CLARIFYING THE RELATIONSHIP BETWEEN WORK ENGAGEMENT AND WORK INTERFERING WITH FAMILY: EXAMINING BETWEEN- AND WITHIN-PERSON DIFFERENCES

by

RACHEL LYNN WILLIAMSON

(Under the Direction of Nathan T. Carter)

ABSTRACT

Work engagement has received considerable attention in the organizational psychology literature due to its association with a variety of positive outcomes. However, some researchers have suggested that engagement may have a downside. Past research suggests high engagement can result in interference between work and familial roles (i.e., work interfering with family), one form of work-family conflict. Recent research suggests that the positive link between engagement and work interfering with family can be partially explained by the extent to which individuals perform organizational citizenship behaviors (OCBs) – discretionary, prosocial behaviors that are beneficial for an organization and/or its members. Put simply, engagement leads employees to enact more OCBs, acts that expend resources such as time and energy that could be applied toward familial roles, resulting in higher work interference with family. Furthermore, Halbesleben suggested that the personality trait of conscientiousness may buffer this positive link because conscientious individuals are more likely to take steps to conserve resources. In this dissertation, I argue that the engagement-work interfering with family link may be better specified by differentiating between OCBs enacted at work (OCBW) (e.g., physically
being at work while helping a co-worker) and OCBs enacted at home (OCBH) (e.g., physically being home while helping a co-worker). Furthermore, I propose that workaholism – a compulsion to work beyond what is expected or is reasonable – accelerates the extinction of resources via OCBH, thus moderating the link between engagement and work interfering with family. Hypotheses were tested using an experience sampling approach in a sample of 160 working adults utilizing a multilevel moderated mediation model. Results suggest that both OCBW and OCBH mediate the engagement-work interfering with family relationship. Additionally, workaholism increases the positive link between engagement and OCBH relationship, suggesting that the combination of engagement and workaholic tendencies leads to greater OCBH, resulting in more work interfering with family. However, conscientiousness did not significantly moderate the link between OCBW and work interfering with family, possibly due to problems with standard errors of the moderation estimate. Implications for organizations to continue encouraging engagement but limiting the associated behaviors that may lead to increased WIF are discussed.

INDEX WORDS: Work engagement, organizational citizenship behavior, work-family conflict
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DEDICATION

To my best friend and soon-to-be husband, Billy. Thank you for your encouragement and support the past five years. You have listened to me, supported me when I have worked all hours of the day and into the weekend, and made long distance the best it could be, all without a single complaint. I love you and am so thankful for you!
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CHAPTER 1
INTRODUCTION

The construct of work engagement reflects a positive state operationalized by vigor, dedication, and absorption in the conduct of work-related behavior (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002; Demerouti, Bakker, De Jonge, Janssen, & Schaufeli, 2001). As organizations strive for engaged employees, an ample amount of research has examined the nature of work engagement in terms of outcomes and antecedents (Akhtar, Boustani, Tsivrikos, & Chamorro-Premuzic, 2015; Christian, Garza, & Slaughter, 2011; Rich, Lepine, & Crawford, 2010), including its distinction from burnout (Cole, Walter, Bedeian, & O’Boyle, 2012; Demerouti, Mostert, & Bakker, 2010) and workaholism (Bakker et al., 2012; Birkeland & Buch, 2015; Shimazu, Schaufeli, Kamiyama, & Kawakami, 2015). Generally, work engagement is associated with many positive outcomes, including future well-being (Shimazu et al., 2015), job performance (Bakker & Bal, 2010; Christian et al., 2011), and work-family facilitation (Bakker, Shimazu, Demerouti, Shimada, & Kawakami, 2014). However, a new vein of research has posited there may be a downside to work engagement, as highly engaged employees may experience increased stress (George, 2011), and may expend too much of their time and energy on work as opposed to their familial roles, leading to work-family interference (Halbesleben, Harvey, & Bolino, 2009).

One explanation for why work engagement may lead to work-family interference is due to the behaviors engaged employees typically perform. Past research suggests engaged workers are more likely to perform discretionary prosocial behaviors that improve their organization,
referred to as organizational citizenship behaviors (OCBs) (Christian et al., 2011). Indeed, one meta-analysis found that work engagement predicted contextual performance (a broader conceptualization of extrarole performance that includes OCBs) beyond job satisfaction, job involvement, and organizational commitment ($\Delta R^2 = .16$) (Christian et al., 2011). Although OCBs are beneficial for an organization, recent research suggests that performing such behaviors at work consumes employees’ resources and energy, leading to lower emotional support for their family and spouse (Lin, Ilies, Pluut, & Pan, 2017). In general, work engagement has indeed been associated with higher levels of work interfering with family (WIF), one form of work-family conflict, across several studies (Halbesleben, 2010). From the perspective of conservation of resources theory, Halbesleben et al. (2009) argued that OCBs represent a mediating mechanism for the positive association between work engagement and WIF, such that engaged employees expend their personal resources by engaging in higher-than-average OCBs, leading in turn to greater WIF.

While Halbesleben and colleagues (2009) found evidence to suggest that OCB mediates the relationship between work engagement and WIF, the incremental variance explained was relatively small (i.e., around 5% across three studies), suggesting other factors may help to explain the link. One situational component I believe has been overlooked in this model is the question of where OCB was performed. To date, the OCB literature has focused attention only on whom the behavior was directed towards (e.g., individual, organization, change). However, I propose that it will also be beneficial to account for where an employee is when they are carrying out OCBs. Until now, research has not distinguished between OCBs that are performed while employees are physically at work (OCB enacted at work or OCBW) versus OCBs that are performed from home (OCB enacted at home or OCBH). However, recent advances in
communication technology have afforded employees much greater flexibility to engage in work-related tasks at home (Boswell & Olson-Buchanan, 2007; Butts, Becker, & Boswell, 2015; Piszczek, 2016; Song, 2009). To explain the nature of the role of OCBs as a mediating mechanism between work engagement and WIF, I posit that we may gain substantial explanatory power by distinguishing between whether OCBs are performed from the traditional, physical workplace or while at home. A common example of an OCB is lending a compassionate ear when someone has a work problem. If this behavior is performed at work, it ultimately requires the employee to expend resources that could not have been expended in the family domain in real time. Thus, I propose that OCBW would lead to WIF, but perhaps exhibits a weaker relationship, as these behaviors are more distal to the home environment. On the other hand, an OCB such as lending a compassionate ear when someone has a work problem can also be performed after leaving the workplace. While this behavior can be performed at work, a colleague that wants to vent about a work problem may prefer to talk about it away from work, such as over the phone once both individuals are physically away from the work environment and other peers. If an employee is engaging in the behavior within high proximity to the home environment, as opposed to spending their resources (e.g., time, energy) on their family, the employee should experience significantly more WIF.

Although capturing the location of where OCBs are performed may help to better specify its mediating influence for the relationship between work engagement and WIF, there are likely important between-person traits that may moderate this relationship, explaining who is likely to perform OCBW versus OCBH. Indeed, Halbesleben et al. (2009) suggested that the personality trait of conscientiousness may serve as a buffer against the impact of OCB performance on WIF. The authors argued that conscientious individuals are more strategic with their personal
resources (Perry, Penney, & Witt, 2007) and are better suited to handle role ambiguity (Grant & Langan-Fox, 2007). Halbesleben and colleagues’ (2009) hypothesis was supported in that conscientiousness significantly weakened the relationship between OCB and WIF across three separate samples. In the current study, I extend this finding by proposing that conscientiousness moderates the relationship between OCBW and WIF, but not OCBH and WIF. Theoretically, conscientiousness may serve as a buffer between OCBW and WIF in that the cognitive awareness of conscientious individuals regarding their competing roles may allow them to better regulate and prioritize their job and personal demands, resulting in less WIF. Although conscientious individuals who perform OCBW may have less WIF, I propose individuals who perform OCBH will by nature experience WIF, regardless of their level of conscientiousness. Furthermore, conscientious individuals would generally be less likely to engage in OCBH due to their tendency to balance and manage their roles according to expectations.

Whereas adaptive traits like conscientiousness may act as personal resource that buffers strain resulting from OCBs, more maladaptive traits could have a draining effect by accelerating the type of behavior that leads to strain (e.g., Bakker et al., 2013). A particularly relevant trait to the distinction between OCBW versus OCBH is workaholism, a compulsion to work beyond what is reasonably expected. To date, the majority of the literature on workaholism and work engagement has focused on the explanatory power of these constructs separately (e.g. Bakker et al., 2014; Birkeland & Buch, 2015; Schaufeli, Taris, & van Rhenen, 2008; Schamzu, Schaufeli, Kamiyama, & Kawakami, 2015). However, a handful of studies have explored the possibility that these two constructs are not mutually exclusive (Spence & Robbins, 1992; van Beek, Taris, & Schaufeli, 2011), and empirical findings suggest that the two are uncorrelated (Clark, Michel, Stevens, Howell, & Scruggs, 2014). Further, whereas work engagement is generally
conceptualized as a state (Bakker & Demerouti, 2008; Bakker & Zanthopoulos, 2009; Breevaart, Bakker, Demerouti, & Hetland, 2012; Park & Haun, 2017) (see Christian et al., 2011 for an exception), workaholism is generally considered a relatively stable trait (Bakker, Demerouti, Oerlemans, & Sonnentag, 2013; Harpaz & Snir, 2003; Mazzetti, Schaufeli, & Guglielmi, 2014), making these variables compelling candidates for exhibiting interactive influences on behavior. Thus, I propose that the trait of workaholism will moderate the relationship between work engagement and OCBH, behaving as an accelerant to the type of behavior that causes WIF. Specifically, I posit that employees high in workaholism experiencing state work engagement are more likely to perform OCBH. On the other hand, persons low in workaholism should engage in less OCBH than those high in workaholism. Figure 1.1 shows a specification of the model to be tested in the current study.

![Conceptual multilevel model](image_url)
This study makes four major contributions to the literature. First, the current study employs experience sampling methodology, which allows the examination of my hypothesized relationships at a daily level. Past research suggests that work engagement has substantial within-person fluctuation (i.e., Sonnentag, 2003, Bakker & Bal, 2010), highlighting the appropriateness of this method. Furthermore, capturing work engagement, OCB, and WIF at the daily level reduces recall bias (Scollon, Kim-Prieto, & Diener, 2003). Second, this study extends our current understanding of the influence of OCB on WIF by distinguishing between OCBs enacted at work versus at home. This is a particularly timely conceptual clarification, as recent research supports the notion that technological advances can afford employees the opportunity to conduct work-related tasks from home (Ferguson et al., 2016; Nijp, Beckers, van de Voorde, Geurts, & Kompier, 2016). Third, this study extends our understanding of the influence of individual differences on the link between work engagement and WIF by drawing on past research (Halbesleben et al., 2009) to incorporate the buffering influence of personal resources (i.e., conscientiousness) on the link between behavioral patterns and strain. Furthermore, the present study explores the notion that specific individual differences (i.e., workaholism) may accelerate the type of behavior (i.e., performing OCBs while at home) that results in strain. Finally, the current study considers the potential interplay between workaholism and work engagement, and how these constructs may interact within an individual, which has received very little attention to date, but could critically advance our understanding of well-being related outcomes including – but not limited to – the primary focus of this dissertation, WIF.

In the following I review the literature on work engagement and specifically how it relates to WIF. Next, I explain how OCBs have been shown to mediate this relationship and introduce the idea that it is important to differentiate where OCBs are performed to better
understand this complex relationship. Finally, I review past research on my two proposed moderators – workaholism and conscientiousness, and how these within-person traits may differentially impact our ability to predict WIF. First, I posit that workaholism may moderate the relationship between state work engagement and OCBH. An employee experiencing state work engagement may perform more OCBs while they are at work (Christian et al., 2011), but spend time at home recovering and psychologically detaching from work (Sonnentag, Mojza, Demerouti, & Bakker, 2012), and thus are not likely to engage in OCBs once they are home. However, engaged employees who also possess workaholic tendencies will likely continue to work regardless of where they are, meaning workaholism will strengthen the relationship between state work engagement and the performance of OCBH. On the other hand, past research suggests that the personality trait of conscientiousness may buffer individuals from work and family stressors (Selvarajan, Singh, & Cloninger, 2016), as conscientious individuals may be more cognitively aware and thus better suited to address conflict that occurs (Barrick, Mount, & Judge, 2001). Thus, I propose that conscientiousness should weaken the relationship between OCBW and WIF. Ultimately, I tested my hypothesized model in a sample of full-time working adults using an experience-sampling methodology (ESM) approach. Participants completed daily surveys twice a day for five days to capture both between- and within-person variance to clarify the positive relation between work engagement and WIF.

**Work Engagement**

As noted previously, work engagement can be defined as a positive and fulfilling work-related state consisting of three components: vigor (high energy and mental resilience when working), dedication (a sense of pride, enthusiasm and significance to work), and absorption (happily engrossed in one’s work) (Schaufeli et al., 2002). Work engagement has been
conceptualized as coming in three different varieties: trait, state, and behavioral (Macey & Schneider, 2008). In the past decade, research has largely supported the state view of work engagement, as the construct has been shown to fluctuate at a daily level within individuals (Bakker, 2014; Bakker & Zanthopoulou, 2009; Ouweneel, Le Blanc, Schaufeli, & van Wijhe, 2012; Reis, Arndt, Lischetzke, & Hoppe, 2016; Sonnentag & Kuhnel, 2016).

Many antecedents have been suggested for work engagement, which can be conceptualized in two main categories: job resources and personal resources (Bakker & Demerouti, 2008). Job resources, such as social support at work, autonomy, and skill variety are associated with increased work engagement (Bakker & Demerouti, 2007; Christian et al., 2011; Schaufeli & Salanova, 2007). As noted by Bakker and Demerouti (2008), conservation of resources theory suggests that job resources are most beneficial when job demands are high (Hobfoll, 2002). Thus, when job resources (e.g., social support) are paired with high job demands (e.g., emotional demands), employees may be motivated to take charge and tackle their work, leading to work engagement (Bakker & Demerouti, 2008). Similarly, personal resources (e.g., optimism, resilience, self-esteem) may induce a similar process when paired with job demands, leading to high work engagement. For example, state work engagement has been consistently linked with state positive affect, within-person and from day to day (Reis et al., 2016). Notably, Reis and colleagues (2016) showed that although work engagement and positive affect are highly correlated, they are distinct constructs, and in fact positive affect has much higher levels of daily fluctuations than state work engagement. This finding is line with assertions made by Bakker and Demerouti (2008), in that one reason engaged workers may exhibit higher levels of performance is due to their positive emotions.
Work Engagement and Interference of Work with Family

Work-family conflict refers to interrole conflict in that the work and family domains elicit pressure on each other (Greenhaus & Beautell, 1985; Carlson, Kacmar, & Williams, 2000), and can exist in two different directions, WIF, and family interfering with work (FIW). Theory suggests three types of work-family conflict that are pertinent to both WIF and FIW: a) time-based conflict, b) strain-based conflict, and c) behavior-based conflict. Time-based work-family conflict can occur when something work-related requires time that interferes with time spent participating in the family domain. Strain-based work-family conflict can occur when stress in one domain (e.g., stress experienced at work) interferes with the other domain (e.g., carrying over into stress experienced at home). Finally, behavior-based work-family conflict can occur when specific behaviors required in one role are not compatible with the behavior required in another role in the other. Although these distinctions are important in many contexts, in the current dissertation I focus on the general underlying variable of WIF as a composite of two of these types (time and strain)\(^1\).

Most relevant to the study at hand, theory suggests a positive relationship exists between work engagement and WIF. Drawing on conservation of resources theory (Hobfoll, 1989), Halbesleben and colleagues (2009) theorized that although engaged employees may complete more tasks during the workday (Halbesleben & Wheeler, 2008; Salanova, Agut, & Peiro, 2005), the completion of these tasks requires effort, time, and psychological investment (Halbesleben et al., 2009). This notion is also supported by the work-home resources (W-HR) model (ten

\(^1\) The most commonly used daily measure of WIF only includes the time- and strain-based measures of WIF. Additionally, behavior-based WIF has been shown to differ based on specific occupational work requirements (Dierdorff & Ellington, 2008), which was not a focus in the current study.
Brummelhuis & Bakker, 2012), which suggests that resource expenditure in one domain leads to depleted personal resources in other domains. Finally, the scarcity hypothesis posits that the depletion of resources in a particular domain can create feelings of overload and thus result in role conflict (Edwards & Rothbard, 2000; Goode, 1960). Taken together, the conservations of resources theory, the W-HR model, and the scarcity hypothesis are related in that they all view resources from one domain as impactful of the other domain. This view has been supported empirically, as research suggests that on days when employees expend resources to help their organization, they have fewer resources to expend at home, taking the form of less time for one’s family and less spousal support (Lin et al., 2017). In sum, these resource-based theories suggest that high levels of work engagement may lead to higher levels of interference between the work and family domains.

To date, theoretical justification for a positive association between work engagement and WIF has been addressed with only a handful of empirical evidence. A study of three samples (one cross-sectional, two time-separated) conducted by Halbesleben, Harvey, and Bolino (2009) found that across three samples, state work engagement was associated with increased strain-based WIF ($\beta = .45, \beta = .34, \beta = .27$), increased time-based WIF ($\beta = .52, \beta = .41, \beta = .40$) and increased behavior-based WIF ($\beta = .36, \beta = .28, \beta = .22$). Furthermore, a meta-analysis conducted by Halbesleben (2010) found a large positive relationship between work engagement and WIF ($\rho = .42$) across 9 studies (including the three studies in Halbesleben, Harvey, & Bolino, 2009).

Despite the findings of the above meta-analysis, other research has found that work engagement may lead to lower levels of WIF. A study by Clark and colleagues (2014) found a negative relationship between work engagement and WIF, with work anxiety (indirect effect = -}
and work disappointment (indirect effect = -.08) serving as mediating mechanisms. These results suggest that work engagement may lead to reduced WIF, perhaps as engaged workers experience lower levels of work anxiety and work disappointment. Although this relationship was examined in an exploratory manner, the authors highlighted the contrast of their findings to that of Halbesleben and colleagues (2009), noting the need for future research to continue exploring the relationship between these two constructs. A more recent study examined WIF, work-family enrichment, and employee well-being in a sample of Belgium security workers (N = 978) (Babic, Stinglhamber, Bertrand, & Hansez, 2017). The authors found that work engagement led to decreased WIF six months later (β = -.08), or in other words, that work engagement led to lower WIF. They concluded that work engagement may employ a gain spiral of resources, in that workers who are energetic and enthusiastic gain new resources, ultimately leading to lower WIF.

Almost a decade ago, a meta-analysis conducted by Halbesleben (2010) analyzed nine correlations and found that work engagement was positively associated with WIF (ρ = .42). However, the results of more recent studies that were not included in the meta-analysis conducted by Halbesleben (2010) (Clark et al., 2014; Babic et al., 2017; Hakanen & Peeters, 2015) suggest that work engagement may lead to lower levels of WIF. Additionally, the 95% credibility interval regarding the relationship between work engagement and WIF in Halbesleben’s meta-analysis (2010) was quite large (-.09, .82). In short, the evidence to date suggests that research has continued to observe inconsistent findings regarding the nature of the relationship between work engagement and WIF.

To remedy these inconsistencies, Williamson and Carter (2018) conducted an updated meta-analysis. The authors identified 53 correlations (53 unique samples resulting from 41 articles). Most relevant to the current study, Williamson and Carter compared the relationships
observed separately for cross-sectional studies and panel studies. Additionally, the authors examined meta-analysis estimates broken down by country, as cross-cultural differences in working conditions (e.g., long working hours, work intensity) may explain systematic differences in work-family conflict (Gallie & Russell, 2009). Williamson and Carter (2018) found that for panel studies conducted in the United States, a positive relationship was observed ($\rho = .18, k = 3$), however the relationship was not significant ($\rho = .39$).

In the current dissertation, I examine the relationship between work engagement and WIF using experience-sampling (a form of panel study), in the United States. Consistent with findings from the meta-analyses conducted by Halbesleben (2010) and Williamson and Carter (2018), this supports the idea of a positive relationship between daily work engagement and daily WIF. Thus, I hypothesize:

**Hypothesis 1**: Daily work engagement measured during the workday will be associated with increased daily WIF measured during the evening.

Due to the inconsistent findings across past studies, research has called for additional studies to examine other potential mediating mechanisms to explain the relationship between work engagement and work-family conflict (Clark et al., 2014; Halbesleben et al., 2009). In the next section, I expand upon past research on the mediating influence of OCBs in this relationship by conceptualizing OCBs in terms of where the individual is physically when they engage in these discretionary behaviors.

**Organizational Citizenship as an Explanatory Mechanism**

Organizational citizenship behaviors are actions that are generally prosocial in nature (Organ, 1997), such as helping a supervisor without being asked, helping a co-worker with a heavy workload, or taking time to listen to a co-worker’s (personal or work) problem. One of the
major typologies of OCBs considers two major forms: OCBs directed at an individual (OCB-I) or OCBs directed at an organization (OCB-O) (Smith, Organ, & Near, 1983). In the current study, I include items capturing both types of OCBs to capture as many behaviors as possible that may explain the relationship between work engagement and WIF.

The nature of employee work engagement has theoretical overlap with OCB; work engagement is associated with positive emotion (Bindl & Parker, 2010), thus employees in a state of work engagement may be more likely to be adaptive and helpful in the workplace (Eldor & Harpaz, 2016). Drawing on broaden-and-build theory (Fredrickson, 2003), Eldor and Harpaz (2016) theorized and found support for employee engagement leading to increased extra-role behaviors, as engaged employees were shown to be more likely to take initiative, desired sharing knowledge with coworkers, and were more open to change. Indeed, recent empirical work suggests that employee engagement can lead to OCB and explains incremental variance beyond more commonly-studied job attitudes (Christian, Garza, & Slaughter, 2011). The authors found that work engagement predicted contextual performance (which includes OCB) beyond organizational commitment, job involvement, and job satisfaction ($\Delta R^2 = .16$) (Christian et al., 2011). In sum, these findings are in line with theory suggesting that to the extent individuals invest more of themselves into work via work engagement, the more willing they should be to engage in behaviors outside of their formal boundaries, including OCB (Rich et al., 2010).

While employee engagement may be beneficial for organizations and their members due to its association with prosocial work behaviors such as OCB, the enactment of OCBs may come at a cost for the individual (Bergeron, 2007; Bolino & Turnley, 2005; Bolino & Grant, 2016; Bolino, Klotz, Turnley, & Havey, 2013; Deery, Rayton, Walsh, & Kinnie, 2016) and thus their families (Halbesleben et al., 2009; Lin et al., 2017). In general, researchers have drawn on
conservation of resources theory (Hobfoll, 1989) to suggest that OCBs limit the resources (i.e., time, energy) available for other activities. Indeed, several studies have found that the performance of OCBs leads to higher levels of emotional exhaustion (Deery et al., 2016; Koopman, Lanaj, & Scott, 2016), work-family conflict (Bolino & Turnley, 2005; Deery et al., 2016; Halbesleben et al., 2009), and less support provided to their spouse (Lin et al., 2017).

To date, one paper has examined the potential mediating mechanism of OCB for explaining work engagement leading to increased WIF. Halbesleben and colleagues (2009) examined this relationship in three separate studies, even separating out the forms of WIF (time-, strain-, and behavior-based). While the authors found support for their proposed relationship across all three studies and forms of WIF, only a small amount of variance was explained (time-based $\Delta R^2 = .05, .04, .05$; strain-based $\Delta R^2 = .09, .03, .05$; and behavior-based $\Delta R^2 = .03, .09, .02$) (Halbesleben et al., 2009).

Although the study by Halbesleben et al. (2009) suggests OCB acts as an explanatory mechanism for the positive relationship between work engagement and WIF, I propose that this link can be better understood by differentiating between OCBs that are conducted in the workplace versus those an employee performs at home. As noted above, conservation of resources theory would suggest OCBs limit time and energy for activities both inside and outside the workplace. Thus, although OCBW may drain resources and lead to WIF, I propose that it is also important to consider OCBH, which are likely to drive more strain-, time-, and behavior-based conflict between work and family roles. Thus, I hypothesize that:
**Hypothesis 2A:** Daily OCBW will mediate the relationship between daily work engagement and daily WIF.

**Hypothesis 2B:** Daily OCBH will mediate the relationship between daily work engagement and daily WIF.

**Conscientiousness as a Moderator of the Link Between OCBW and WIF**

Past research on the conservation of resources has argued that individual difference variables such as personality traits may be viewed as personal resources to the extent that they are advantageous for both avoiding resource loss as well as acquiring resources (Halbesleben et al., 2009). In particular, the trait of conscientiousness is relevant to avoiding losses and acquisition of resources due to its association with persistence of effort, self-efficacy, deliberation, and self-discipline (Costa & McCrae, 1995). Indeed, conscientiousness has been associated with constructive problem-solving (D’Zurilla, Maydeu-Olivares, & Gallardo-Pujol, 2011), objective and subjective success (Duckworth, Weir, Tsukayama, & Kwok, 2012), and all domains of work performance, including OCB (Debusscher, Hofmans, & De Fruyt, 2016; Wang & Bowling, 2016).

Conscientiousness is also thought to be beneficial for employee well-being in that it can offer serve as a buffer against negative outcomes. For example, Chi and colleagues (2015) theorized that conscientiousness may buffer against the daily effects of negative mood on task performance, due to the high self-control and strong motivation of conscientious individuals. In other words, negative mood can lead to lower levels of task performance, but this effect is weakened in conscientious individuals’ due to their achievement-orientation, thus continuing to stay focused on their tasks even when they are having a bad day. Another study utilizing the midlife in the US (MIDUS) study of health and well-being found that conscientiousness can act
as a buffer against work-family conflict (Selvarajan et al., 2016). These authors posited that one explanation for this finding was that conscientious individuals may be more cognitively aware of their obligations (Barrick et al., 2001), lending greater potential for addressing conflict when it occurs. Similarly, Wayne and colleagues (2004) found that in a large US sample ($N = 2,130$) conscientious individuals were less likely to experience less work-family conflict, perhaps because conscientious individuals are more efficient at work leading to less conflict between the two domains, and greater boundary separation between work and family.

Particularly important to the current investigation, at least one study to date has shown that conscientiousness moderated the relationship between OCB and WIF (Halbesleben et al., 2009). The authors drew on conservation of resources theory to suggest that conscientious employees may be more mindful with their personal resources, essentially buffering against the interference of work with family caused by OCBs. Across all three samples, the authors found support for this moderation, supporting the notion that conscientiousness affords reduced work-family conflict despite the depletion of energy and time associated with enacting in OCB. In the current study, I extend this finding by focusing on the potential moderation of conscientiousness on OCBW and WIF. In other words, conscientiousness may serve as a buffer for engaged individuals who are likely to perform OCBW against the repercussions of WIF. Therefore, based on conservation of resources theory and past findings of Halbesleben et al. (2009), I hypothesize that:

Hypothesis 3: Conscientiousness will moderate the indirect effect of daily work engagement on daily WIF through daily OCBW, such that higher levels of conscientiousness will weaken this relationship.
However, I do not expect conscientiousness to have the same buffering effect for the link between OCBH and WIF. First, as noted by Selvarajan, Singh, and Cloninger (2016), the cognitive awareness of conscientious individuals regarding their role-dependent obligations should generally lead to less OCBH, as they will be more likely to segment their work and home roles. Although only one study to date has looked at conscientiousness and segmentation preferences, the results of the study suggest a positive correlation between conscientiousness and segmentation ($r = .15$) suggesting conscientious individuals prefer segmenting between work and family (Michel & Clark, 2013). Although this study reflects preferences as opposed to behavior, past research suggests that segmentation preferences translate into segmentation behavior (i.e., preferring segmentation was associated with a decreased use of flextime and flexplace) (Shockley & Allen, 2010). Second, employees who work from home when they are not expected to should experience more WIF regardless of their levels of conscientiousness due to the salience of the role interference of home-based OCBs.

**Workaholism as a Moderator of the Link Between Work Engagement and OCBH**

In the past decade, the area of excessive work has gained increased attention in the occupational health literature. Past research has suggested that there are two main forms of excessive working: work engagement and workaholism. Workaholism can be conceptualized as an addiction to work (Aziz & Zickar, 2006; Bakker, Demourti, Oerlemans, & Sonntentag, 2013; Mazzetti et al., 2014; Taris, Geurts, Schaufeli, Blonk, & Lagerveld, 2008; Schaufeli, Shimazu, & Taris, 2009; Shifron & Reysen, 2011), and involves persistent thoughts about work when not working, feeling compelled to work because of internal pressures, and working beyond what is expected (Clark et al., 2016). Although both workaholism and work engagement are both characterized by excessive working, the literature argues that workaholics are driven by a
compulsion that they “should” work rather than passion or enjoyment of working, which better characterizes work engagement (Clark et al., 2016). Furthermore, workaholism is conceptualized as a relatively stable trait (Bakker et al., 2013; Burke, Matthiesen, & Pallesen, 2006; Harpaz & Snir, 2003; Mazzetti et al., 2014), whereas work engagement is most properly considered as a state (Bakker & Demerouti, 2008; Bakker & Zanthopoulou, 2009; Breevaart et al., 2012; Park & Haun, 2017) (see Christian et al., 2011 for an exception).

When considering the constructs of work engagement and workaholism, research tends to focus on their distinctiveness in terms of how they relate to outcomes. In general, research suggests that workaholism is negative for employee well-being whereas work engagement is beneficial for employee well-being (Clark et al., 2014; Schaufeli et al., 2008; van Wihje, Peeters, & Schaufeli, 2011). Only a handful of studies have examined the possibility that individuals can be engaged workaholics, or in other words, possess both at certain points in time (Andreassen, Ursin, & Eriksen, 2007; Andreassen, Hetland, & Pallesen, 2010; Spence & Robbins, 1992; van Beek et al., 2011). The first study to explore this possibility found evidence that some individuals are high in both constructs, and that engaged workaholics were associated with higher job involvement and more hours worked than individuals possessing just workaholism or work engagement (Spence & Robbins, 1992). In 2011, van Beek and colleagues examined four potential types of workers: engaged employees, workaholic employees, engaged workaholics, and nonengaged/nonworkaholic employees. The authors again found evidence of certain employees who were high in both work engagement and workaholism, further supported by the zero correlation between the two variables. Perhaps most important to the current study, these authors found that engaged workaholics spend the most time working compared with the other worker categories.
As mentioned, workaholism is generally associated with negative outcomes, thus it is not surprising that a recent meta-analysis found a strong positive relationship between workaholism and work-family conflict (ρ = .47) (Clark et al., 2016). This is likely because of workaholics’ tendency to engage in work-related behaviors after work hours (i.e., from home). This is in line with past research suggesting that workaholics prefer working over engaging in a leisure activity during non-work time (Snir & Zohar, 2008), and that workaholics spend more time on work-related tasks after the end of the workday (van Wijhe, Peeters, Schaufeli, & Ouweneel, 2013). Yet, while research has consistently shown that workaholics continue to perform work-related activities during leisure time, there is no study to date that has explored what kind of behaviors workaholics are performing during leisure time. Thus, I propose that they will likely find any possible task to continue working while at home to satisfy their compulsions, which may take the form of OCBs. In other words, engaging in OCBH may be one way for a workaholic to continue their work even after they have physically left the workplace, by performing behaviors such as finishing additional work, continuing to work from home through meals, or finishing some work-related assignment for a co-worker. Therefore, I hypothesize that:

**Hypothesis 4:** Workaholism will moderate the indirect effect of daily work engagement on daily WIF through daily OCBH, such that workaholism will strengthen this relationship.
CHAPTER 2
METHODS

Participants and Procedures

Subjects for this study were recruited through social media efforts (e.g., Facebook, LinkedIn, Reddit). To be eligible for this study, participants had to be working full-time in an organization with only one job, living in the United States, able to read English, be 18 years of age or older, work only one job that (a) requires them to physically leave their home for at least 6 hours a day on workdays, and (b) requires they work at least five days a week. Additionally, as the focus of the study includes WIF as our dependent variable, I screened participants to ensure they were currently living with at least one family member (e.g., child, spouse, parent, etc.), as an individual who lives alone may not experience WIF. Only employees who agreed to consent were eligible for this study. Upon completion, participants received a check for $20. Participants with perfect compliance received a $10 bonus, resulting in $30 total.

The current study used experience sampling methodology. Participants took the initial survey for the study based on the recruitment flyer. The initial survey began with consent information, which participants had to agree to before moving onto the screener. The first items in the screener included eligibility items (e.g., age, location, job information) to screen out individuals who were not eligible. I measured my four control variables – age, gender, marital status, and children living at home – during the initial survey, as well as overall workaholism and personality traits. The end of the screener survey also included additional demographic items that did not relate to eligibility (see Appendix A). Within 48 hours of completing the initial survey, I
contacted each participant with details about when to expect the daily surveys (twice a day for five working days; once at the end of the workday and once before bed). Notably, these days were not always consecutive, as some participants may work non-traditional schedules (i.e., Monday, Tuesday, Wednesday, Thursday, and Saturday). When I contacted the individuals, I also asked their anticipated work schedule for the week of the daily surveys so that I could tailor the day-level surveys in terms of time and days they planned to be working. I sent the afternoon surveys an hour before the end of each participant’s traditional workday, and the evening survey was sent at approximately 9:00 pm each evening. The end of workday surveys included a measure of state work engagement and OCBW. The surveys taken before bed included a measure of OCBH, daily workaholism, and WIF. Upon finishing their final survey, I contacted each participant to let them know the study had concluded, how much they would be paid, and request they fill out an honorarium form to move forward with processing payment. After I received the signed honorarium, they were sent a check for $20.00 (or $30.00 for perfect compliance).

322 participants took the initial screener, but only 201 of these individuals were eligible to participate in the study. Of the 201 eligible participants, 163 responded and completed the survey (89.1% response rate). The average number of daily surveys completed was 7.79 (10 was the maximum). The final number of surveys completed was 1,261. Participants held a range of occupations (e.g., Professor, Vet Tech, Physical Therapist, Finance Manager, Attorney, Chef, etc.). The average age of participants was 31.34 years ($SD = 7.86$). Participants had been working at their current job for an average of 4.17 years ($SD = 3.43$) and worked 45.09 hours on average each week ($SD = 6.80$). 38.3% of participants held a supervisory role. 79% of the
participants were female, and 90% identified as Caucasian. 79% of participants were married and/or living with their partner.

**Study Measures: Initial Survey**

**Workaholism.** Workaholism was measured using the Work Addiction Risk Test (WART; Robinson, 1998). The WART consists of five dimensions (compulsive tendencies, control, impaired communication/self-absorption, inability to delegate, and self-worth) (Flowers & Robinson, 2002), and is commonly used to assess workaholism. An example item is “it is hard for me to relax when I am not working” (compulsive tendencies subscale). Items were measured on a 1-5 Likert scale (1 = strongly disagree, 5 = strongly agree). The workaholism measure presented acceptable evidence of reliability (α = .81). This scale can be found in Appendix B.

**Conscientiousness.** Conscientiousness was measured using a 10-item inventory from the International Personality Item Pool (IPIP; Goldberg, 1999) (see Appendix C). Items were measured on a five-point scale (1 = strongly disagree, 5 = strongly agree). The conscientiousness measure presented acceptable evidence of reliability at all time points (α = .81). All other five factor model traits were measured using the Mini-IPIP (Donnellan, Oswald, Baird, & Lucas, 2006) on the same scale.

**Day-Level Measures**

**Organizational Citizenship Behaviors.** To develop this measure, I modified previously developed OCB items from a commonly used scale: the OCB checklist (Fox & Spector, 2011). The items have been adapted to capture whether they were performed at home or work, meaning they are asked twice. The first set of items are OCBW, which are identical to the original OCB-checklist, adapted to capture behaviors at a daily level. An example item is “Today, I volunteered for extra work assignments.” The OCBW measure presented acceptable evidence of reliability at
all time points (α range = .84 to .89). The second set of items are adapted to capture OCBH, also adapted at a daily level. An example item of the second scale is “while at home, I volunteered for extra work assignments” (see Appendix D). Four items could not be adapted for performing from home: “Today, I picked up a meal for others at work,” “Today, I helped a less capable co-worker lift a heavy box or other object,” “Today, I took phone messages for an absent or busy co-worker,” and “Today, I decorated, straightened up, or otherwise beautified common work space.” The OCBH measure presented acceptable evidence of reliability at all time points (α range = .73 to .95).

**Work engagement.** Work engagement consists of three facets: vigor, dedication, and absorption. I measured work engagement using the day-specific 9-item version of the Utrecht Work Engagement Scale (UWES-9; Schaufeli, Bakker, & Salanova, 2006), adapted to day-level measurement. An example item is “Today, I felt bursting with energy.” Items were measured on a 0-6 frequency scale (0 = Never; 1 = Almost never; 2 = Rarely; 3 = Sometimes; 4 = Often; 5 = Very often; 6 = Always) (see Appendix E). The work engagement measure presented acceptable evidence of reliability at all time points (α range = .91 to .94).

**Daily WIF.** Day-level work-family conflict was measured using the eight-item negative work-home interface (WHI) subscale of the SWING (Survey Work-Home Interaction NijmeGen; Geurts et al., 2005), which was recently adapted to day-level measurement (Van Hooff, Geurts, Kompier, & Taris, 2006; Derks & Bakker, 2014). The items were measured on a 1-5 Likert scale (1 = strongly disagree, 5 = strongly agree). An example item is “Today, I was irritable at home because my work was demanding.” See Appendix F for the items. The WIF measure presented acceptable evidence of reliability at all time points (α range = .84 to .93).
Control Variables

Based on the nature of my outcome variable, I controlled for relevant demographic variables that may systematically impact my results: gender, age, living with a spouse/partner and living with children. Gender was coded as “0” for male and “1” for female and age was measured in years. Living with a spouse/partner and living with children were both measured dichotomously.

Analyses

Preliminary Analyses. Before testing my hypotheses, I screened the data for outliers. I utilized the non-compliant responding techniques described by Christensen and colleagues (2003) for experience sampling data by screening for random responding by correlating two items that should be related if a person is responding honestly for each participant (e.g., two items from the same subscale of state work engagement should be highly correlated) (Christensen, Barrett, Bliss-Moreau, Lebo, & Kaschub). I then examined any responses suggesting potential inconsistency in depth. I checked for any set responses (e.g., an individual selects the same option for all items). If found, I then removed the set of responses prior to data analyses, in line with practices recommended by Christensen and colleagues (2003). In total, only three participants were removed, resulting in a final sample size of 160 participants. After cleaning my dataset, I ran descriptive analyses. Table 2.1 displays descriptive statistics and correlations between all study variables.
Table 2.1 Correlations between study variables

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. OCBW</td>
<td>664</td>
<td>1.59</td>
<td>.50</td>
<td>.59**</td>
<td>.36**</td>
<td>.29**</td>
<td>.24**</td>
<td>.21**</td>
<td></td>
</tr>
<tr>
<td>2. OCBH</td>
<td>580</td>
<td>1.14</td>
<td>.34</td>
<td>.51**</td>
<td>.23**</td>
<td>.29**</td>
<td>.04</td>
<td>.15</td>
<td></td>
</tr>
<tr>
<td>3. Work Engagement</td>
<td>663</td>
<td>3.96</td>
<td>1.23</td>
<td>.36**</td>
<td>.18**</td>
<td>-.10</td>
<td>.36**</td>
<td>-.09</td>
<td></td>
</tr>
<tr>
<td>4. WIF</td>
<td>578</td>
<td>2.31</td>
<td>1.08</td>
<td>.26**</td>
<td>.22**</td>
<td>-.03</td>
<td>-.02</td>
<td>.34**</td>
<td></td>
</tr>
<tr>
<td>5. Conscientiousness</td>
<td>163</td>
<td>3.14</td>
<td>.44</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>6. Workaholism</td>
<td>163</td>
<td>2.67</td>
<td>.35</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Note. Correlations below the diagonal represent within-individual correlations (N = 534-664). Correlations above the diagonal represent between-individual correlations (N = 148-162).

** p < .01 * p < .05.

As my study utilizes experience sampling methodology, I incorporated best practices for analyzing this type of data. Experience sampling methodology typically involves one of three approaches: interval-contingent, signal-contingent, and event-contingent (Bolger, Davis, & Rafaeli, 2003). My study utilizes interval-contingent experience sampling methodology, as participants responded to daily surveys at prescribed times (once about an hour before they left work, and once at approximately 9:00 pm). First, using Mplus 7 (Muthén & Muthén, 1998–2012), I estimated a model with no predictors for each level 1 variable, which determines how much variance in each model can be attributed to within individuals or between individuals, and allows the calculation of the intraclass correlation coefficient (ICC) (Fisher & To, 2012) (see Table 2.2). Level 1 included the within-person predictors (see Figure 1.1) which includes work engagement, OCBW, OCBH, and WIF. Level 2 included the between-person variables of workaholism and conscientiousness. My Level 2 moderators were grand-mean centered.
Table 2.2 Variance composition of level 1 variables.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Within-individual variance (e²)</th>
<th>Between-individual variance (r²)</th>
<th>Within-individual variance (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Engagement</td>
<td>.73</td>
<td>.77***</td>
<td>48.56%</td>
</tr>
<tr>
<td>WIF</td>
<td>.57</td>
<td>.60***</td>
<td>48.42%</td>
</tr>
<tr>
<td>OCBW</td>
<td>.09</td>
<td>.16***</td>
<td>34.96%</td>
</tr>
<tr>
<td>OCBH</td>
<td>.02</td>
<td>.09***</td>
<td>18.18%</td>
</tr>
</tbody>
</table>

Note. The percentage of variance within individuals was calculated as the ratio of within-individual variance/(within- + between-individual variance).

Hypothesis Testing. Each Hypothesis of my model was tested utilizing a hierarchical approach, adding upon each prior model (see Figure 1.1). Due to the nature of my hypotheses, I analyzed each moderated mediation portion of my model separately (i.e., conscientiousness moderating OCBW, and workaholism moderating OCBH, see Figures 3.1 and 3.2). In my final models, I estimated random coefficients for two of the three Level 1 slopes (for OCBH, the slope of WIF on OCBH was fixed; for OCBW, the slope of OCBW on work engagement was fixed). Ideally, I would have estimated random coefficients for all three Level 1 slopes\(^2\), but the OCBH model would not converge. I did not want to fix the slope of the moderated mediation term or the direct effect, thus I fixed the remaining slope in each of the two final models. In sum, I first tested a null model, followed by Model 1, which included engagement as a within-subjects predictor only. Model 2 was a single mediator model (OCBW or OCH). Model 3 included the relevant individual difference added as a main effect (i.e., for OCBW, conscientiousness was added; for OCBH, workaholism was added). Finally, Model 4 was my final model for each form.

\(^2\) The OCBW model did converge with all random effects, but OCBH would not converge with all random effects. The results of the OCBW model consisting of all random effects exhibited the same findings as the OCBW model consisting of one fixed effect (within the range of .01 to .09). This suggests I would find the same effects for the OCBH model if all slopes were estimated as random.
of OCB, including the moderated mediation term (i.e., conscientiousness moderating the slope of WIF regressed on OCBW; workaholism moderating the slope of OCBH regressed on work engagement). All significance testing used one-tailed distribution values due to specific directional hypotheses.

Finally, I included four demographic control variables in my models: gender, age, living with a spouse/partner and living with children. These demographic variables were chosen as controls as they may impact relationship between the work and family domain (e.g., having children living at home may result in less time available for performing OCBH). Ultimately, our final models did not include any controls, because the addition of each control variable suggested that our results would not change.
CHAPTER 3
RESULTS

Hypothesis 1 posited that work engagement in the afternoon would be positively related to WIF measured in the evening. Although the observed effect was in the hypothesized direction, the direct effect was not significant ($b = .10, p = .068$, 95% CI = [-.03, .24], see Model 1 in Tables 3.1 and 3.2), thus Hypothesis 1 was not supported. However, the effect was approaching significance, and the variance of both the slope (1.56) and the intercept (3.00) were quite large, meaning there is a significant amount of variability regarding the relationship between work engagement and WIF to be explained.

Hypothesis 2 proposed that OCBW (Hypothesis 2A) and OCBH (Hypothesis 2B) would mediate the relationship between work engagement and WIF. Hypothesis 2A was fully supported, as OCBW significantly mediated the relationship between work engagement and WIF ($indirect\;effect = .09, p < .001$, see Model 2 in Table 3.1), with a 95% confidence interval (CI) of [.05, .13]. Hypothesis 2B was not supported, as OCBH did not significantly mediate the relationship between work engagement and WIF, although it was approaching significance and in the hypothesized direction ($indirect\;effect = .01, p = .066$, 95% CI [.00, .03], see Model 2 in Table 3.2).
Table 3.1
Unstandardized coefficients of the multilevel moderated mediation for the OCBW model

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Estimate</th>
<th>SE</th>
<th>Estimate</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OCBW</td>
<td></td>
<td>WIF</td>
<td></td>
</tr>
<tr>
<td>Model 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Level 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>2.35***</td>
<td>.08</td>
<td>.08</td>
<td>.05</td>
</tr>
<tr>
<td>Engagement</td>
<td>.08</td>
<td>.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 2</td>
<td></td>
<td></td>
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<tr>
<td><strong>Level 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>1.14***</td>
<td>.07</td>
<td>1.36***</td>
<td>.27</td>
</tr>
<tr>
<td>Engagement</td>
<td>.12***</td>
<td>.02</td>
<td>-.06</td>
<td>.04</td>
</tr>
<tr>
<td>OCBW</td>
<td>.77***</td>
<td>.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Indirect Effect)</td>
<td>.09***</td>
<td>.02</td>
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<td></td>
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<tr>
<td><strong>Level 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>-1.16</td>
<td>.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 3</td>
<td></td>
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<tr>
<td><strong>Level 1</strong></td>
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</tr>
<tr>
<td>Intercept</td>
<td>1.14***</td>
<td>.07</td>
<td>1.33***</td>
<td>.27</td>
</tr>
<tr>
<td>Engagement</td>
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<td>.04</td>
</tr>
<tr>
<td>OCBW</td>
<td>.78***</td>
<td>.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Indirect Effect)</td>
<td>.09***</td>
<td>.02</td>
<td></td>
<td></td>
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<tr>
<td><strong>Level 2</strong></td>
<td>Conscientiousness</td>
<td>-1.22</td>
<td>.57</td>
<td></td>
</tr>
<tr>
<td>Conscientiousness x OCBW</td>
<td>.22</td>
<td>.33</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. $N = 157$; Level 1 Units = 663. These estimates represent unstandardized path coefficients.
* $p < .05$, ** $p < .01$, *** $p < .001$
Table 3.2  
*Unstandardized coefficients of the multilevel moderated mediation for the OCBH model*

<table>
<thead>
<tr>
<th>Predictor</th>
<th>OCBH</th>
<th>WIF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>SE</td>
</tr>
<tr>
<td><strong>Model 1</strong></td>
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*Note. N = 146; Level 1 Units = 534. These estimates represent unstandardized path coefficients. * p < .05, ** p < .01, *** p < .001*

Hypotheses 3 and 4 predicted moderated mediation would be observed for conscientiousness and workaholism on OCBW and OCBH, respectively. Before testing the moderated mediation, I added the direct effect of each individual difference onto my previous Model (i.e., added the direct effect of conscientiousness into my OCBW model) (see Model 3 in Tables 3.1 and 3.2). Next, I moved forward with testing my hypothesized moderated mediation. Hypothesis 3 predicted that conscientiousness would moderate the relationship between OCBW and WIF, such that higher conscientiousness would attenuate the relationship (see Figure 3.1 and Model 4 in Table 3.1). The indirect effect of the relationship between work engagement and WIF
through OCBW was significant \( (b = .09, p < .001, 95\% \text{ CI } [.05, .13]) \), but conscientiousness did not significantly moderate the relationship between OCBW and WIF \( (b = -.23, p = .247, 95\% \text{ CI } [-.87, .42]) \). Following recommendations by Bauer and colleagues (2006), I estimated the effect at lower \((-1 SD)\) and higher \((+1 SD)\) values of conscientiousness. The indirect effect of OCBW on WIF was not significant at low levels of conscientiousness \( (\text{indirect effect} = .12) \) or high levels of conscientiousness \( (\text{indirect effect} = .06) \). Hypothesis 4 predicted that workaholism would moderate the relationship between work engagement and OCBH, such that higher workaholism would strengthen the relationship. The indirect effect was significant, \( (b = .03, p = .030, 95\% \text{ CI } [0.0, 0.06]) \), as was the moderating effect of workaholism on work engagement and OCBH \( (b = .13, p = .005, 95\% \text{ CI } [0.03, 0.23]) \) (see Figure 3.2 and Model 4 in Table 3.2). As with the previous test of moderated mediation, I estimated the effect at lower \((-1 SD)\) and higher \((+1 SD)\) values of workaholism. The indirect effect of work engagement on OCBH was significant when workaholism was low \( (\text{indirect effect} = -.12) \) and when workaholism was high \( (\text{indirect effect} = .18) \), such that individuals high in workaholism perform more OCBH when experiencing state work engagement then when they are not experiencing state work engagement (see Figure 3.3).
Total indirect effect = .09***

* $p < .05$, ** $p < .01$, *** $p < .001$

Figure 3.1 Test of Hypothesis 3, moderated mediation of the OCBW model.
Figure 3.2. Test of Hypothesis 4, moderated mediation of the OCBH model.

* $p < .05$, ** $p < .01$, *** $p < .001$
Figure 3.3. Workaholism moderates the effect of daily work engagement on daily OCBH.
CHAPTER 4

DISCUSSION

Past research has found mixed results regarding the relationship between work engagement and WIF, with some studies finding a positive relationship (Chen & Huang, 2016; Halbesleben et al., 2009; Mauno, 2010), and others observing a negative relationship (Babic, Stinglhamber, & Hansez, 2015; Hakanen & Peeters, 2015; Miner, Bickerton, Dowson, & Sterland, 2015). The aim of the current study was to examine within- and between-person differences that may explain the nature of the relationship between work engagement and WIF. Rooted in conservation of resources theory, I tested my proposed model using experience sampling data. The overarching finding arising from this study was that increased work engagement was associated with greater levels of WIF. The daily fluctuation of OCBW accounted for the positive relationship between work engagement and WIF, in that state engagement during the day led to the performance of OCBW, in turn resulting in greater levels of WIF in the evening. This result partially replicates a previous finding by Halbesleben et al. (2009), although I was unable to replicate their finding that conscientiousness serves as a buffer to the translation of OCBWs into higher WIF. Additionally, I found that individuals experiencing state engagement performed a higher number of OCBHs, leading in turn to greater levels of WIF. I confirmed my hypothesis that higher workaholic tendencies would strengthen the positive link between engagement and OCBHs, thus leading to even greater WIF. Thus, both OCBW and OCBH offer unique explanatory power behind why work engagement is associated with greater WIF, and there is some evidence that personality traits can play a role in the extent to which
engagement translates to higher WIF through these causal mechanisms. Below, I discuss the theoretical and practical implications of this study, and along with its limitations, and directions for future research.

**Theoretical Implications**

The current study offers a number of theoretical implications. First, in the context of conservation of resource theory and the relationship between work engagement and WIF, the findings of the current study highlight the importance of examining not only individual differences that may that may help conserve resources (e.g., conscientiousness, Halbesleben et al., 2009), but also traits that may accelerate resource depletion (e.g., workaholism). This is especially notable in the context of the primacy of loss principle, which posits that resource loss is more salient than resource gain (Hobfoll, Halbesleben, Neveu, & Westman, 2018). With regard to the current study, the primacy of loss principle would suggest that the accelerated depletion of resources (i.e., time, energy) of those high in workaholism may have more evident impacts on outcomes then the potential conservation of resources by those high in conscientiousness. This rationale could be one explanation for why I failed to find a significant buffering effect of conscientiousness on the relationship between OCBW and WIF but did find the expected accelerating effect for workaholism. Alternatively, one reason for the null finding with regard to the buffering influence of conscientiousness could rest with the nature of the mediator. I found that OCBH showed lower variance within-person than OCBW; thus, between-person moderators such as workaholism and conscientiousness may be more important for understanding mechanisms that mostly vary between-person, whereas within-person moderators such as affect may be more important for mechanisms whose influence has higher within-person variability.
Second, the current study highlights the importance of capturing the interplay of state work engagement and trait workaholism within an individual in predicting WIF. Whereas past research has focused on the distinction between work engagement and workaholism (e.g. Bakker et al., 2014; Birkeland & Buch, 2015), their low correlation with one another and the results of the current study suggest that interactions do exist for these two constructs within individuals and can increase our understanding of the outcomes each is known to produce.

Finally, the current study suggests that OCBW and OCBH are distinct constructs, underscoring the importance of considering the context of work behaviors when studying the influence of engagement and/or workaholism on WIF. This is the first study known to the author to examine the importance of capturing where OCBs are performed. Although OCBs by definition are discretionary and voluntary, aspects of OCBs have been linked with performance evaluation decisions (Whiting, Podsakoff, & Pierce, 2008), and are often perceived by employees to be a part of their job description (Turnipseed & Wilson, 2009). As shown here, those high in workaholism are more likely to exhibit home-based OCBs, and thus accelerate the depletion of resources that leads to higher WIF. Organizations may not be aware that employees are performing OCBs not only during their paid work hours – but also at home during non-work hours. Although OCBs may be beneficial for organizations initially, the current study suggests that the performance of both OCBW and OCBH are associated with greater WIF and would likely result in the depletion of other resources. This is in line with past research which suggests that OCBs are associated with lower job satisfaction (Munyon, Hochwarter, Perrew, & Ferris, 2010) and burnout (Vigoda-Gadot, 2007). Additionally, the performance of OCB is associated with citizenship fatigue, which consequently leads to fewer OCBs performed in the future (Bolino, Hsiung, Harvey, & LePine, 2015).
Practical Implications

The current study also has several practical implications. First, organizations should be cognizant that work engagement can be associated with higher levels of WIF. A past meta-analysis found that WIF was related to negative outcomes for employees (e.g., increased psychological strain, higher levels of depression, stress, and anxiety), their families (e.g., higher family-related stress, lower family-related performance), and for organizations (e.g., higher rates of absenteeism, lower work-related performance) (Amstad, Meier, Fasel, Elfering, & Semmer, 2011). Thus, although organizations often strive to encourage work engagement and OCBs (Markos & Sridevi, 2010; Skarlicki & Latham, 1997), this seemingly positive state and associated behaviors can have detrimental impacts on the employee, their family, and the organization.

Although work engagement can lead to increased WIF, organizations and society as a whole can help reduce the behaviors that may lead to increased WIF and other potential negative consequences that result from the resource depletion associated with engagement. At a societal level, countries could employ formal laws limiting employers’ right to expect work after-hours. For example, France recently implemented a law banning work-related emails after 6:00 pm (Morris, 2017). A policy such as this would reduce the likelihood of OCBH, leading to lower levels of WIF, and potentially helping to retain the good parts of engagement, while limiting its detrments. Additionally, organizations could offer training that aims to reduce workaholic behaviors. For instance, a recent intervention found that mindfulness training for the treatment of workaholism led to a reduction of work hours, yet job performance did not decline (Van Gordon et al., 2017). Finally, organizations may want to encourage supervisors to restrict their own OCBH, in turn setting an example to employees that continuing to work “off the clock” is not
necessary or expected, as social norms regarding technology use after working hours are associated with increased WIF (Derks, van Duin, Tims, & Bakker, 2015).

Regarding the finding of OCBW leading to greater WIF, organizations could offer workshops to employees demonstrating the construct of OCBW, whether OCBW has any impact on formal performance evaluations at the specific company, and the potential costs of performing these helping behaviors. While OCBW has a whole does not necessarily need to be discouraged, employers could make employees aware of the types of resources they may be depleting by performing such behaviors (i.e., emotional resources, time, etc.). Additionally, employees may wish to continue performing OCBW, but alleviating potential resource loss by taking breaks to aid with recovery. For instance, relaxing during a lunch break is associated with greater recovery from work (Trougakos, Hideg, Cheng, & Beal, 2014). Furthermore, a previous experience sampling study found that vigor (one facet of work engagement) combined with recovery after work over a period of days led to greater recovery experience for the employee overall (Sonnentag & Niessen, 2008). Perhaps engaged employees who regularly perform OCBWs can alleviate the associated resource loss by taking time to recover regularly after work hours, leading to less resource loss, greater recovery across the work week as a whole, and ideally lower levels of WIF. In fact, this idea would further suggest the importance of limiting OCBs conducted after hours and/or at home.

Limitations

Despite the strengths of the current study, there are notable limitations. The main limitation is the homogeneity of the sample, in that the sample was almost entirely Caucasian (90%) and female (79%). This greatly limits the generalizability of the current findings, in that generalizations are mostly limited to Caucasian females. However, recent studies, and especially
experience sampling studies, have had similar sampling problems (i.e., Clark, Robertson, & Carter, in press; Koopman et al., 2016; Shockley & Allen, 2013; Sianoja, Syrek, de Bloom, Korpela, & Kinnunen, in press). Additionally, the homogeneity of the sample limited the ability to test for differences based on race and gender, which may show different causal mechanisms for the engagement-WIF link. For instance, drawing on gender role theory, certain OCBs are more theoretically associated with the behaviors of women (e.g., altruism, courtesy), while other OCBs are more theoretically associated with the behaviors of men (e.g., sportsmanship, civic virtue) (Kark & Waismel-Manor, 2005; Kidder, 2002).

Another major limitation is the restriction of behaviors captured by the mediator variables. Although past research has shown that OCB mediates the relationship between work engagement and WIF (Halbesleben et al., 2009), the measurement of OCBs necessarily places a boundary on the domain of behaviors that are captured. For instance, workaholics may also perform other behaviors that could mediate the relationship between work engagement and WIF, such as continuing to work longer hours (while physically at work) as opposed to coming home and continuing to work.

Conclusion

The current study aimed to investigate the nature of the relationship between work engagement and WIF. Overall, results suggest that work engagement is indeed associate with increased levels of WIF, and that OCBs – both at home and at work – explain how engagement translates into greater WIF. Additionally, individuals exhibiting workaholic tendencies are inclined to perform OCBH, resulting in even stronger positive associations between work engagement and WIF. Moreover, I was not able to replicate the past finding that conscientiousness can serve as a buffer to this causal chain, though we are wary of concluding
that this trait cannot act to decrease the impact of OCBW on WIF. Employees and organizations should strive to be cognizant of the depletion of psychological resources in workers and take steps to avoid resource depletion that interferes with the resources available for their familial roles.
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APPENDIX A: DEMOGRAPHICS

Eligibility Items:

1. Are you currently employed?
   a. Yes
   b. No (if no is selected, informs participant they are not eligible)

2. How many jobs do you currently have?
   a. 1 (if anything other than 1, informs participant they are not eligible)
   b. 2
   c. 3
   d. 4

3. Does your job require you to leave home for at least 6 hours a day on workdays?
   a. Yes
   b. No (if no is selected, informs participant they are not eligible)

4. Does your job require you to work at least five days a week?
   a. Yes
   b. No (if no is selected, informs participant they are not eligible)

5. Please select which days of the week you typically work.
   a. Sunday
   b. Monday
   c. Tuesday
   d. Wednesday
e. Thursday
f. Friday
g. Saturday

6. How many people do you live with?
   a. (drop down list of 0-10; if 0 is selected, informs participant they are not eligible)

7. Do you live with any of the following family members? Please select all that apply.
   a. Spouse/Partner
   b. Child
   c. Parent

8. What time zone do you live in?
   a. Pacific time zone
   b. Mountain time zone
   c. Central time zone
   d. Eastern time zone
   e. Alaskan time zone
   f. Hawaiian time zone
   g. I do not live in the United States (if this option is selected, informs participant they are not eligible)

Remaining Demographic Items:

9. What is your gender?
   a. Male
   b. Female
10. What is your current age in years?
   a. (Drop down multiple choice, responses between 1-100)

11. Please indicate your race, choose all that apply
   a. White (non-Hispanic)
   b. African American
   c. Asian/Pacific Islander
   d. Hispanic/Latino
   e. Native American or American Indian
   f. Other (Fill in the blank)

12. What is your highest level of education?
   a. Less than high school
   b. High school/GED
   c. Some college
   d. 2-year college degree (Associates)
   e. 4-year college degree (B.A., B.S.)
   f. Master’s degree
   g. Doctoral degree
   h. J.D.
   i. M.D.

13. What is your relationship status?
   a. Single
   b. Married/Living with Partner
   c. Divorced
14. How many hours on average do you work per week?
   a. (drop down list)

15. What is your job title?
   a. (fill in)

16. Do you hold a supervisory position in your current job?
   a. Yes
   b. No

17. What is your current income?
   a. (fill in)

18. How long have you held your current job (in years)
   a. Drop down list ranging from 0-6 months to 100 years

19. Do you employ any domestic workers to help around your home? Please select all that apply.
   a. Nanny or babysitter
   b. Housekeeper
   c. Other (please describe)
   d. I do not employ any domestic workers to help around my home
APPENDIX B: WORKAHOLISM

The following statements are about how you feel at work. Please read each statement carefully and decide if you felt this way about your job today. (1 = Strongly disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Strongly agree)

1. I seem to be in a hurry and racing against the clock
2. I stay busy and keep many irons in the fire
3. I find myself doing two or things at one time such as eating lunch and writing a memo, while talking on the phone
4. I overly commit myself by biting off more than I can chew
5. I feel guilty when I am not working on something
6. I find myself continuing to work after my coworkers have called it quits
7. I put myself under pressure with self-imposed deadlines when I work
8. It is hard for me to relax when I am not working
9. I spend more time working than on socializing with friends, on hobbies, or on leisure activities
10. I prefer to do most things myself rather than ask for help
11. I get impatient when I have to wait for someone else or when something takes too long, such as long, slow-moving lines
12. I get irritated when I am interrupted while I am in the middle of something
13. It is important that I see the concrete results of what I do
14. I am more interested in the final result of my work than in the process
15. Things do not seem to move fast enough or get done fast enough for me

16. I lose my temper when things don’t go my way or work out to suit me

17. I ask the same question over again, without realizing it, after I’ve already been given the answer once

18. I spend a lot of time mentally preparing and thinking about future events while tuning out the here and now

19. I get angry when people don’t meet my standards of perfection

20. I get upset when I am in situations where I cannot be in control

21. I dive into projects to get a head start before all phases have been finished

22. I get upset with myself for making even the smallest mistake

23. I put more thought, time, and energy into my work than I do into my relationships with friends and loved ones

24. I forget, ignore, or minimize birthdays, reunions, anniversaries, or holidays

25. I make important decisions before I have all the facts and have a chance to think them through thoroughly
APPENDIX C: PERSONALITY MEASURES

The following statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. Please indicate how much you agree with each statement below. (1 = Strongly disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Strongly agree)

Conscientiousness

1. Am always prepared
2. Pay attention to details
3. Get chores done right away
4. Carry out my plans
5. Make plans and stick to them
6. Waste my time
7. Find it difficult to get down to work
8. Do just enough work to get by
9. Don’t see things through
10. Shirk my duties

Extraversion

1. Am the life of the party
2. Don’t talk a lot (R)
3. Talk to a lot of different people at parties
4. Keep in the background (R)
Agreeableness

1. Sympathize with others’ feelings
2. Am not interested in other people’s problems (R)
3. Feel other’s emotions
4. Am not really interested in others (R)

Openness

1. Have a vivid imagination
2. Am not interested in abstract ideas (R)
3. Have difficulty understanding abstract ideas (R)
4. Do not have a good imagination (R)

Neuroticism

1. Have frequent mood swings
2. Am relaxed most of the time (R)
3. Get upset easily
4. Seldom feel blue (R)
APPENDIX D: OCBW AND OCBW

Instructions: Below are items measuring behaviors you may perform in your present job. Please indicate the frequency you have engaged in these behaviors today. Items will be presented on a 6-point scale, ranging from never (0) to 5 or more times today (5).

OCBW

1. Today, I picked up a meal for others at work.*
2. Today, I took time to advise, coach, or mentor a co-worker.
3. Today, I helped co-worker learn new skills or shared job knowledge.
4. Today, I helped new employees get oriented to the job.
5. Today, I lent a compassionate ear when someone had a work problem.
6. Today, I lent a compassionate ear when someone had a personal problem.
7. Today, I changed vacation schedule, workdays, or shifts to accommodate co-worker’s needs.
8. Today, I offered suggestions to improve how work is done.
9. Today, I offered suggestions for improving the work environment.
10. Today, I finished something for co-worker who had to leave early.
11. Today, I helped a less capable co-worker lift a heavy box or other object.*
12. Today, I helped a co-worker who had too much to do.
14. Today, I took phone messages for an absent or busy co-worker.*
15. Today, I said good things about your employer in front of others.
16. Today, I gave up meal and other breaks to complete work.

17. Today, I volunteered to help a co-worker deal with a difficult customer, vendor, or co-worker.

18. Today, I went out of the way to give co-worker encouragement or express appreciation.

19. Today, I decorated, straightened up, or otherwise beautified common work space.*

20. Today, I defended a co-worker who was being ‘put-down’ or spoken ill of by other co-workers or supervisor

OCBH

1. While I was at home, I took time to advise, coach, or mentor a co-worker.

2. While I was at home, I helped co-worker learn new skills or shared job knowledge.

3. While I was at home, I helped new employees get oriented to the job.

4. While I was at home, I lent a compassionate ear when someone had a work problem.

5. While I was at home, I lent a compassionate ear when someone had a personal problem.

6. While I was at home, I changed vacation schedule, workdays, or shifts to accommodate co-worker’s needs.

7. While I was at home, I offered suggestions to improve how work is done.

8. While I was at home, I offered suggestions for improving the work environment.

9. While I was at home, I finished something for co-worker who had to leave early.

10. While I was at home, I helped a co-worker who had too much to do.

11. While I was at home, I volunteered for extra work assignments.

12. While I was at home, I said good things about my employer in front of others.

13. While I was at home, I gave up meals and other breaks to complete work.
14. While I was at home, I volunteered to help a co-worker deal with a difficult customer, vendor, or co-worker.

15. While I was at home, I went out of the way to give co-worker encouragement or express appreciation.

16. While I was at home, I defended a co-worker who was being ‘put-down’ or spoken ill of by other co-workers or supervisor.
APPENDIX E: STATE WORK ENGAGEMENT

The following statements are about how you feel at work. Please read each statement carefully and decide if you felt this way at your job today. If you have never had this feeling, cross the “0” (zero) in the space after the statement. If you have had this feeling, indicate how often you felt it by crossing the number (from 1 to 6) that best describes how frequently you felt that way today. (0 = Never; 1 = Almost never; 2 = Rarely; 3 = Sometimes; 4 = Often; 5 = Very often; 6 = Always).

1. Today, I felt bursting with energy (V)
2. Today, I felt strong and vigorous at my job (V)
3. When I got up this morning, I felt like going to work (V)
4. Today, I was enthusiastic about my job (D)
5. Today, my job inspired me (D)
6. Today, I was proud of the work that I do (D)
7. Today, I felt happy when I was working intensely (A)
8. Today, I was immersed in my work (A)
9. Today, I got carried away when I was working (A)
APPENDIX F: DAILY WIF

The following statements are about how you feel at work. Please read each statement carefully and decide if you felt this way at your job today. Items were measured on a 1-5 Likert scale (1 = strongly disagree, 5 = strongly agree).

1. Today, I found it difficult to fulfill my domestic obligations, because I was constantly thinking about my work.

2. Today, I had to cancel or reschedule appointments with my spouse/family/friends due to work-related commitments.

3. Today, I was irritable at home because my work was demanding.

4. Today, I did not have the energy to engage in leisure activities with my spouse/family/friends because of my job.

5. Today, my work took up time that I would have liked to spend with my spouse/family/friends.

6. Today, I worked so hard that I did not have time for any of my hobbies.

7. Today, my work obligations made it difficult for me to feel relaxed at home.

8. Today, my work schedule made it difficult for me to fulfil my domestic obligations.