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Title

**Mindfulness Buffers the Deleterious Effects of Workaholism for Work-Family Conflict**

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**Conflict of interest**

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## 1. Introduction

Work is a determinant of health. With continuous changes in the nature of work, ongoing research is needed to preserve workers' well-being (Sorensen et al., 2021). Workaholism — a “compulsion or uncontrollable need to work incessantly” (Oates, 1971, p. 11) — is an increasingly prevalent form of addiction within the modern workforce. This pervasiveness is further amplified by the proliferation of new technologies that facilitate constant connectivity to work (Molino et al., 2019) and by the increased teleworking prompted by the COVID-19 pandemic (Buomprisco et al., 2021). It is thus not surprising that today's workers are reporting unprecedented levels of conflict between their work and family roles (work/family conflict; WFC) (Huml et al., 2021).

Although much workaholism research has enumerated its negative outcomes (such as WFC; Bakker et al., 2004), less has focused on the potential efficacy of strategies workaholics may use to cope with their work-obsessed tendencies (Karapinar et al., 2020). Scholars have called for a focused exploration of the mechanisms which may help mitigate the negative effects of workaholism on WFC (Shimazu et al., 2020; Torp et al., 2018). Practices that promote self-regulation (such as mindfulness) may hold particular promise for helping workaholics reduce behaviors known to exacerbate instances of WFC. Such practices may help individuals more appropriately allocate their finite cognitive, emotional, and motivational resources, and thus reduce instances of WFC and increase performance in both domains (Grawitch et al., 2010).

### *1.1. Workaholism and work-family conflict*

Grounded in role stress and inter-role conflict theories (Kahn et al., 1964), WFC is characterized as “a form of inter-role conflict in which the role pressures from the work and

family domains are mutually incompatible in some respect” (Greenhaus and Beutell, 1985, p. 77). WFC research has well-documented the instances of conflict between work and non-work domains brought about by time, strain, and/or behavior-based interferences (Carlson et al., 2000). Excessive work hours, work role overload, and workplace stressors are key antecedents of WFC (Bakker et al., 2004; Peter et al., 2016). Whether given the choice of where to spend the balance of their finite resources or because they feel compelled by work urgency to do so, workaholics consistently choose to invest their resources in work rather than family (Snir and Zohar, 2008). Altogether, it makes sense that workaholism amplifies the incidence of WFC (Andreassen et al., 2014), a notion supported by studies evidencing a positive link between workaholism and WFC (Brady et al., 2008), as well as those reporting workaholics experience significantly more WFC than do their nonworkaholic counterparts (Bonebright et al., 2000; Schaufeli et al., 2009).

Conservation of resources theory (COR; Hobfoll, 1989) — which has been used extensively within the management literature and which has been particularly impactful within stress-related research (Peter et al., 2016; Tsukerman et al., 2020) — provides a useful lens through which to understand how workaholic tendencies may result in WFC (Bakker et al., 2013; Molino et al., 2015; Shimazu et al., 2011). According to COR theory, resources (objects, personal characteristics, conditions, or energies; Hobfoll, 1989) are finite and must be allocated in ways that are likely to precipitate their renewal. When resource allocation is not followed by sufficient resource renewal, stress arises (Halbesleben et al., 2014). As such, individuals seek “to retain, protect, and build resources” and are threatened by “the potential or actual loss of these valued resources” (Hobfoll, 1989, p. 516). COR theory would suggest workaholism reflects a misallocation of finite resources — whether time-, behavior-, or strain-based — that ultimately exacerbates the incidence of WFC.

## *1.2 The ameliorative potential of dispositional mindfulness*

The WFC literature has highlighted the key role of individual dispositions in WFC: negative trait-based variables (e.g., neuroticism) make people more vulnerable to WFC, while positive trait-based variables (e.g., self-efficacy) play a protective role (Allen et al., 2012). Given the present-moment orientation and self-regulation benefits evoked by mindfulness, dispositional mindfulness may be one such positive trait-based variable that may serve as a buffer between workaholism and WFC.

The central characteristic of mindfulness involves focusing on being in the present, in the “here and now” (Herndon, 2008, p.32), rather than being stuck in the past or spending too much time forecasting potential futures (Brown and Ryan, 2003). Mindfulness involves “receptive attention to and awareness of present events and experience” (Brown et al., 2007, p. 212), and can be conceptualized as a trait or dispositional tendency towards being mindful that varies across individuals (Brown and Ryan, 2003). Mindfulness has been defined as a two-component construct, comprising self-regulation of attention and a particular orientation towards one’s experiences that can be characterized by curiosity, openness, and acceptance (Bishop et al., 2004). Mindfulness characterizes a purposeful, non-reactive, non-judgmental awareness (Kabat-Zinn, 2003) where non-judgment refers to not evaluating the experience and non-reactivity refers to non-automatic responses (Baer et al., 2006).

Given its focus on attention, values clarification, and cognitive/emotional/behavioral flexibility, mindfulness may help mitigate the negative impacts of workaholism in several ways. First, mindfulness activates mental and neurobiological processes that improve the self-regulation of thoughts and behaviors (Bishop et al., 2004). Prior research has suggested that good management of the work-life interface is about resource allocation, such that positive and negative outcomes depend on (in)effective management of finite personal

resources (Grawitch and Barber, 2010). Thanks to good self-regulation capacities, mindful workers benefit from greater control over when, where, and how they want to allocate their personal resources. Faced with a variety of demands emerging from different life domains, mindful workers implement active processes of prioritizing and (re)organizing demands, thus experiencing greater autonomy. Less mindful workers rely on more passive processes of resource allocation and are more likely to let immediate demands supersede their preferences, ultimately perceiving less control over unwanted outcomes.

Second, mindfulness may be beneficial in helping a workaholic cope with the stress and negative mood generated by over-investment in work. A recent study highlighted the long-term mental impairment caused by workaholism, such as job-related negative affect and mental distress (Balducci et al., 2018). Research has further demonstrated that mindfulness improves mood in clinical and non-clinical settings (Speca et al., 2000), particularly through attentional control (Baer, 2003), which allows one to sustain attention to an object and resist unwanted negative thoughts or behaviors. Van Gordon and colleagues (2017) suggested that by focusing attentional resources on the present moment, mindfulness may counterbalance the goal-based working tendencies of workaholics. Indeed, recent studies confirmed the negative relationship between workaholism and trait mindfulness (Aziz et al., 2021; Liu et al., 2020) as well as the protective role of trait mindfulness against addictive behaviors through behavioral regulation and its usefulness in coping with uncontrolled usages and cravings (Demetrovics and Griffiths, 2012). Dispositional mindfulness has been associated with a reduction in severe gambling outcomes (Lakey et al., 2007), problematic Internet use (Mazzoni et al., 2017), and smartphone addiction (Owen et al., 2018), likely as a function of an improved sense of self-control and emotion regulation. In sum, we argue that trait mindfulness is a personal characteristic that contributes to greater self-regulation and thus may play a salutary role in the relationship between workaholism and WFC.

### *1.3 The ameliorative potential of mindfulness practice*

Historically, scholars have recommended recreational activities (such as sport; Bakker et al., 2013; Balducci et al., 2018) and other preventive intervention and treatment programs (such as cognitive behavioral therapy approaches; Aziz and Zickar, 2006) as methods by which workaholics could develop coping skills to deal with the negative effects of their work-obsessive tendencies. Still, except for Bakker and colleagues (2013), who evidenced the positive effects of exercise (as opposed to working) on well-being during nonwork time for workaholics, scant empirical study has focused on how to minimize workaholism or mitigate its effects.

More recently, mindfulness-based interventions (MBIs) have been proposed as potentially effective tools for reducing the workaholics' experience of WFC (Williamson and Clark, 2015). MBIs are designed to train participants with self-management techniques to cultivate mindfulness (Bawa et al., 2021), ultimately promoting psychological and physical health (Xie et al., 2021). Indeed, beyond a natural disposition towards mindfulness (mindful personality trait), mindfulness skills can also be developed through MBIs (Baer et al., 2009). Through mindfulness practice, workaholics can learn the self-regulatory mechanisms that may change the beliefs and attitudes that promote their work obsession as well as balance their decision-making process for allocating their finite time-, emotion-, and behavioral resources. MBIs have the potential to result in positive workplace outcomes such as recovery from work-related stress (Hülshager et al., 2015), as well as emotion regulation and job satisfaction (Hülshager et al., 2013). MBIs have also been found to be effective as a treatment for other addictions, such as substance misuse (Li et al., 2017), problem gambling (Lahey et al., 2007), or smartphone addiction (Owen et al., 2018).

Kiburz and colleagues (2017) examined the effectiveness of a brief MBI consisting of a one-hour mindfulness-based workshop followed by 13 days of behavioral self-monitoring on both mindfulness and WFC. Using a baseline and two post-intervention designs, they found a significant increase in mindfulness and a significant decrease in WFC from pre- to post-intervention. Similar significant reductions of strain-based WFC were found by Michel et al., (2014) who used a randomized waitlist control group design to evaluate the effects of a three-week online intervention at pre-intervention, post-intervention, and two-week follow-up.

Not all mindfulness practitioners have experienced MBI. It is not uncommon, for example, for individuals to practice mindfulness meditation through the support of apps (such as Insight Timer or Headspace) rather than having participated in formalized training. Accounting for the unprecedented surge in meditation apps since the onset of the COVID-19 pandemic (Lerman, 2020), one cannot disregard the investigation of regular mindfulness practice that has not been informed by extended training. Regardless of its rigor, regular mindfulness practice is similarly likely to be a potential buffer between workaholism and WFC.

#### ***1.4 The current research***

We conducted two studies to explore the potential mindfulness may play a mitigating role in the relationship between workaholism and WFC. Study 1 focuses on dispositional mindfulness as a moderator in the relationship between workaholism and WFC. In Study 2, we focus on mindfulness practice — whether formally trained or not — as a means of buffering the negative relationship between workaholism and WFC. Study 2a investigates the moderating role of mindfulness practice by comparing workers who regularly practice mindfulness meditation (defined herein as engaging in mindfulness meditation at least once



per week) but received no formal mindfulness training to those who report that they never or scarcely ever practice mindfulness meditation. Study 2b focuses on the potential of formal mindfulness training (Mindfulness-Based Stress Reduction; MBSR) to augment the role of mindfulness practice in moderating the link between workaholism and WFC. We compare the strength of the workaholism-WFC relationship for regular mindfulness practitioners who have been formally trained in MBSR with those that regularly practice mindfulness but have not been so trained.

Our two studies aim to test the following hypotheses regarding the potential protective role of mindfulness against the deleterious effects of workaholic tendencies for WFC:

**Hypothesis 1** Workaholism is directly and positively related to WFC. (Study 1)

**Hypothesis 2.** Trait mindfulness moderates the positive relationship between workaholism and WFC such that greater levels of trait mindfulness are associated with a weaker relationship between workaholism and WFC. (Study 1)

**Hypothesis 3.** Regular (at least weekly) mindfulness practice moderates the positive relationship between workaholism and WFC, such that this positive relationship is stronger for individuals who do not practice mindfulness than for those who do practice. (Study 2a)

**Hypothesis 4.** Attending a formal MBI training (in this case, MBSR) moderates the positive relationship between workaholism and WFC, such that among two groups of people who regularly (at least weekly) practice mindfulness, the positive relationship will be stronger for individuals who have not been formally trained in MBSR than for those who have been so trained. (Study 2b)

## 2. Study 1

## **2.1 Methods**

### **2.1.1. Sample and Procedures**

We followed a purposive sampling method to identify employed professionals in the alumni records of two well-regarded business schools in France. We selected the contacts whose email addresses were confirmed within the prior year to minimize the distribution of surveys to inactive email addresses. Of the 3,000 questionnaires initially distributed, 475 were returned, resulting in a response rate of 16%. Respondents were excluded when they were not currently working or had failed to complete the survey. Further, to allow us to tease apart dispositional from behavioral mindfulness, we excluded responses when participants reported having received mindfulness training or practicing some sort of meditation. The final dataset comprised 307 currently working adults. Table 1 reports sample demographics. Respondents gave their informed consent and responded to the survey anonymously, without any financial incentives.

### **2.1.2. Measures**

The 15-item Mindfulness Attention and Awareness Scale (MAAS; Brown and Ryan, 2003) was used to assess dispositional mindfulness. Responses were made using a 6-point Likert-type scale ranging from (1) almost always to (6) almost never. A sample item includes “I find it difficult to stay focused on what’s happening in the present.” (Cronbach’s  $\alpha = 0.85$ ).

Workaholism was measured with the 10-item Dutch Workaholism Scale (DUWAS) developed by Schaufeli et al. (2008). The scale consists of two subscales: Working Excessively (e.g., “It is hard for me to relax when I’m not working”) and Working Compulsively (e.g., “I feel obliged to work hard, even when it’s not enjoyable”). Participants answered using a Likert-type scale ranging from (1) not at all true to (6) totally true. Since

prior research has shown that both components contribute similarly to the workaholic syndrome (Schaufeli et al., 2009), an overall workaholism score was obtained. (Cronbach's  $\alpha = 0.78$ ).

We used Netemeyer et al.'s (1996) 5-item measure of work-family conflict with 6-point Likert-type anchors ranging from (1) strongly disagree to (6) strongly agree. Sample items include "The demands of my work interfere with my home and family life" and "The amount of time my job takes up makes it difficult to fulfill family responsibilities." (Cronbach's  $\alpha = 0.89$ ).

### ***2.1.3. Statistical Analysis***

We used SPSS 27.0, testing assumptions of normality and multicollinearity, to analyze our data. We conducted descriptive analyses to determine the characteristics of the study sample. H1 was assessed using structural equation modeling (SEM) techniques with AMOS 26.0 using full information maximum likelihood estimation (FIML) with missing values estimation. We used the following criteria for configural invariance:  $\chi^2$  and degrees of freedom ( $\chi^2/df < 5$ ), Tucker–Lewis Index (TLI  $> 0.90$ ), comparative fit index (CFI  $> 0.90$ ), and root mean square error of approximation (RMSEA  $< 0.10$ ) (Vandenberg and Lance, 2000).

To examine the moderating effect of trait mindfulness (H2), we used the SPSS macros developed by Preacher et al. (2007) (Model 1), thus allowing us to avoid dichotomizing continuous variables, a practice which has negative consequences (e.g., loss of effect size and power in the case of bivariate relationships; loss of effect size and power; Fitzsimons, 2008; Irwin and McClelland, 2003; MacCallum, R.C., et al., 2002). The effect estimations rely on bootstrapping with 2,000 samples and 95% bias-corrected confidence intervals. Age, gender,

education, marital status, number of children, management level, and working hours were included in the analysis as observable controls.

## 2.2. Results

*Measurement model.* Table 2 reports the internal consistency reliabilities (coefficient alphas), variable inter-correlations, and convergent validities for all study variables. Trait mindfulness was significantly negatively related to both workaholism (-0.13) and WFC (-0.49). The composite reliability coefficients (Cronbach's  $\alpha$ s > 0.70), internal convergent validity ( $\rho_{hvc}$  > 0.50), and discriminant validities were acceptable (Fornell and Larcker, 1981).

We conducted exploratory and confirmatory analyses among the 30 scale items representing three factors: (1) 15 items for trait mindfulness, (2) 10 items for workaholism, and (3) 5 items for WFC. Most of the fitting indexes were within, or close to, the reasonable range (Table 3, Model 1), providing support for the three-factor structure.

*Structural model.* The SEM model for Study 1 indicated an acceptable fit for the full model ( $\chi^2 = 180.60$ ,  $df = 52$ ,  $p < 0.001$ ; adjusted  $\chi^2 = 3.47$ ; CFI = 0.91, TLI = 0.92, RMSEA = 0.06, Table 3, Model 6). Workaholism is positively related to WFC ( $\beta = 0.25$ ;  $t = 3.92$ ,  $p < 0.001$ ), in support of H1.

Next, we ran PROCESS Model 1 (Hayes, 2018) to examine the moderating role of trait mindfulness (H2). After covariates were controlled, the results support the hypothesized negative interactive effect of trait mindfulness and workaholism (effect = -0.14,  $t = -2.39$ , [-0.27; -0.02],  $p < 0.05$ ) on WFC. This relationship indicates that the greater the level of mindfulness, the weaker the relationship between workaholism and WFC.

### **3. Study 2**

Study 2 extends Study 1 by investigating the moderating benefits of regular mindfulness practice (2a) and mindfulness training (2b) for diminishing the negative implications of workaholism for WFC and hypothesizes that having attended a sound MBI (herein the MBSR) augments the benefits of regular meditation practice in the workaholism-WFC relationship.

#### ***3.1. Methods***

##### ***3.1.1. Sample and Procedures***

To test H3 and H4, we collected data from three groups of working adults. Group 1 comprised a group of working adults who reported not practicing mindfulness meditation nor having attended a mindfulness training program (non-practitioners). Group 2 comprised a group of working adults who reported regularly engaging in mindfulness practice but had not attended an MBSR training program (untrained practitioners). Group 3 comprised a group of working adults who reported regularly practicing mindfulness and having attended MBSR training (trained practitioners). The use of these three groups allowed us to tease apart the role of mindfulness training in the ameliorative effects of mindfulness practice. To reach potential participants, we contacted five MBSR-certified instructors who had received certifications from the Center for Mindfulness (CFM) at the University of Massachusetts and asked those experts to send our questionnaire to their contact lists. In total, 1,104 questionnaires were returned (response rate 35.5%). Respondents who failed to complete the survey, as well as those who reported that they were not currently working, were excluded from the sample. Depending upon their reported mindfulness practice and training experience, we allocated respondents to one of the three groups for analysis. Group 1 (non-

practitioners) comprised 202 workers. Group 2 (untrained practitioners) comprised 258 workers. Group 3 (trained practitioners) comprised 255 workers. We excluded 268 participants who reported having completed MBSR training but who were not practicing mindfulness regularly (herein, at least weekly). Respondents gave their informed consent and responded to the survey anonymously and without financial inducements. Table 1 shows the full profile of the respondents.

Multivariate analysis of variance (MANOVA) results indicate no significant differences across the three groups in terms of participants' demographic characteristics ( $F(4, 816) = 2.06, p = 0.12, \text{Wilks' Lambda} = 0.99, \text{effect size} = 0.01$ ). Further, univariate analysis of variance (ANOVAs) results indicates no significant differences in age ( $F = 1.50, p = 0.26$ ), gender ( $F = 0.47, p = 0.50$ ), education ( $F = 1.99, p = 0.15$ ), marital status ( $F = 1.98, p = 0.14$ ), or trait mindfulness ( $F = 1.70; p = 0.25$ ; Group 1 — non practitioners = 3.88; Groupe 2 — untrained practitioners = 3.91; Group 3- trained practitioners = 3.93). Our findings confirmed that the three groups are comparable, thus providing confidence that we can test our hypotheses and theoretical model.

### **3.1.2. Measures**

We used the same measurement scales as those in Study 1, including the MAAS (Brown and Ryan, 2003), the Dutch Workaholism Scale (DUWAS; Schaufeli et al., 2008), and the WFC scale (Netemeyer et al., 1996). Cronbach's  $\alpha$ s were  $> 0.73$  for each scale across the three groups.

*MBSR training.* To maximize validity, we operationalized mindfulness training narrowly as the Mindfulness-Based Stress Reduction program (MBSR; Kabat-Zinn, 1982), because amongst MBIs, MBSR is recognized as having a rigorous protocol and is the most

investigated (Chaskalson and Hadley, 2015). MBSR programs are typically implemented over the course of eight weeks of instruction in mindfulness meditation with the incorporation of mindful yoga and group discussions to facilitate the development of a tendency toward awareness. The programs typically conclude with a silent retreat aimed at cultivating a mindful attitude. We asked respondents whether they had undertaken MBSR training with a yes/no question.

*Mindfulness practice.* We asked the respondents how much time they spent practicing mindfulness meditation using the following frequency scale: 1 = never; 2 = a few times a year; 3 = every 2-3 months; 4 = at least weekly or several times a week; 5 = daily.

Respondents were allocated into the groups based on the following rules: Group 1 (non-practitioners) had not attended MBSR and reported mindfulness practice answers 1, 2, or 3. Group 2 (untrained practitioners) had not attended MBSR and reported mindfulness practice answers 4 or 5. Group 3 (trained practitioners) had attended MBSR and reported mindfulness practice answers 4 or 5.

### **3.1.3. Statistical Analysis**

*Measurement model.* We checked for configural (factor structure) and metric (factor loading) invariance across the three groups using Multi-Group Confirmatory Factor Analysis (MGCFA). Each of them achieved configural invariance. To test for metric invariances, we set as equal all of the factor loadings across groups in a constrained multi-group CFA (Table 3 — Models 2 and 3 for Study 2a; Models 4 and 5 for Study 2b). As evidence of metric invariance, the constrained and unconstrained models do not differ ( $\Delta\text{CFI}/\Delta\text{RMSEA} < 0.01$ ) (Cheung and Rensvold, 2002).

*Structural model.* To test for the moderating effects of regular mindfulness practice (H3) and mindfulness training (H4), we used multi-group analyses with the software AMOS 26.0 to run SEM with maximum likelihood with missing values estimation. For each hypothesis, following Kline (2005), we compared two models: a “constrained model” that forces the structural parameters to be equal across groups ( $\chi^2_H$ ) and a “non-constrained model” that removes this restriction, resulting in a chi-square value ( $\chi^2_N$ ) with an additional degree of freedom. The proposed moderation effect is supported if the difference in the two chi-square values ( $\chi^2_N - \chi^2_H$ ) is statistically significant.

### **3.2. Results**

The first multigroup analysis across Groups 1 and 2 shows an acceptable fit of the full model ( $\chi^2 = 192.42$ ,  $df = 52$ ,  $p < 0.001$ ; adjusted  $\chi^2 = 3.70$ ; CFI = 0.91, TLI = 0.91, RMSEA = 0.06, Table 3, Model 7). Consistent with H3, regular mindfulness practice moderates the relationship between workaholism and WFC ( $\chi^2\Delta(1) = 19.31$ ,  $p < 0.001$ ). The positive relationship between workaholism and WFC is stronger for Group 1 (non-practitioners) ( $\beta = 0.34$ ;  $t = 3.50$ ;  $p < 0.001$ ), than for Group 2 (untrained practitioners) ( $\beta = 0.22$ ;  $t = 2.54$ ;  $p < 0.05$ ).

The second multigroup analysis across Groups 2 and 3 shows an acceptable fit of the full model ( $\chi^2 = 206.96$ ,  $df = 52$ ,  $p < 0.001$ ; adjusted  $\chi^2 = 3.98$ ; CFI = 0.90, TLI = 0.90, RMSEA = 0.07, Table 3, Model 8). Consistent with H4, mindfulness-based training moderates the positive relationship between workaholism and WFC ( $\chi^2\Delta(1) = 15.01$ ,  $p < 0.001$ ). The positive relationship between workaholism and WFC is significant for Group 2 (untrained practitioners) ( $\beta = 0.22$ ;  $t = 2.54$ ,  $p < 0.001$ ), but not for Group 3 (trained



practitioners) ( $\beta = 0.07$ ;  $t = 0.96$ ;  $p = 0.33$ ). Figure 1 displays the final multi-group structural model with path coefficients for each group.

#### **4. Discussion**

Scholars have begun to theorize that self-regulatory mechanisms may help to attenuate the link between workaholism and WFC (Kiburz et al., 2017). Mindfulness has long been associated with self-regulation, owing to its role in promoting present-moment orientation and non-judgment (Brown and Ryan, 2003). Our results support the notion that the negative implications of workaholic tendencies for WFC are significantly lower among workers who are (1) dispositionally mindful, or (2) regularly practice mindfulness, particularly (3) when they've been trained via MBSR.

##### ***4.1. Theoretical Contributions***

A key contribution of our study relates to our investigation of how mindfulness benefits WFC via its mitigating effects on workaholism. Although research has laid the groundwork for this relationship (e.g., via simple correlations between workaholism and WFC; Piotrowski and Vodano, 2006; and between mindfulness and WFC; Kiburz et al., 2017; Michel et al., 2014), a bigger picture of the pathway has not been illuminated until now. Since simple correlations (whether single or multiple) are limited in their ability to provide a more comprehensive developmental model, the testing of our structural model sheds new light on the interrelationship among these constructs, providing profitable advances in theory around mindfulness, workaholism, and WFC. This study extends prior research not only by confirming the direct positive role of workaholism on WFC but also by uncovering the ameliorating role of mindfulness in the relationship between workaholism and WFC. Future research should continue to uncover the mechanisms by which mindfulness may benefit workers struggling to balance the often-competing demands of work and family.

Although we found positive implications for trait mindfulness and mindfulness practice, it is possible that moderating and mediating variables could interact to affect the ameliorating potential of mindfulness such that in some scenarios it could be a detriment.

Second, research has begun to explore the role of personality characteristics in the experience of workaholism (e.g., Burke et al., 2006; Součková et al., 2014), but mostly as antecedents of workaholism, rather than as potential moderators in the relationship between workaholism and WFC. Still, the salutary role of trait mindfulness for work-related implications has become more well-regarded. Recently, trait mindfulness was found to moderate the relationship between perceived discrimination at work and paranoid cognition and emotional exhaustion (Thoroughgood et al., 2020). Similarly, trait mindfulness moderates the effects of job stressors, such as workload, organizational constraints, or experienced incivility, on strain outcomes (such as mental and physical symptoms of strain and job dissatisfaction; Fisher et al., 2019). Mindfulness can thus be considered a personal resource that protects against stress and strain, whether external (in the case of job stressors) or internal (in the case of workaholism). Our study extends our understanding of the benefits of mindfulness for the work-life domains by highlighting its potential buffering role between workaholism and WFC.

Third, by separately examining the role of dispositional mindfulness, mindfulness practice, and mindfulness training through a triangulation of methods, we contribute to a more holistic understanding of how mindfulness may relate to workaholism and WFC. In particular, our study confirms that mindfulness training followed by regular mindfulness practice can effectively be used as a coping intervention to alleviate the nature, perception, and severity of WFC associated with workaholism, as suggested by Williamson and Clark (2015). Herein, we extend Michel et al. (2014) and Kiburz et al.'s (2017) prior findings

regarding the value of mindfulness interventions on WFC in two ways. First, Michel et al. (2014) and Kiburz et al. (2017) investigated the direct effect of a mindfulness intervention on WFC. We deepen this finding by highlighting that one of the mindfulness coping mechanisms at play is the moderation of workaholism tendencies. Second, although we agree with Kiburz and colleagues that short-term interventions are more scalable within organizations, it is difficult to replicate such tailor-made designs experimentally, thus their generalizability is more nebulous. In this study, we investigate the potential of mindfulness interventions within our theoretical model using a standardized and theoretically sound eight-week MBSR program delivered by experienced and certified instructors. We thus contribute to the literature by testing the most popular mindfulness program in the literature and its benefits in the work-family domain.

Finally, to the best of our knowledge, this study is the first to explore the benefits of mindfulness practice that extend beyond the attendance at any sort of mindfulness training/intervention. Our results indicate mindfulness practice, regardless of whether it has been formally trained (e.g., via MBSR) or not, is associated with a reduction in the negative implications of workaholism for WFC. It is important to note that formal mindfulness training does not guarantee positive outcomes for the participant; rather the participant must implement the training. This finding is further reinforced by the fact that our sample included 268 individuals who had completed MBSR training but did not implement this training through regular practice. Our findings evidence that regular mindfulness practice, even without formalized mindfulness training, shows promise in protecting against tendencies such as workaholism as well as the perception of conflict between the work-family domain.

#### ***4.2. Practical Implications***

At least 30% of the workforce struggles with workaholic tendencies, driving these employees to spend significantly more of their finite time, emotional, and behavioral resources on work-related tasks as compared with their non-workaholic colleagues (Abrams, 2019). Consequently, understanding the different ways mindfulness may benefit this population's health is a key practical implication of this study. We uncover three such ways: dispositional tendencies toward mindfulness, mindfulness practice, and mindfulness training (through formal MBSR-training) followed by regular practice. Our study confirms the utility of mindfulness for mitigating the negative implications of workaholism (Van Gordon et al., 2017).

When employees devote too many time-, behavior-, and/or emotion-related resources to their work role, fewer of these resources are available to allocate to their non-work responsibilities (Carlson et al., 2000). Over time, this imbalance accumulates negative implications for performance within the family role as well as precipitates dissatisfaction and withdrawal within the work role (Qu and Zhao, 2012). Thus, although workaholism may be beneficial to work performance and engagement in the near-term, over time it leads to burnout and withdrawal, both of which ultimately harm the organization. We extend the role of mindfulness beyond its behavioral implications to incorporate its role in managing the cognitive and emotional aspects of work and family (Michel et al., 2014). Consequently, organizational interventions (e.g., work-life balance programs) that include mindfulness interventions are particularly promising.

MBIs help people “become more aware of and relate differently to” their life experiences (Shapiro et al., 2005, p.165). As such, mindfulness training is a tool to support role management. Still, WFC arises in a social context where others contribute to ease or worsen the handling of work and non-work jugglery (Michel et al., 2011). Research has

highlighted the influence of supervisors' behavior on work-family experiences; numerous studies have indeed found that family-supportive supervision decreases the experience of WFC (Lapierre and Allen, 2006). It has been further proposed that when supervisors are trained to be more family-supportive (Hammer et al., 2009) via mindfulness training interventions, they may be even more effective at promoting employee work-life balance. Mindfulness training thus may be a useful add-in to family-supportive supervisor training.

### ***4.3. Limitations and Suggestions for Future Research***

Mindfulness research benefits from a frank assessment of potential threats to this study's validity and generalizability. A first limitation is the comparatively low response rate in Study 1. Although this response rate is not out of line with other similar data collection strategies (unsolicited surveys which may be seen as variably relevant to the recipient), it is on the lower end of the average (Baruch and Holtom, 2008). Another complicating factor may be the pandemic context which yielded difficulties in reaching out to professionals. Although we have no reason to believe the response profiles of respondents would vary in some systematic way, the potential cannot be overlooked entirely.

We collected data within Western Europe, and because some of our constructs may be culturally sensitive (e.g., perceptions of work-family stressors and well-being, typical working hours, tendencies toward workaholism; Spector et al., 2004), it is prudent to investigate our ideas in other cultures, particularly those with a greater tendency toward workaholism (Hu et al., 2014) and/or WFC (Yang et al., 2000).

Third, acknowledging the benefits of trait mindfulness and mindfulness practice (with or without MBSR), more research could be launched to investigate the best use of mindfulness treatments to cope with workaholism tendencies. A recent critique by Rosch

(2015) raises the notion that not all in MBSR training is necessarily consistent with the principles of mindfulness, and techniques taught in MBSR courses may be differentially implemented by the participants during and after the training. Future research might explore the potential for mindfulness practice integrity to affect the extent to which individuals experience positive outcomes. Non-meditative forms of fostering mindfulness could also be tested to account for those who would be reluctant to engage in meditative practices (e.g., Acceptance and Commitment Therapy; Hayes et al., 2006).

## **5. Conclusions**

Determining how to help employees cope with WFC has been an important focus for management practitioners and theorists alike. Although more recently emerging in the management literature, the construct of mindfulness shows promise as a useful antidote for WFC. Our results suggest that trait mindfulness may buffer the effects of workaholism on WFC. Further, we find that beyond a natural disposition toward mindfulness, mindfulness practice can also play a protective role, particularly when mindfulness meditation skills were acquired through formalized training, such as MBSR. Further research is needed to identify ways to alleviate the deleterious effects of perceived WFC within an increasingly workaholic population.

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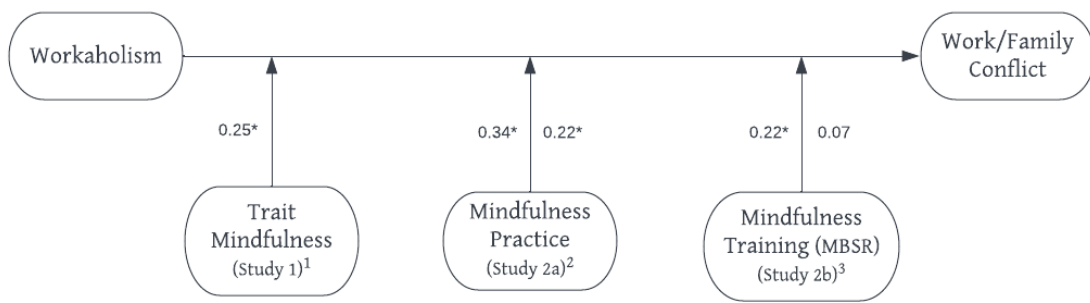
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Note: Standardized path coefficients ( $\beta$ ) are indicated; \* $p < 0.05$ .

<sup>1</sup>Moderated effect = -0.14,  $t = -2.39$ , [-0.27; -0.02],  $p < 0.05$ .

<sup>2</sup> $\beta$  for non-practitioners to the left of the arrow and for untrained practitioners to the right.

<sup>3</sup> $\beta$  for untrained practitioners to the left of the arrow and for trained practitioners to the right.

**Fig. 1.** Multi-group structural model.

**Table 1.**  
Demographics features of samples.

	<b>Study 1 (n=307)</b>	<b>Study 2 - Group 1 (non- practitioners; n=202)</b>	<b>Study 2 - Group 2 (untrained practitioners; n=258)</b>	<b>Study 2 - Group 3 (trained practitioners; n=255)</b>
<b>Gender %</b>				
Male	35.82	40.54	39.53	38.82
Female	64.18	59.46	60.47	61.18
<b>Age</b>				
Mean	41	42	44	42
Standard deviation	9.26	8.64	8.55	12.08
<b>Number of child(ren) %</b>				
0	13.91	16.52	19.32	14.54
1	33.82	34.94	32.92	25.82
2	33.10	27.93	29.21	33.53
> =3	19.17	20.61	18.55	26.11
<b>Marital status %</b>				
Separated, divorced, single	23.68	24.74	49.83	22.73
Married	76.32	75.26	50.17	77.27
<b>Education %</b>				
Completed high school	2.24	7.06	7.13	5.52
Undergraduate or bachelor's degree	28.73	17.43	15.35	28.63
Completed graduate studies/ degrees	69.03	75.51	77.52	65.85
<b>Management level %</b>				
High-level professionals and managers	63.25	40.74	41.12	59.26
Head of their firms	18.21	8.52	14.33	18.81
Middle-level managers and professionals	11.20	24.81	28.81	16.14
Regular employees	7.34	25.93	15.74	5.79
<b>Working hours (per week)</b>				
Mean	38.63	39.37	39.13	39.92
Standard deviation	9.72	8.91	7.82	8.17

Table 2. Mean, Standard Deviation, Correlations, and Reliability of Main Variables (Study 1,  $n=307$ ).

Variables	Mean	Standard Deviation	Trait Mindfulness	Workaholism	Work Family Conflict
Trait mindfulness	3.41	0.72	—		
Workaholism	3.22	0.99	-0.13*	—	
Work Family Conflict	3.48	0.82	-0.49**	0.25**	—
Reliability (Cronbach's $\alpha$ )			0.85	0.78	0.89
Convergent Validity			0.50	0.51	0.70

Note. \* $p < 0.05$ , \*\* $p < 0.01$



Table 3. Main results of measurement and structural models.

	$\chi^2$	<i>df</i>	<i>p</i>	$\chi^2/df$	CFI	TLI	RMSEA	Models	$\Delta\chi^2$	$\Delta df$	$\Delta CFI$	$\Delta RMSEA$
<b>MEASUREMENT MODELS</b>												
<b>Study 1. Measurement model on the whole sample</b>												
1. Model 1: Reflective 30-item, 3-factor	744.32	296	0.00	2.51	0.91	0.91	0.07					
<b>Study 2a. Measurement invariance across groups 1 and 2</b>												
2. Model 2: Configural invariance	1,148.50	498	0.00	2.30	0.90	0.90	0.06	2 vs 3	79.37	21	0.00	0.01
3. Model 3: Metric invariance	1,227.87	519	0.00	2.36	0.90	0.91	0.05					
<b>Study 2b. Measurement invariance across groups 2 and 3</b>												
4. Model 4: Configural invariance	1,152.48	498	0.00	2.31	0.90	0.90	0.05	4 vs 5	162.07	21	0.00	0.01
5. Model 5: Metric invariance	1,314.55	519	0.00	2.53	0.90	0.90	0.04					
<b>STRUCTURAL MODELS</b>												
Model 6. SEM model across the whole sample (study 1)	180.60	52	0.00	3.47	0.91	0.92	0.06					
Model 7. SEM model across Groups 1 and 2 (Study 2a)	192.42	52	0.00	3.70	0.91	0.91	0.06					
Model 8. SEM model across Groups 2 and 3 (Study 2b)	206.96	52	0.00	3.98	0.90	0.90	0.07					

*Note.* Normed Chi-Square ( $\chi^2/df < 5$ ) – TLI: Tucker–Lewis Index (TLI > 0.90) – CFI: Comparative Fit Index (CFI > 0.90) – RMSEA: root mean square error of approximation (RMSEA < 0.10)