPF
BurnCW
BurnEE
Auto
SSup
CoSup
CSE
Dem_T1
DemQ_T1
DemC_T1
DemE_T1

Work_T1
WorkM_T1
WorkC_T1
WorkE_T1
WorkB_T1
Burn_T1
BurnPF_T1
BurnCW_T1
BurnEE_T1;

Usevariables are Dem Work Burn;

Missing are all (-999);

Cluster = PID;

WITHIN = ;
BETWEEN = ;

DEFINE:

Center Dem Work (grandmean); !grandmean because considerable variance appears from ICCs at the between level

ANALYSIS:

TYPE = twolevel;
Estimator is mlr;

MODEL:

%WITHIN%

Work on Dem; !path a
Burn on Work; !path b
Burn on Dem; !path c

%BETWEEN%

[Work]; [Dem]; [Burn];

Work Dem Burn; !this is assuming that they vary between persons but are not related at the between person level

Work Dem Burn with Work Dem Burn; !covariances

Model indirect:

Burn ind Work Dem;

OUTPUT:

SAMPSTAT TECH1 CINTERVAL;

Testing Random Slope Variance before adding Moderators to the Mediation Model

TITLE: Moderated Mediation Analysis_05222024; random slope variance

DATA: File is ModMedAnalyses_05132024.csv;

Montecarlo:

VARIABLE: Names =

PID

Day

Dem_G

DemQ_G

DemC_G

DemE_G

Work_G

WorkM_G

WorkC_G

WorkE_G

WorkB_G

Burn_G

BurnPF_G

BurnCW_G

BurnEE_G

Dem

DemQ

DemC

DemE

Work

WorkM

WorkC

WorkE

WorkB

Burn

BurnPF

BurnCW

BurnEE

Auto

SSup

CoSup

CSE

Dem_T1

DemQ_T1

DemC_T1

DemE_T1

Work_T1

WorkM_T1

WorkC_T1

WorkE_T1
WorkB_T1
Burn_T1
BurnPF_T1
BurnCW_T1
BurnEE_T1;

Usevariables are Dem Work Burn;

Missing are all (-999);

Cluster = PID;

WITHIN = ;
BETWEEN =;

DEFINE:
Center Dem Work (grandmean);

Analysis:
TYPE = twolevel random;
estimator=bayes;
algorithm=integration;
FBITERATIONS=10000; !means you are running the model twice to see if you get the same
model parameters
Processors=2;

Model:
%WITHIN%
sb | Burn on Work (b);
Burn on Dem;
Work on Dem (a);

%BETWEEN%
Work Dem Burn with Work Dem Burn;
sb; !we want to know if this is meaningful before adding the resources into the model

Output:
Tech1 Tech3 Tech8 cinterval sampstat;

Hypothesis 2: Autonomy will moderate the positive relationship between daily engagement in workaholic behaviors and end of workday burnout such that the association between workaholic behaviors and burnout will be weaker when autonomy is high versus low.

TITLE: Moderated Mediation Analysis Autonomy_05222024; random slope

DATA: File is ModMedAnalyses_05132024.csv;

Montecarlo:

VARIABLE: Names =

PID

Day

Dem_G

DemQ_G

DemC_G

DemE_G

Work_G

WorkM_G

WorkC_G

WorkE_G

WorkB_G

Burn_G

BurnPF_G

BurnCW_G

BurnEE_G

Dem

DemQ

DemC

DemE

Work

WorkM

WorkC

WorkE

WorkB

Burn

BurnPF

BurnCW

BurnEE

Auto

SSup

CoSup

CSE

Dem_T1

DemQ_T1

DemC_T1

DemE_T1

Work_T1

WorkM_T1

WorkC_T1

WorkE_T1

WorkB_T1

Burn_T1

BurnPF_T1

BurnCW_T1
BurnEE_T1;

Usevariables are Dem Work Burn Auto;

Missing are all (-999);

Cluster = PID;

WITHIN = ;
BETWEEN = Auto;

DEFINE:
Center Dem Work Auto (grandmean);

Analysis:
TYPE = twolevel random;
estimator=bayes;
algorithm=integration;
FBITERATIONS=10000; !means you are running the model twice to see if you get the same
model parameters
Processors=2;

Model:
%WITHIN%
sb | Burn on Work (b);
Burn on Dem;
Work on Dem (a);

%BETWEEN%
Work Dem Burn with Work Dem Burn;
sb; (b1);
sb on Auto (s1);

Output:
Tech1 Tech3 Tech8 cinterval sampstat;

Hypothesis 3: Direct supervisor support will moderate the positive relationship between daily engagement in workaholic behaviors and end of workday burnout such that the association between workaholic behaviors and burnout will be weaker when direct supervisor support is high versus low.

TITLE: Moderated Mediation Analysis SSUp_05222024; random slope

DATA: File is ModMedAnalyses_05132024.csv;
Montecarlo:

VARIABLE: Names =

PID

Day

Dem_G

DemQ_G

DemC_G

DemE_G

Work_G

WorkM_G

WorkC_G

WorkE_G

WorkB_G

Burn_G

BurnPF_G

BurnCW_G

BurnEE_G

Dem

DemQ

DemC

DemE

Work

WorkM

WorkC

WorkE

WorkB

Burn

BurnPF

BurnCW

BurnEE

Auto

SSup

CoSup

CSE

Dem_T1

DemQ_T1

DemC_T1

DemE_T1

Work_T1

WorkM_T1

WorkC_T1

WorkE_T1

WorkB_T1

Burn_T1

BurnPF_T1

BurnCW_T1

BurnEE_T1;

Usevariables are Dem Work Burn SSup;

Missing are all (-999);

Cluster = PID;

WITHIN = ;

BETWEEN = SSup;

DEFINE:

Center Dem Work SSup (grandmean);

Analysis:

TYPE = twolevel random;

estimator=bayes;

algorithm=integration;

FBITERATIONS=10000; !means you are running the model twice to see if you get the same model parameters

Processors=2;

Model:

%WITHIN%

sb | Burn on Work (b);

Burn on Dem;

Work on Dem (a);

%BETWEEN%

Work Dem Burn with Work Dem Burn;

sb; (b1);

sb on SSup (s1);

Output:

Tech1 Tech3 Tech8 cinterval sampstat;

Hypothesis 4: Work colleague support will moderate the positive relationship between daily engagement in workaholic behaviors and end of workday burnout such that the association between workaholic behaviors and burnout will be weaker when work colleague support is high versus low.

TITLE: Moderated Mediation Analysis CoSup_05222024; random slope

DATA: File is ModMedAnalyses_05132024.csv;

Montecarlo:

VARIABLE: Names =

PID

Day
 Dem_G
 DemQ_G
 DemC_G
 DemE_G
 Work_G
 WorkM_G
 WorkC_G
 WorkE_G
 WorkB_G
 Burn_G
 BurnPF_G
 BurnCW_G
 BurnEE_G
 Dem
 DemQ
 DemC
 DemE
 Work
 WorkM
 WorkC
 WorkE
 WorkB
 Burn
 BurnPF
 BurnCW
 BurnEE
 Auto
 SSup
 CoSup
 CSE
 Dem_T1
 DemQ_T1
 DemC_T1
 DemE_T1
 Work_T1
 WorkM_T1
 WorkC_T1
 WorkE_T1
 WorkB_T1
 Burn_T1
 BurnPF_T1
 BurnCW_T1
 BurnEE_T1;

Usevariables are Dem Work Burn CoSup;

```

Missing are all (-999);

Cluster = PID;

WITHIN = ;
BETWEEN = CoSup;

DEFINE:
Center Dem Work CoSup (grandmean);

Analysis:
TYPE = twolevel random;
estimator=bayes;
algorithm=integration;
FBITERATIONS=10000; !means you are running the model twice to see if you get the same
model parameters
Processors=2;

Model:
%WITHIN%
sb | Burn on Work (b);
Burn on Dem;
Work on Dem (a);

%BETWEEN%
Work Dem Burn with Work Dem Burn;
sb; (b1);
sb on CoSup (s1);

Output:
Tech1 Tech3 Tech8 cinterval sampstat;

Hypothesis 5: Core self-evaluations will moderate the positive relationship between daily engagement in workaholic behaviors and end of workday burnout such that the association between workaholic behaviors and burnout will be weaker when core self-evaluations are high versus low.

TITLE: Moderated Mediation Analysis CSE_05222024; random slope

DATA: File is ModMedAnalyses_05132024.csv;
Montecarlo:
VARIABLE: Names =
PID
Day
Dem_G

```

DemQ_G
DemC_G
DemE_G
Work_G
WorkM_G
WorkC_G
WorkE_G
WorkB_G
Burn_G
BurnPF_G
BurnCW_G
BurnEE_G
Dem
DemQ
DemC
DemE
Work
WorkM
WorkC
WorkE
WorkB
Burn
BurnPF
BurnCW
BurnEE
Auto
SSup
CoSup
CSE
Dem_T1
DemQ_T1
DemC_T1
DemE_T1
Work_T1
WorkM_T1
WorkC_T1
WorkE_T1
WorkB_T1
Burn_T1
BurnPF_T1
BurnCW_T1
BurnEE_T1;

Usevariables are Dem Work Burn CSE;

Missing are all (-999);

Cluster = PID;

WITHIN = ;

BETWEEN = CSE;

DEFINE:

Center Dem Work CSE (grandmean);

Analysis:

TYPE = twolevel random;

estimator=bayes;

algorithm=integration;

FBITERATIONS=10000; !means you are running the model twice to see if you get the same
model parameters

Processors=2;

Model:

%WITHIN%

sb | Burn on Work (b);

Burn on Dem;

Work on Dem (a);

%BETWEEN%

Work Dem Burn with Work Dem Burn;

sb; (b1);

sb on CSE (s1);

Output:

Tech1 Tech3 Tech8 cinterval sampstat;

Appendix F: Syntax, Supplemental Examinations at the Dimension-Level

Mediation

TITLE: Workaholism Dimension Level Mediation Analysis_05222024

DATA: File is ModMedAnalyses_05132024.csv;

VARIABLE: Names =

PID

Day

Dem_G

DemQ_G

DemC_G

DemE_G

Work_G

WorkM_G

WorkC_G

WorkE_G

WorkB_G

Burn_G

BurnPF_G

BurnCW_G

BurnEE_G

Dem

DemQ

DemC

DemE

Work

WorkM

WorkC

WorkE

WorkB

Burn

BurnPF

BurnCW

BurnEE

Auto

SSup

CoSup

CSE

Dem_T1

DemQ_T1

DemC_T1

DemE_T1

Work_T1

WorkM_T1
WorkC_T1
WorkE_T1
WorkB_T1
Burn_T1
BurnPF_T1
BurnCW_T1
BurnEE_T1;

Usevariables are Dem WorkM WorkC WorkE WorkB Burn;

Missing are all (-999);

Cluster = PID;

WITHIN = ;
BETWEEN = ;

DEFINE:
Center Dem WorkM WorkC WorkE WorkB (grandmean);

ANALYSIS:
TYPE = twolevel;
Estimator is mlr;

MODEL:
%WITHIN%
WorkM on Dem; !path a
Burn on WorkM; !path b
Burn on Dem; !path c

WorkC on Dem; !path a
Burn on WorkC; !path b
Burn on Dem; !path c

WorkE on Dem; !path a
Burn on WorkE; !path b
Burn on Dem; !path c

WorkB on Dem; !path a
Burn on WorkB; !path b
Burn on Dem; !path c

%BETWEEN%
[WorkM]; [Dem]; [Burn];

WorkM Dem Burn; !this is assuming that they vary between persons but are not related at the between person level

WorkM Dem Burn with WorkM Dem Burn; !covariances

[WorkC]; [Dem]; [Burn];

WorkC Dem Burn; !this is assuming that they vary between persons but are not related at the between person level

WorkC Dem Burn with WorkC Dem Burn; !covariances

[WorkE]; [Dem]; [Burn];

WorkE Dem Burn; !this is assuming that they vary between persons but are not related at the between person level

WorkE Dem Burn with WorkE Dem Burn; !covariances

[WorkB]; [Dem]; [Burn];

WorkB Dem Burn; !this is assuming that they vary between persons but are not related at the between person level

WorkB Dem Burn with WorkB Dem Burn; !covariances

!Work on Dem; !path a

!Burn on Work; !path b

!Burn on Dem; !path c

Model indirect:

Burn ind WorkM Dem;

Burn ind WorkC Dem;

Burn ind WorkE Dem;

Burn ind WorkB Dem;

OUTPUT:

SAMPSTAT TECH1 CINTERVAL;

Random Slope Variance

TITLE: Moderated Mediation Analysis_05222024; random slope var with multidimensional work

DATA: File is ModMedAnalyses_05132024.csv;

Montecarlo:

VARIABLE: Names =

PID

Day

Dem_G

DemQ_G

DemC_G
 DemE_G
 Work_G
 WorkM_G
 WorkC_G
 WorkE_G
 WorkB_G
 Burn_G
 BurnPF_G
 BurnCW_G
 BurnEE_G
 Dem
 DemQ
 DemC
 DemE
 Work
 WorkM
 WorkC
 WorkE
 WorkB
 Burn
 BurnPF
 BurnCW
 BurnEE
 Auto
 SSup
 CoSup
 CSE
 Dem_T1
 DemQ_T1
 DemC_T1
 DemE_T1
 Work_T1
 WorkM_T1
 WorkC_T1
 WorkE_T1
 WorkB_T1
 Burn_T1
 BurnPF_T1
 BurnCW_T1
 BurnEE_T1;

Usevariables are Dem WorkM WorkC WorkE WorkB Burn;

Missing are all (-999);

Cluster = PID;

WITHIN = ;

BETWEEN = ;

DEFINE:

Center Dem WorkM WorkC WorkE WorkB (grandmean);

Analysis:

TYPE = twolevel random;

estimator=bayes;

algorithm=integration;

ALGORITHM=GIBBS(RW)

!FBITERATIONS=10000; !means you are running the model twice to see if you get the sa

!Processors=2;

Model:

%WITHIN%

sb1 | Burn on WorkM (b1);

Burn on Dem;

WorkM on Dem (a1);

sb2 | Burn on WorkC (b2);

Burn on Dem;

WorkC on Dem (a2);

sb3 | Burn on WorkE (b3);

Burn on Dem;

WorkE on Dem (a3);

sb4 | Burn on WorkB (b4);

Burn on Dem;

WorkB on Dem (a4);

%BETWEEN%

WorkM Dem Burn with WorkM Dem Burn;

sb1;

WorkC Dem Burn with WorkC Dem Burn;

sb2;

WorkE Dem Burn with WorkE Dem Burn;

sb3;

WorkB Dem Burn with WorkB Dem Burn;

sb4;

Output:

Tech1 Tech3 Tech8 cinterval sampstat;

Moderated Mediation: Autonomy

TITLE: Moderated Mediation Analysis AUTONOMY_05222024; random slope with multidimensional workaholism

DATA: File is ModMedAnalyses_05132024.csv;

Montecarlo:

VARIABLE: Names =

PID

Day

Dem_G

DemQ_G

DemC_G

DemE_G

Work_G

WorkM_G

WorkC_G

WorkE_G

WorkB_G

Burn_G

BurnPF_G

BurnCW_G

BurnEE_G

Dem

DemQ

DemC

DemE

Work

WorkM

WorkC

WorkE

WorkB

Burn

BurnPF

BurnCW

BurnEE

Auto

SSup

CoSup

CSE

Dem_T1

DemQ_T1

```

DemC_T1
DemE_T1
Work_T1
WorkM_T1
WorkC_T1
WorkE_T1
WorkB_T1
Burn_T1
BurnPF_T1
BurnCW_T1
BurnEE_T1;

```

Usevariables are Dem WorkM WorkC WorkE WorkB Burn Auto;

Missing are all (-999);

Cluster = PID;

WITHIN = ;

BETWEEN = Auto;

DEFINE:

Center Dem WorkM WorkC WorkE WorkB Auto (grandmean);

Analysis:

TYPE = twolevel random;

estimator=bayes;

algorithm=integration;

ALGORITHM=GIBBS(RW)

!FBITERATIONS=10000; !means you are running the model twice to see if you get the same model parameters

!Processors=2;

Model:

%WITHIN%

sb1 | Burn on WorkM (b1);

Burn on Dem;

WorkM on Dem (a1);

sb2 | Burn on WorkC (b2);

Burn on Dem;

WorkC on Dem (a2);

sb3 | Burn on WorkE (b3);

Burn on Dem;

WorkE on Dem (a3);

sb4 | Burn on WorkB (b4);
Burn on Dem;
WorkB on Dem (a4);

%BETWEEN%
WorkM Dem Burn with WorkM Dem Burn;
sb1; (b1);
sb1 on Auto (s1);

WorkC Dem Burn with WorkC Dem Burn;
sb2; (b2);
sb2 on Auto (s2);

WorkE Dem Burn with WorkE Dem Burn;
sb3; (b3);
sb3 on Auto (s3);

WorkB Dem Burn with WorkB Dem Burn;
sb4; (b4);
sb4 on Auto (s4);

Output:

Tech1 Tech3 Tech8 cinterval sampstat;

Moderated Mediation: Direct Supervisor Support

TITLE: Moderated Mediation Analysis SSUP_05222024; random slope with multidimensional workaholism

DATA: File is ModMedAnalyses_05132024.csv;

Montecarlo:

VARIABLE: Names =

PID

Day

Dem_G

DemQ_G

DemC_G

DemE_G

Work_G

WorkM_G

WorkC_G

WorkE_G

WorkB_G

Burn_G

BurnPF_G

BurnCW_G
 BurnEE_G
 Dem
 DemQ
 DemC
 DemE
 Work
 WorkM
 WorkC
 WorkE
 WorkB
 Burn
 BurnPF
 BurnCW
 BurnEE
 Auto
 SSup
 CoSup
 CSE
 Dem_T1
 DemQ_T1
 DemC_T1
 DemE_T1
 Work_T1
 WorkM_T1
 WorkC_T1
 WorkE_T1
 WorkB_T1
 Burn_T1
 BurnPF_T1
 BurnCW_T1
 BurnEE_T1;

Usevariables are Dem WorkM WorkC WorkE WorkB Burn SSup;

Missing are all (-999);

Cluster = PID;

WITHIN = ;

BETWEEN = SSup;

DEFINE:

Center Dem WorkM WorkC WorkE WorkB SSup (grandmean);

Analysis:

```
TYPE = twolevel random;
estimator=bayes;
algorithm=integration;
ALGORITHM=GIBBS(RW)
!FBITERATIONS=10000; !means you are running the model twice to see if you get the same
model parameters
!Processors=2;
```

Model:

%WITHIN%

sb1 | Burn on WorkM (b1);

Burn on Dem;

WorkM on Dem (a1);

sb2 | Burn on WorkC (b2);

Burn on Dem;

WorkC on Dem (a2);

sb3 | Burn on WorkE (b3);

Burn on Dem;

WorkE on Dem (a3);

sb4 | Burn on WorkB (b4);

Burn on Dem;

WorkB on Dem (a4);

%BETWEEN%

WorkM Dem Burn with WorkM Dem Burn;

sb1; (b1);

sb1 on SSup (s1);

WorkC Dem Burn with WorkC Dem Burn;

sb2; (b2);

sb2 on SSup (s2);

WorkE Dem Burn with WorkE Dem Burn;

sb3; (b3);

sb3 on SSup (s3);

WorkB Dem Burn with WorkB Dem Burn;

sb4; (b4);

sb4 on SSup (s4);

Output:

Tech1 Tech3 Tech8 cinterval sampstat;

Moderated Mediation: Work Colleague Support

TITLE: Moderated Mediation Analysis CoSUP_05222024; random slope with multidimensional workaholism

DATA: File is ModMedAnalyses_05132024.csv;

Montecarlo:

VARIABLE: Names =

PID

Day

Dem_G

DemQ_G

DemC_G

DemE_G

Work_G

WorkM_G

WorkC_G

WorkE_G

WorkB_G

Burn_G

BurnPF_G

BurnCW_G

BurnEE_G

Dem

DemQ

DemC

DemE

Work

WorkM

WorkC

WorkE

WorkB

Burn

BurnPF

BurnCW

BurnEE

Auto

SSup

CoSup

CSE

Dem_T1

DemQ_T1

DemC_T1

DemE_T1

Work_T1

WorkM_T1

WorkC_T1
WorkE_T1
WorkB_T1
Burn_T1
BurnPF_T1
BurnCW_T1
BurnEE_T1;

Usevariables are Dem WorkM WorkC WorkE WorkB Burn CoSup;

Missing are all (-999);

Cluster = PID;

WITHIN = ;
BETWEEN = CoSup;

DEFINE:
Center Dem WorkM WorkC WorkE WorkB CoSup (grandmean);

Analysis:
TYPE = twolevel random;
estimator=bayes;
algorithm=integration;
ALGORITHM=GIBBS(RW)
!FBITERATIONS=10000; !means you are running the model twice to see if you get the same
model parameters
!Processors=2;

Model:
%WITHIN%
sb1 | Burn on WorkM (b1);
Burn on Dem;
WorkM on Dem (a1);

sb2 | Burn on WorkC (b2);
Burn on Dem;
WorkC on Dem (a2);

sb3 | Burn on WorkE (b3);
Burn on Dem;
WorkE on Dem (a3);

sb4 | Burn on WorkB (b4);
Burn on Dem;
WorkB on Dem (a4);

%BETWEEN%

WorkM Dem Burn with WorkM Dem Burn;

sb1; (b1);

sb1 on CoSup (s1);

WorkC Dem Burn with WorkC Dem Burn;

sb2; (b2);

sb2 on CoSup (s2);

WorkE Dem Burn with WorkE Dem Burn;

sb3; (b3);

sb3 on CoSup (s3);

WorkB Dem Burn with WorkB Dem Burn;

sb4; (b4);

sb4 on CoSup (s4);

Output:

Tech1 Tech3 Tech8 cinterval sampstat;

Moderated Mediation: Core Self-Evaluations

TITLE: Moderated Mediation Analysis CSE_05222024; random slope with multidimensional workaholism

DATA: File is ModMedAnalyses_05132024.csv;

Montecarlo:

VARIABLE: Names =

PID

Day

Dem_G

DemQ_G

DemC_G

DemE_G

Work_G

WorkM_G

WorkC_G

WorkE_G

WorkB_G

Burn_G

BurnPF_G

BurnCW_G

BurnEE_G

Dem

DemQ

DemC
DemE
Work
WorkM
WorkC
WorkE
WorkB
Burn
BurnPF
BurnCW
BurnEE
Auto
SSup
CoSup
CSE
Dem_T1
DemQ_T1
DemC_T1
DemE_T1
Work_T1
WorkM_T1
WorkC_T1
WorkE_T1
WorkB_T1
Burn_T1
BurnPF_T1
BurnCW_T1
BurnEE_T1;

Usevariables are Dem WorkM WorkC WorkE WorkB Burn CSE;

Missing are all (-999);

Cluster = PID;

WITHIN = ;

BETWEEN = CSE;

DEFINE:

Center Dem WorkM WorkC WorkE WorkB CSE (grandmean);

Analysis:

TYPE = twolevel random;

estimator=bayes;

algorithm=integration;

ALGORITHM=GIBBS(RW)

!FBITERATIONS=10000; !means you are running the model twice to see if you get the same model parameters

!Processors=2;

Model:

%WITHIN%

sb1 | Burn on WorkM (b1);

Burn on Dem;

WorkM on Dem (a1);

sb2 | Burn on WorkC (b2);

Burn on Dem;

WorkC on Dem (a2);

sb3 | Burn on WorkE (b3);

Burn on Dem;

WorkE on Dem (a3);

sb4 | Burn on WorkB (b4);

Burn on Dem;

WorkB on Dem (a4);

%BETWEEN%

WorkM Dem Burn with WorkM Dem Burn;

sb1; (b1);

sb1 on CSE (s1);

WorkC Dem Burn with WorkC Dem Burn;

sb2; (b2);

sb2 on CSE (s2);

WorkE Dem Burn with WorkE Dem Burn;

sb3; (b3);

sb3 on CSE (s3);

WorkB Dem Burn with WorkB Dem Burn;

sb4; (b4);

sb4 on CSE (s4)

Output:

Tech1 Tech3 Tech8 cinterval sampstat;

Appendix G: Syntax, Supplemental Examinations of Resources on the *a* path

Overall Workaholism: Random Slope Variance

TITLE: Moderated Mediation Analysis_05202024 randslopevar

DATA: File is ModMedAnalyses_05132024.csv;

Montecarlo:

VARIABLE: Names =

PID

Day

Dem_G

DemQ_G

DemC_G

DemE_G

Work_G

WorkM_G

WorkC_G

WorkE_G

WorkB_G

Burn_G

BurnPF_G

BurnCW_G

BurnEE_G

Dem

DemQ

DemC

DemE

Work

WorkM

WorkC

WorkE

WorkB

Burn

BurnPF

BurnCW

BurnEE

Auto

SSup

CoSup

CSE

Dem_T1

DemQ_T1

DemC_T1

DemE_T1

Work_T1

WorkM_T1
WorkC_T1
WorkE_T1
WorkB_T1
Burn_T1
BurnPF_T1
BurnCW_T1
BurnEE_T1;

Usevariables are Dem Work Burn;

Missing are all (-999);

Cluster = PID;

WITHIN = ;
BETWEEN =;

DEFINE:
Center Auto (grandmean);
Center Dem Work (grandmean);

Analysis:
TYPE = twolevel random;
estimator=;
estimator=bayes;
algorithm=integration;
FBITERATIONS=10000;
Processors=2;
!MITER = 50000;
!mconv=0.000000001;

Model:

%WITHIN%
sa | Work on Dem (a); !DV on Mediator
Burn on Dem; !DV on IV
Burn on Work (b); !Mediator on IV

%BETWEEN%
Work Dem Burn with Work Dem Burn; !just covariances
sa;

Output:

Tech1 Tech3 Tech8 cinterval sampstat;

Moderated Mediation: Autonomy

TITLE: Moderated Mediation Analysis AUTONOMY_05202024

DATA: File is ModMedAnalyses_05132024.csv;

Montecarlo:

VARIABLE: Names =

PID

Day

Dem_G

DemQ_G

DemC_G

DemE_G

Work_G

WorkM_G

WorkC_G

WorkE_G

WorkB_G

Burn_G

BurnPF_G

BurnCW_G

BurnEE_G

Dem

DemQ

DemC

DemE

Work

WorkM

WorkC

WorkE

WorkB

Burn

BurnPF

BurnCW

BurnEE

Auto

SSup

CoSup

CSE

Dem_T1

DemQ_T1

DemC_T1

DemE_T1

Work_T1

WorkM_T1

WorkC_T1

WorkE_T1

```
WorkB_T1
Burn_T1
BurnPF_T1
BurnCW_T1
BurnEE_T1;
```

Usevariables are Dem Work Burn Auto;

Missing are all (-999);

Cluster = PID;

WITHIN = ;

BETWEEN = Auto;

DEFINE:

Center Auto (grandmean);

Center Dem Work (grandmean);

Analysis:

TYPE = twolevel random;

estimator=;

estimator=bayes;

algorithm=integration;

FBITERATIONS=10000;

Processors=2;

!MITER = 50000;

!mconv=0.000000001;

Model:

%WITHIN%

sa | Work on Dem (a); !DV on Mediator

Burn on Dem; !DV on IV

Burn on Work (b); !Mediator on IV

%BETWEEN%

Work Dem Burn with Work Dem Burn; !just covariances

sa; (b1);

sa on Auto (s1);

Output:

Tech1 Tech3 Tech8 cinterval sampstat;

Moderated Mediation: Direct Supervisor Support

TITLE: Moderated Mediation Analysis SSup_05202024

DATA: File is ModMedAnalyses_05132024.csv;

Montecarlo:

VARIABLE: Names =

PID

Day

Dem_G

DemQ_G

DemC_G

DemE_G

Work_G

WorkM_G

WorkC_G

WorkE_G

WorkB_G

Burn_G

BurnPF_G

BurnCW_G

BurnEE_G

Dem

DemQ

DemC

DemE

Work

WorkM

WorkC

WorkE

WorkB

Burn

BurnPF

BurnCW

BurnEE

Auto

SSup

CoSup

CSE

Dem_T1

DemQ_T1

DemC_T1

DemE_T1

Work_T1

WorkM_T1

WorkC_T1

WorkE_T1

WorkB_T1

Burn_T1

BurnPF_T1
BurnCW_T1
BurnEE_T1;

Usevariables are Dem Work Burn SSup;

Missing are all (-999);

Cluster = PID;

WITHIN = ;
BETWEEN = SSup;

DEFINE:
Center SSup (grandmean);
Center Dem Work (grandmean);

Analysis:
TYPE = twolevel random;
estimator=;
estimator=bayes;
algorithm=integration;
FBITERATIONS=10000;
Processors=2;
!MITER = 50000;
!mconv=0.000000001;

Model:

%WITHIN%
sa | Work on Dem (a); !DV on Mediator
Burn on Dem; !DV on IV
Burn on Work (b); !Mediator on IV

%BETWEEN%
Work Dem Burn with Work Dem Burn; !just covariances
sa; (b1);
sa on SSup (s1);

Output:
Tech1 Tech3 Tech8 cinterval sampstat;

Moderated Mediation: Work Colleague Support

TITLE: Moderated Mediation Analysis CoSup_05202024

DATA: File is ModMedAnalyses_05132024.csv;

Montecarlo:

VARIABLE: Names =

PID

Day

Dem_G

DemQ_G

DemC_G

DemE_G

Work_G

WorkM_G

WorkC_G

WorkE_G

WorkB_G

Burn_G

BurnPF_G

BurnCW_G

BurnEE_G

Dem

DemQ

DemC

DemE

Work

WorkM

WorkC

WorkE

WorkB

Burn

BurnPF

BurnCW

BurnEE

Auto

SSup

CoSup

CSE

Dem_T1

DemQ_T1

DemC_T1

DemE_T1

Work_T1

WorkM_T1

WorkC_T1

WorkE_T1

WorkB_T1

Burn_T1

BurnPF_T1

BurnCW_T1

BurnEE_T1;

Usevariables are Dem Work Burn CoSup;

Missing are all (-999);

Cluster = PID;

WITHIN = ;

BETWEEN = CoSup;

DEFINE:

Center Auto (grandmean);

Center Dem Work (grandmean);

Analysis:

TYPE = twolevel random;

estimator=;

estimator=bayes;

algorithm=integration;

FBITERATIONS=10000;

Processors=2;

!MITER = 50000;

!mconv=0.000000001;

Model:

%WITHIN%

sa | Work on Dem (a); !DV on Mediator

Burn on Dem; !DV on IV

Burn on Work (b); !Mediator on IV

%BETWEEN%

Work Dem Burn with Work Dem Burn; !just covariances

sa; (b1);

sa on CoSup (s1);

Output:

Tech1 Tech3 Tech8 cinterval sampstat;

Moderated Mediation: Core self-evaluations

TITLE: Moderated Mediation Analysis CSE_05202024

DATA: File is ModMedAnalyses_05132024.csv;

Montecarlo:

VARIABLE: Names =

PID
Day
Dem_G
DemQ_G
DemC_G
DemE_G
Work_G
WorkM_G
WorkC_G
WorkE_G
WorkB_G
Burn_G
BurnPF_G
BurnCW_G
BurnEE_G
Dem
DemQ
DemC
DemE
Work
WorkM
WorkC
WorkE
WorkB
Burn
BurnPF
BurnCW
BurnEE
Auto
SSup
CoSup
CSE
Dem_T1
DemQ_T1
DemC_T1
DemE_T1
Work_T1
WorkM_T1
WorkC_T1
WorkE_T1
WorkB_T1
Burn_T1
BurnPF_T1
BurnCW_T1
BurnEE_T1;

Usevariables are Dem Work Burn CSE;

Missing are all (-999);

Cluster = PID;

WITHIN = ;

BETWEEN = Auto;

DEFINE:

Center CSE (grandmean);

Center Dem Work (grandmean);

Analysis:

TYPE = twolevel random;

estimator=;

estimator=bayes;

algorithm=integration;

FBITERATIONS=10000;

Processors=2;

!MITER = 50000;

!mconv=0.000000001;

Model:

%WITHIN%

sa | Work on Dem (a); !DV on Mediator

Burn on Dem; !DV on IV

Burn on Work (b); !Mediator on IV

%BETWEEN%

Work Dem Burn with Work Dem Burn; !just covariances

sa; (b1);

sa on CSE (s1);

Output:

Tech1 Tech3 Tech8 cinterval sampstat;

Dimension-Level: Random Slope Variance

TITLE: Moderated Mediation Analysis_05222024; random slope var with multidimensional work

DATA: File is ModMedAnalyses_05132024.csv;

Montecarlo:

VARIABLE: Names =

PID
Day
Dem_G
DemQ_G
DemC_G
DemE_G
Work_G
WorkM_G
WorkC_G
WorkE_G
WorkB_G
Burn_G
BurnPF_G
BurnCW_G
BurnEE_G
Dem
DemQ
DemC
DemE
Work
WorkM
WorkC
WorkE
WorkB
Burn
BurnPF
BurnCW
BurnEE
Auto
SSup
CoSup
CSE
Dem_T1
DemQ_T1
DemC_T1
DemE_T1
Work_T1
WorkM_T1
WorkC_T1
WorkE_T1
WorkB_T1
Burn_T1
BurnPF_T1
BurnCW_T1
BurnEE_T1;

Usevariables are Dem WorkM WorkC WorkE WorkB Burn;

Missing are all (-999);

Cluster = PID;

WITHIN = ;

BETWEEN = ;

DEFINE:

Center Dem WorkM WorkC WorkE WorkB (grandmean);

Analysis:

TYPE = twolevel random;

estimator=bayes;

algorithm=integration;

ALGORITHM=GIBBS(RW)

!FBITERATIONS=10000; !means you are running the model twice to see if you get the sa

!Processors=2;

!MITER = 50000;

!mconv=0.000000001;

Model:

%WITHIN%

sa1 | WorkM on Dem (a1);

Burn on Dem;

Burn on WorkM (b1);

sa2 | WorkC on Dem (a2);

Burn on Dem;

Burn on WorkC (b2);

sa3 | WorkE on Dem (a3);

Burn on Dem;

Burn on WorkE (b3);

sa4 | WorkB on Dem (a4);

Burn on Dem;

Burn on WorkB (b4);

%BETWEEN%

WorkM Dem Burn with WorkM Dem Burn;

sa1;

WorkC Dem Burn with WorkC Dem Burn;

sa2;

WorkE Dem Burn with WorkE Dem Burn;
sa3;

WorkB Dem Burn with WorkB Dem Burn;
sa4;

Output:
Tech1 Tech3 Tech8 cinterval sampstat;

Dimension-Level: Moderated Mediation with Autonomy

TITLE: Moderated Mediation Analysis Autonomy_05222024; random slope with
multidimensional work

DATA: File is ModMedAnalyses_05132024.csv;

Montecarlo:

VARIABLE: Names =

PID

Day

Dem_G

DemQ_G

DemC_G

DemE_G

Work_G

WorkM_G

WorkC_G

WorkE_G

WorkB_G

Burn_G

BurnPF_G

BurnCW_G

BurnEE_G

Dem

DemQ

DemC

DemE

Work

WorkM

WorkC

WorkE

WorkB

Burn

BurnPF

BurnCW

```

BurnEE
Auto
SSup
CoSup
CSE
Dem_T1
DemQ_T1
DemC_T1
DemE_T1
Work_T1
WorkM_T1
WorkC_T1
WorkE_T1
WorkB_T1
Burn_T1
BurnPF_T1
BurnCW_T1
BurnEE_T1;

```

Usevariables are Dem WorkM WorkC WorkE WorkB Burn Auto;

Missing are all (-999);

Cluster = PID;

WITHIN = ;

BETWEEN = Auto;

DEFINE:

Center Dem WorkM WorkC WorkE WorkB Auto (grandmean);

Analysis:

TYPE = twolevel random;

estimator=bayes;

algorithm=integration;

ALGORITHM=GIBBS(RW)

!FBITERATIONS=10000; !means you are running the model twice to see if you get the sa

!Processors=2;

!MITER = 50000;

!mconv=0.000000001;

Model:

%WITHIN%

sa1 | WorkM on Dem (a1);

Burn on Dem;

Burn on WorkM (b1);

sa2 | WorkC on Dem (a2);
Burn on Dem;
Burn on WorkC (b2);

sa3 | WorkE on Dem (a3);
Burn on Dem;
Burn on WorkE (b3);

sa4 | WorkB on Dem (a4);
Burn on Dem;
Burn on WorkB (b4);

%BETWEEN%
WorkM Dem Burn with WorkM Dem Burn;
sa1; (a1);
sa1 on Auto (s1); !we want to know if this is meaningful

WorkC Dem Burn with WorkC Dem Burn;
sa2; (a2);
sa2 on Auto (s2); !we want to know if this is meaningful

WorkE Dem Burn with WorkE Dem Burn;
sa3; (a3);
sa3 on Auto (s3); !we want to know if this is meaningful

WorkB Dem Burn with WorkB Dem Burn;
sa4; (a4);
sa4 on Auto (s4); !we want to know if this is meaningful

Output:
Tech1 Tech3 Tech8 cinterval sampstat;

Dimension-Level: Moderated Mediation with Direct Supervisor Support

TITLE: Moderated Mediation Analysis SSup_05222024; random slope with multidimensional work

DATA: File is ModMedAnalyses_05132024.csv;
Montecarlo:
VARIABLE: Names =
PID
Day
Dem_G
DemQ_G
DemC_G
DemE_G

Work_G
 WorkM_G
 WorkC_G
 WorkE_G
 WorkB_G
 Burn_G
 BurnPF_G
 BurnCW_G
 BurnEE_G
 Dem
 DemQ
 DemC
 DemE
 Work
 WorkM
 WorkC
 WorkE
 WorkB
 Burn
 BurnPF
 BurnCW
 BurnEE
 Auto
 SSup
 CoSup
 CSE
 Dem_T1
 DemQ_T1
 DemC_T1
 DemE_T1
 Work_T1
 WorkM_T1
 WorkC_T1
 WorkE_T1
 WorkB_T1
 Burn_T1
 BurnPF_T1
 BurnCW_T1
 BurnEE_T1;

Usevariables are Dem WorkM WorkC WorkE WorkB Burn SSup;

Missing are all (-999);

Cluster = PID;

```
WITHIN = ;  
BETWEEN = SSup;
```

```
DEFINE:  
Center Dem WorkM WorkC WorkE WorkB SSup (grandmean);
```

```
Analysis:  
TYPE = twolevel random;  
estimator=bayes;  
algorithm=integration;  
ALGORITHM=GIBBS(RW)  
!FBITERATIONS=10000; !means you are running the model twice to see if you get the sa  
!Processors=2;  
!MITER = 50000;  
!mconv=0.000000001;
```

Model:

```
%WITHIN%  
sa1 | WorkM on Dem (a1);  
Burn on Dem;  
Burn on WorkM (b1);  
  
sa2 | WorkC on Dem (a2);  
Burn on Dem;  
Burn on WorkC (b2);  
  
sa3 | WorkE on Dem (a3);  
Burn on Dem;  
Burn on WorkE (b3);  
  
sa4 | WorkB on Dem (a4);  
Burn on Dem;  
Burn on WorkB (b4);  
  
%BETWEEN%  
WorkM Dem Burn with WorkM Dem Burn;  
sa1; (a1);  
sa1 on SSup (s1); !we want to know if this is meaningful  
  
WorkC Dem Burn with WorkC Dem Burn;  
sa2; (a2);  
sa2 on SSup (s2); !we want to know if this is meaningful  
  
WorkE Dem Burn with WorkE Dem Burn;  
sa3; (a3);  
sa3 on SSup (s3); !we want to know if this is meaningful
```

WorkB Dem Burn with WorkB Dem Burn;
sa4; (a4);
sa4 on SSUp (s4); !we want to know if this is meaningful

Output:
Tech1 Tech3 Tech8 cinterval sampstat;

Dimension-Level: Moderated Mediation with Work Colleague Support

TITLE: Moderated Mediation Analysis CoSup_05222024; random slope with multidimensional work

DATA: File is ModMedAnalyses_05132024.csv;
Montecarlo:
VARIABLE: Names =
PID
Day
Dem_G
DemQ_G
DemC_G
DemE_G
Work_G
WorkM_G
WorkC_G
WorkE_G
WorkB_G
Burn_G
BurnPF_G
BurnCW_G
BurnEE_G
Dem
DemQ
DemC
DemE
Work
WorkM
WorkC
WorkE
WorkB
Burn
BurnPF
BurnCW
BurnEE
Auto

```

SSup
CoSup
CSE
Dem_T1
DemQ_T1
DemC_T1
DemE_T1
Work_T1
WorkM_T1
WorkC_T1
WorkE_T1
WorkB_T1
Burn_T1
BurnPF_T1
BurnCW_T1
BurnEE_T1;

```

Usevariables are Dem WorkM WorkC WorkE WorkB Burn CoSup;

Missing are all (-999);

Cluster = PID;

WITHIN = ;

BETWEEN = CoSup;

DEFINE:

Center Dem WorkM WorkC WorkE WorkB CoSup (grandmean);

Analysis:

TYPE = twolevel random;

estimator=bayes;

algorithm=integration;

ALGORITHM=GIBBS(RW)

!FBITERATIONS=10000; !means you are running the model twice to see if you get the sa

!Processors=2;

!MITER = 50000;

!mconv=0.000000001;

Model:

%WITHIN%

sa1 | WorkM on Dem (a1);

Burn on Dem;

Burn on WorkM (b1);

sa2 | WorkC on Dem (a2);

Burn on Dem;
Burn on WorkC (b2);

sa3 | WorkE on Dem (a3);
Burn on Dem;
Burn on WorkE (b3);

sa4 | WorkB on Dem (a4);
Burn on Dem;
Burn on WorkB (b4);

%BETWEEN%
WorkM Dem Burn with WorkM Dem Burn;
sa1; (a1);
sa1 on CoSup (s1); !we want to know if this is meaningful

WorkC Dem Burn with WorkC Dem Burn;
sa2; (a2);
sa2 on CoSup (s2); !we want to know if this is meaningful

WorkE Dem Burn with WorkE Dem Burn;
sa3; (a3);
sa3 on CoSup (s3); !we want to know if this is meaningful

WorkB Dem Burn with WorkB Dem Burn;
sa4; (a4);
sa4 on CoSup (s4); !we want to know if this is meaningful

Output:
Tech1 Tech3 Tech8 cinterval sampstat;

Dimension-Level: Moderated Mediation with Core Self-Evaluations

TITLE: Moderated Mediation Analysis CSE_05222024; random slope with multidimensional work

DATA: File is ModMedAnalyses_05132024.csv;
Montecarlo:
VARIABLE: Names =
PID
Day
Dem_G
DemQ_G
DemC_G
DemE_G
Work_G

WorkM_G
 WorkC_G
 WorkE_G
 WorkB_G
 Burn_G
 BurnPF_G
 BurnCW_G
 BurnEE_G
 Dem
 DemQ
 DemC
 DemE
 Work
 WorkM
 WorkC
 WorkE
 WorkB
 Burn
 BurnPF
 BurnCW
 BurnEE
 Auto
 SSup
 CoSup
 CSE
 Dem_T1
 DemQ_T1
 DemC_T1
 DemE_T1
 Work_T1
 WorkM_T1
 WorkC_T1
 WorkE_T1
 WorkB_T1
 Burn_T1
 BurnPF_T1
 BurnCW_T1
 BurnEE_T1;

Usevariables are Dem WorkM WorkC WorkE WorkB Burn CSE;

Missing are all (-999);

Cluster = PID;

WITHIN = ;

BETWEEN = CSE;

DEFINE:

Center Dem WorkM WorkC WorkE WorkB CSE (grandmean);

Analysis:

TYPE = twolevel random;

estimator=bayes;

algorithm=integration;

ALGORITHM=GIBBS(RW)

!FBITERATIONS=10000; !means you are running the model twice to see if you get the sa

!Processors=2;

!MITER = 50000;

!mconv=0.000000001;

Model:

%WITHIN%

sa1 | WorkM on Dem (a1);

Burn on Dem;

Burn on WorkM (b1);

sa2 | WorkC on Dem (a2);

Burn on Dem;

Burn on WorkC (b2);

sa3 | WorkE on Dem (a3);

Burn on Dem;

Burn on WorkE (b3);

sa4 | WorkB on Dem (a4);

Burn on Dem;

Burn on WorkB (b4);

%BETWEEN%

WorkM Dem Burn with WorkM Dem Burn;

sa1; (a1);

sa1 on CSE (s1); !we want to know if this is meaningful

WorkC Dem Burn with WorkC Dem Burn;

sa2; (a2);

sa2 on CSE (s2); !we want to know if this is meaningful

WorkE Dem Burn with WorkE Dem Burn;

sa3; (a3);

sa3 on CSE (s3); !we want to know if this is meaningful

WorkB Dem Burn with WorkB Dem Burn;
sa4; (a4);
sa4 on CSE (s4); !we want to know if this is meaningful

Output:
Tech1 Tech3 Tech8 cinterval sampstat;

Appendix H: Tables

Table 1

Correlations, reliabilities, and descriptive statistics among study variables

Variable	M_w	SD_w	M_b	SD_b	ICC	1	2	3	4	5	6	7	8	9	10	11
Level 1 variables																
1. Demands	3.20	1.12	3.19	1.29	.67	.91	.40	.22	.40	.34	.38	.43	-.08	-.14	-.06	-.19
2. Workaholism	3.28	1.18	3.28	1.36	.69	.28	.95	.82	.89	.79	.83	.00	.11	.08	.07	.09
3. Workaholism (Motivational)	4.06	1.47	4.05	1.72	.65	.16	.76	—	.64	.52	.57	-.15	.18	.15	.09	.23
4. Workaholism (Cognitive)	3.16	1.38	3.16	1.62	.64	.26	.83	.55	—	.66	.67	.07	.06	.05	.05	.01
5. Workaholism (Emotional)	2.50	1.19	2.50	1.41	.63	.21	.72	.39	.51	—	.51	.12	-.03	.01	.06	-.05
6. Workaholism (Behavioral)	3.39	1.48	3.40	1.74	.64	.25	.78	.41	.52	.43	—	-.01	.13	.04	.04	.08
7. Burnout	2.68	1.22	2.67	1.41	.70	.18	-.01	-.07	.05	.00	.00	.97	-.25	-.29	-.17	-.50
Level 2 variables																
8. Autonomy	—	—	5.43	1.17	—	—	—	—	—	—	—	—	.90	.41	.29	.40
9. Supervisor Support	—	—	3.13	.76	—	—	—	—	—	—	—	—	—	.96	.48	.37
10. Coworker Support	—	—	3.13	.70	—	—	—	—	—	—	—	—	—	—	.96	.24
11. Core self-evaluations	—	—	5.14	1.18	—	—	—	—	—	—	—	—	—	—	—	.93

Note. Within-person correlations, reflected below the diagonal line, are based on $N = 1850$ (demands), $N = 1816$ (workaholism and burnout), and $N = 1955$ (autonomy, supervisor support, coworker support, and core self-evaluations). Within-person level constructs were person-mean centered (demands, workaholism, and burnout). Between-person correlations, reflected above the diagonal line, are based on $N = 391$. Correlations in bold are significant at $p < .05$, and those in bold and italicized are significant at $p < .01$. Means and standard deviation subscripts indicate those based on within- and between-person scores. Coefficient alphas of the full measures are reflected in the diagonal line.

Table 2***Variance Components of Null Model for Level 1 Variables***

Variable	Within- individual variance (ρ^2)	Between- individual variance (τ_{00})	Percentage of variability within-individual	Design Effect
Demands	.55*	1.12*	33%	3.51
Workaholism	.57*	1.27*	31%	3.52
Workaholism (M)	1.03*	1.92*	35%	3.37
Workaholism (C)	.93*	1.69*	35%	3.35
Workaholism (E)	0.74*	1.26*	37%	3.29
Workaholism (B)	1.09*	1.94*	36%	3.34
Burnout	.60*	1.36*	31%	3.53

Note. Workaholism dimensions: (M) = motivational; (C) = cognitive; (E) = emotional; (B) = behavioral. Percentage of variability within-individual was computed as $\rho^2/(\rho^2 + \tau_{00})$. Design effects computed as $1 + (\text{average cluster size} - 1) \text{ICC}$. A design effect of ≤ 2.0 likely indicates that the observations are mostly independent of level 2 units, so > 2.0 is desirable. * $p < .0$

Table 3***Multilevel Path Analysis Results for the Within-Person Mediation Model***

Variable	Mediation model			
	Estimate	S.E.	<i>t</i>	<i>p</i>
Intercept				
Demands	.012	.056	.205	.838
Workaholism	-.003	.060	-.047	.963
Burnout	2.673	.062	43.318	.000
Direct Effects				
Workaholism as DV				
Demands	.291	.040	7.311	.000
Burnout as DV				
Workaholism	-.065	.044	-1.487	.137
Demands	.211	.037	5.635	.000
Indirect effect				
Demands on Burnout	-.019	.013	-1.487	.137

Notes. Level 1 ($N = 1917$). Clustered by Prolific ID ($N = 391$). Level 1 and 2 predictors were grand mean centered. Unstandardized estimates included.

Table 4a***Multilevel Path Analysis Results for the Cross-Level Moderated Mediation Model***

Variable	Moderated mediation model			
	Estimate	Posterior S.D.	95% CI	<i>p</i>
<i>Autonomy</i>				
Intercept				
Demands	.013	.057	[-.096, .125]	.415
Workaholism	-.001	.061	[-.118, .119]	.496
Burnout	2.672	.063	[2.547, 2.795]	.000
Burnout on Workaholism (SB)	-.029	.036	[-.097, .043]	.215
Within-level				
Workaholism as DV				
Demands	.293	.027	[.239, .344]	.000
Burnout as DV				
Demands	.189	.029	[.133, .246]	.000
Between-level				
SB on Auto	-.005	.029	[-.062, .052]	.435
Workaholism with				
Demands	.568	.075	[.433, .728]	.000
Burnout	-.007	.076	[-.160, .140]	.459
Demands with				
Burnout	.658	.079	[.516, .823]	.000

Notes. Level 1 ($N = 1917$). Clustered by Prolific ID ($N = 391$). Level 1 and 2 predictors were grand mean centered. Unstandardized estimates included. The *p*-values and significance markers above are based on Bayesian estimation. Auto = Autonomy. SB = slope of workaholism to burnout.

Table 4b

Multilevel Path Analysis Results for the Cross-Level Moderated Mediation Model

Variable	Moderated mediation model			
	Estimate	Posterior S.D.	95% CI	<i>p</i>
<i>Direct Supervisor Support</i>				
Intercept				
Demands	.013	.057	[-.096, .125]	.414
Workaholism	.000	.061	[-.118, .118]	.497
Burnout	2.672	.063	[2.547, 2.794]	.000
Burnout on Workaholism (SB)	-.029	.036	[-.097, .043]	.218
Within-level				
Workaholism as DV				
Demands	.293	.027	[.239, .344]	.000
Burnout as DV				
Demands	.189	.029	[.133, .246]	.000
Between-level				
SB on DSSup	.005	.047	[-.087, .096]	.461
Workaholism with				
Demands	.568	.075	[.433, .728]	.000
Burnout	-.007	.076	[-.160, .140]	.460
Demands with				
Burnout	.658	.079	[.516, .823]	.000

Notes. Level 1 ($N = 1917$). Clustered by Prolific ID ($N = 391$). Level 1 and 2 predictors were grand mean centered. Unstandardized estimates included. The *p*-values and significance markers above are based on Bayesian estimation. DSSup = Direct supervisor support. SB = slope of workaholism to burnout.

Table 4c

Multilevel Path Analysis Results for the Cross-Level Moderated Mediation Model

Variable	Moderated mediation model			
	Estimate	Posterior S.D.	95% CI	<i>p</i>
<i>Work Colleague Support</i>				
Intercept				
Demands	.013	.057	[-.096, .125]	.413
Workaholism	.000	.061	[-.118, .119]	.500
Burnout	2.672	.063	[2.547, 2.794]	.000
Burnout on Workaholism (SB)	-.030	.036	[-.097, .043]	.213
Within-level				
Workaholism as DV				
Demands	.293	.027	[.239, .344]	.000
Burnout as DV				
Demands	.189	.029	[.133, .246]	.000
Between-level				
SB on WCSup	.052	.051	[-.048, .152]	.152
Workaholism with				
Demands	.568	.075	[.432, .728]	.000
Burnout	-.007	.076	[-.160, .140]	.457
Demands with				
Burnout	.658	.079	[.515, .823]	.000

Notes. Level 1 ($N = 1917$). Clustered by Prolific ID ($N = 391$). Level 1 and 2 predictors were grand mean centered. Unstandardized estimates included. The *p*-values and significance markers above are based on Bayesian estimation. WCSup = Work colleague support. SB = slope of workaholism to burnout.

Table 4d***Multilevel Path Analysis Results for the Cross-Level Moderated Mediation Model***

Variable	Moderated mediation model			
	Estimate	Posterior S.D.	95% CI	<i>p</i>
<i>Core self-evaluations</i>				
Intercept				
Demands	.014	.057	[-.096, .126]	.409
Workaholism	.002	.061	[-.115, .121]	.483
Burnout	2.671	.063	[2.546, 2.793]	.000
Burnout on Workaholism (SB)	-.022	.036	[-.090, .051]	.282
Within-level				
Workaholism as DV				
Demands	.293	.027	[.240, .345]	.000
Burnout as DV				
Demands	.189	.029	[.133, .246]	.000
Between-level				
SB on CSE	.056	.031	[-.004, .116]	.033
Workaholism with				
Demands	.568	.075	[.432, .727]	.000
Burnout	-.006	.076	[-.159, .141]	.467
Demands with				
Burnout	.659	.079	[.517, .824]	.000

Notes. Level 1 ($N = 1917$). Clustered by Prolific ID ($N = 391$). Level 1 and 2 predictors were grand mean centered. Unstandardized estimates included. The p -values and significance markers above are based on Bayesian estimation. CSE = core self-evaluations. SB = slope of workaholism to burnout.