YOUR WORK-FAMILY CONFLICT (WFC) IS HARD ON ME TOO: EMPLOYEE REACTIONS TO COWORKER WFC

by

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ABSTRACT

ALLISON ASHLEY TOTH. Your Work-Family Conflict (WFC) Is Hard on Me Too:
Employee Reactions to Coworker WFC. (Under the direction of DR. LINDA R.
SHANOCK)

Researchers working in the work-family conflict (WFC) literature have a long history of focusing on how conflict between the work and family domains influences employees and their experiences inside and outside of work (Eby et al., 2005). However, missing from the literature is how a coworker's WFC, specifically in the direction of family interfering with work (FIW), can go beyond influencing the person experiencing the FIW to impact other people in the work environment, such as other employees. The present study used a weekly diary study and multilevel modeling to investigate how fluctuations in coworker FIW are related to fluctuations in a focal employee's helping behavior, as well as how engaging in that helping behavior may influence the relationship quality between coworkers and focal employees and may lead to increased role overload, work interfering with family (WIF), and need for recovery for the focal employee. The study also tested whether having higher levels of prosocial motivation moderates the relationship between coworker FIW and focal employee helping behavior. Results from the multilevel analyses indicated coworker FIW was not related to whether or not a focal employee will engage in helping behavior, and prosocial motivation levels did not moderate this relationship between coworker FIW and helping behavior. However, engaging in helping behavior was related to increased focal employee role overload and relationship quality, but not to WIF or need for recovery. Implications and limitations of these findings for the WFC literature are discussed.

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INTRODUCTION

The interdisciplinary field of organizational science has a long history of exploring how employees' work and family lives affect one another (Allen & Martin, 2017; Eby et al., 2005). One's work experiences may spill over into one's personal life outside of work (e.g., feeling too exhausted after work to participate in family activities), and/or one's personal life may influence one's ability to complete work tasks (e.g., missing work to care for a sick child). This incompatibility between an employee's work and family roles is known as work-family conflict (WFC), and this conflict can be in the direction of work interfering with family (WIF) and/or family interfering with work (FIW; Greenhaus & Beutell, 1985). Although the "family" in WFC often refers to instances in which one's children, spouse/partner, or aging parents create obligations or strain that is incompatible with work obligations, "family" can also be interpreted quite broadly, and can refer to other important individuals in one's personal life who might interfere with one's ability to complete work tasks (e.g., Boswell & Olson-Buchanan, 2007). For example, leaving work to take a pet to the vet or being emotionally drained due to a fight with a friend could also be considered FIW. Thus, it is possible to experience WIF or FIW, even if one does not have a family in the traditional sense.

Research on WFC has flourished over the past 40 years, but has mainly focused on the WIF direction of WFC. However, FIW is also important to research because it is quite common for employees to bring personal issues into the work environment (Allen & Martin, 2017). Not only is FIW common, but the research to date that does exist on FIW suggests it can also lead to detrimental effects on the work outcomes and well-being of the employees experiencing it (e.g., Amstad et al., 2011; Ford et al., 2007). For

example, research has found FIW is associated with absenteeism, turnover intentions, and lower organizational citizenship behavior, job performance, job satisfaction, and organizational commitment (Amstad et al., 2011; Ford et al., 2007; Kinnunen et al., 2010; Kossek & Ozeki, 1998). FIW is also related to stress, burnout, anxiety, depression, and somatic symptoms (Amstad et al., 2011; Ford et al., 2007; Kelloway et al., 1999). In addition, there is evidence of crossover effects, where the family members of employees who experience work-family conflict may also experience negative outcomes (e.g., Hammer et al., 1997; Westman, & Etzion, 2005). Thus, FIW has serious implications for an employee's work life and well-being and may affect other individuals within an employee's home. However, although there is evidence that FIW is detrimental to the people experiencing it and their families, researchers have neglected to consider how FIW might influence other people in the work environment, specifically the coworkers of people struggling with FIW.

It is important to consider how an employee's FIW may influence his or her coworkers because they are the ones who may have to provide instrumental and/or emotional support as that employee's family/personal issue spills over into the workplace (Settoon & Mossholder, 2002). Although organizational policies and leader behaviors may help accommodate employees struggling with FIW (e.g., Allen, 2001; Hammer et al., 2009), the reality is an employee's FIW can still negatively impact their work performance and productivity, creating instances where employees need further support. For example, an employee may need to leave work early to attend a child's after-school activity or may miss work entirely to care for a sick child, possibly creating a situation where coworkers have to cover for the missing employee. Or, an employee might be

preoccupied while at work because they cannot stop thinking about a fight they had with their spouse or friend, and reach out to a coworker to talk or vent about it. This could then potentially reduce the productivity or quality of work of the employee as well as the coworker. In each of these scenarios, the employee is clearly experiencing situations where the demands required by their family roles and work roles are incompatible. It may then fall on other individuals in the work environment (i.e., coworkers) to pick up the slack, either because the employee cannot be physically present or because the employee is unable to produce quality work because of their family issues. Thus, coworkers may need to expend time, effort, and energy as a result of another employee's FIW.

Coworkers are the most likely source for providing instrumental and emotional support to employees struggling with FIW for several reasons. First, employees often have close relationships with coworkers that border on friendships (Riordan & Griffeth, 1995; Sias & Cahill, 1998), so employees and coworkers have likely shared personal details about their family lives (and may have even met each other's families; Sias et al., 2004) and may feel close enough to vent about personal issues. There may be a history of reciprocal sharing of personal problems, and coworkers may desire or even be expected to provide emotional support (Sias & Cahill, 1998; Sias et al, 2004). Coworkers also interact frequently with each other and are likely to have job overlap or at least some understanding of one another's roles (Chiaburu & Harrison, 2008). This positions coworkers to provide instrumental support if an employee has to miss work or needs help completing tasks due to family issues. Coworkers may voluntarily provide this instrumental help as a result of their friendship with the struggling employee, or they may be formally asked by their supervisor to cover for another employee. Thus, coworkers are

uniquely positioned to provide instrumental and emotional support if an employee is struggling with FIW.

However, despite the likelihood of employee FIW influencing others in the work environment, the work-family literature has not considered how coworkers may be impacted by another's FIW. Thus, the present study will attempt to fill two gaps that exist in the work-family literature: 1) how coworkers may be drawn upon to help employees struggling with FIW, and 2) how engaging in that helping behavior may then have negative implications for the coworker. For example, a coworker may start to experience their own work-family issues if their workload increases substantially as a result of helping another employee with work tasks. Or, the relationship quality between the coworker and employee may start to suffer if the coworker is constantly listening to an employee vent about their home life. Thus, there is a potential dark side to engaging in helping behavior to support an employee dealing with FIW that has not been explored in the work-family literature.

The present study will fill these gaps in the literature and focus on how an employee's family or personal life can interfere not only with their own work life, but also with the work experiences and well-being of their coworkers. Specifically, the current study will investigate to what extent an employee bringing a personal issue into the work environment may influence coworker helping behavior in the form of providing instrumental and/or emotional support for the employee dealing with FIW. The present study will also investigate the potential dark side of this helping behavior by considering whether providing instrumental and emotional support negatively impacts the coworker's well-being (i.e., role overload, WIF, need for recovery), as well as the coworker's

perception of the relationship quality between the coworker and employee. Finally, this study also focuses on whether having a desire and propensity to help others (i.e., high prosocial motivation) may influence the extent to which a coworker is willing to help an employee who is struggling with FIW (see Figure 1 for full model).

Background on Work-Family Conflict (WFC)

WFC is a form of interrole conflict where the work and family domains are incompatible in some respect (Greenhaus & Beutell, 1985). The work and family domains can each influence the other domain, thus work can spill over into one's family or personal life (WIF), and one's personal issues can spill over into the work domain (FIW; Crouter, 1984; Greenhaus & Beutell, 1985). It is important to note that in order for WFC to exist in either direction, a person has to experience demands or pressures from both roles (Greenhaus & Beutell, 1985). For example, if a person is experiencing high family demands, but few work demands, they may not experience WFC, as there are no work demands to conflict with family demands.

The WFC literature has classified work and family demands into three main types of conflict that can go in either direction (Greenhaus & Beutell, 1985). These types are time-based, strain-based, and behavior-based conflict. Time-based conflict reflects that time is zero-sum, thus the time spent in one domain generally cannot also be spent in the other domain (Greenhaus & Beutell, 1985). For example, if an employee has to work late but wants to attend their child's soccer game that evening, they would experience time-based conflict. Time-based conflict can also reflect how an individual might be spending time ruminating about the family (work) domain while in the work (family) domain. Thus, time-based WFC can occur when the pressures of one role create a preoccupation

with that role while one is trying to meet the demands of another role (Greenhaus & Beutell, 1985). Strain-based conflict occurs when there is affective spillover between the domains or when the strain produced or experienced in one role makes it challenging to comply with the demands of another role (Eby et al., 2005; Greenhaus & Beutell, 1985). For example, if an employee experiences job ambiguity or high work demands, this might produce strain that makes the employee too fatigued to take part in family activities. Or, affective spillover might occur if an employee experiences anger at work and carries that anger into their home environment (Edwards & Rothbard, 2000). Finally, behavior-based conflict occurs when the behaviors that are expected or rewarded in one domain are incompatible with the behaviors expected in the other domain (Greenhaus & Beutell, 1985). For example, a parent might be expected to be nurturing and compassionate while at home, but may be expected to be firm and put the interests of the company first while at work. Although some studies have included behavior-based conflict (e.g., Bruck et al., 2002; Carlson, 1999; Loerch et al., 1989), much of the WFC literature has focused primarily on time-based and strain-based conflict (Eby et al., 2005).

Previous WFC research has also primarily treated FIW and WIF as stable constructs, with common measures using general language about how often a work-family conflict occurs (e.g., "The demands of my family or spouse/partner interfere with work-related activities;" Netemeyer et al., 1996). However, more recently, researchers have begun to assess how WFC can fluctuate on a daily or weekly basis (e.g., Butler et al., 2005; Grzywacz et al., 2002; Haar et al., 2018; Liu et al., 2015; Nohe et al., 2014). WFC can fluctuate due to the different events that might be experienced in the work and home domains over time (Haar et al., 2018). For example, an individual may experience

FIW on a day where their child gets sick and needs to be picked up from school.

However, this particular family event would likely not occur every day during the week,

and thus there could be different levels of perceived FIW depending on when it is

assessed and what work or life events are occurring at the time.

Work-Family Conflict Theorizing

Theorizing about the work and family domains and how conflict can lead to

negative outcomes has taken many forms. Early WFC theorists took a segmentation view

of the work and family domains, and believed the domains did not affect one another

(Lambert, 1990; Staines, 1980). According to the segmentation framework, aspects of the

work environment only influence an employee while they are at work and lead only to

work outcomes, and aspects of the family environment remain in the family domain and

only influence family outcomes. This view was prominent because early industrialization

created a physical and temporal separation between work and family responsibilities

(Clark, 2000). However, as it became clear the work and family domains do, in fact,

influence one another, other theoretical models emerged (Clark, 2000; Lambert, 1990).

One of these models is the compensation framework. According to this view, people try

to compensate for lack of satisfaction in one domain by trying to find more satisfaction in

another domain (Lambert, 1990, Staines, 1980). This approach assumes work and

nonwork are antithetical and individuals will essentially seek opposite experiences

between the two domains. This approach was initially applied to blue collar workers in an

effort to explain nonwork reactions to what was deemed inherently unsatisfying work

(Lambert, 1990). However, an issue with this approach is it does not take into account

how satisfaction in one domain can actually increase satisfaction in another domain.

Spillover theory is one of the more popular theoretical frameworks used to explain how the work and family domains relate to one another, and it does account for how attitudes in one domain can improve attitudes in another domain (Edwards & Rothbard, 2000; Staines, 1980). According to this theory, effects from one domain spill over into the other domain, leading to the domains becoming more similar over time (Lambert, 1990; Staines, 1980). This spillover can be positive or negative (Crouter, 1984). For example, positive spillover might occur when a person's satisfaction with work carries over into the home environment, leading to positive attitudes while at home as well. Negative spillover might occur if one experiences many family pressures, creating stress that is then carried into the work environment, leading to feelings of work stress. Thus, the work and home domains become more similar to one another, because individuals who are stressed at work may, over time, become more stressed at home as well.

The spillover and subsequent similarities between work and family domains are thought to be due to several possible reasons. One is that people are more likely to have spillover between the domains due to personality traits. People might be predisposed to be more involved, behave in certain ways, or have higher positive or negative affect, which would then influence their experiences in both domains (Staines, 1980). Another is that the skills and abilities acquired while at work or while at home can spill over into the other domain, leading to an easier time navigating the other domain (Staines, 1980). Finally, another reason there may be similarity and spillover across domains is due to cultural pressures. Workers may be pressured to become involved in activities outside of work that resemble work activities, especially if they are at higher levels in their

organizations (Staines, 1980). For example, a leader in an organization may feel pressure to become a leader in her community, leading to her engaging in similar activities in the work and family domains. Each of these reasons could contribute to why individuals experience spillover and similarities between the two domains.

Role theory (Kahn et al., 1964), later discussed as role conflict theory (Greenhaus & Beutell, 1985) has also been used in the work-family literature to help explain why spillover occurs. According to role theory, individuals have different roles they enact (e.g., parent, spouse, employee) and each role contains activities to be performed (Kahn et al., 1964). The activities that are expected to be performed in one role may not be conducive to performing activities in another role. Thus, the activities of one role might spill over and influence one's ability to enact another role, leading to inter-role conflict. Inter-role conflict is a situation where role pressures associated with one role (typically the work role) are in conflict with the pressures that arise due to membership in another group (Kahn et al., 1964). These pressures can be exacerbated when other individuals in each domain (i.e., role senders) have certain conflicting expectations about what a focal person needs to do to enact that role effectively (Kahn et al., 1964; Onyemah, 2008). For example, a person's supervisor may expect an employee to stay late to finish a work task, whereas that person's spouse may expect them to be home in time to eat dinner as a family. These expectations from role senders exert role pressures that ultimately result in inter-role conflict.

While role theory originally was quite broad and could encompass inter-role conflicts occurring between many different roles (including different roles within the work environment), Greenhaus and Beutell (1985) applied role theory and inter-role

conflict specifically to the work and family domains, defining WFC as a form of inter-role conflict where the work and family roles are incompatible in some way. An employee who is dealing with WFC is experiencing an inter-role conflict between the expectation of organizational role senders (e.g., supervisor) to be a good employee, and expectations of personal life role senders (e.g., spouses, children, friends, pets) to fulfill outside obligations. However, just as that employee has role senders in their own life, they are also a role sender in the lives of other employees with whom they interact on a daily basis, such as their coworkers. Employees may communicate to their coworkers that they expect them to enact the role of "good coworker" when the employee experiences a FIW issue. For example, they may signal to their coworkers that they expect them help out with their work tasks or listen to them vent about a personal problem.

Due to this expectation to provide instrumental and/or emotional support while an employee is dealing with a FIW issue, coworkers will likely have to give their time and energy to help the struggling employee. Having to help another employee to fulfill the role of good coworker creates additional work for the coworker who must now take on the employee's tasks or take time away from their own work to listen to the struggling employee. However, these coworkers are still expected by other role senders in the organization (e.g., their leader) to complete their own work tasks. By engaging in helping behavior to assist an employee struggling with FIW, a coworker necessarily experiences their own role conflict because they must complete the in-role job tasks required to fulfill the role of good employee while also engaging in extra-role helping behavior to fulfill the role of good coworker (Bolino & Turnley, 2005). This may, in turn, lead to negative outcomes for the coworker. Thus, engaging in helping behavior to support an employee

struggling with FIW may lead to negative outcomes, such as reduced well-being in the form of increased role overload, WIF, and need for recovery, because the coworker must engage in extra-role helping behavior that limits their ability to complete their own job tasks.

The present study thus extends role theory by considering how an employee experiencing an inter-role conflict between their work and family roles can become the role sender for their coworkers, as they communicate that they expect increased helping behavior. However, engaging in this helping behavior can be detrimental to their coworkers who still have to fulfill their formal job role requirements. Previous WFC research has not considered employees with FIW may put additional pressures on other employees to engage in helping behavior, in addition to the pressures these employees already experience to complete their own work tasks. The present study helps fill this gap by taking the perspective of focal employees who are working with coworkers who are experiencing FIW and bringing their personal issues into the work environment. This study investigates how that coworker FIW relates to the focal employee's helping behavior and subsequent negative outcomes.

Coworker FIW and Focal Employee Interpersonal Citizenship Behavior (ICB)

When an employee has a coworker who is experiencing FIW, they may be called upon to help that coworker, either by providing instrumental or emotional support. In other words, the employee may be expected to engage in interpersonal citizenship behavior (ICB; Settoon & Mossholder, 2002). ICB reflects extra-role behaviors that coworkers engage in to help each other either directly or indirectly increase job performance and/or achieve team or organizational goals (Bowler & Brass, 2006). ICB

fits within the larger organizational citizenship behavior (OCB) framework (Organ, 1997)

and reflects extra-role behaviors that are geared specifically towards one's coworkers

(Bowler & Brass, 2006).

There are two types of ICB: person-focused and task-focused (Settoon &

Mossholder, 2002). Person-focused ICB, sometimes referred to as altruism (Bowler &

Brass, 2006), reflects relational behaviors, such as listening to and demonstrating concern

for coworkers or going out of one's way to cheer up others in the work environment

(Settoon & Mossholder, 2002). These behaviors are therefore focused on provision of

emotional support. Person-focused helping behaviors are grounded in the friendships that

may arise between coworkers and may help coworkers deal with more personal problems

(Settoon & Mossholder, 2002). Task-focused ICB, on the other hand, reflects behaviors

geared towards helping coworkers accomplish their work tasks or achieve organizational

goals (Settoon & Mossholder, 2002). Thus, task-focused ICB is focused on providing

instrumental support and occurs when employees go above and beyond their normal job

role to help their coworkers complete their work role requirements.

When a coworker is experiencing FIW, this may lead to other employees in the

workplace engaging in increased levels of both person- and task-focused ICB. When a

coworker brings a family or personal issue into the workplace, this may mean they are

not able to accomplish all of their work tasks, either because their personal issue leads to

them missing work, or because they are too stressed or distracted to give their work the

attention and energy it needs (Greenhaus & Beutell, 1985). They may also carry the

emotional weight of their personal issue and need to share it with others. When this

happens, these coworkers may signal to other employees that they expect those

employees to enact the good coworker or good friend role (Kahn et al., 1964). Thus, they may communicate their expectation that other employees help them either by providing instrumental support so they can complete their work tasks, or by listening to them vent about their personal issue.

In addition to coworker expectations that employees help them, there may be group or organizational norms around helping behavior. Organizations may see the ideal worker as one who engages in high levels of citizenship behavior, in addition to completing one's formal job requirements (Bolino & Turnley, 2005). Leaders or workgroup members may create a group norm of helping each other out in times of need, or leaders may ask workgroup members directly to help someone in need (Gonzalez-Mulé et al., 2014; Naumann & Ehrhart, 2011; Taggar & Ellis, 2007). Furthermore, regardless of the personal issues a coworker is experiencing, the work must get done, and, given the increasingly team-based nature of work (Chiaburu & Harrison, 2008; Mathieu et al., 2008), employees may have a personal incentive to cover coworker tasks if it helps them also accomplish their own work tasks (Bolino et al, 2013). Thus, there may be implicit or explicit pressures and expectations from the organization as a whole, the leader, the workgroup, and/or the coworker dealing with the FIW issue, or there may even be a personal incentive for the employee, to offer help to the coworker dealing with FIW. As a result, it is likely that a coworker's FIW will lead to increased ICB by other employees in the workplace. This opportunity to help a coworker with FIW may fluctuate from week to week as coworkers manage changing work and family demands.

This leads to my first hypothesis:

H1: Fluctuations in coworker FIW will be positively related to fluctuations in focal employee interpersonal citizenship behavior (ICB).

Focal Employee Prosocial Motivation

In addition to organizational or team norms around helping behavior, it may be the case employees are more likely to engage in ICB when a coworker experiences FIW if they have a predisposition towards engaging in helping behavior, such as high prosocial motivation. Prosocial motivation is a personal characteristic that reflects a concern about how one's actions can benefit others, rather than how one's actions will lead to personal benefits (Grant, 2008; Hu & Liden, 2015). Individuals with high prosocial motivation are givers who care about how their actions may affect the well-being of others (Grant, 2008; Hu & Liden, 2015). Struggling coworkers will likely benefit more if other employees in the work environment have higher levels of prosocial motivation as opposed to lower levels, as these employees with higher prosocial motivation will be more likely to offer to help (Hu & Liden, 2015). If an employee has low levels of prosocial motivation, on the other hand, they may not be as willing to provide the help the coworker needs to be successful while managing their FIW issue.

There are several mechanisms that have been suggested for why prosocial motives should increase helping behaviors. The first is employees with prosocial motives are more likely to recognize opportunities to help others because they focus their attention outwardly, rather than inwardly (Grant & Mayer, 2009; Meglino & Korsgaard, 2004). Second, employees with prosocial motives value helping others and feel a sense of personal responsibility to try to improve the lives of other people (Grant & Mayer, 2009). Thus, if an employee has high prosocial motivation, they will be more likely to a) notice

when a coworker is struggling with a work-family issue, and b) be more likely to offer

assistance because helping is in line with that employee's values. This leads to the

following hypothesis:

> **H2:** The relationship between fluctuations in coworker FIW and fluctuations in
>
> focal employee ICB will be moderated by focal employee prosocial motivation
>
> such that the higher the level of focal employee prosocial motivation, the stronger
>
> the relationship between fluctuations in coworker FIW and fluctuations in focal
>
> employee ICB.

The Dark Side of Focal Employee ICB

Previous research on OCB in general has suggested engaging in OCB has positive

effects on important organizational outcomes, such as increased performance,

productivity, profitability, and lower turnover (Podsakoff et al., 2009). Meta-analytic

findings also suggest OCB is positively related to job satisfaction and organizational

commitment (LePine et al., 2002) and negatively related to engaging in

counterproductive work behaviors (Dalal, 2005). However, despite evidence for some of

the positive associations between OCB and other relevant organizational variables, there

is a growing body of work investigating the dark side of helping behavior in the

workplace (e.g., Bolino & Turnley, 2005; Bolino et al., 2013; Klein, 2007; Koopman et

al., 2016; Şeşen et al., 2014). The present study investigates some of the potential

negative outcomes of engaging in discretionary helping behavior in the context of helping

a coworker deal with their FIW.

When employees engage in helping behavior to assist a coworker struggling with

FIW, they are engaging in extra-role behavior, meaning they still have to complete their

own in-role job tasks in addition to performing the extra-role helping behaviors (Bolino

& Turnley, 2005). Helping a struggling coworker adds an additional burden, which may

overwhelm the employee, leading to reduced well-being in the form of increased role

overload, WIF, and need for recovery. I also expect engaging in helping behavior to

relate to the relationship quality between the employee and coworker who needs help.

Thus, I am suggesting that as fluctuations in coworker FIW occur, this may lead to

fluctuations in role overload, WIF, and need for recovery, and possibly reduced

relationship quality for the focal employee through fluctuations in focal employee ICB.

These relationships are discussed in greater detail below.

Role Overload

Engaging in helping behavior to provide instrumental or emotional support to a

coworker dealing with FIW may lead to role overload. Role overload occurs when

individuals feel they lack the resources to meet the role expectations or requirements of

multiple roles at the same time (Rizzo et al., 1970). ICB, as a form of OCB, is a

discretionary behavior that goes beyond an employee's formal job requirements (Bolino

& Turnley, 2005). However, because ICB is an extra-role behavior, employees must also

fulfill the in-role, formal duties of their jobs in addition to providing instrumental or

emotional support to their coworkers. Having to fulfill the role of good employee and

complete one's own work tasks while also trying to fulfill the role of good coworker and

help out a coworker dealing with FIW is likely to be overwhelming for employees and

lead to perceptions of not being able to meet everyone's expectations (Bolino & Turnley,

2005). This leads to the following hypothesis:

H3a: Fluctuations in focal employee ICB will be positively related to fluctuations in focal employee role overload.

H3b: Fluctuations in focal employee ICB will partially mediate the relationship between fluctuations in coworker FIW and fluctuations in role overload.

Work Interfering with Family (WIF)

It may also be the case employees who help a coworker deal with his or her FIW will be more likely to experience work-family issues of their own, in the direction of work interfering with family (WIF). As previously mentioned, in line with role theory, a coworker's FIW can create role conflict within the work environment for a focal employee who faces the expectation to be both a good employee and get their own work done, and a good coworker and therefore engage in helping behavior to assist their coworker. This pressure to be a good coworker may also be incompatible with expectations of role senders who are outside of the work environment, leading to inter-role conflict between work roles and roles outside the work environment (Bolino & Turnley, 2005; Kahn et al., 1964). An employee's romantic partner, children, parents, or friends may expect them to come home from work at a reasonable hour and have enough energy when at home to be an active participant in personal life affairs (Greenhaus & Beutell, 1985). This expectation may be challenging for employees who have coworkers who are dealing with FIW, as they will likely experience greater work demands since they have the additional burden of engaging in helping behavior to deal with a coworker's work or emotional output. For example, if an employee has to cover work tasks for a coworker or be an emotional support system as the coworker vents about their personal life (i.e., engage in ICB), this can create a situation where the employee feels

more stressed out while at work. This work stress may then spill over into the home environment, creating a situation where the employee is now experiencing strain while at home as a result of their affective experiences at work (i.e., strain-based WIF; Greenhaus & Beutell, 1985; Kahn et al., 1964; Staines, 1980). Or, the focal employee might experience time-based WIF if they have to stay late at work to cover for a coworker who has to leave to handle a family issue (Greenhaus & Beutell, 1985). Thus, it is possible the added work demands and role pressure of being a good coworker is incompatible with being fully present in one's personal life, increasing the WIF for the focal employee.

Previous research has largely suggested engaging in OCBs can lead to WIF (e.g., Bolino & Turnley, 2005; Bolino et al., 2013; Halbesleben et al., 2009), with one exception that found no relationship between OCB and WIF (Klein, 2007). Thus, the present study seeks to replicate the finding that OCBs can lead to WIF but in the specific context of engaging in ICB to help a coworker who is dealing with FIW. This leads to the following hypothesis:

H4a: Fluctuations in focal employee ICB will be positively related to fluctuations in focal employee WIF.

H4b: Fluctuations in focal employee ICB will partially mediate the relationship between fluctuations in coworker FIW and fluctuations in focal employee WIF.

Need for Recovery

Engaging in helping behavior to assist a coworker dealing with FIW may also lead to increased fatigue and, therefore, increased need for recovery. In general, employees are required to expend effort during the work day to complete tasks, which can cause fatigue, as well as other negative symptoms (van Veldhoven & Broersen,

2003). However, if employees have the opportunity to recuperate during their post-work time, they can return to work the following day without the negative effects of the previous day's effort (van Veldhoven & Broersen, 2003). Need for recovery reflects, "the extent that the work task induces a need to recuperate from work induced effort" (van Veldhoven & Broersen, 2003, p. i4). Individuals who need to recover may feel the immediate need after leaving work to be left alone or to lie down and relax (Sluiter et al., 2001). Again, this suggests the individual has experienced high psychological demands at work that required the expenditure of effort, depleting the individual's resources, and creating a situation where they need to be able to recover during their off-work time (van Veldhoven & Broersen, 2003).

One reason an employee might experience increased need for recovery is if they face the added job demand of helping a coworker who is experiencing FIW. Not only does the employee face the demands of their own role, but when a coworker experiences FIW, they may also face the demands of their coworker's role, especially if they are covering for a coworker who misses work or if they are a helping a coworker complete their work tasks. An employee may also face the added emotional demand of listening to a coworker vent about their personal life or providing emotional support. Thus, the employee faces demands stemming from their role of employee, but also their role of coworker. Role theory suggests facing role demands leads to feelings of stress, which can be fatiguing and could lead to an increased need for recovery when the employee leaves work (Kahn et al., 1964; Sluiter et al., 2001; van Veldhoven & Broersen, 2003). This leads to the following hypothesis:

H5a: Fluctuations in focal employee ICB will be positively related to fluctuations in focal employee need for recovery.

H5b: Fluctuations in focal employee ICB will partially mediate the relationship between fluctuations in coworker FIW and fluctuations in focal employee need for recovery.

Relationship Quality

Thus far, I have argued engaging in ICB to help a coworker struggling with FIW will have negative implications for employees. However, although engaging in ICB may lead to reduced well-being, the effect of engaging in ICB on the perceived relationship quality with the struggling coworker is less clear. On one hand, it is possible helping a struggling coworker will continue the negative trend discussed above and lead to lower relationship quality between the employee and coworker. This is because helping a coworker means the focal employee has less time to complete their own job tasks (Bolino & Turnley, 2005), which may make the employee feel stressed, overwhelmed, and have reduced performance of their own job tasks (Bolino & Grant, 2016; Grant, 2008). The employee may resent their coworker if their own job performance starts to suffer because they have to engage in helping behavior. This resentment may be particularly salient if the employee feels they were pressured or compelled to help (Bolino & Grant, 2016; Grant, 2008), which may be the case if coworkers are behaving as role senders for the focal employee and communicating they expect the focal employee to fulfill the role of good coworker and provide assistance. Furthermore, if, for example, the employee has to listen to their coworker vent or has to manage the stress of taking on their coworker's work tasks, this may start to make the relationship feel one-sided and no longer reciprocal

(Chiaburu & Harrison, 2008). The employee may also begin to wonder why the coworker cannot seem to better manage their personal life (Sias et al., 2004). Thus, it is possible helping a coworker who is struggling with FIW may lead to the employee having lower perceptions of their relationship quality with their coworker.

However, on the other hand, research on helping behavior has suggested engaging in helping behavior can lead to positive outcomes, such as improved relationship quality (Bolino & Grant, 2016). For example, giving has been associated with increased happiness and psychological well-being (Crocker et al., 2017; Glomb et al., 2011), which may then positively color the employee's interpretation of their relationship quality with their coworker. Giving has also been associated with increased trust, commitment, and relationship satisfaction, all of which might foster positive relationship development (Crocker et al., 2017). Furthermore, reciprocity norms suggest if the employee helps out their coworker, they may feel their coworker will later help them out, creating a relationship built on mutual trust and helping that will likely to be seen as satisfactory to the employee (Bolino & Grant, 2016). It may even be the case the focal employee engaged in helping behavior in the first place because they already have a strong relationship or even friendship with their coworker built on this norm of reciprocity, and thus they see helping as a way to continue an already satisfactory relationship. In summary, the focal employee may perceive higher relationship satisfaction with their coworker as a result of helping them because engaging in helping behavior can both create and perpetuate a strong relationship.

Because there are valid arguments for ICB leading to either high or low relationship quality between the employee and coworker, I am posing the following research question instead of a hypothesis:

> **RQ1:** How will fluctuations in engaging in ICB relate to fluctuations in the focal employee's perception of their relationship quality with their coworkers who are dealing with FIW?

METHOD

Overview of Method

My study is a multilevel, weekly diary study, where Level 1 is the intra-individual (within-person) level of analysis and Level 2 is the individual (between-person) level of analysis. I collected survey data from participants once a week for three weeks. Each participant had a maximum of three possible data points, as they responded to three weekly surveys. Thus, occasions (Level 1, within-person) were nested within people (Level 2, between-person). Most of the proposed measures in my model (see Figure 1) were at the within-person level, and thus they were captured on each weekly survey. The exceptions were any between-person, stable measures, such as prosocial motivation and demographic characteristics, that were captured only once. More detail on participants, measures and procedure are included below. I have also included my codebook as Appendix A, which includes a full list of all study items.

I chose a weekly diary design for several reasons. First, a weekly diary design over the course of three weeks provides a realistic snapshot of an employee's regular work life, and thus my findings might be more generalizable to the typical work experience of the focal employee (Beal, 2015). This is because experience sampling methodologies (ESM), such as weekly diary designs, allow one to capture a range of experiences that may fluctuate over time (Beal, 2015). They also reduce memory biases, since ESM designs capture experiences close to when they occurred (Beal, 2015), which enables participants to provide a more accurate reflection of what happened during the study window. The reduction in memory biases due to the ESM design is also ideal for assessing behavior (Hansborough et al., 2015), and should allow for a more accurate

measurement of helping behavior than cross-sectional survey designs that often rely on retrospective and/or cumulative ratings across a long time period.

Second, I was unsure how prevalent coworker FIW would be. I did not think a daily survey design would be appropriate because it seemed unlikely a coworker would experience FIW on a daily basis, but it did seem possible a coworker might deal with a family issue perhaps several times a week. It could also be the case a coworker's FIW and need for help may build over the course of a week and become most salient to a focal employee as they reflect over the course of the week.

Lastly, I chose a multilevel, weekly diary design rather than other designs, such as a design where I captured my independent variables at Time 1, my mediator variable at Time 2, and my outcome variables at Time 3, because of how close in time I expected coworker FIW and focal employee ICB to occur. If a focal employee is made aware their coworker is experiencing a FIW issue, they likely need to engage in helping behavior shortly after being made aware of the issue. For example, if a coworker vents about a fight they had with their spouse to the focal employee, the focal employee may engage in person-focused ICB mere minutes after learning about their coworker's FIW. Or, if a coworker has to leave work early to take a child to a doctor's appointment, the focal employee may have more work to do that same day or the next day to assist the coworker who missed work. Thus, fluctuations in my focal variables should co-occur fairly quickly, and I did not think a design where I assessed current levels of focal employee ICB as a mediator in my model a week after the coworker experienced FIW was appropriate. Therefore, I chose to assess my model using a design that would capture fluctuations in each variable every week of the study.

It is important to note I did not propose any particular change trajectory (e.g., increase or decrease) in my study variables over time. For example, I did not expect coworker FIW nor focal employee ICB or WIF to increase over the course of the study. Rather, the focus of the study was to determine how fluctuations in coworker FIW would relate to fluctuations in focal employee ICB, which could relate to fluctuations in my outcome variables. Thus, my study did not use growth curve modeling, as I did not expect participants to have a steady increase or decrease in their experiences of coworker FIW, ICB, or my outcome variables throughout the course of the study as a function of time (Nezlek, 2001; Schonfeld & Ringskopf, 2007). I instead used multilevel modeling, as this allowed me to model how fluctuations in my independent variable (coworker FIW) and mediator variable (ICB) related to each other and to fluctuations in the outcome variables (Nezlek, 2001; Schonfeld & Ringskopf, 2007). More information on the analyses I used is provided below in the Results section.

Pilot Study

Prior to conducting my main study, I conducted a pilot study. There were two primary goals of the pilot study: 1) determine whether participants experience coworker FIW frequently enough (i.e., weekly) for it to show up in my main study, and 2) assess the validity of my adapted measures. It was important to determine how frequently participants experience coworker FIW because if coworker FIW occurs infrequently, it could mean there would not be enough variation on this variable in my main study, making it less likely that my hypothesized mediated model would work out. If my pilot results indicated coworker FIW occurred infrequently, I would potentially need to add a

screening question to my study and specifically screen in individuals who report at least some coworker FIW.

The second goal of the pilot study was to assess the validity of my adapted measures. The majority of the measures I planned on using in my main study were adapted in some way to account for the weekly diary design of the study. While it is not uncommon for studies, especially diary studies, to use adapted measures, it is important to provide justification for why the measures are adapted, as well as validity evidence for the adapted measure (Heggestad et al., 2019). The types of adaptations present in my study included changing the referent of the measure from self to coworker, changing the time referent, and changing the context of the measure. Heggestad and colleagues (2019) provide recommendations for how to best adapt measures. For each of the types of adaptations I have in my study, the primary recommendation is to conduct a confirmatory factor analysis (CFA) and compare the number of factors and the factor loadings in each adapted measure to what has been found when using the original measure. Ideally, I would conduct this factor analytic work on the data from my main study. However, because my anticipated sample size for my main study was below 100, I did not think I would have enough participants in my main study sample to conduct CFAs, as researchers have argued at least 100 participants are needed to run this type of analysis (e.g., MacCallum et al., 1999).

Thus, to still be able to test the validity of my adapted measures, I needed to conduct a pilot study where I could give all of the adapted measures (58 items total) I planned on using in my main study to enough participants to actually be able to run CFAs. I planned on collecting data from around 300 participants for the pilot study, as

this would give me a ratio of around five participants per item (Cattell, 1978; MacCallum et al., 1999; Matsunaga, 2010). While researchers have proposed different sample size requirements for running CFAs (e.g., MacCullum et al., 1999), a sample of 300 participants meets these various recommendations (Matsunaga, 2010).

Pilot Study Data Collection and Screening

I recruited participants for my pilot study using two sources: my personal network and Amazon Mechanical Turk (MTurk). To recruit through my personal network, I posted a message on my personal social media accounts asking individuals to take my survey or pass along the link to anyone they knew who qualified to take part in the study. To qualify to take the survey, individuals had to be at least 18 years old, work at least 30 hours a week, work on a team of at least 3 people, and interact with at least one person on their team on a daily basis. From my personal network, 57 people opened the survey link. Ten of these individuals did not qualify to take the survey based on my criteria. An additional 10 individuals did not fully complete the survey, leaving me with a total of 37 complete responses from my personal network.

I also collected data through MTurk. Participants on MTurk were paid $1.85 to complete the survey. In all, 463 people from MTurk opened the survey link, but 152 people were screened out of the survey or did not continue with the survey after the screening questions. In addition, another 11 people continued the survey past the screening questions, but did not finish the survey. As a result, I was left with 300 participants from MTurk who completed the survey in its entirety.

My starting pilot study sample was thus 337 participants from my personal network and MTurk data collections. I then screened this sample to look for insufficient

effort responding (IER). IER occurs when participants respond to survey items with reduced effort and provide low quality data, perhaps due to inattentiveness or carelessness (Meade & Craig, 2012). There are multiple ways to assess IER (Meade & Craig, 2012), and in my pilot study, I choose to examine response time, attention check item responses, and Individual Response Variability (IRV; Dunn et al., 2018).

Response Time. To calculate what would be a reasonable response time for the pilot survey, I decided to first look at the average time it took participants to complete the survey. The average time was 1,101 seconds or 18 minutes. However, it is important to note participants could close out of the survey and come back to it at a later time, or they could leave the survey open in their browser while not responding to items. Thus, the response times may not perfectly capture how long participants spent taking the survey. Because some participants may have left the survey open while not responding items, I checked for outliers in response time. There was one outlier of 95,636 seconds (1,594 minutes). After removing the outlier response time from the analysis, the average time to take the survey was 836 seconds or 14 minutes ($SD = 1,091$ seconds/18 minutes). I then decided to look at the fastest 5% of finishers ($N = 16$). There were three participants who finished the survey in less than two minutes. Given that the average completion time was 14 minutes, it seemed unlikely participants who finished in under two minutes were giving the survey the same level of detail as the other participants. I decided to remove the three participants who finished the survey in less than two minutes. The rest of the participants in the fastest 5% of finishers were not removed from the dataset, as their responses did not indicate any obvious patterns or suggest they were clicking through the survey without reading the question.

Attention Check Screening. I included two attention check items throughout the survey. Attention check items ask participants to select a specific response option (e.g., "Please choose "strongly agree" for this item") and are used to identify if a participant is clicking responses without actually reading the question. In my pilot study, 14 participants missed one of the attention check items, and 8 participants missed both attention check items. To be conservative in my data quality checks, I decided to remove any participant who missed one or both of the attention check items. Thus, I decided to remove an additional 22 participants for missing attention check items.

IRV Index Screening. The last index I used to assess my pilot data quality was the IRV index (Dunn et al., 2018). The IRV index is a function of the variability in participants' responses and is based on the premise that if participants are reporting their standing on different constructs, their responses should vary from construct to construct (Dunn et al., 2018). To determine IRV index values, I calculated the standard deviation of survey responses for the primary 58 scale items (not including demographic or screening questions). The average IRV index was 1.98 (*SD* = .22). I looked at the lowest 5% of the IRV index to determine if there was IER. Upon visual inspection of the lowest 5% of the IRV index, I noticed the person with the lowest IRV index (IRV = 1.26) appeared to have selected the same response for each scale. Thus, I decided to remove this participant. Visual inspection of the rest of the responses in the lowest 5% of the IRV index did not result in any further flags, so no further participants were excluded as result of their IRV index. In summary, during the data cleaning process, 26 participants were removed due to IER, leaving me with a final sample of 311 participants. Thus, 60% of people who opened the survey link provided usable data for the study.

Pilot Study Participants

Of the 311 participants who provided complete data for my pilot study, 61% were male and 38% were female (1% did not disclose their sex). The average age was 36 (*SD* = 10.3). Seventy percent of the participants were white, 20% were Black or African American, 4% were Asian, 3% were Hispanic or Latino/a, 1.3% were American Indian or Alaska Native, and 1.3% were multiple races. Fourteen percent of participants indicated they were single, 13% were in a committed relationship, and 73% of participants were married. Thirty-one percent or participants did not have any children currently living in their home full-time, 29% had one child living with them, 34% had two children, and 6% had three or more children.

Pilot Study Results

I include a summary of the results of my pilot study here. A full discussion of the validity evidence for each adapted measure can be found in Appendix B.

Frequency of Coworker FIW. Based on the results of my pilot study, it did appear coworker FIW had a high enough incidence rate for me to move forward with my main study without additional screening questions. In my pilot survey, I first defined family-to-work conflict and then used three measures to determine whether employees had a coworker experiencing FIW. The first measure was a single item asking "On how many days during a typical workweek (on average) does one of your coworkers deal with family-to-work conflict?" Responses ranged from 1 (never or 0 days per week) to 4 (often or 4-5 days per week), and the mean was 2.67 (*SD* = .68) on this 1-4 scale. Only 3.6% of respondents reported that coworker FIW never occurs/occurs 0 days per week. Nine percent of respondents reported coworker FIW occurs often (4-5 days per week),

53.4% of respondents indicated it occurs sometimes (2-3 days per week), and 34.4% of

respondents reported it occurs rarely (1 day per week). Based on these results, it

appeared that generally, during a typical workweek, coworker FIW occurs at least once

for most participants.

Because part of my main study included asking participants to report the amount

of coworker FIW that occurred during the past workweek, I also included an item on my

pilot study that allowed participants to report more recent coworker FIW. Participants

were asked: "Thinking about last week specifically, on how many days did one of your

coworkers deal with family-to-work conflict?" This item was included to help reduce

memory biases (Fisher & To, 2012), as there was less of a gap between when the

coworker FIW occurred and when participants were asked to report it. This single-item

measure was also on a 1-4 scale ranging from 1 = never or 0 days to 4 = often or 4-5

days. The mean of this 1-4 scale was 2.50 ($SD = .85$). Fourteen percent of participants

reported their coworker dealt with family-to-work conflict 0 days during the last week.

However, 9.6% of participants indicated coworker FIW occurred often (4 or 5 days), 45%

said it occurred sometimes (2-3 days), and 31.5% said it occurred rarely (1 day).

Finally, I also included the 5-item measure of coworker FIW that I adapted from

the Netemeyer and colleagues (1996) measure of employee FIW. This measure asks

participants to "Please respond to the following items regarding your coworker's ability

to manage their work and family roles during the current work week" and includes five

items referencing specific occurrences. Response options ranged from 1 (*strongly

disagree*) to 7 (*strongly agree*). The mean of the 1-7 scale was 4.84 ($SD = 1.55$). Because

the mean was well above the mid-point of the scale, participants were endorsing the

higher end of the scale more frequently, suggesting higher levels of coworker FIW.

Taken together, all three of these coworker FIW measures suggest coworker FIW

is a relatively frequent phenomenon that does occur during a typical workweek. This

gave me confidence moving forward with my main study since I demonstrated coworker

FIW is something many employees report seeing in the workplace on a weekly basis.

In addition to assessing the frequency of coworker FIW, I also looked at how

frequently participants reported engaging in helping behavior to assist a coworker dealing

with FIW, as this is the mediator in my model. The adapted interpersonal citizenship

behavior (ICB) measure I included in my study had a response scale ranging from 1

(strongly disagree) to 5 (strongly agree) and asked participants to report how they

behaved during the current work week in response to a coworker who was dealing with a

personal or family issue (Settoon & Mossholder, 2002). There were two sub-scales,

person-focused ICB and task-focused ICB, and the mean for both scales was 4.03 ($SD =$

.60 for person-focused ICB; $SD =$ .64 for task-focused ICB). Because the mean is above

the mid-point of the scale, this again suggests a relatively high frequency of employees

engaging in ICB as a result of coworker FIW.

Validity of Adapted Measures. The second goal of my pilot study was to assess

the validity of my adapted measures. Because my study is focused specifically on the

experiences and outcomes of coworker FIW, and because I used a weekly diary design

for my main study, most of my measures needed to be slightly adapted. However, it is

important to determine that adapted measures are valid and are still measuring the

constructs of interest (Heggestad et al., 2019). Thus, with my pilot study, I gave all of my

adapted measures to participants so I could determine whether these measures should be used in my main study.

There were several types of scale adaptations present in my main study measures. These adaptations include: changing the referent of the measure from self to other (history of coworker FIW control variable and coworker FIW measure), changing the time frame (coworker FIW, ICB, role overload, WIF, FIW, need for recovery, and relationship quality measures), and changing the context of the measure (prosocial motivation, relationship quality, and ICB measures). Heggestad and colleagues (2019) provide recommendations for how to demonstrate the validity of an adapted measure, depending on the type of adaptation. For each of the types of adaptations I have in my study, the primary recommendation is to conduct a confirmatory factor analysis (CFA) and compare the number of factors and the factor loadings in each adapted measure to what has been found when using the original measure.

To conduct a CFA for each of the adapted measures in my study, I used the Lavaan package and maximum likelihood estimate within R (version 4.0.3). The fit indices I examined to determine how well the data fit my model included the comparative fit index (CFI), Tucker-Lewis index (TLI), root-mean-square-error-of-approximation (RMSEA), and the chi-square value. To claim my model fit the data well, the CFI or TLI needed to be at or above the recommended cutoff of .90, and the RMSEA value needed to be below the recommended cutoff of .10 (Hu & Bentler, 1999; Tabachnick & Fidell, 2013). I also examined changes of the chi-square value when comparing a one-factor to a two-or-more factor model. In addition, I calculated the Cronbach's alpha for each of my adapted measures. While some have argued Cronbach's alpha may be a biased estimate

of internal consistency and therefore recommend using omega reliability estimates

instead (e.g., Dunn et al., 2014), the articles in which the original measures were

developed only reported Cronbach's alpha values. Thus, I chose to calculate Cronbach's

alpha for each of my adapted measures so I could compare the adapted measure's

Cronbach's alpha and the original measure's Cronbach's alpha and provide evidence for

their equivalence (see Table 1). However, I did also calculate omega reliability estimates

for each of the adapted measures and obtained values similar to the Cronbach's alpha

values.

After calculating reliability estimates and conducting a series of CFAs to test each

of my study variables, I found the reliability estimates were consistent between the

original and adapted measures, and the factor structures of all of my adapted main study

measures were consistent with the original measures (see Tables 2-4). A more detailed

discussion of the validity evidence for each measure can be found in Appendix B. As a

result of these findings, I decided to move forward using the adapted measures in my

main study.

Main Study Participants

Participants for the main study were recruited through Qualtrics Panels. To be

eligible to participate in this study, participants had to be at least 18 years old and work

full-time (30 hours or more a week) in a workgroup/team of three or more. They also had

to report typically having interactions with at least one coworker on a daily basis. Thirty

hours a week was chosen as the cutoff to be considered a full-time employee because this

is the full-time cutoff used by government regulatory bodies, such as the IRS (IRS.gov).

Working full-time in workgroups/teams should have ensured participants had ample

opportunity to interact (virtually or in-person) with multiple coworkers, increasing the chances that at least one of those coworkers was experiencing a family-to-work issue. However, it is possible for an employee to work on a team and not interact with their coworkers on a daily basis. It was important to ensure participants had daily interactions with their coworkers because it would be more challenging for participants to know if a coworker is experiencing a family-to-work issue if they are not regularly interacting. Thus, I added a screening question confirming participants had daily interactions with their coworkers, which should have allowed for more opportunities for coworker FIW to be salient to participants in the study.

My goal was to have 85 participants complete the survey at all three time points, which is a sample size consistent with other within-person, diary studies (e.g., Butler et al., 2005; Judge et al., 2006) and follows norms laid out by Gabriel and colleagues (2019) for Level 2 sample sizes. After data collection, I had complete data at all three time points from 88 participants. Thus, my Level 2 sample size was 88 participants, and my Level 1 sample size was 264 occasions (three occasions nested within 88 participants). Previous research on multilevel power suggests a Level 1 sample size of three and a Level 2 sample size of 40 or more should result in adequate power for an expected medium effect size. Thus, an N of 88 at Level 2 should be adequately powered to detect even small effect sizes, given that additional Level 2 units increase power more so than adding Level 1 units (Lane & Hennes, 2018; Scherbaum & Pesner, 2019).

My final sample was 69% male (31% female), and the average age was 60 years old ($SD = 8.68$; age range was 40 – 80 years old). The sample was 93.2% white, 4.5% Asian, and 2.3% Hispanic or Latino/a. Two-thirds (66%) of participants were married,

12.5% were single, 11.4% were divorced, 5.7% were widowed, and 4.5% were in a committed relationship. Eighty-one percent of participants did not have a child living at home full-time, 12.5% had one child, and 6.8% had two children living in their home full-time. Forty-two percent of participants' youngest child was 18 or older, 8% of participants' youngest child was between 13 and 17 years old, 5.7% of participants' youngest child was between 6 and 12 years old, and 44.3% of participants did not have children. The majority (92%) of participants did not have any other family members besides children for whom they were responsible for providing care.

In terms of education, 75% of the sample had a Bachelor's or Master's degree (36.4% and 38.6% respectively), 1% were a high school graduate, 10.2% had completed some college, 11.4% had an Associate's degree, and 2.3% had a PhD, Law, Medical, or other advanced degree. The average job role tenure was 15 years ($SD = 10.58$) and the average organization tenure was 18 years ($SD = 10.71$). Fifty-two percent of participants worked 30-40 hours per week and 48% worked more than 40 hours per week. Twenty-six percent of participants worked on a team with 3-5 coworkers, 27% worked on a team of 6-10 coworkers, and 47% worked on a team of more than 10 coworkers. A quarter of participants interacted with 1-2 coworkers on a daily basis, 35% interacted with 3-5 coworkers, and 40% interacted with 6 or more coworkers on a daily basis. Half of participants were currently working in-person, 14% were working remotely some of the time and in-person some of the time, and 36% were working remotely. Because this study was conducted during the Covid-19 global pandemic, I also asked participants whether they normally (i.e., prior to the pandemic) worked remotely or in-person. Eighty-two percent of participants normally worked in-person all of the time, 10% normally worked

remotely some of the time and in-person some of the time, and 8% normally worked

remotely all of the time.

Main Study Procedure

Participants were asked to complete a survey once a week for three weeks. I chose

three time points for the study because multilevel modeling requires three data points per

participant (Beal, 2015; Bliese, 2000; Newman & Sin, 2009). Also, taking the survey

once a week for three weeks provides a representative snapshot of an employee's life at

work (Beal, 2015). Because Qualtrics guaranteed survey completion from at least 85

participants at all three time points, I was not concerned about missing data (Newman &

Sin, 2009), and therefore I did not feel the need to add any extra time points to account

for participants missing a week. Participants received an incentive through their Qualtrics

panel provider for each survey they completed. Qualtrics partners with a variety of panel

providers who offer different incentives, such as gift cards, airline miles, or points at a

retail store. I was not informed of which panel providers were used to recruit participants

for my study, so I do not know what types of incentives participants received. However, I

paid Qualtrics $5 per complete survey across all three time points.

The first weekly survey included all Level 1 variables, as well as all Level 2

variables (i.e., demographic and control variables, prosocial motivation). The following

two weekly surveys only included Level 1 variables. The Level 2 variables only needed

to be assessed once on the first weekly survey because they reflect stable individual

characteristics that were not expected to fluctuate over time (Ohly et al., 2010).

The initial plan was to send the weekly survey to participants on Thursday of each

week of the study period around 12 p.m. The plan was to keep the survey open until 12

p.m. on Saturday of that same week, giving participants 48 hours to complete each weekly survey. However, Qualtrics does not have staff working over the weekend, so it was not possible to close my survey on Saturday. I then changed the design to open each weekly survey on Thursday morning and close the survey on the following Monday morning, giving participants around four days to complete the survey. It was important to collect data at the end of the week because participants needed to reflect on their experiences during the workweek. I wanted to allow for the opportunity to reflect on the entire work week to ensure there were enough opportunities for coworkers to experience FIW or for coworker FIW to become salient to participants. Participants received the following instructions prior to taking the Level 1 measures: "The following questions will ask you to reflect on experiences during the current week. By current work week, we mean experiences that have happened during your last five work days. If you are taking this survey on a Thursday or Friday, please think about experiences you have had so far this work week since Monday. If you are taking this survey over the weekend, please answer these questions thinking about your most recent work week (i.e., the Monday-Friday you just experienced)."

Qualtrics expects a 50% attrition rate at each time point. Thus, to end up with at least 85 participants after Time 3 (T3), I needed to collect data from at least 340 participants at Time 1 (T1). I initially included quotas for race, gender, and age to try to get a representative sample at T1. I began data collection with a soft launch of my T1 survey on a Wednesday to make sure my survey was working correctly. I kept the survey open for five days during the soft launch and only had 32 participants complete the survey during this time. I removed six participants from this dataset because visual

inspection of their data indicated they had selected the mid-point of every single scale in the study (Meade & Craig, 2012). Prior to the soft launch, I had planned to do the full launch of the T1 survey on the following Thursday and keep the survey open for four days. However, given the slow start to data collection during the soft launch, I grew concerned that 4 days would not be long enough to collect 340 participants. To increase the chances I could get enough participants for my T1 data collection in a timely manner, I decided to 1) remove the quotas I initially set for race, gender, and age, and 2) kept they survey open for longer than initially planned. Thus, I reopened my T1 survey after the soft launch on a Tuesday and kept the T1 survey open for another 13 days. With the soft launch and full launch, the data collection for T1 took place over a period of 18 days. Because participants could take the T1 survey on any day of the week, I added the following the instructions to the T1 survey: "If you are taking this survey on a Monday, Tuesday, or Wednesday, please think about experiences you have had so far during this work week, and also during the last half of your previous work week." My goal with the Level 1 measure instructions was to make sure participants were thinking about their previous five workdays, regardless of which days of the week those five days occurred, to make the timeframe somewhat consistent between the T1, T2, and T3 surveys.

There were 1304 people who opened the T1 survey. However, participants who did not consent to take the survey, who did not meet the inclusion criteria, or who did not finish the entire survey were excluded from taking the survey. Participants were also excluded based on the time it took to complete the survey. The median completion time of the T1 survey during the soft launch was 7 minutes or 420 seconds. Qualtrics added a speeding check after the soft launch. Their formula for determining the speeding check

was one-half the median soft launch time, so Qualtrics removed any participants who finished the survey faster than 210 seconds. Lastly, I had an attention check item towards the end of the survey. Participants who did not select the correct response for the attention check item were automatically removed from the dataset by Qualtrics. After participants were excluded for speeding, not consenting, not meeting the inclusion criteria, or missing the attention check item, I was left with 396 responses. I then visually reviewed the data to look for insufficient effort responding (Meade & Craig, 2012). I removed 13 participants from the T1 dataset because they selected the midpoint for every single scale and/or because they wrote something in some open-ended survey questions that let me know they were not taking the survey seriously (e.g., one participant put their occupation was "cotton picker" and wrote a nonsensical story in an open-response question). Thus, my final T1 sample had 383 participants. This represents a 29% response rate, as there were 383 people who provided usable responses out of the 1304 people who opened the survey.

My T1 survey was closed on a Monday morning, and I opened my T2 survey several days later on the Thursday of that week. I kept the T2 survey open for 4 days as initially planned (Thursday-Monday morning). The T2 survey was only sent to participants who had completed the T1 survey. A total of 319 people opened the T2 survey. However, participants were excluded by Qualtrics if they did not consent to complete the survey, if they did not finish all survey items, or if they took the survey too quickly. Because the T2 survey had fewer measures than the T1 survey, the speeding cutoff was changed to 120 seconds. Participants were automatically excluded from the final dataset if they finished the T2 survey faster than 120 seconds. Of the 319 people

who opened the T2 survey, 284 participants provided complete responses and had a duration of longer than 120 seconds. After visual inspection of the data, I excluded two participants for evidence of IER, as they chose the same response for every single measure of the study (Meade & Craig, 2012). Thus, I was left with 282 people who had completed both the T1 and T2 surveys. This represents a 74% response rate, as the T2 survey was sent to 383 people, and 282 people provided usable data.

My T3 survey was sent out on the Thursday following the T2 survey closure. The T3 survey was also kept open for four days (Thursday-Monday morning). The T3 survey was only sent to participants who had completed the T2 survey. A total of 103 people opened the T3 survey. Participants were excluded by Qualtrics if they did not consent to complete the survey, if they did not finish all survey items, or if they took the survey faster than 120 seconds. After participants were excluded for these reasons, I was left with responses from 92 participants. I then visually inspected the data and excluded two participants for evidence of IER, as they chose the same response for every single measure of the study. While I was matching participant data across the three time points, I noticed there was one person who had taken the T3 survey two times. This participant provided very different responses for each of the time points, and rather than decide which responses to keep, I decided to exclude the person from my dataset. Thus, my final dataset included complete data from 88 participants at all three time points. This represents a 31% response rate, as the T3 survey was sent to 282 people, and 88 people provided usable data.

There was attrition in my study, as I began with a dataset of 383 participants at T1 and ended up with 88 participants after T3. This represents a 77% attrition rate between

T1 and T3. I compared participants who only completed the T1 survey ($n = 295$) with participants who did complete all three surveys ($n = 88$) to see if they significantly differed on any of my study variables. Participants who did not complete all three surveys were not significantly different from participants who did complete the entire study on most demographic variables (sex, marital status, number of children, age of youngest child, care responsibilities, education level, job tenure, organizational tenure), any main study variables (coworker FIW, ICB, role overload, need for recovery, WIF, relationship quality), or most Level 2 variables (history of CFIW, prosocial motivation). However, participants who did not complete all three surveys did differ from those who did complete all surveys in terms of race ($M = .84$, $SD = .37$ and $M = .93$, $SD = .25$, respectively, $t(381) = -2.18$, $p = .03$), such that more white individuals completed the survey at all three time points than non-white individuals. Furthermore, participants who did not complete all three surveys had higher levels of their own FIW than individuals who did complete all three surveys ($M = 2.33$, $SD = 1.43$ and $M = 2.00$, $SD = 1.11$, respectively; $t(381) = 1.99$, $p = .047$). Lastly, participants who did not complete all three surveys had higher levels of negative affectivity (NA) than individuals who did complete all three surveys ($M = 1.51$, $SD = .65$, $M = 1.34$, $SD = .44$, respectively; $t(381) = 2.253$, $p = .025$). It could be the case participants who were experiencing high levels of FIW and NA were unable to continue taking the survey at later time points due the increased stress levels that may coincide with FIW and NA (e.g., Eby et al., 2005; Zhou et al., 2018); however no causal relationships can be determined based on the present data.

Lastly, it is important to note the timeframe between the T1 and T2 survey was different from the timeframe between the T2 and T3 surveys. While there was about one

week in between the T2 and T3 surveys, data collection for the T1 survey took place over 18 days. Thus, for some participants, the gap between the T1 and T2 survey may have still been about one week, but for others, the gap may have been as long as three weeks. I revisit this issue more in detail in the Limitations section of the paper.

Level 1 Measures

The following measures were included on all three weekly surveys. The instructions for each of the weekly survey measures asked participants to respond to the items thinking about their current work week. Because participants could have taken the survey on different days of the week, "current work week" was defined as "experiences that have happened during your last five work days." Because participants were reflecting on experiences that occurred already during the work week, all survey items were changed from present tense to past tense. See Appendix A for all survey items.

Coworker FIW

Coworker FIW was assessed using a modified version of the 5-item Family-Work Conflict Scale (Netemeyer et al., 1996). The response scale for this measure ranges from 1 (*strongly disagree*) to 7 (*strongly agree*). Items of this scale were modified such that rather than assessing their own FIW, participants assessed their coworkers' FIW. For example, the original scale item "the demands of my family or spouse/partner interfered with work-related activities" was changed to "the demands of my coworker's family or spouse/partner interfered with their work-related activities." This scale was worded to refer to an employee's coworkers more generally, rather than one specific coworker. Because participants took the survey once a week for three weeks, if they were asked to report experiences with one specific coworker, they might not remember which coworker

they were thinking of for the last survey. Furthermore, if participants report on one specific coworker's FIW, that coworker may only experience FIW during one of the three weeks of the study. Thus, to make sure there was a sufficiently high incidence rate of coworker FIW and to avoid issues of recall, participants were asked to report on coworker FIW in general in their work environment. This is also consistent with the work environment being a highly interactive place (Chiaburu & Harrison, 2008), where employees have multiple coworkers and may be called upon to help different coworkers experiencing FIW at different times during the week.

When changing the referent of a scale, it is important to justify why the person taking the scale is equipped to answer items about another person (Heggestad et al., 2019). Because coworkers work closely with one another and often share personal details with one another (Sias & Cahill, 1998; Sias et al., 2004), the focal employee should have the necessary knowledge to respond to items about their coworkers' FIW. Furthermore, changing the referent of a scale item is typically seen as only slightly concerning by psychometricians (Heggestad et al., 2019). Factor analytic work to demonstrate the validity of this adapted measure was conducted during the pilot study and is provided in Table 2 and described in detail in Appendix B.

Focal Employee ICB

Focal employee ICB was assessed using a 14-item measure developed by Settoon & Mossholder (2002). Eight items assessed person-focused ICB and 6 items assessed task-focused ICB using a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). To capture ICB specific to helping with a coworker's FIW, the directions of the scale were written to say "Please respond to the following questions

indicating how you behaved during the current work week in response to a coworker who was dealing with a personal or family issue (e.g., issue with spouse, children, parent, significant other, etc.)." It was important to contextualize ICB to situations where it was engaged in in response to coworker FIW because otherwise the measure could be capturing general helping behavior. Example items from the person-focused subscale include "Listened to coworkers when they had to get something off their chest" and "Made an extra effort to understand the problems faced by coworkers." Example items from the task-focused subscale include "Helped coworkers who were running behind in their work activities" and "Helped coworkers with work when they had been absent."

Researchers have used the person-focused and task-focused ICB sub-scales separately in analyses (e.g., Hunter et al., 2013; Settoon & Mossholder, 2002), and have also combined both sub-scales to capture overall ICB (e.g., Mossholder et al., 2005; Pandey et al., 2008). Because in the present study I am interested in overall ICB, I combined the items from the person-focused and task-focused subscales into a single measure (Mossholder et al., 2005). However, to be sure the results of my analyses did not differ depending on whether I used the overall measure or separated out each sub-scale, I ran each multilevel analysis using the combined measure and using person-focused and task-focused ICB separately. I also reported the pattern of correlations for the person-focused ICB subscale, task-focused ICB subscale, and overall, combined ICB measure with all study variables.

Focal Employee Role Overload

Focal employee role overload was assessed using a 6-item version of the Reilly Role Overload Scale (Reilly, 1982) that was validated by Thiagarajan and colleagues

(2006). Respondents used a 7-point Likert type scale ranging from 1 (*never*) to 7 (*always*). Example items from this scale include "I needed more hours in the day to do all the things that were expected of me" and "There were times when I could not meet everyone's expectations." One of the items used "parents" as a referent, and that referent was modified to "people" (i.e., "I seem to have more commitments to overcome than other *people* I know") to make sure the item was relevant to participants who are not parents.

Focal Employee WIF

Focal employee WIF was assessed using the 5-item Work-Family Conflict Scale (Netemeyer et al., 1996). The only adaptation for this scale was a shift in time referent from present tense to past tense. Response options ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). Example items include "The demands of my work interfered with my home and family life" and "My job produced strain that made it difficult to fulfill family duties."

Focal Employee Need for Recovery

Need for recovery was assessed using the English translation of the 11-item Need for Recovery Scale (Sluiter, 1999; Van Veldhoven & Meijman, 1994). The only adaptation for this scale was a shift in time referent from present tense to past tense. Example items include "I found it hard to relax at the end of the working day" and "In general, it took me over an hour to feel fully recovered after work." Participants responded yes or no (1 or 0) to each item, and after reverse-scoring one item, the scale score was created by taking the sum of the responses.

Relationship Quality

Focal employee perceptions of their relationship quality with their coworkers dealing with FIW was assessed using a 5-item measure developed by Rusbult, Martz, and Agnew (1998). Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). The instructions of the measure were slightly modified from "Please indicate the degree to which you agree with each statement regarding your current relationship" to "Please indicate the degree to which you agree with each statement regarding your relationship with your coworkers who had work-family issues over the past week." Examples of items include "I feel satisfied with our relationship" and "My relationship is close to ideal." One item was modified from "Our relationship does a good job of fulfilling my needs for intimacy, companionship, etc." to "Our relationship does a good job of fulfilling my needs." Although there are measures of coworker exchange that adapt leader-member exchange measures (e.g., Sherony & Green, 2002), to my knowledge there are no existing measures of coworker relationship quality. The measure used in this study is a highly cited relationship quality measure from the close relationships literature and the items have good face validity for capturing the quality of the relationship between coworkers with the adapted instructions.

Level 2 Measures

The following measures reflect stable individual characteristics and were only assessed during the first weekly survey (see Appendix A for all survey items).

Focal Employee Prosocial Motivation

Focal employee prosocial motivation was measured using an adapted version of a 4-item scale developed by Grant (2008). This measure as written was specifically contextualized to why an employee is motivated to do their work. The original measure

begins with the question "Why are you motivated to do your work?" and the items that follow refer to wanting to use one's work to benefit others (e.g., "Because I want to help others through my work"). However, prosocial motivation, as conceptualized by Grant (2008) and others (e.g., Hu & Liden, 2015) and as used in this study, refers more to a general orientation to want to help others. This could include helping others through one's work specifically, but not all jobs provide opportunities to actually help other people through one's work. It could be the case someone has high prosocial motivation and wants to help others and cares about benefitting others in the workplace, but they do not see a way to help others through their work tasks. Rather, they may just have a general orientation to want to help others in the workplace, even if they cannot do so through their work tasks. As a result, I adapted the Grant (2008) measure and removed the references to "my work" in the items. I replaced the introductory statement from "Why are you motivated to do your work?" to "Indicate how much you agree or disagree with the following statements." The four original items, "Because I care about benefiting others through my work," "Because I want to help others through my work," "Because I want to have a positive impact on others," and "Because it is important to me to do good for others through my work" were changed to "I care about benefitting others," "I want to help others," "I want to have a positive impact on others," and "It is important to me to do good for others." Response options ranged from 1 (*strongly disagree*) to 7 (*strongly agree*).

Control Variables

Several measures were included in the study to potentially be used as control variables. I included demographic variables, trait negative affect, focal employee FIW,

and history of coworker FIW as potential control variables. The demographic variables I assessed were the focal employee's sex, job and organizational tenure, marital status, number of children, age of their youngest child, and whether they had care responsibilities for other family members besides children. These variables are commonly used as control variables in the work-family literature (e.g., Allen et al., 2012, Allen & Martin, 2017; Eby et al., 2005) and might influence whether an employee engages in helping behavior and whether they experience several of the outcomes in the study. For example, gender has been found to relate to OCB, role overload, and work-family conflict (Bolino & Turnley, 2005).

Trait negative affect (NA) of the focal employee was also assessed, as previous research suggests that NA can color interpretations of life events, and may predispose individuals to experience more negative emotions and other outcomes (Judge et al., 2000; Spector et al., 2000). Thus, it is possible NA would be associated with both the independent and dependent variables in this study, rendering it necessary to include as a control variable (Becker et al., 2016; Bernerth & Aguinis, 2016; James, 1980). For example, individuals with higher levels of NA may be more likely to see engaging in helping behavior as a stressor, which might then influence how they perceive their role overload or need for recovery. NA was assessed using the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). Participants were asked to report how much they generally feel 10 negative emotions (e.g., afraid, irritable, hostile) on a 5-point Likert scale ranging from very slightly or not at all to extremely.

I included focal employee FIW as a control variable in this study. Employees with higher levels of FIW themselves may be less likely to engage in helping behavior because

they have fewer available resources due to managing their own family issues (e.g., Liu et al., 2015). Furthermore, they may be more likely to experience role overload, WIF, and need for recovery as a result of expending energy to deal with their own FIW. Thus, it was important to measure focal employee FIW to control for its potential influence on the other study variables. Focal employee FIW was measured using the 5-item Family-Work Conflict Scale (Netemeyer et al., 1996). Response options ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). Example items include "The demands of my family or spouse/partner interfered with work-related activities" and "Family-related strain interfered with my ability to perform job-related duties."

Finally, I included a variable to capture the history of a coworker's FIW. This measure was developed by Grzywacz and colleagues (2006) and assesses the frequency of FIW that occurred during the last six months. This measure was adapted to refer to a coworker's FIW, rather than the participant's own FIW. The adapted question stem of the measure began with "In the last 6 months how often did your coworker's home life" and the three following items were "interfere with their responsibilities at work, such as getting to work on time, accomplishing daily tasks, or working overtime?" "keep them from spending the amount of time they would like to spend on job or career-related activities," and "interfere with their job or career." The response options ranged from 0 (*never*) to 5 (*5 or more days per week*). This measure was included to control for how often a coworker generally experiences FIW. This may be relevant in the study, as employees may be less likely to engage in helping behavior during the study period if their coworker has a history of experiencing many FIW issues.

Some authors (e.g., Becker et al., 2016; Bernerth & Aguinis, 2016) argue control variables should be used sparingly, as including control variables reduces degrees of freedom and statistical power, and can influence whether a relationship between predictor and criterion variables is correctly identified (Bernerth & Aguinis, 2016). Recommendations for the use of control variables in social sciences research suggest control variables should only be included if they are theoretically relevant (i.e., there is a theoretical reason the control variable should relate to the independent or dependent variables in the study) and if there is empirical evidence establishing the control variable is related to focal study variables (Bernerth & Aguinis, 2016). Thus, while I measured several different demographic characteristics and theoretically meaningful variables as potential control variables, I first looked to see if those variables had an empirical relationship with both the independent and dependent variables in my study before including them in my model. After reviewing the pattern of correlations between my main study variables at all three time points with my control variables, it appears NA, FIW, and history of coworker FIW are significantly related to both the predictor and criterion variables in my model. Thus, I included these three variables as Level 2 control variables in my multilevel analyses. However, it is considered best practice to run analyses both with and without control variables (Becker et al., 2016). Thus, I ran all multilevel analyses with and without NA, FIW, and history of coworker FIW. The interpretation of results did not substantially differ depending on whether control variables were or were not included in the multilevel analyses.

RESULTS

Common Method Bias

My study design involves gathering self-report data from participants for all study variables. Because the data are coming from the same source, it could be possible there is common method bias (CMB; Podsakoff et al., 2012). Several sources of evidence were used to ensure CMB was not an issue in the present study. First, when testing my hypotheses, I person-mean centered my Level 1 predictor variables. Person-mean centering removes between-person variance, providing an unbiased estimate of within-person relationships (Enders & Tofighi, 2007; Gabriel et al., 2019). Thus, person-mean centering removes any between-person characteristics that could be a source of CMB (Gabriel et al., 2019; Podsakoff et al., 2012).

It is possible the relationship between coworker FIW and ICB is particularly likely to be influenced by CMB given their proximity in time (i.e., a participant would likely have to engage in ICB shortly after becoming aware of a coworker's FIW). I reviewed the bivariate correlations between my study variables at all three time points (Table 10). If CMB were present, I would expect significant correlations between all of my measures, and especially between coworker FIW and ICB. However, ICB was for the most part not significantly correlated with coworker FIW, nor any outcome variable except for relationship quality across all three time points. This led me to conclude CMB was not affecting the relationship between my main study variables.

Lastly, I used the Comprehensive Confirmatory Factor Analysis Marker Technique (Williams et al., 2010) to statistically check for CMB among the variables at each time point. When using this technique, it is important to have a marker variable that

is not significantly related to any of the variables one plans to test for CMB (Williams et al., 2010). Initially, I planned on using positive affect (measured as trait affect using the PANAS at Time 1) as my marker variable, as it was not expected to significantly relate to any of my study variables. However, positive affect was significantly related to my study variables across time points, violating a fundamental assumption of the marker variable technique (Williams et al., 2010). To still be able to use the marker variable technique, I decided to use a different variable as my marker variable. The person-focused ICB subscale at each time point was only significantly related to relationship quality at its corresponding time point. Thus, I decided to use person-focused ICB as my marker variable. While this still violates the assumption that the marker variable is uncorrelated with variables one is testing for CMB, using person-focused ICB as the marker variable was the best option given the pattern of correlations in my dataset.

To use the Comprehensive Confirmatory Factor Analysis Marker Technique (Williams et al., 2010), I created a measurement model in Amos 26.0 with all focal variables at Time 1 (T1) except T1 person-focused ICB and T1 need for recovery, and allowed variables to covary with each other. Person-focused ICB was not included in the model because it was going to be used as my marker variable. Need for recovery could not be included in the model because the measure used a yes/no response scale. After creating the measurement model, I then added a common latent factor to the model and regressed all observed items for my focal variables at T1 (coworker FIW, role overload, WIF, relationship quality) onto the common latent factor. I constrained each regression weight to "a" to ensure the common factor would explain how much common shared variance is present among the observed items. I then added the marker variable, person-

focused ICB, to the measurement model and regressed the observed items for person-focused ICB onto the common latent factor. I again constrained each regression weight to "a" and also allowed the marker variable to covary with my latent focal variables. I then constrained the variance for the common factor to 1. I ran this model to obtain the regression weights for "a," which reflected the common variance among the items. The "a" regression weights were .35 which is .12 when squared. Thus, the percentage of common variance among my T1 measures (minus T1 ICB) was 12%.

I repeated the above process separately for my Time 2 (T2) variables and Time 3 (T3) variables. When using T2 person-focused ICB as the marker variable to assess the CMB present among my T2 variables, the "a" regression weights were .12 which is .014 when squared. Thus, the percentage of common variance among my T2 study variables (minus T2 ICB) was 1.4%. When using T3 person-focused ICB as the marker variable to assess the CMB present among my T3 variables, the "a" regression weights were .16 which is .026 when squared. Thus, the percentage of common variance among my T3 study variables (minus T3 ICB) was 2.6%. Based on the results of the Comprehensive Confirmatory Factor Analysis Marker Technique which yielded low percentages of common variance at all three time points, the pattern of correlations between my study variables, and the fact that I person-mean centered my predictor variables when testing my hypotheses, I did not believe common method variance significantly biased my estimates.

Discriminant Validity of Constructs in Measurement Model

One of the primary assumptions underlying factor analytic techniques, including confirmatory factor analysis (CFA), is that the data are independent (Dyer et al., 2005).

Because the data in the present study are nested, this violates the assumption of independence. Researchers have argued when there is nested data, it is important to conduct a multilevel confirmatory factor analysis (MCFA) to determine whether the data structure is the same or different at the within-person level as compared to the between-person level (e.g., Dyer et al., 2005; Huang, 2017; Pornprasertmanit et al., 2014). However, the sample size requirements to conduct an MCFA are quite large, and most examples of MCFA in the literature have much larger sample sizes than what I have in my study (e.g., Barbour & Lammers, 2015; Dyer et al., 2005; Huang, 2017; Pornprasertmanit et al., 2014). Given the Level 1 and Level 2 sample sizes of my data, it is unlikely that an MCFA model would converge (Pornprasertmanit et al., 2014). Indeed, one of the reasons I conducted a pilot study to provide factor analytic validity evidence for the adapted measures used in the main study was because of the sample size limitations I knew would be present in the main study.

Despite this sample size limitation of the main study data, I still wanted to conduct an analysis to test the discriminant validity of the measures used in my study (57 items). I decided to run a set of regular CFAs on the data collected at T1. At T1, I had complete data from 383 participants, which is sufficient to run a CFA between-persons (Cattell, 1978; MacCallum et al., 1999; Matsunaga, 2010). Because I only used data from one time point in this analysis, I did not violate the assumption of independence as the data were only at one level (i.e., there was no within-persons aspect to the data). However, this meant I was not able to capture any within-person variation in my measures as part of the CFAs. While it is possible the nature of the constructs in my main study differed depending on the level of analysis (i.e., within-person versus between-

person; Dyer et al., 2005), conducting a CFA using the T1 data at least gave me some evidence of the construct validity of the measures used in my study at T1.

To conduct a CFA to determine the discriminant validity of my T1 measures, I used the Lavaan package and maximum likelihood estimate within R (version 4.0.3) and tested a series of CFA models (see Table 5). The 11-factor model included all control variables and main study measures (except for need for recovery which could not be included due its yes/no response scale) assessed at T1 as separate factors. In this model, I also created a separate factor for each sub-dimension of any multi-dimensional constructs. Thus the 11-factor model included separate factors for positive affect, negative affective, history of CFIW, prosocial motivation, FIW, CFIW, person-focused ICB, task-focused ICB, WIF, role overload, and relationship quality. I also ran a series of 10-factor models in which I combined the sub-dimensions of multidimensional constructs into a single factor. In the first 10-factor model (ICB), I combined the items for the person-focused and task-focused ICB sub-scales into a single factor and kept all the other constructs as separate factors. In the second 10-factor model (PANAS), I combined positive affect and negative affect into a single factor and kept all other constructs as separate factors. In the third 10-factor model (WIF & FIW), I combined the WIF and FIW measures into a single factor and kept all other constructs as separate factors. Lastly, I ran a fourth 10-factor model (CFIW & FIW) to make sure CFIW was distinct from the FIW measure from which it was adapted. In this 10-factor model, I combined CFIW and FIW into a single factor and kept all other constructs as separate factors.

The fit indices I looked at to determine how well the data fit each of these models included the comparative fit index (CFI), Tucker-Lewis index (TLI), root-mean-square-

error-of-approximation (RMSEA), chi-square value, and Akaike information criterion (AIC; Berkout et al., 2014; Schreiber et al., 2006). The 11-factor model fit the data best (χ^2 (2089) = 4123.39, $p < .05$; CFI = .92; TLI = .92; RMSEA = .05) and had CFI and TLI values closest to their recommended cutoff of .95, and an RMSEA value below the recommended cutoff of .06 (Hu & Bentler, 1999; Schreiber et al., 2006; Tabachnick & Fidell, 2013). The chi-square values and AIC values were also significantly lower for the 11-factor model as compared to the other models (Schreiber et al., 2006). I also reviewed the correlations between the 11 factors from the 11-factor model (see Table 6). These correlations overall were small in magnitude. The largest correlation ($r = .41$) was between Factors 8 and 9, which represented the items from the WIF and FIW measures, respectively. Given that the correlations between factors were relatively small in magnitude, this further suggests the factors represent separate constructs. Thus, these results support the conclusion that there is discriminant validity among the various constructs assessed at T1, and each measure/sub-scale represented a different construct to participants.

Since I had usable data from 282 participants at T2, I was also able to run CFAs on the T2 measures. I followed a similar process as described above, though because the T1 survey included measures that were not included in the T2 survey, the models that were compared for the T2 measures were slightly different. However, the results of the analyses followed a similar pattern as the results of the T1 CFAs, and the model with all T2 measures loading onto their own factors (coworker FIW, person-focused ICB, task-focused ICB, role overload, WIF, and relationship quality each as their own factor) fit the data best χ^2 (545) = 1252.90, $p < .05$; CFI = .93; TLI = .92; RMSEA = .068). This further

supports the conclusion that there was discriminant validity among the constructs assessed in my study.

Although I initially decided to treat ICB as a single measure because I was interested in all ICBs a focal employee might engage in to assist a struggling coworker, the results of the CFAs suggest the person-focused and task-focused ICB sub-scales reflect independent constructs. Thus, in subsequent multilevel analyses, I ran each analysis using person-focused ICB and task-focused ICB as separate variables, and then separately with general ICB (which included all items from both subscales). The results of the multilevel analyses did not differ substantially based on whether I used an individual subscale of ICB or the combined ICB measure, except in two instances, which I discuss in greater detail below. Since I did not expect any theoretical differences between person-focused and task-focused ICB and was interested in overall ICB engaged in by the focal employee, I mainly discuss the results of the analyses using the general ICB measure that included all items from both subscales.

Descriptive Statistics

Means, standard deviations, and bivariate correlations between all variables assessed at each time point for the final sample are presented in Tables 7-9. Bivariate correlations between main study variables from all three time points are presented in Table 10. All correlations were calculated using data only from those participants who completed the survey at all three time points and who were thus retained for the final sample. Omega reliabilities and their 95% confidence intervals for all control variables and main study variables at each time point are presented in Table 11 (Dunn et al., 2014). All omega reliability coefficients in the present study exceeded typically accepted cutoffs

in the literature and suggest all measures were reliable (Kelley & Pornprasertmanit, 2016; Watkins, 2017).

It is worth noting the means for the coworker FIW scale at all three time points were below the mid-point of the scale. Unlike in the pilot study, it appears on average the participants in the main study did not perceive their coworkers were experiencing high levels of FIW. It is also worth noting on average participants reported engaging in high levels of helping behavior and perceived their relationship quality with their coworkers as being quite high, as the means for both of those measures at all three time points were well above the mid-point of the scale.

Multilevel Modeling

In the present study, the data were nested, as each participant responded to three weekly surveys. Thus, occasions (Level 1, within-person) were nested within people (Level 2, between-person). Other analysis techniques, such as ordinary least squares (OLS) regression, assume independence of errors and are inappropriate when handling nested data, as nested data structures have dependent errors and therefore violate this assumption of independence (Kenny et al., 2006; Ployhart & Vandenberg, 2010). Multilevel modeling does not assume independence of residuals, so it can be used to analyze nested data structures (Beal, 2015; Ohly et al., 2010).

When using multilevel modeling, it is important to establish there is variance at both the within-person and between-person level of analysis (Bliese, 2000; Hofmann, 1997). To determine how much variance is at each level of analysis for each variable, I ran a null model with no predictors for each of the endogenous variables in my model (Hofmann, 1997). The endogenous variables in my model include role overload, WIF,

need for recovery, and relationship quality. It also includes focal employee ICB, the potential mediator in the relationship between coworker FIW and the outcome variables, because ICB is an endogenous variable in the mediated model. Running null models for each outcome variable allowed me to calculate an ICC(1) to determine how much of the variance in the outcome variables was within-person (Level 1) and how much of the variance was between-person (Level 2; Bliese, 2000; LeBreton & Senter, 2008).

After running null models for each of the endogenous variables in my study, I determined the ICC(1) for focal employee ICB was .58, suggesting that 58% of the variance in ICB is at the between-person level and due to between-person factors, and 42% of the variance is at the within-person level and is due to within-person factors. The ICC(1) for role overload and need for recovery were .70 and .80, respectively, suggesting 70% of the variance in role overload and 80% of the variance in need for recovery is at the between-person level. Lastly, the ICC(1) for WIF and relationship quality was .76 and .65, respectively, suggesting 76% of the variance in WIF and 65% of the variance in relationship quality is due to between-person factors. These ICC(1) values for the endogenous variables in my model suggest the majority of variance is due to between-person factors; however, there is still some within-person fluctuation in each of the outcome variables. While there are no set rules of thumb regarding how much variance is needed at either level (within- or between-persons) to proceed with multilevel modeling, typically as long as there is at least 10% of variance in the outcome variables at both levels, it is possible to proceed with multilevel modeling (Bliese, 2000; Hofmann, 1997). Results of the multilevel modeling analyses used to test all hypotheses are discussed below and summarized in Figure 2.

Hypothesis 1

My first hypothesis predicted fluctuations in coworker FIW would be positively related to fluctuations in focal employee ICB. To test this hypothesis, I first person-mean centered coworker FIW. Person-mean centering removes between-person variation and provides an estimate of the within-person relationship (Enders & Tofighi, 2007; Hofmann & Gavin, 1998). I then ran an intercepts-as-outcomes model, which allowed me to predict the intercept of the Level 1 outcome variable (ICB) from Level 1 and Level 2 predictors (Hofmann, 1997). I included the person-centered coworker FIW variable as the Level 1 predictor, and added in the Level 2 control variables that were found to significantly correlate with my focal variables (i.e., history of coworker FIW, negative affect, and FIW). I also added back in the coworker FIW person/cluster means as a Level 2 predictor variable. This effectively controls for any between-person variance in coworker FIW, allowing me to cleanly estimate the within-person relationship between coworker FIW and ICB (Enders & Tofighi, 2007; Hofmann & Gavin, 1998). The results of this analysis are presented in Table 12. Coworker FIW was not significantly related to focal employee ICB ($B = .07$, $p = .063$), suggesting that within-person fluctuations in coworker FIW did not predict within-person fluctuations in ICB. I then calculated the pseudo r-squared value for the coworker FIW – ICB relationship (LaHuis et al., 2019). Only 1.4% of within-group variance in ICB was due to coworker FIW, and 12% of the between-group variance in ICB was due to the Level 2 predictors. I also repeated the above multilevel analyses with person-focused ICB and task-focused ICB as separate measures instead of combining them into overall ICB and obtained similar results. Thus, Hypothesis 1 was not supported.

Hypothesis 2

My second hypothesis predicted the relationship between fluctuations in coworker FIW and fluctuations in focal employee ICB would be moderated by focal employee prosocial motivation such that the higher the level of focal employee prosocial motivation, the stronger the relationship between coworker FIW and focal employee ICB. To run this analysis, I first ran an intercepts-as-outcomes model to test whether prosocial motivation and my Level 2 control variables (history of coworker FIW, negative affect, and FIW) had a cross-level direct effect on focal employee ICB (Hofmann, 1997). I made sure to add in the person means for coworker FIW as a Level 2 variable to control for the between-person variation in coworker FIW (Enders & Tofighi, 2007; Hofmann & Gavin, 1998). The results of this analysis suggest prosocial motivation did have a cross-level direct effect on focal employee ICB ($B = .40$, $p < .001$).

After running the intercepts-as-outcomes model, I then ran a slopes-as-outcomes model to test whether prosocial motivation was a cross-level moderator of the relationship between coworker FIW (person-mean centered) and focal employee ICB. Because I person-mean centered coworker FIW, I made sure to add back in the person means for CFIW at Level 2 to control for their influence in predicting the slopes (Enders & Tofighi, 2007; Hofmann & Gavin, 1998). The results of this analysis are presented in Table 13 and suggest prosocial motivation did not moderate the relationship between fluctuations in coworker FIW and fluctuations in ICB ($B = .04$, $p = .063$). I then calculated the pseudo r-squared value for the cross-level interaction (LaHuis et al., 2019) and found that 56% of the between-group variance in the coworker FIW – ICB slopes was due to the cross-level interaction and person means for coworker FIW (i.e., the

Level-2 predictors). However, much of that variance explained was due to the person

means for FIW, not the cross-level interaction with prosocial motivation, as not only was

the interaction not significant, but I also plotted the interaction using a simple slopes

plotter, and the slopes at one standard deviation above and below the mean of prosocial

motivation were not significantly different from one another. The graph is not included

here because there was no evidence of an interaction, just a main effect for prosocial

motivation where those high in prosocial motivation engage in more ICB. Finally, I

repeated these analyses with person-focused ICB and task-focused ICB as separate

measures instead of combining them into overall ICB and obtained similar results. Thus,

Hypothesis 2 was not supported.

Hypotheses 3a and 3b

Hypothesis 3a predicted fluctuations in focal employee ICB would be positively

related to fluctuations in focal employee role overload, and Hypothesis 3b predicted

fluctuations in focal employee ICB would partially mediate the relationship between

fluctuations in coworker FIW and fluctuations in role overload. In order for a mediation

to be possible, two conditions must first be met. First, the predictor variable (i.e.,

coworker FIW) must be significantly related to the mediator (i.e., ICB; Kenny, 2018;

Stone-Romero & Rosopa, 2008). Second, the mediator (i.e., ICB) must be significantly

related to the outcome variable (i.e., role overload, WIF, need for recovery, or

relationship quality; Kenny, 2018; Stone-Romero & Rosopa, 2008). If either of these

conditions is not met, the predictor variable cannot be related to an outcome variable

through a mediator. In the present study, because coworker FIW was not significantly

related to focal employee ICB, I have not met the first condition needed to run a mediated

model. Therefore, I am unable to test any mediation hypotheses, including Hypothesis 3b, which means Hypothesis 3b was not supported. However, I still calculated the indirect effect of coworker FIW on role overload through ICB. The indirect effect of coworker FIW on role overload was .03, and the Sobel test revealed this indirect effect was not significant ($p = .113$).

Although Hypothesis 3b was not supported, I tested Hypothesis 3a and determine if fluctuations in ICB were related to fluctuations in role overload. I first person-mean centered ICB to remove any between-person variance in ICB so I could estimate the relationship between the within-person variance in ICB and the within-person variance in role overload. I then estimated a model with person-mean centered ICB as the Level 1 predictor variable. I then ran an intercepts-as-outcomes model and included the Level 2 control variables (history of coworker FIW, negative affect, and FIW). I also included the person means for ICB as a Level 2 control variable (Enders & Tofighi, 2007). The results of these analyses are presented in Table 14. ICB did significantly relate to role overload ($B = .45, p < .001$), suggesting that within-person fluctuations in ICB were related to within-person fluctuations in role overload, which supports Hypothesis 3a. I also calculated the pseudo r-squared values for the ICB – role overload relationship which were .07 for Level 1 and .24 for Level 2 (Lahuis et al., 2019). These values indicate that seven percent of within-group variance in role overload was due to ICB, and 24% of the between-group variance in role overload was due to the Level 2 predictors. In addition, two of the control variables were significantly related to role overload: negative affect ($B = 1.09, p = .003$) and FIW ($B = .33, p = .012$). I also repeated these analyses with person-focused ICB and task-focused ICB as separate measures instead of combining them into

overall ICB. Person-focused ICB was still significantly related to role overload ($B = .53$, $p < .001$), however task-focused ICB was not ($B = .06$, $p = .666$).

Hypothesis 4a and 4b

Hypothesis 4a predicted fluctuations in ICB would positively relate to fluctuations in focal employee WIF, and Hypothesis 4b predicted fluctuations in ICB would mediate the relationship between fluctuations in coworker FIW and fluctuations in WIF. As discussed above, because coworker FIW was not significantly related to ICB, I was unable to test a mediated model, and Hypothesis 4b was not supported. However, I calculated the indirect effect of coworker FIW on WIF through ICB. The indirect effect of coworker FIW on WIF was -.001, and the Sobel test revealed this indirect effect was not significant ($p = .842$).

To test Hypotheses 4a, I first regressed WIF onto the person-mean centered ICB variable. I then ran an intercepts-as-outcomes model and included the Level 2 control variables (history of coworker FIW, negative affect, and FIW). I also included the person means for ICB as a Level 2 control variable (Enders & Tofighi, 2007). The results of these analyses are presented in Table 14. ICB was not significantly related to WIF ($B = -.02$, $p = .865$), suggesting that within-person fluctuations in ICB did not predict within-person fluctuations in WIF. I then calculated the pseudo r-squared value for the ICB – WIF quality relationship (LaHuis et al., 2019) and found that less than 1% of within-group variance in WIF was due to ICB, and 61% of the between-group variance in WIF was due to Level 2 predictors, likely largely driven by the person means for coworker FIW. Thus, Hypothesis 4a was not supported. However, two of the control variables were significantly related to WIF: negative affect ($B = .80$, $p = .002$) and FIW ($B = .65$, $p <$

.001). I also repeated these analyses with person-focused ICB and task-focused ICB as separate measures instead of combining them into overall ICB and obtained similar results.

Hypothesis 5a and 5b

Hypothesis 5a predicted fluctuations in ICB would positively relate to fluctuations in focal employee need for recovery, and Hypothesis 5b predicted fluctuations in ICB would mediate the relationship between fluctuations in coworker FIW and fluctuations in need for recovery. As discussed previously, because coworker FIW was not significantly related to ICB, I was unable to test a mediated model, and Hypothesis 5b was not supported. However, I calculated the indirect effect of coworker FIW on need for recovery through ICB. The indirect effect of coworker FIW on need for recovery was -.01, and the Sobel test revealed this indirect effect was not significant ($p = .607$).

To test Hypothesis 5a, I first regressed need for recovery onto the person-mean centered ICB variable. I then ran an intercepts-as-outcomes model and included the Level 2 control variables (history of coworker FIW, negative affect, and FIW). I also included the person means for ICB as a Level 2 control variable (Enders & Tofighi, 2007). The results of these analyses are presented in Table 14. ICB was not significantly related to need for recovery ($B = -0.14$, $p = .593$), suggesting that within-person fluctuations in total ICB did not predict within-person fluctuations in need for recovery. I also calculated the pseudo r-squared value for the ICB – need for recovery relationship (LaHuis et al., 2019) and found that six percent of within-group variance in need for recovery was due to ICB, and 37% of the between-group variance in need for recovery was due to Level 2 predictors (most likely driven by the person means for coworker FIW). Thus, hypothesis

5a was not supported. However, two of the control variables were significantly related to need for recovery: negative affect ($B = 2.89$, $p < .001$) and FIW ($B = .91$, $p = .001$). I also repeated these analyses with person-focused ICB and task-focused ICB as separate measures instead of combining them into overall ICB and obtained similar results.

Research Question 1

Research question 1 asked how fluctuations in ICB might relate to fluctuations in the focal employee's perception of their relationship quality with their coworkers dealing with FIW. To test this research question, I regressed relationship quality onto person-mean centered focal employee ICB. I ran an intercepts-as-outcomes model and included the Level 2 control variables (history of coworker FIW, negative affect, and FIW). I also included the person means for ICB as a Level 2 control variable (Enders & Tofighi, 2007). The results of these analyses are presented in Table 14. ICB was significantly related to relationship quality ($B = .17$, $p = .020$) such that within-person fluctuations in helping behavior were associated with fluctuations in relationship quality perceptions. I also calculated the pseudo r-squared value for the ICB – relationship quality relationship (LaHuis et al., 2019). Six percent of within-group variance in relationship quality was due to ICB, and 44% of the between-group variance in relationship quality was due to Level 2 predictors. When I repeated these analyses with person-focused ICB and task-focused ICB as separate measures, person-focused ICB was still significantly related to relationship quality ($B = .16$, $p = .038$), but task-focused ICB was not ($B = .06$, $p = .415$). I also tested the indirect effect of coworker FIW on relationship quality through ICB. The indirect effect of coworker FIW on relationship quality was .01, and the Sobel test revealed this indirect effect was not significant ($p = .156$).

Post-Hoc Analyses

  I decided to run several post-hoc analyses solely to be able to further understand my data. In the present study I hypothesized coworker FIW would relate to various focal employee outcomes through focal employee ICB. However, while I did not hypothesize any direct relationships between coworker FIW and focal employee outcomes, I decided to test whether coworker FIW was related to the outcomes in my study. I ran an intercepts-as-outcomes multilevel model for each of the outcomes in my study (role overload, WIF, need for recovery, and relationship quality) using person-mean centered coworker FIW as a Level 1 predictor. I also included several Level 2 control variables (history of coworker FIW, negative affect, and FIW), and added in the person means for coworker FIW as a Level 2 control variable (Enders & Tofighi, 2007). The results of these analyses are presented in Table 15 and summarized in Figure 3. Coworker FIW was significantly related to role overload ($B = .20$, $p = .005$), WIF ($B = .17$, $p = .004$), and need for recovery ($B = .32$, $p = .001$), but not relationship quality ($B = -.05$, $p = .118$).

  I also decided to test whether my hypothesized mediated model would be supported if I removed the multilevel component and ran a model solely at the between-persons level (Level 2) where coworker FIW at T1 predicted focal employee ICB at T2, which then predicted my outcome variables at T3. I decided to run this model because it could be the case I incorrectly assumed the correct time period in between each of the constructs in my model. For example, while I expected coworker FIW and focal employee ICB to occur very close in time to one another, it could be the case the effects of a coworker's FIW are more delayed and do not begin to influence whether focal employees need to provide assistance until the following week. Furthermore, the majority

of the variance for each variable in the study turned out to be at the between-person level (see ICC(1) values on page 60). I ran a simple regression to test whether coworker FIW at T1 was related to focal employee ICB at T2. Coworker FIW at T1 was not related to focal employee ICB at T2 ($B = .07$, $p = .238$). I also tested whether coworker FIW at T1 predicted ICB at T3, and the results were still not statistically significant ($B = .02$, $p = .806$). In addition, I tested whether coworker FIW at T2 predicted ICB at T3, and these results were statistically significant ($B = .13$, $p = 048$). However, mediated models require three time points (Stone Romero & Rosopa, 2008). Because coworker FIW at T1 was not related to ICB at T2, the first part of the mediated model did not work out, and it was not possible to test a full mediated model using ICB at T2 as the mediator between coworker FIW at T1 and focal employee outcomes at T3 (Kenny, 2018; Stone-Romero & Rosopa, 2008). However, I did also conduct a series of regressions to determine whether ICB at T2 predicted outcomes (role overload, WIF, need for recovery, and relationship quality) at T3. ICB at T2 did significantly relate to relationship quality at T3 ($B = .36$, $p < .001$), but not to role overload, WIF, or need for recovery.

DISCUSSION

There were two main goals of the present study. First, this study was intended to investigate how employees may be drawn upon to engage in helping behavior to assist a coworker struggling with FIW. The second goal was to determine whether engaging in helping behavior to assist a struggling coworker would have negative implications for the focal employee. Thus, I predicted coworker FIW would lead to negative outcomes for a focal employee through the mechanism of the focal employee engaging in helping behavior. These relationships were tested using a within-person design where weekly fluctuations in coworker FIW, helping behavior, and potential negative outcomes for focal employees were captured across three workweeks.

Hypotheses 1 and 2 predicted fluctuations in coworker FIW would be related to fluctuations in focal employee ICB (H1) and that this relationship would be stronger for employees with higher levels of prosocial motivation (H2). Both of these hypotheses were not supported. Hypothesis 3a predicted fluctuations in focal employee ICB would be related to fluctuations in focal employee role overload. This hypothesis was supported, and further analyses revealed the relationship between ICB and role overload was significant for person-focused ICB, but not task-focused ICB. Hypotheses 4a and 5a predicted fluctuations in focal employee ICB would be related to fluctuations in focal employee WIF and need for recovery, respectively. Neither of these hypotheses were supported. Hypotheses 3b, 4b, and 5b, predicted the relationship between coworker FIW and focal employee role overload, WIF, and need for recovery, respectively, would be mediated by focal employee ICB. These hypotheses were not supported. Lastly, RQ1 asked how fluctuations in focal employee ICB would be related to fluctuations in

relationship quality. Results from the multilevel analyses suggested that person-focused ICB was significantly related to better relationship quality perceptions. Thus, in summary only Hypothesis 3a was supported.

Theoretical Implications

This project has theoretical implications for the WFC literature. To date, role theory arguments in the WFC literature have primarily considered how the roles of employee and spouse/parent conflict (e.g., Eby et al., 2005; Greenhaus & Beutell, 1985). This study extends role theory by considering how the inter-role conflict experienced by an employee can spread throughout the work environment to influence others, such as that employee's coworkers. More broadly, there has been little focus in WFC theorizing in the context of coworker relationships, which is an important gap to fill, given the likelihood of coworkers being called upon to provide support when an employee experiences a work-family issue. Thus, this study added to the WFC literature by going beyond studying how inter-role conflict between the work and family domains influences the people experiencing it to instead focus on how this inter-role conflict impacts others within the work environment.

This study also adds to the theorizing on within-person variability in WFC experiences. Work and family responsibilities can ebb and flow from week to week or even day to day (e.g., Liu et al., 2015). For example, employees may have a deadline approaching that increases their workload for the current week, but the workload for the following week may be rather light. Similarly, an employee may need to miss work to care for a sick child for a couple days, but is able to work normally the rest of the week. In addition to changes in work and family responsibilities throughout the week, it may be

the case fluctuating emotions are a mechanism through which WFC experiences are connected to daily or weekly work and family outcomes. Emotions are, by definition, short-lived experiences that can change throughout the day (Weiss & Cropanzano, 1996). If, for example, an employee experiences a family-to-work conflict while at work, this may influence their daily emotional experiences, which may then influence work and home outcomes (Ilies et al., 2009; Judge et al., 2006). Thus, there are several reasons why WFC experiences and outcomes may fluctuate within individuals over time. The present study supports the notion that scholars should engage in future theorizing around fluctuations in WFC, as sixty-one percent of the variance in perceptions of coworker FIW and 24% of the variance in participant WIF was due to within-person factors. This adds to the growing body of work in the WFC literature that argues work-family constructs fluctuate over time (e.g., Allen & Martin, 2017; Butler et al., 2005; Grzywacz et al., 2002; Haar et al., 2018; Liu et al., 2015; Nohe et al., 2014), and is in line with calls to explore the dynamic nature of WFC (Allen & Martin, 2017).

Relationship between Coworker FIW and Focal Employee Helping Behavior

Based on role theory (Kahn et al., 1964), I predicted when a coworker experiences a FIW issue, this will activate the role of "good coworker" for other employees in the workplace who will then engage in helping behavior to meet the role requirements of being a good coworker. I also reasoned this relationship between coworker FIW and focal employee helping behavior would be influenced by the focal employee's level of prosocial motivation, as those who are more prosocially motivated might be more likely to notice someone needs help and be more likely to engage in helping behavior to assist them (Grant & Mayer, 2009; Meglino & Korsgaard, 2004). However, coworker FIW was

not related to focal employee helping behavior in the present study, regardless of the level of the focal employee's prosocial motivation.

There are several reasons why coworker FIW may not have been related to focal employee helping behavior. The first is my main study sample was predominantly male and made up of older individuals who either never had children or whose children were adults and not currently living with them. It may be the case these individuals were not experiencing any of their own FIW issues and therefore did not fully understand the implications of a coworker's FIW. For example, older employees with grown children are more removed from some of the common sources of FIW (i.e., childcare responsibilities) and may have forgotten how disruptive this type of family issue can be. Thus, it may be the case participants in this study did not realize their coworkers' FIW was severe enough for them to need help, or they may not have even recognized coworkers were struggling in the first place. Indeed, the mean for coworker FIW was below the midpoint of the scale at all three time points, suggesting participants were not perceiving high levels of coworker FIW. Perhaps coworkers who were more likely to experience higher levels of FIW, such as younger women with young children (e.g., Cinamon & Rich, 2002; Eby et al., 2005; Shockley et al., 2017), did not want to confide in their older, male colleagues about what they were experiencing to avoid the stigma that can occur from being a working mother (e.g., Spagnoli et al., 2020). Or, perhaps the increase in virtual work made it more challenging for employees to have the kinds of casual conversations in which family struggles might be communicated.

A second reason coworker FIW may not have been related to focal employee helping behavior is that employees may have become desensitized to their coworkers'

FIW. At the time of data collection, the changes to work and family situations (e.g., work-from-home arrangements, virtual schooling, etc.) that occurred as a result of the Covid-19 pandemic had been in effect for about a year. It may be the case coworkers who experienced high levels of FIW during the study period had already been experiencing high levels of FIW for many months prior to the start of the study. Over time, focal employees may have shifted their perspective from thinking their coworkers were experiencing unusually high levels of FIW to thinking high levels of FIW were normal for their coworkers. If coworker FIW was perceived as something normal and an everyday occurrence, it may have become less salient to focal employees over time. Thus, focal employees may not have realized these issues were still occurring. Or, it could be the case focal employees came to assume over time that their coworkers knew how to manage their frequent FIW. Thus, participants may not have felt the need to provide help in instances of elevated FIW anymore. The fact that pilot study participants reported higher levels of coworker FIW during the pilot study data collection six months ago than what was reported in the present study offers some support to this idea that perceptions of coworker FIW may be decreasing over time as the pandemic has continued.

Finally, another reason there may not have been a relationship between coworker FIW and focal employee helping behavior is that participants may have been reporting general helping behavior instead of helping behavior they engaged in specifically as a result of a coworker's FIW issue. Even though the instructions of the helping behavior measure used in this study were adapted to specifically ask participants to report their helping behavior in response to a coworker's personal/family issue, participants may not

have read the instructions carefully, or may still have been thinking about their general

helping behavior. The means for the helping behavior measure were above the midpoint

of the scale at all three time points, suggesting participants did engage in relatively high

levels of helping behavior. It could be the case participants generally engage in high

levels of helping behavior and thus were likely to engage in helping behavior regardless

of whether their coworkers were experiencing a FIW issue. Perhaps going through the

Covid-19 pandemic made employees realize how much everyone relies on help from

coworkers, and thus focal employees were willing to provide instrumental and emotional

support to all of their coworkers no matter what their personal circumstances were.

Relationships between Coworker FIW and Focal Employee Outcomes

In the present study, I expected coworker FIW to relate to focal employee

outcomes through focal employee helping behavior, and I did not hypothesize any direct

relationships between coworker FIW and focal employee outcomes. However, I ran some

post-hoc analyses to determine whether coworker FIW directly related to outcomes of

interest in this study, even if it did not relate to the outcomes through helping behavior.

Coworker FIW was significantly related to focal employee role overload, WIF, and need

for recovery. These direct effects were not hypothesized, and therefore results should be

considered post-hoc exploration only. Furthermore, these results should also be treated

with caution because it is possible the Covid-19 pandemic influenced the relationships

between these variables. For example, it could be the case participants reported increased

coworker FIW because of how the pandemic has changed work and childcare

arrangements. Participants may have also reported increased role overload, WIF, and

need for recovery as a result of work changes and increased stress caused by the

pandemic. Thus, the pandemic may be an explanatory third variable for the relationships found between coworker FIW and focal employee outcomes in the present study (Card & Barnett, 2015). If similar results are found in future studies conducted after the pandemic that do predict direct effects between coworker FIW and focal employee outcomes, there will be more reliable support for the claim that a coworker's home life can have a detrimental effect on experiences of other individuals in the work environment.

However, the results of the post-hoc analyses do provide some preliminary support for the idea that a coworker's FIW can impact other employees even if the other employees do not directly engage in helping behavior to assist the person struggling with FIW. Thus, there is a need for future exploration of other mediating mechanisms that connect coworker FIW to focal employee outcomes. Perhaps when coworkers bring their family issues into work, they start to create a negative affective climate (Vijayalakshmi & Bhattacharyya, 2012). It may be the case their stress and negative emotional experiences are contagious to other employees, who then experience their own negative emotions as a result (Vijayalakshmi & Bhattacharyya, 2012). These negative emotions may then spillover into the employees' home life, leading to WIF or increased need for recovery (Edwards & Rothbard, 2000; Greenhaus & Beutell, 1985; Staines, 1980). Thus, when a coworker struggles to manage their work and family roles, it may eventually make others in the work environment struggle to manage their work and family roles as well. Future research might consider integrating the emotional contagion literature with role theory to help us better understand how experiences of role conflict are transmitted from one employee to another across work-life barriers.

It is important to note that while coworker FIW was related to increased role overload, WIF, and need for recovery, coworker FIW was not related to focal employee perceptions of their relationship quality with coworkers. Thus, while having a coworker who is experiencing a FIW issue might reduce an employee's level of available resources and add to their workload and stress level (Bolino & Turnley, 2005; Rizzo et al., 1970), ultimately resulting in increased role overload or need for recovery, the relationship quality between struggling coworkers and other employees remained unaffected. This could mean that even though employees may experience more stress as a result of a coworker's FIW, they did not hold that against their coworkers who were dealing with FIW.

Evidence of the Dark Side of Helping Behavior

There is a growing body of work researching the potential negative effects of engaging in helping behaviors (e.g., Bolino & Turnley, 2005; Bolino et al., 2013; Klein, 2007; Koopman et al., 2016; Şeşen et al., 2014). While many have argued for the benefits of engaging in helping behavior, such as increased positive affective experiences and better interpersonal relationships (e.g., Crocker et al., 2017; Grant, 2007), there is a growing literature on the dark side of helping behavior that suggests engaging in helping behavior can have negative effects. For example, engaging in helping behavior can increase an employee's workload which may then increase stress and subsequent negative outcomes (Bolino & Turnley, 2005; Bolino et al., 2013).

The present study contributed to the literature on the dark side of helping behavior, and I hypothesized that focal employee helping behavior would be related to increased levels of role overload, WIF, and need for recovery. However, while the

present study found engaging in helping behavior, and particularly person-focused helping behavior, was associated with higher levels of role overload, helping behavior was not related to WIF or need for recovery. This relationship between helping behavior and role overload makes sense, given that helping behavior is typically an extra-role behavior, and thus employees who engaged in helping behavior were doing so in addition to engaging in task performance (Bolino & Turnley, 2005). Person-focused helping behavior may have been particularly overwhelming, as providing emotional support to one's coworkers can become draining and reduce the resources one has to complete work tasks (Bolino et al., 2013). In line with role theory, it is possible participants experienced role overload as a result of trying to fulfill the role of good coworker and provide emotional support to a coworker who was struggling with FIW while also trying to fulfill the role of good employee and complete one's own work tasks.

Despite helping behavior relating to role overload, helping behavior was not significantly related to WIF (unlike in previous studies, e.g., Bolino & Turnley, 2005; Bolino et al., 2013; Halbesleben et al., 2009) or need for recovery. I expected helping behavior to relate to WIF and need for recovery because engaging in extra-role helping behavior while trying to manage their own responsibilities at work may create stress and fatigue that is then carried into an employee's home. However, it did not appear in the present study that helping others resulted in employees carrying more stress into their home lives or being more fatigued after work. This could be because of the characteristics of my sample. My sample was comprised of employees who were all over the age of 40 and who had on average been at their organization for 18 years and in their current job role for 15 years. Thus, these employees may have learned over time how to

leave work at work and not carry it back into their personal lives. They may also have learned over time where to access resources at work so that helping someone else may not have been as much of a burden. It could also be the case the positive feelings that occur when helping someone else had a restorative effect on participants (Crocker et al., 2017; Glomb et al., 2011). Rather than carrying feelings of stress from taking on the additional task of helping someone into their home environment, participants may have felt happy or content after helping their coworkers and may have instead carried those positive feelings back home (Crouter, 1984).

While I anticipated engaging in helping behavior to relate to worse outcomes for focal employees, I was unsure whether helping behavior would positively or negatively impact perceptions of relationship quality with struggling coworkers. Thus, I posed a research question to investigate how engaging in helping behavior would relate to focal employee perceptions of relationship quality with their coworkers who were dealing with FIW. Results from the present study support the view that helping behavior has a positive relationship with relationship quality, though person-focused ICB may be more beneficial for the relationship than task-focused ICB. It may be the case supporting one's coworkers generates increased happiness, trust, and expectations of reciprocity, all of which might lead to high levels of relationship quality (Bolino & Grant, 2016; Crocker et al., 2017; Glomb et al., 2011). It could also be the case participants engaged in high levels of helping behavior in the first place because they already had high-quality relationships with their coworkers, and helping was a way to continue an already satisfactory relationship. Thus, the high levels of relationship quality reported in the study could be a function of the existing relationship between participants and coworkers, rather than a

result of engaging in helping behavior. The design of the present study does not allow for causal claims, and it was not possible to determine whether helping behavior or high levels of relationship quality came first.

In summary, while I expected employees who engaged in helping behavior to experience more negative outcomes, helping behavior was not related to increased WIF or need for recovery, but was related to increased role overload and better relationship quality perceptions. Thus, the present study contradicts some of the arguments for the dark side of helping behavior and does offer some support for the view that helping behavior is associated with positive relationship outcomes. These results are encouraging, particularly since this study was conducted in the midst of a global pandemic during which many individuals experienced higher levels of stress than normal and therefore may have been less willing or less able to engage in extra-role behaviors as a result. However, it appears helping out a coworker, even during such a generally stressful time, does not necessarily lead to poor outcomes, and may have, in fact, bolster coworker relationships.

Practical Implications

Given the lack of support for most of this study's hypotheses, practical implications are limited. However, the results of this study provide some support for making the business case that organizations should support employees who are dealing with personal issues, as well as their coworkers. Although not initially hypothesized, the present study found that a coworker's FIW issues were related to three negative outcomes for other employees in the workplace (role overload, WIF, and need for recovery). Because work-family issues do not necessarily just impact the people who are directly

experiencing them, organizations who help employees manage work-family issues stand to benefit greatly. Allowing flexible work arrangements or extensions on work deadlines not just for those who are experiencing work-family issues, but also for their coworkers, may help reduce some of the negative crossover effects of WFC. Furthermore, given the potential for cyclical effects where work stress can lead to WIF, which can lead to family stress that leads to FIW (e.g., Amstad et al., 2011; Frone et al., 1992), if organizations are better able to support both employees struggling with FIW and their coworkers, this may prevent FIW from creating long-lasting, far-reaching negative impacts on the work environment.

A second practical implication for organizations from the present research is to consider how helping behavior may be both detrimental and beneficial to employees. The present study found helping behavior was related to increased role overload, which may be detrimental to employees given that role overload has been associated with other negative outcomes, such as poor health (Shultz et al., 2010). However, because helping behavior was not associated with WIF or need for recovery, it could also be the case that the restorative properties of helping mitigate some of the potential negative outcomes that can occur when extending oneself beyond one's formal job duties (Crocker et al., 2017). Perhaps if employees are supported by the organization and have enough resources while engaging in helping behavior, they may be able to experience the benefits of helping without experiencing some of the potential negative outcomes, such as role overload (Hobfoll, 1989; 2001).

Furthermore, there are implications of engaging in helping behavior, particularly person-focused helping behavior, for fostering positive relationships between employees

and coworkers, as helping behavior was associated with higher levels of perceived relationship quality in the present study. Organizations may stand to benefit from creating a culture of helping and encouraging employees to offer not just instrumental support, but emotional support as well. Organizations could facilitate closer relationships between employees and coworkers and increase the likelihood employees would feel comfortable offering emotional support through the use of team-building activities and more casual company events that take place outside of work (Keavney, 2016). In summary, if organizations are able to create a culture of helping and provide necessary resources to employees who engage in helping behavior, it could be the case that not only will employees who are struggling with FIW have the support they need to still accomplish work tasks, but other employees who engage in the helping behavior may benefit as well, and there may be stronger relationships built between employees.

Limitations and Future Research

There are several limitations of the present study. First, it should be noted no causal claims can be made as a result of this research. While a mediated model tested using weekly fluctuations across three time points does imply causal relationships between study variables, ultimately my study design could not rule out other explanations for the relationships between variables. Future research should explore the relationships proposed in this study using research designs that provide stronger causal evidence (i.e., experiments).

A second limitation of the present study was that the sample was not very diverse, as participants tended to be white, male, over 40, and without childcare or eldercare responsibilities. These demographic characteristics may influence whether or not an

individual is likely to perceive the severity of a coworker's FIW or be willing to engage in helping behavior (e.g., Cinamon & Rich, 2002; Eby et al., 2005; Shockley et al., 2017; Spanoli et al., 2020). Future research should make an effort to capture more diverse perspectives and include participants who are not white and who are younger than 40, female, and who have childcare and/or eldercare responsibilities.

Third, the timeframe between the T2 and T3 surveys differed from the timeframe between the T1 and T2 surveys. There was a one-week gap between the T2 and T3 surveys, but, because data collection for T1 took 18 days, participants ranged in how long of a gap they had between T1 and T2. For some participants, there was still a one-week gap between T1 and T2, but for others, the gap was closer to three weeks. While this time gap would be more impactful if the study design required growth curve modeling and the goal was to measure changes in study variables over time, this gap still may have affected participant responses. For example, participants who had a longer gap between T1 and T2 may have experienced less participant fatigue. Furthermore, while the study design was intended to capture weekly fluctuations in study variables, I was not able to truly capture weekly fluctuations for all participants.

Fourth, while the sample size of the data at Level 1 ($n = 264$) and Level 2 ($n = 88$) was sufficient to conduct multilevel modeling (Lane & Hennes, 2018; Scherbaum & Pesner, 2019), I did not have enough data to conduct an MCFA. Thus, a limitation of the present study is that I could not demonstrate the validity of my measures at the within-person and between-person level. While I was able to support the discriminant validity of the measures used in the study using a regular CFA at T1 and T2, it is still possible the nature of the constructs in my study differed depending on the level of analysis (Dyer et

al., 2005). Future research should ensure enough data at each level of analysis are collected to run an MCFA and determine the factor structure of measures at different levels of analysis.

Finally, a limitation of the present study is that participants were asked to reflect on experiences with their coworkers in general, rather than a specific coworker. While this allowed me to assess how focal employees interact with and support their coworkers in general, I was not able to investigate individual dyadic relationships between a focal employee and a single coworker. It may be the case participants report different experiences when asked to think about someone specific, rather than making a generalization about all of their coworkers. Furthermore, I investigated dyadic relationships in the present study but only obtained the perspectives of one member of the dyad. Future research should attempt to understand how coworker FIW and helping behavior are enacted within the context of a single coworker relationship and should attempt to gather the perspective of both members of the dyad.

There are several other avenues for future research. Post-hoc analyses revealed coworker FIW did relate to several focal employee outcomes in this study, and while helping behavior was not found to be a mechanism that connects coworker FIW to focal employee outcomes, there may be other mechanisms that do connect these variables. Perhaps focal employee emotions, such as anger or happiness, mediate the relationship between coworker FIW and focal employee outcomes. For example, a coworker experiencing a FIW issue could be considered an affective event (Weiss & Cropanzano, 1996) that elicits feelings of anger in other employees. That anger may, in turn, predict whether the focal employee experiences increased role overload, WIF, need for recovery,

or other outcomes. Future research should investigate other potential mechanisms that connect a coworker's work-life experiences to others within the workplace.

Although coworker FIW and focal employee helping behavior were not significantly related to each other in the present study, it could still be the case this relationship can exist, but only under certain circumstances. The present study tested focal employee prosocial motivation as one of those circumstances. Although prosocial motivation was not found to moderate the relationship between coworker FIW and helping behavior, there could be other individual difference variables, such as helping motives, that do influence whether or not this relationship exists, and whether engaging in helping behavior may then lead to more negative or positive outcomes. For example, employees who feel compelled to help due to leadership or organizational pressure or who want to help due to a desire to look good (i.e., impression management motives), as compared to employees who want to help because they genuinely enjoy helping, may engage in less, or lower quality, helping behavior in response to requests to help due to coworker FIW, and may be more likely to experience negative outcomes as a result of helping (Bolino & Grant, 2016; Bolino & Turnley, 2005; Grant, 2008). Future research should investigate to what extent different helping motives influence the amount and quality of helping provided when a coworker experiences FIW, as well as how helping motives may influence to what extent helping has negative implications for focal employee performance and well-being.

Future research should also test the hypothesized model in this study in other cultures. The United States is known for its individualistic culture, which may have impacted how likely the workers in the present study were to engage in helping behavior

as a result of a coworker's FIW issue (Hofstede, 1993). It may be the case workers in more collectivistic cultures who value group harmony and value group success more than individual success may be more likely to engage in helping behavior when a coworker experiences a FIW issue (Hofstede, 1993). Thus, it is possible the relationship between coworker FIW and helping behavior would be stronger in more collectivistic cultures, perhaps because workers in collectivistic cultures may be more prosocially motivated. Future research should investigate the relationships between the WFC, helping behavior, and well-being experienced by coworkers and focal employees in different cultures.

It is also important to note this study was conducted during a transitional period in the American workforce. The Covid-19 pandemic has had an impact on work in ways that will not fully be understood for years to come. While it may be the case some of the changes as a result of the pandemic will remain (e.g., increased work-from-home options), some aspects of life will eventually return to how they were prior to the pandemic (e.g., children attending school in person). Thus, it may be the case that different relationships between the variables in this study would be found if this study were run again six months or a year in the future. For example, it could be the case employees gave each other more grace during the pandemic as everyone tried to manage work and home responsibilities under unprecedented circumstances. However, once social distancing requirements are lifted, children return to in-person school, and employees return to more in-office work, employees may be less forgiving if coworkers experience a family-to-work issue. Employees may experience compassion fatigue after going through such a stressful time, and therefore may be more likely to experience negative outcomes if they continue to have to help their coworkers (Gerard, 2017). Future

research should attempt to replicate the findings in this study and determine to what degree the different stages of the pandemic influenced results.

Finally, it is important to acknowledge the Covid-19 pandemic may have signaled the beginning of a new era of work-family research. During the pandemic, organizations that previously required in-office working were forced to allow work-from-home arrangements. During this time, many employees developed a preference for working from home, and, moving forward, organizations are likely to allow more fully remote positions or hybrid work arrangements where employees are expected to be in the office a few days a week, but are allowed to work from home the rest of the week. Allowing more flexible work-from-home arrangements may increase the integration of one's work and family domains, and this may influence how employees are able to manage their work and family responsibilities. Depending on personal preferences and individual situations (e.g., childcare or eldercare responsibilities), employees may find the increased integration of their work and family lives facilitates or impedes their ability to accomplish tasks in both domains. Whereas previously work-family researchers may have assumed participants were working in-person, it will be important for future work-family research to capture participants' current work arrangement (i.e., fully in-person, fully remote, or hybrid), as well as their work arrangement preference, as this may have important implications for how work-family conflict is experienced and managed.

Conclusion

While the WFC literature has a long history of exploring the implications of WFC for the individuals who experience it and their families, missing from the literature is a consideration of how an employee's WFC may influence others in the work environment,

such as their coworkers. The current study began to address this gap in the literature by exploring how a coworker's FIW may influence whether focal employees are drawn upon provide assistance, and whether doing so has negative implications for the focal employee. The results suggest that coworker FIW may relate to negative outcomes for the focal employee, such as increased role overload, WIF, and need for recovery, but these relationships were not mediated by focal employee helping behavior, nor did the level of focal employee prosocial motivation influence the relationship between coworker FIW and focal employee helping behavior. In addition, there was mixed evidence for the dark side of helping behavior. While focal employee helping behavior was related to increased role overload, it was not related to WIF or need for recovery. Furthermore, helping behavior was related to higher levels of relationship quality one's coworkers. The current study represents a first step in investigating how issues from the home domain are transmitted into the work domain to influence coworkers and sets the stage for future research to investigate different mechanisms that connect a coworker's FIW to the experiences of other employees in the workplace.

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Table 1

Pilot Study Internal Consistency Values of Adapted and Original Measures

Variable	# of items	*N*	Cronbach's alpha of adapted scale	Cronbach's alpha of original scale	Original Scale Citation
History of coworker FIW	3	311	.87	.88	Grzywacz et al., 2006
Coworker FIW	5	311	.94	.89	Netemeyer et al., 1996
WIF	5	309	.94	.89	Netemeyer et al., 1996
FIW	5	309	.96	.89	Netemeyer et al., 1996
Role overload	6	303	.93	.89	Thiagarajan et al., 2006
Need for recovery	11	303	.80	.80	Van Veldhoven & Meijman, 1994
Person-focused ICB	8	305	.83	.93	Settoon & Mossholder, 2002
Task-focused ICB	6	304	.78	.95	Settoon & Mossholder, 2002
Overall ICB	14	299	.87	Not reported	Settoon & Mossholder, 2002
Relationship quality	5	308	.81	.95	Rusbult et al., 1998
Prosocial motivation	4	308	.83	.91	Grant, 2008

Note. FIW = family interfering with work. WIF = work interfering with family. ICB = interpersonal citizenship behavior. Several of the original articles reported multiple studies and multiple Cronbach's alphas. I have reported the highest Cronbach's alpha the original article reported. I also calculated omega internal consistencies for each scale, which did not yield substantial differences from alpha. Omega internal consistency values are available upon request.

Table 2

Confirmatory Factor Analyses of Pilot Study Measures with Self-Other Referent Shift

Variable	# of Items	Model	N	CFI	TLI	χ^2	df	Difference	RMSEA
History of Coworker FIW[a]	3	One-factor	311	1.00	1.00	0	0	0	0
History of Coworker FIW & Role Overload	9	One-factor	303	.83	.77	359.05*	36		.20
History of Coworker FIW & Role Overload[a]	9	Two-factor (Factor 1 = 3 History of Coworker FIW items; Factor 2 = 6 Role Overload items)	303	.97	.96	88.50	26	270.55*	.089
Coworker FIW[a]	5	One-factor	311	.993	.986	15.08*	5		.081
Coworker FIW	5	Two-factor (odd-even split)	311	.993	.983	13.73*	4	1.35	.088

Note: *$p < .05$. [a] = model that was expected to fit the data best. FIW = family interfering with work. Difference reflects the change in chi-square from the one-factor model to the two-factor model. Coworker FIW also included a timeframe adaptation, as items were changed to past tense and reflect coworker FIW during the current workweek. The original measure coworker FIW was adapted from had one factor, so I did not expect the two-factor model to fit the data much better than the one-factor model, which is what was seen here. History of coworker FIW on its own did not appear to run, either in R or in AMOS. This could be because the model was just-identified. I ran history of coworker FIW with another scale (role overload) and expected a two-factor model to fit the data, which is what was seen here. See write-up in Appendix B for more information.

Table 3

Confirmatory Factor Analyses of Pilot Study Measures with Adapted Timeframe

Variable	# of Items	Model	N	CFI	TLI	χ^2	df	Difference	RMSEA
WIF and FIW	5	One-factor (all WIF and FIW items)	308	.915	.891	346.43*	35		.170
WIF and FIW[a]	5	Two-factor (Factor 1 = WIF items Factor 2 = FIW items)	308	.983	.977	96.74*	34	249.69*	.077
Role Overload[a]	6	One-factor	303	.965	.941	55.22*	15		.130
Role Overload	6	Two-factor (odd-even split)	303	.970	.943	47.94*	8	7.28*	.128
Need for Recovery	11	Could not be computed due to non-continuous response scale (i.e., response scale was 0 = No; 1 = yes)							

Note: *$p < .05$. [a] = model that was expected to fit the data best. WIF = work interfering with family. FIW = family interfering with work. Difference reflects the change in chi-square from a one-factor model to a two-factor model for each measure. The two-factor model was expected for WIF and FIW measure, and the one-factor model was expected for the role overload measure.

Table 4

Confirmatory Factor Analyses of Pilot Study Measures with Adapted Context

Variable	# of Items	Model	N	CFI	TLI	χ^2	df	Diff	RMSEA
ICB	14	One-factor (all ICB items)	299	.857	.831	256.58*	77		.088
ICB [a]	14	Two-factor (Factor 1 = 8 person-focused ICB items Factor 2 = 6 task-focused ICB items)	299	.928	.914	166.82*	76	89.76*	.063
ICB	14	Three-factor (Factor 1 = 5 of the person-focused ICB items Factor 2 = 3 of the person-focused ICB items Factor 3 = all task-focused ICB items)	299	.927	.910	165.91*	74	.91	.064
Relationship Quality [a]	5	One-factor (all relationship quality items)	308	.999	.999	5.31	5		.014
Relationship Quality	5	Two-factor (odd-even split)	308	1.00	.999	4.13	4	1.18	.010
Prosocial Motivation [a]	4	One-factor (all prosocial motivation items)	308	1.00	1.01	.326	2		0
Prosocial Motivation	4	Two-factor (odd-even split)	308	1.00	1.01	.239	1		0

Note. Table 4 is continued on next page.

Variable	# of Items	Model	N	CFI	TLI	χ^2	df	Diff	RMSEA
Prosocial Motivation & Relationship Quality	9	One-factor	305	.69	.59	332.33	27		.193
Prosocial Motivation & Relationship Quality [a]	9	Two-factor (Factor 1 = 4 prosocial motivation items Factor 2 = 5 relationship quality items)	305	.96	.95	64.20	26	268.13*	.069

Note: *$p < .05$. [a] = model that was expected to fit the data best. ICB = interpersonal citizenship behavior. Diff = Difference and reflects the change in chi-square from the previous model to the next, more differentiated model for a single construct. The two-factor model was expected for ICB, the one-factor model was expected for relationship quality, and the one-factor model was expected for prosocial motivation. Prosocial motivation on its own did not appear to run, either in R or in AMOS. This could be because the model was just-identified, so I ran prosocial motivation with another scale (relationship quality) and expected a two-factor model to fit the data best, which is what was seen here. See write-up in Appendix B for more information. The ICB and relationship quality measures also included an adapted timeframe, and items were worded to be past tense.

Table 5

Confirmatory Factor Analyses for Main Study Measurement Model of Time 1 Measures

Model	CFI	TLI	χ^2	df	AIC	RMSEA
11-Factor Model	.92	.92	4129.39	2089	49731.24	.05
10-Factor Model (ICB)	.89	.88	4959.41	2099	50571.26	.06
10-Factor Model (PANAS)	.83	.82	6436.24	2099	52018.09	.07
10-Factor Model (WIF & FIW)	.87	.87	5327.29	2099	50909.14	.06
10-Factor Model (CFIW & FIW)	.83	.82	6409.18	2099	51991.03	.07

Note. N = 383. ICB = interpersonal citizenship behavior. WIF = work interfering with family. FIW = family interfering with work. CFIW = coworker-experienced family interfering with work. 11-Factor model included all control variables and focal constructs as separate factors. If a construct had multiple sub-scales/dimensions, each sub-scale was a separate factor. In the first 10-factor model (ICB), person-focused ICB and task-focused ICB were included as a single factor and all other constructs were kept as separate factors. In the second 10-factor model (PANAS), positive affect and negative affect were combined into a single factor and all other constructs were kept as separate factors. In the third 10-factor model (WIF & FIW), WIF and FIW were included as a single factor and all other constructs were kept as separate factors. In the fourth 10-factor model (CFIW & FIW), CFIW and FIW were included as a single factor and all other constructs were kept as separate factors.

Table 6

Correlations between the Factors from the 11-Factor Confirmatory Factor Analytic Solution for Main Study Measurement Model of Time 1 Measures

Variable	1	2	3	4	5	6	7	8	9	10
1. Prosocial	--									
2. RELQ	.073	--								
3. Hist CFIW	.002	.001	--							
4. CFIW	.025	.021	.263	--						
5. Person ICB	.118	.047	.026	.003	--					
6. Task ICB	.061	.047	.015	.008	.155	--				
7. RO	.008	.018	.064	.117	.003	.008	--			
8. WIF	.032	.039	.084	.177	.001	.003	.274	--		
9. FIW	.042	.018	.036	.176	.004	.002	.135	.411	--	
10. PA	.092	.081	.005	.001	.034	.038	.008	.018	.010	--
11. NA	.013	.008	.020	.028	.001	.002	.037	.057	.049	.006

Note. N = 383. Each variable corresponds to a factor from the 11-factor solution. Prosocial = prosocial motivation. RELQ = relationship quality. FIW = family interfering with work. CFIW = coworker FIW. Hist CFIW = history of CFIW. ICB = interpersonal citizenship behavior. Person ICB = person-focused ICB. Task ICB = task-focused ICB. RO = role overload. WIF = work interfering with family. PA = positive affect. NA = negative affect.

Table 7

Time 1 Descriptive Statistics and Zero-Order Correlations among Main Study Focal and Control Variables for Participants Included in the Final Sample

Variable	*M*	*SD*	1	2	3	4	5	6	7	8
1. Age	59.84	8.68	--							
2. Sex	--	--	-.06	--						
3. Race	--	--	.20	-.02	--					
4. Child	--	--	-.20	-.05	.05	--				
5. Child Age	--	--	.16	.19	.03	-.71	--			
6. Care Provider	--	--	.03	-.01	-.09	.09	.06	--		
7. Marital Status	--	--	.01	-.33	-.08	.04	-.29	.11	--	
8. Education	--	--	.00	-.07	-.15	.08	-.17	.10	.07	--
9. Job Tenure	15.12	10.58	.25	.01	.10	-.08	-.02	-.24	-.01	-.10
10. Org Tenure	18.40	10.73	.18	-.02	.09	-.05	.04	-.27	-.04	-.19
11. PA	3.62	.69	.08	-.12	-.02	.09	-.16	-.16	.15	.10
12. NA	1.34	.44	-.21	.01	.07	.00	-.03	-.07	.01	-.01
13. History of CFIW	1.05	1.06	.04	.15	-.03	.02	-.07	-.11	-.09	.04
14. Prosocial	5.77	.97	.12	.09	.12	-.01	.03	.07	-.09	.11
15. FIW	2.00	1.11	-.16	-.10	-.11	.01	-.15	-.11	.13	.06
16. T1 CFIW	2.38	1.41	-.01	.08	.02	.05	-.11	-.11	.08	.04
17. T1 ICB Person	3.75	.81	.16	.22	.28	.02	.09	-.01	-.10	.00
18. T1 ICB Task	3.45	.88	.05	-.09	.27	.15	-.11	-.06	.02	-.04
19. T1 ICB Total	3.62	.76	.12	.09	.31	.08	.00	-.03	-.05	-.02
20. TI Role Overload	3.15	1.51	-.03	-.01	.09	-.08	-.04	-.17	.04	-.06
21. T1 Need for Recovery	3.39	3.24	-.09	.09	.19	-.15	.06	-.13	.01	-.04
22. T1 WIF	2.53	1.4	-.03	.01	.03	-.08	-.04	-.20	.10	-.07
23. T1 Relationship Quality	3.79	.77	.04	.02	-.05	-.05	.16	.15	.03	.08

Note. Table 7 is continued on next page.

Variable	M	SD	9	10	11	12	13	14	15	16
1. Age	59.84	8.68								
2. Sex	--	--								
3. Race	--	--								
4. Child	--	--								
5. Child Age	--	--								
6. Care Provider	--	--								
7. Marital Status	--	--								
8. Education	--	--								
9. Job Tenure	15.12	10.58	--							
10. Org Tenure	18.40	10.73	.60	--						
11. PA	3.62	.69	.18	-.02	--					
12. NA	1.34	.44	-.14	.08	-.35	--				
13. History of CFIW	1.05	1.06	.06	.06	-.03	.46	--			
14. Prosocial	5.77	.97	.02	-.06	.35	-.14	.13	--		
15. FIW	2.00	1.11	.06	-.05	-.14	.36	.30	-.24	--	
16. T1 CFIW	2.38	1.41	.08	-.06	-.16	.33	.57	-.05	.52	--
17. T1 ICB Person	3.75	.81	.11	-.04	.16	.00	.32	.55	-.08	.19
18. T1 ICB Task	3.45	.88	.11	-.02	.21	-.14	.10	.38	.01	.08
19. T1 ICB Total	3.62	.76	.12	-.03	.20	-.07	.25	.53	-.05	.16
20. TI Role Overload	3.15	1.51	.10	.13	-.23	.37	.23	-.24	.40	.36
21. T1 Need for Recovery	3.39	3.24	-.03	.09	-.29	.50	.29	-.08	.49	.39
22. T1 WIF	2.53	1.4	.12	.19	-.18	.43	.40	-.16	.67	.55
23. T1 Relationship Quality	3.79	.77	.02	-.04	.47	-.26	-.08	.42	-.31	-.23

Note. Table 7 is continued on next page

Variable	M	SD	17	18	19	20	21	22	23
1. Age	59.84	8.68							
2. Sex	--	--							
3. Race	--	--							
4. Child	--	--							
5. Child Age	--	--							
6. Care Provider	--	--							
7. Marital Status	--	--							
8. Education	--	--							
9. Job Tenure	15.12	10.58							
10. Org Tenure	18.40	10.73							
11. PA [b]	3.62	.69							
12. NA [b]	1.34	.44							
13. History of CFIW	1.05	1.06							
14. Prosocial Motivation [a]	5.77	.97							
15. FIW [a]	2.00	1.11							
16. T1 CFIW [a]	2.38	1.41							
17. T1 ICB Person [b]	3.75	.81	--						
18. T1 ICB Task [b]	3.45	.88	.61	--					
19. T1 ICB Total [b]	3.62	.76	.92	.87	--				
20. TI Role Overload [a]	3.15	1.51	.04	.08	.06	--			
21. T1 Need for Recovery	3.39	3.24	.12	.04	.09	.62	--		
22. T1 WIF [a]	2.53	1.40	.02	.03	.02	.66	.64	--	
23. T1 Relationship Quality	3.79	.77	.27	.35	.34	-.38	-.32	-.27	--

Note. N = 88. The sample reflects only those participants who completed surveys at all three time points and who were retained for the final sample. Correlations greater than .27 are significant at p < .01. Correlations greater than .20 are significant at p < .05. Org tenure = organizational tenure. PA = positive affect. NA = negative affect. T1 = Time 1. FIW = family interfering with work. CFIW = coworker family interfering with work. ICB = interpersonal citizenship behavior. ICB Person = person-focused ICB subscale. ICB Task = task-focused ICB subscale. ICB Total = all ICB items from person-focused ICB and task-focused ICB subscales. WIF = work-interfering with family. Sex was coded 1 = male, 2 = female. Race was dummy coded 0= not white, 1 = white. Child = number of children and was coded on a 1-6 scale such that higher numbers indicated more children. Child Age = Age of youngest child and was coded on a 1-5 scale such that higher numbers indicated older ages/fewer childcare responsibilities. Care Provider reflected whether participants provided care for family members other than children and was dummy coded as 0 = no, do not provide care, 1 = yes, do provide care. Marital status was dummy coded as 0 = not partnered (i.e., single, divorced, or widowed), 1= partnered (i.e., married or in a committed relationship). Education reflected the highest level of education completed and was coded on a 1-7 scale such that higher numbers indicated higher levels of education. Job tenure and organizational tenure were reported in years. [a] = measure was on a 1-7 Likert-type scale. [b] = measure was on a 1-5 Likert-type scale. Need for recovery was the sum of "yes" items and ranged from 0-11.

Table 8

Time 2 Descriptive Statistics and Zero-Order Correlations among Main Study Focal Variables for Participants Included in the Final Sample

Variable	*M*	*SD*	1	2	3	4	5	6	7
1. T2 CFIW [a]	2.40	1.45							
2. T2 ICB Person [b]	3.72	0.88	.19						
3. T2 ICB Task [b]	3.39	0.92	.19	.59					
4. T2 ICB Total [b]	3.58	0.80	.21	.92	.86				
5. T2 Role Overload [a]	3.12	1.57	.35	-.03	-.10	-.07			
6. T2 Need for Recovery	3.48	3.22	.32	-.05	-.15	-.10	.57		
7. T2 WIF [a]	2.49	1.35	.51	.03	-.08	-.03	.59	.69	
8. T2 Relationship Quality [b]	3.90	0.69	-.23	.40	.30	.40	-.38	-.18	-.32

Note. N = 88. The sample reflects only those participants who completed surveys at all three time points and who were retained for the final sample. Correlations greater than .27 are significant at *p* < .01. Correlations greater than .20 are significant at *p* < .05. T2 = Time 2. CFIW = coworker family interfering with work. ICB = interpersonal citizenship behavior. ICB Person = person-focused ICB subscale. ICB Task = task-focused ICB subscale. ICB Total = all ICB items from person-focused ICB and task-focused ICB subscales. WIF = work-interfering with family. [a] = measure was on a 1-7 Likert-type scale. [b] = measure was on a 1-5 Likert-type scale. Need for recovery was the sum of "yes" items and ranged from 0-11.

Table 9

Time 3 Descriptive Statistics and Zero-Order Correlations among Main Study Focal Variables for Participants Included in the Final Sample

Variable	*M*	*SD*	1	2	3	4	5	6	7
1. T3 CFIW [a]	2.15	1.33							
2. T3 ICB Person [b]	3.63	0.95	-.02						
3. T3 ICB Task [b]	3.44	0.95	-.04	.63					
4. T3 ICB Total [b]	3.55	0.86	-.03	.93	.87				
5. T3 Role Overload [a]	2.77	1.56	.36	.10	-.05	.04			
6. T3 Need for Recovery	3.23	3.22	.39	-.02	-.15	-.08	.64		
7. T3 WIF [a]	2.43	1.35	.44	-.02	-.12	-.06	.65	.71	
8. T3 Relationship Quality [b]	3.93	0.73	-.34	.50	.49	.55	-.32	-.34	-.42

Note. $N = 88$. The sample reflects only those participants who completed surveys at all three time points and who were retained for the final sample. Correlations greater than .27 are significant at $p < .01$. Correlations greater than .20 are significant at $p < .05$. T3 = Time 3. CFIW = coworker family interfering with work. ICB = interpersonal citizenship behavior. ICB Person = person-focused ICB subscale. ICB Task = task-focused ICB subscale. ICB Total = all ICB items from person-focused ICB and task-focused ICB subscales. WIF = work-interfering with family. [a] = measure was on a 1-7 Likert-type scale. [b] = measure was on a 1-5 Likert-type scale. Need for recovery was the sum of "yes" items and ranged from 0-11.

Table 10

Zero-order Correlations among Main Study Focal Variables across All Three Time Points

Variable	*M*	*SD*	1	2	3	4	5	6	7	8
1. T1 CFIW	2.38	1.41	--							
2. T1 ICB Person	3.75	0.81	.19	--						
3. T1 ICB Task	3.45	0.88	.08	.61	--					
4. T1 ICB Total	3.62	0.76	.16	.92	.87	--				
5. T1 Role Overload	3.15	1.51	.36	.04	.08	.06	--			
6. T1 Need for Recovery	3.39	3.24	.39	.12	.04	.09	.62	--		
7. T1 WIF	2.53	1.40	.55	.02	.03	.02	.66	.64	--	
8. TI Relationship Quality	3.79	0.77	-.23	.27	.35	.34	-.38	-.32	-.27	--
9. T2 CFIW	2.40	1.45	.44	.19	.04	.14	.25	.35	.49	-.00
10. T2 ICB Person	3.72	0.88	.12	.49	.33	.46	-.10	.07	-.06	.44
11. T2 ICB Task	3.39	0.92	.11	.12	.41	.28	-.15	-.02	-.04	.43
12. T2 ICB Total	3.58	0.80	.13	.36	.41	.43	-.14	.03	-.05	.49
13. T2 Role Overload	3.12	1.57	.21	.02	-.03	-.00	.76	.53	.45	-.32
14. T2 Need for Recovery	3.48	3.22	.25	.07	-.05	.02	.61	.79	.63	-.30
15. T2 WIF	2.49	1.35	.42	.08	-.03	.04	.60	.61	.80	-.27
16. T2 Relationship Quality	3.90	0.69	-.27	.14	.19	.18	-.36	-.21	-.35	.63
17. T3 CFIW	2.15	1.33	.29	-.12	-.17	-.16	.28	.24	.36	-.33
18. T3 ICB Person	3.63	0.95	.04	.63	.54	.66	-.08	.02	.06	.46
19. T3 ICB Task	3.44	0.95	.01	.34	.46	.44	-.22	-.14	-.10	.47
20. T3 ICB Total	3.55	0.86	.03	.56	.56	.63	-.16	-.06	-.01	.51
21. T3 Role Overload	2.77	1.56	.25	.02	-.00	.01	.68	.57	.57	-.27
22. T3 Need for Recovery	3.23	3.22	.27	.13	-.06	.05	.61	.78	.62	-.32
23. T3 WIF	2.43	1.35	.40	.03	-.06	-.01	.60	.62	.70	-.33
24. T3 Relationship Quality	3.93	0.73	-.25	.30	.29	.33	-.39	-.27	-.27	.66

Note. Table 10 is continued on next page.

Variable	*M*	*SD*	9	10	11	12	13	14	15	16
1. T1 CFIW	2.38	1.41								
2. T1 ICB Person	3.75	0.81								
3. T1 ICB Task	3.45	0.88								
4. T1 ICB Total	3.62	0.76								
5. T1 Role Overload	3.15	1.51								
6. T1 Need for Recovery	3.39	3.24								
7. T1 WIF	2.53	1.40								
8. TI Relationship Quality	3.79	0.77								
9. T2 CFIW	2.40	1.45	--							
10. T2 ICB Person	3.72	0.88	19	--						
11. T2 ICB Task	3.39	0.92	.19	.59	--					
12. T2 ICB Total	3.58	0.80	.21	.92	.86	--				
13. T2 Role Overload	3.12	1.57	.35	-.03	-.10	-.07	--			
14. T2 Need for Recovery	3.48	3.22	.32	-.05	-.15	-.10	.57	--		
15. T2 WIF	2.49	1.35	.51	.03	-.08	-.03	.59	.69	--	
16.T2 Relationship Quality	3.90	0.69	-.23	.40	.30	.40	-.38	-.18	-.32	--
17. T3 CFIW	2.15	1.33	.42	-.13	-.08	-.12	.28	.26	.41	-.41
18. T3 ICB Person	3.63	0.95	.22	.64	.44	.62	-.08	-.03	.04	.35
19. T3 ICB Task	3.44	0.95	.16	.46	.66	.62	-.15	-.20	-.05	.33
20. T3 ICB Total	3.55	0.86	.21	.63	.59	.69	-.12	-.11	.00	.38
21. T3 Role Overload	2.77	1.56	.33	-.10	-.06	-.09	.70	.54	.47	-.31
22. T3 Need for Recovery	3.23	3.22	.32	-.01	-.16	-.09	.59	.84	.69	-.29
23. T3 WIF	2.43	1.35	.39	-.01	-.13	-.07	.61	.64	.76	-.31
24. T3 Relationship Quality	3.93	0.73	-.11	.35	.36	.39	-.44	-.24	-.31	.69

Note. Table 10 is continued on next page.

Variable	M	SD	17	18	19	20	21	22	23	24
1. T1 CFIW [a]	2.38	1.41								
2. T1 ICB Person [b]	3.75	0.81								
3. T1 ICB Task [b]	3.45	0.88								
4. T1 ICB Total [b]	3.62	0.76								
5. T1 Role Overload [a]	3.15	1.51								
6. T1 Need for Recovery	3.39	3.24								
7. T1 WIF [a]	2.53	1.40								
8. TI Relationship Quality [b]	3.79	0.77								
9. T2 CFIW [a]	2.40	1.45								
10. T2 ICB Person [b]	3.72	0.88								
11. T2 ICB Task [b]	3.39	0.92								
12. T2 ICB Total [b]	3.58	0.80								
13. T2 Role Overload [a]	3.12	1.57								
14. T2 Need for Recovery	3.48	3.22								
15. T2 WIF [a]	2.49	1.35								
16.T2 Relationship Quality [b]	3.90	0.69								
17. T3 CFIW [a]	2.15	1.33	--							
18. T3 ICB Person [b]	3.63	0.95	-.02	--						
19. T3 ICB Task [b]	3.44	0.95	-.04	.63	--					
20. T3 ICB Total [b]	3.55	0.86	-.03	.93	.87	--				
21. T3 Role Overload [a]	2.77	1.56	.36	.10	-.05	.04	--			
22. T3 Need for Recovery	3.23	3.22	.39	-.02	-.15	-.08	.64	--		
23. T3 WIF [a]	2.43	1.35	.44	-.02	-.11	-.06	.65	.71	--	
24. T3 Relationship Quality [b]	3.93	0.73	-.34	.50	.49	.55	-.32	-.34	-.42	--

Note. $N = 88$. The sample reflects only those participants who completed surveys at all three time points and who were retained for the final sample. Correlations greater than .27 are significant at $p < .01$. Correlations greater than .20 are significant at $p < .05$. T1 = Time 1. T2 = Time 2. T3 = Time 3. CFIW = coworker family interfering with work. ICB = interpersonal citizenship behavior. ICB Person = person-focused ICB subscale. ICB Task = task-focused ICB subscale. ICB Total = all ICB items from person-focused ICB and task-focused ICB subscales. WIF = work-interfering with family. [a] = measure was on a 1-7 Likert-type scale. [b] = measure was on a 1-5 Likert-type scale. Need for recovery at all three time points was the sum of "yes" items and ranged from 0-11.

Table 11

Omega Reliabilities of All Main Study Measures

Measure	ὡ	Lower 95% CI	Upper 95% CI
Positive Affect	.91	.86	.94
Negative Affect	.87	.80	.92
History of CFIW	.91	.84	.95
Prosocial Motivation	.97	.95	.99
FIW	.97	.94	.98
T1 CFIW	.97	.95	.98
T1 ICB Person	.92	.88	.95
T1 ICB Task	.92	.86	.95
T1 ICB Total	.93	.90	.96
T1 Role Overload	.94	.91	.96
T1 Need for Recovery	.88	.83	.91
T1 WIF	.95	.92	.97
T1 Relationship Quality	.91	.87	.95
T2 CFIW	.96	.94	.98
T2 ICB Person	.93	.89	.96
T2 ICB Task	.93	.89	.95
T2 ICB Total	.94	.90	.96
T2 Role Overload	.95	.92	.97
T2 Need for Recovery	.87	.82	.91
T2 WIF	.95	.92	.97
T2 Relationship Quality	.92	.88	.96
T3 CFIW	.98	.93	.99
T3 ICB Person	.94	.89	.96
T3 ICB Task	.92	.88	.95
T3 ICB Total	.94	.90	.96
T3 Role Overload	.95	.93	.97
T3 Need for Recovery	.88	.83	.91
T3 WIF	.97	.94	.98
T3 Relationship Quality	.92	.88	.95

Note. $N = 88$. T1 = Time 1. T2 = Time 2. T3 = Time 3. FIW = family interfering with work. CFIW = coworker family interfering with work. ICB = interpersonal citizenship behavior. ICB Person = person-focused ICB subscale. ICB Task = task-focused ICB subscale. ICB Total = all ICB items from person-focused ICB and task-focused ICB subscales. WIF = work-interfering with family. Positive and negative affect, history of CFIW, and FIW all measured at Time 1 only.

Table 12

Hypothesis 1 Intercepts-as-Outcomes Multilevel Modeling Results Utilizing all Time Points with L1 Interpersonal Citizenship Behavior (ICB) as the Criterion

Variable	Estimate	Std. Error	*df*	t-value	*p* value
1. (Intercept)	3.97**	0.25	175	15.94	0.000
2. L1 Coworker FIW	0.07	0.04	175	1.87	0.063
3. L2 History of Coworker FIW	0.21*	0.08	83	2.54	0.012
4. L2 Negative Affect	-0.45*	0.19	83	-2.40	0.018
5. L2 FIW	-0.10	0.08	83	-1.20	0.234
6. L2 Coworker FIW Person/Cluster Mean	0.08	0.09	83	0.84	0.402

Equations

Level 1

$ICB_{ij} = \beta_{0j} + \beta_1(\text{Coworker FIW}) + r_{ij}$

Level 2

$\beta_{0j} = \gamma_{00} + \gamma_{01}(\text{History of Coworker FIW}) + \gamma_{02}(\text{NA}) + \gamma_{03}(\text{FIW}) + \gamma_{04}(\text{Coworker FIW Cluster Mean}) + u_{0j}$

$\beta_{1j} = \gamma_{10} + u_{1j}$

Note. FIW = family interfering with work. L1 = Level 1, occasions of measurement over time. L2 = Level 2, person level. Level 2 *N* = 88. Level 1 *N* = 264. * indicates p < .05. ** indicates p < .01. Estimates are unstandardized. L1 Coworker FIW was person mean centered. The model utilized data from all three time points.

Table 13

Hypothesis 2 Slopes-as-Outcomes Multilevel Modeling Results Utilizing All Three Time Points and Testing the Prosocial Motivation Cross-Level Interaction Using the Coworker FIW-Interpersonal Citizenship Behavior (ICB) Slope as the Criterion

Variable	Estimate	Std. Error	*df*	t-value	*p* value
1. (Intercept)	1.30**	0.49	174	2.65	0.008
2. L1 Coworker FIW	-0.19	0.14	174	-1.38	0.170
3. L2 History of Coworker FIW	0.06	0.07	82	0.84	0.402
4. L2 Negative Affect	-0.31*	0.16	82	-2.01	0.047
5. L2 FIW	-0.03	0.07	82	-0.43	0.672
6. L2 Coworker FIW Person/Cluster Mean	0.18*	0.08	82	2.21	0.030
7. L2 Prosocial Motivation	0.40**	0.07	82	5.99	0.000
8. Prosocial Motivation x Coworker FIW	0.04	0.02	174	1.87	0.063

Equations

Level 1

$ICB_{ij} = \beta_{0j} + \beta_1(\text{Coworker FIW}) + r_{ij}$

Level 2

$\beta_{0j} = \gamma_{00} + \gamma_{01}(\text{Prosocial}) + \gamma_{02}(\text{History of Coworker FIW}) + \gamma_{03}(\text{NA}) + \gamma_{04}(\text{FIW}) + \gamma_{05}(\text{Coworker FIW Cluster Mean}) + u_{0j}$

$\beta_{1j} = \gamma_{10} + \gamma_{11}(\text{prosocial}) + u_{1j}$

Note. FIW = family interfering with work. L1 = Level 1. L2 = Level 2. Level 2 *N* = 88. Level 1 *N* = 264. * indicates p < .05. ** indicates p < .01. Estimates are unstandardized. L1 Coworker FIW was person mean centered.

Table 14

Intercepts-as-Outcomes Multilevel Modeling Results Utilizing All Three Time Points and Testing the Effect of Level 1 ICB on Level 1 Role Overload, WIF, Need for Recovery, and Relationship Quality with Level 2 Control Variables (H3a, H4a, H5a, RQ1)

Variable	Estimate	Std. Error	df	t-value	p value
Role Overload					
1. (Intercept)	0.85	0.95	175	0.90	0.369
2. L1 ICB	0.45**	0.12	175	3.77	0.000
3. L2 History of Coworker FIW	-0.01	0.15	83	-0.06	0.950
4. L2 Negative Affect	1.09**	0.36	83	3.02	0.003
5. L2 FIW	0.33*	0.13	83	2.57	0.012
6. L2 ICB Person/ Cluster Mean	0.01	0.21	83	0.04	0.966
WIF					
1. (Intercept)	-0.32	0.65	175	-0.49	0.626
2. L1 ICB	-0.02	0.10	175	-0.17	0.865
3. L2 History of Coworker FIW	0.08	0.10	83	0.75	0.457
4. L2 Negative Affect	0.80**	0.25	83	3.25	0.002
5. L2 FIW	0.65**	0.09	83	7.73	0.000
6. L2 ICB Person /Cluster Mean	0.09	0.14	83	0.67	0.508
Need for Recovery					
1. (Intercept)	-3.19	1.86	175	-1.71	0.088
2. L1 ICB	-0.14	0.26	175	-0.54	0.593
3. L2 History of Coworker FIW	-0.03	0.30	83	-0.09	0.932
4. L2 Negative Affect	2.89**	0.71	83	4.06	0.000
5. L2 FIW	0.91**	0.25	83	3.58	0.001
6. L2 ICB Person /Cluster Mean	0.24	0.41	83	0.59	0.556
Relationship Quality					
1. (Intercept)	2.49**	0.38	175	6.51	0.000
2. L1 ICB	0.17*	0.07	175	2.36	0.020
3. L2 History of Coworker FIW	-0.10	0.06	83	-1.62	0.108
4. L2 Negative Affect	-0.09	0.15	83	-0.63	0.529
5. L2 FIW	-0.12*	0.05	83	-2.26	0.027
6. L2 ICB Person /Cluster Mean	0.51**	0.08	83	6.15	0.000

Note. ICB = interpersonal citizenship behavior. FIW = family interfering with work. WIF = work interfering with family. L1 = Level 1. L2 = Level 2. Level 2 N = 88. Level 1 N = 264. * indicates p < .05. ** indicates p < .01. Estimates are unstandardized. L1 ICB was

person-mean centered. Level 1 equations were Role Overload$_{ij}$= β_{0j} + β_1(ICB) + r_{ij}; WIF$_{ij}$= β_{0j} + β_1(ICB) + r_{ij}; Need for recovery$_{ij}$= β_{0j} + β_1(ICB) + r_{ij}; Relationship Quality$_{ij}$= β_{0j} + β_1(ICB) + r_{ij}. All Level 2 equations were β_{0j} = γ_{00} + γ_{01}(History of Coworker FIW) + γ_{02}(NA) + γ_{03}(FIW) + γ_{04}(ICB Cluster Mean) + u_{0j}; β_{1j} = γ_{10} + u_{1j}.

Table 15

Post-Hoc Intercepts-as-Outcomes Multilevel Modeling Results Testing the Effect of Level 1 Coworker FIW on Level 1 Role Overload, WIF, Need for Recovery, and Relationship Quality with Level 2 Control Variables

Variable	Estimate	Std. Error	*df*	t-value	*p* value
Role Overload					
1. (Intercept)	0.57	0.46	175	1.24	0.218
2. L1 Coworker FIW	0.20**	0.07	175	2.85	0.005
3. L2 History of Coworker FIW	-0.15	0.15	83	-0.96	0.341
4. L2 Negative Affect	1.07**	0.34	83	3.15	0.002
5. L2 FIW	0.16	0.15	83	1.07	0.286
6. L2 Coworker FIW Person/Cluster Mean	0.36*	0.17	83	2.11	0.038
WIF					
1. (Intercept)	-0.22	0.31	175	-0.71	0.482
2. L1 Coworker FIW	0.17**	0.06	175	2.95	0.004
3. L2 History of Coworker FIW	-0.03	0.10	83	-0.28	0.783
4. L2 Negative Affect	0.76**	0.23	83	3.29	0.002
5. L2 FIW	0.50**	0.10	83	4.91	0.000
6. L2 Coworker FIW Person/Cluster Mean	0.31**	0.12	83	2.68	0.009
Need for Recovery					
1. (Intercept)	-2.60**	0.92	175	-2.82	0.005
2. L1 Coworker FIW	0.32**	0.10	175	3.32	0.001
3. L2 History of Coworker FIW	-0.15	0.31	83	-0.49	0.627
4. L2 Negative Affect	2.78**	0.69	83	4.05	0.000
5. L2 FIW	0.69*	0.30	83	2.29	0.025
6. L2 Coworker FIW Person/Cluster Mean	0.43	0.35	83	1.25	0.215
Relationship Quality					
1. (Intercept)	4.74**	0.23	175	20.79	0.000
2. L1 Coworker FIW	-0.05	0.03	175	-1.57	0.118
3. L2 History of Coworker FIW	0.07	0.08	83	0.96	0.342
4. L2 Negative Affect	-0.35*	0.17	83	-2.06	0.042
5. L2 FIW	-0.06	0.07	83	-0.76	0.449
6. L2 Coworker FIW Person/Cluster Mean	-0.16	0.09	83	-1.84	0.070

Note. FIW = family interfering with work. WIF = work interfering with family. L1 = Level 1. L2 = Level 2. Level 2 *N* = 88. Level 1 *N* = 264. * indicates p < .05. ** indicates p < .01. Estimates are unstandardized. L1 Coworker FIW was person-mean centered.
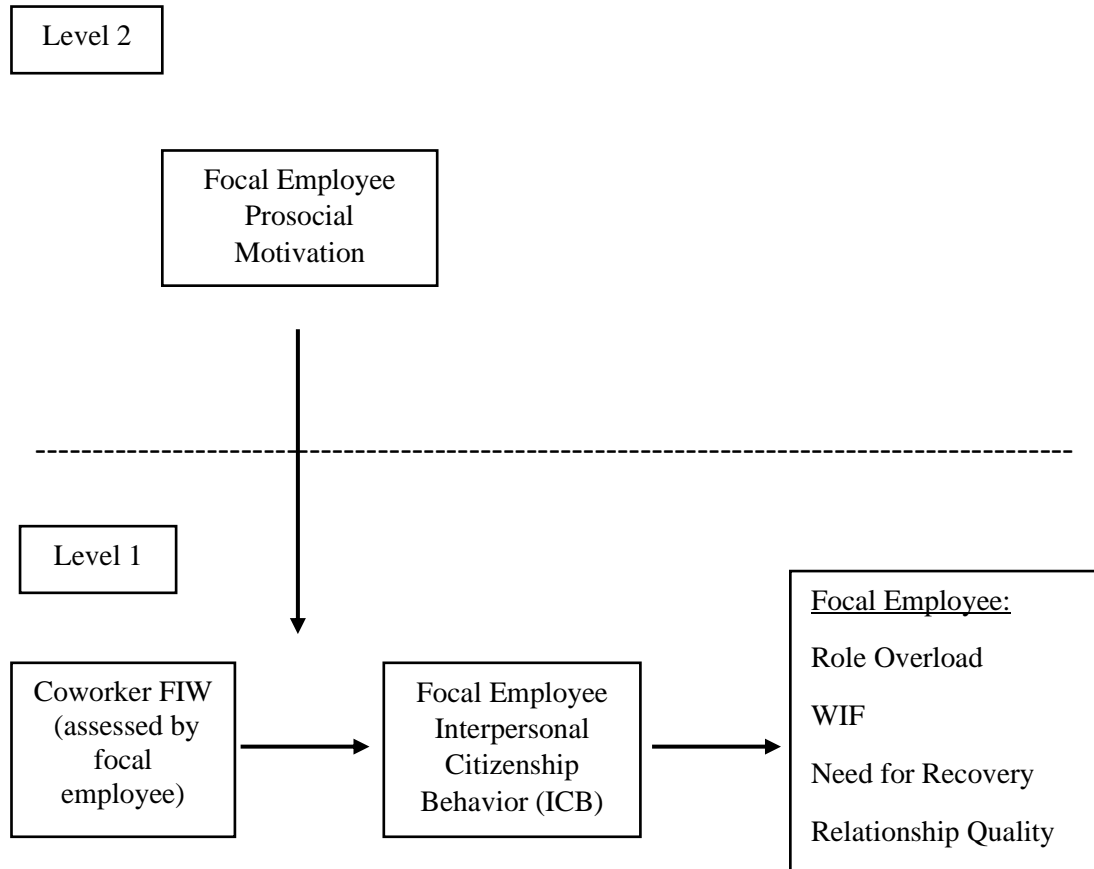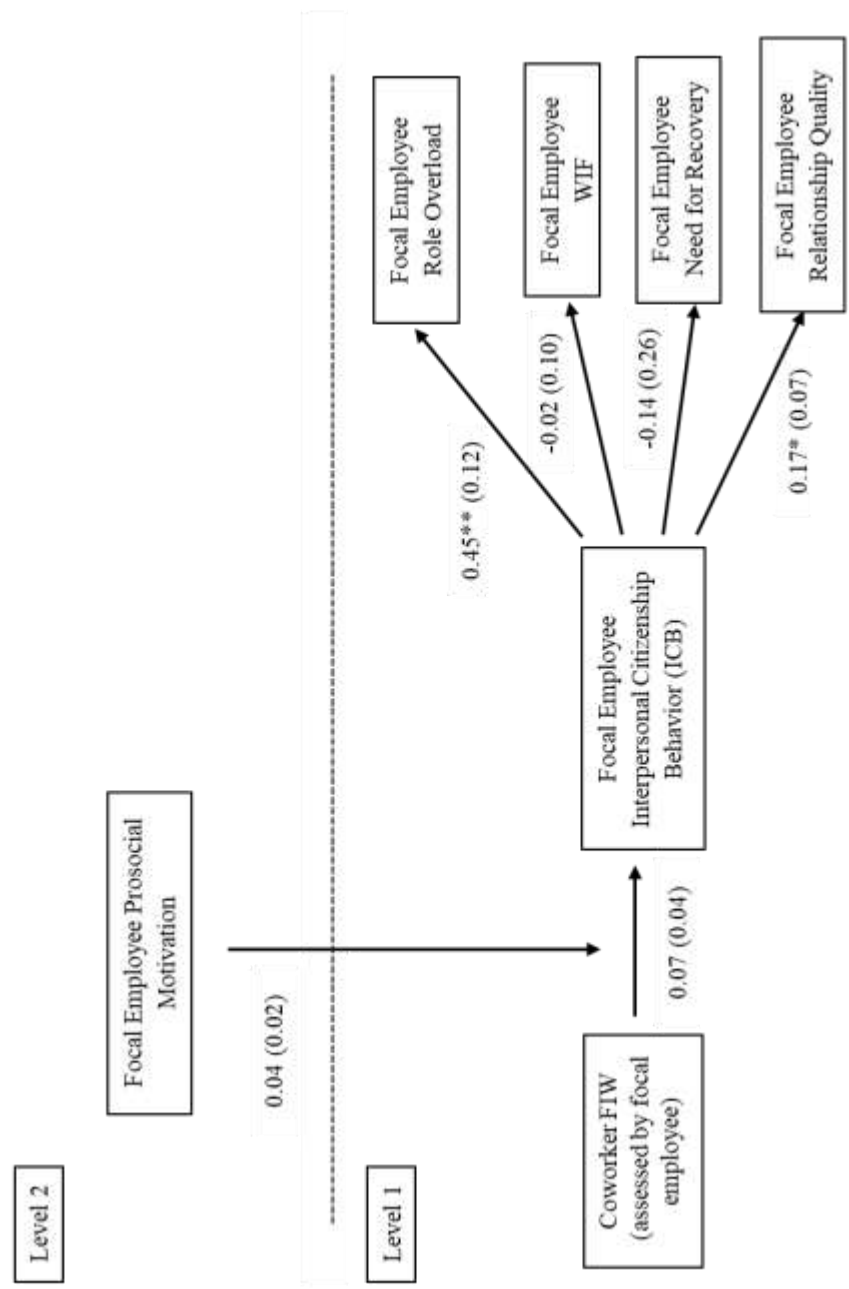
Figure 1

Main Study Hypothesized Model

Note. Level 1 is the intra-individual level. Level 2 is the between-persons level. FIW = family interfering with work. WIF = work interfering with family.

Figure 2

Results of All Hypothesis Testing

Level 2

Focal Employee Prosocial Motivation

0.04 (0.02)

Level 1

Coworker FIW (assessed by focal employee)

0.07 (0.04)

Focal Employee Interpersonal Citizenship Behavior (ICB)

0.45** (0.12)

Focal Employee Role Overload

-0.02 (0.10)

Focal Employee WIF

-0.14 (0.26)

Focal Employee Need for Recovery

0.17* (0.07)

Focal Employee Relationship Quality

Note. Level 2 $N = 88$. Level 1 $N = 264$. * p < .05. ** p < .01. Standard errors are presented in parentheses. Level 1 is the intra-individual level. Level 2 is the between-persons level. FIW = family interfering with work. WIF = work interfering with family. Negative affectivity, focal employee FIW, and history of coworker FIW were included as controls for each analysis.

Figure 3

Results of Exploratory Analyses Testing the Relationships between Coworker FIW and Focal Employee Outcomes

Note. Level 2 $N = 88$. Level 1 $N = 264$. * $p < .05$. ** $p < .01$. Standard errors are presented in parentheses. Level 1 is the intra-individual level. Level 2 is the between-persons level. FIW = family interfering with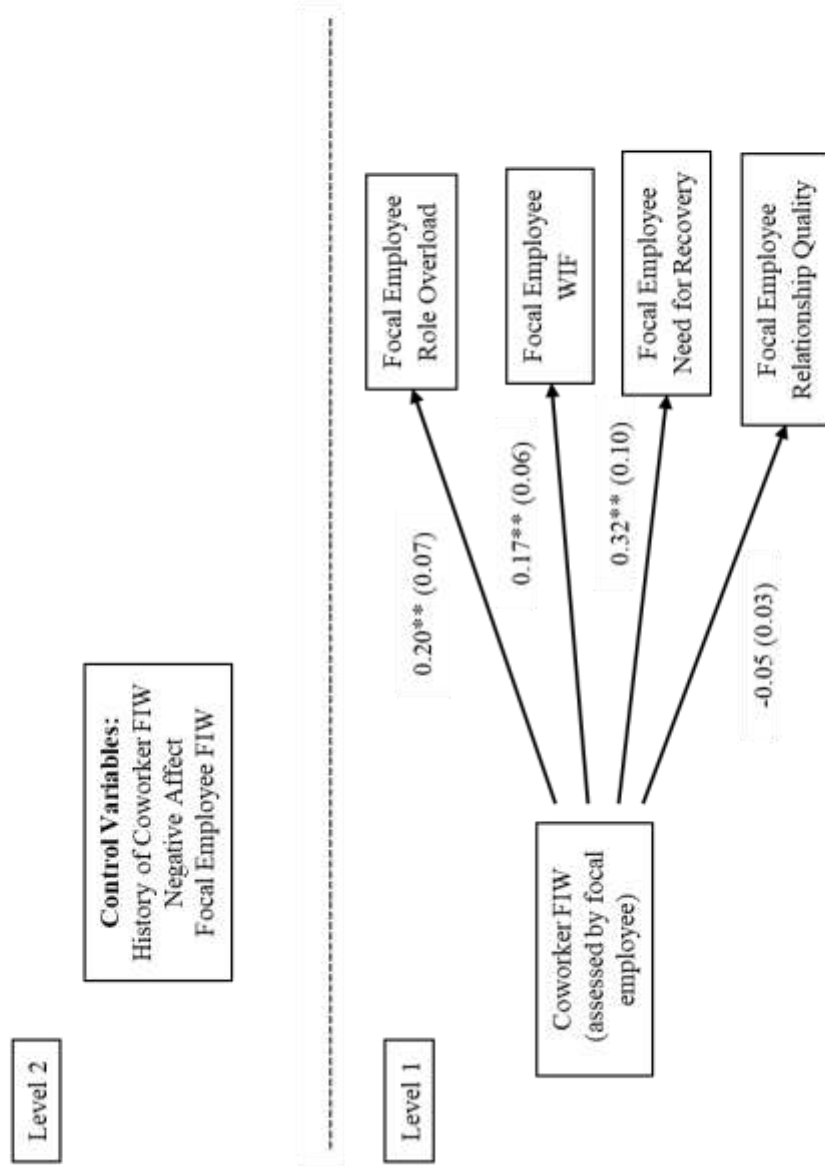 work. WIF = work interfering with family. Negative affectivity, focal employee FIW, and history of coworker FIW were included as controls for each analysis.

APPENDIX A: SURVEY ITEMS

Table A1

List of Main Study Survey Measures

Measure	Number of Items
Screening Measures	
18 years old or older	1
Number of hours worked per week	1
Number of coworkers on team	1
Number of coworkers interacted with	1
Level 1 Measures	
Coworker FIW	5
ICB (person-focused and task-focused)	14
Role overload	6
WIF	5
Need for Recovery	11
Relationship Quality	5
Level 2 Measures	
Typical coworker FIW	1
Last week coworker FIW	1
History of Coworker FIW	3
Prosocial motivation	4
Other-Orientation	3
Positive and Negative Affect	10
Focal Employee FIW	5
Gender	1
Age	1
Race	1
Number of Children	1
Age of youngest child	1
Family care responsibilities	1
Marital Status	1
Level of education	1
Current Job Title	1
Job Role Tenure	1
Organizational Tenure	1
Current context of work (virtual or in-person)	1
Normal context of work (virtual or in-person)	1
Story of coworker FIW (open-ended)	1
Supportive or Unsupportive Supervisor Prompt (open-ended)	1
Attention Check Item	1
Total Number of Items	**93**

Note. FIW = family interfering with work. WIF = work interfering with family.

Screening Questions

1. SCRN1 – Are you 18 years old or older?
    a. 1 = yes
    b. 2 = no

2. SCRN2 - How many hours per week do you TYPICALLY (on average) work?
    a. 1 = Less than 30 hours
    b. 2 = 30 to 40 hours
    c. 3 = More than 40 hours

    Screened out if they choose 1 = less than 30 hours

3. SCRN3 - How many coworkers are part of your workgroup/team?
    a. 1 = 0; I do not have any other people who work with me on my team
    b. 2 = 1 or 2 coworkers
    c. 3 = 3 to 5 coworkers
    d. 4 = 6 to 10 coworkers
    e. 5 = more than 10 coworkers

    Screened out if they choose 1 = 0; I do not have any other people who work with me on my team or 2 = 1 or 2 coworkers

4. SCRN4 - How many coworkers do you TYPICALLY (on average) interact with on a daily basis?
    a. 1 = I do not typically interact with any coworkers
    b. 2 = 1 or 2 coworkers
    c. 3 = 3 to 5 coworkers
    d. 4 = 6 or more coworkers

    Screened out if they choose 1 = I do not typically interact with any coworkers.

If screened out, taken to page that says:

This study requires participants who have certain characteristics, and, unfortunately, you do not meet the criteria to participate in this study. Thank you so much for your time and for your interest in this study.

Level 1 Measures

1. Coworker FIW

   Citation: Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work–family conflict and family–work conflict scales. *Journal of Applied Psychology*, *81*(4), 400.

   <u>Response Scale</u>: 1=strongly disagree to 7= strongly agree.

	Original	**Adapted**
	No instructions provided.	Please respond to the following items regarding your coworker's ability to manage their work and family roles during the current work week.
1	The demands of my family or spouse/partner interfere with work-related activities.	CFIW1_T1 - The demands of my coworkers' family or spouse/partner interfered with their work-related activities.
2	I have to put off doing things at work because of demands on my time at home.	CFIW2_T1 - My coworkers had to put off doing things at work because of demands on their time at home.
3	Things I want to do at work don't get done because of the demands of my family or spouse/partner.	CFIW3_T1 - Things my coworkers wanted to do at work didn't get done because of the demands of their family or spouse/partner.
4	My home life interferes with my responsibilities at work such as getting to work on time, accomplishing daily tasks, and working overtime.	CFIW4_T1 - My coworkers' home life interfered with their responsibilities at work such as getting to work on time, accomplishing daily tasks, and working overtime.
5	Family-related strain interferes with my ability to perform job-related duties.	CFIW5_T1 - Family-related strain interfered with my coworkers' ability to perform job-related duties.

2. Focal Employee ICB

Citation: Settoon, R. P., & Mossholder, K. W. (2002). Relationship quality and relationship context as antecedents of person-and task-focused interpersonal citizenship behavior. *Journal of Applied Psychology*, *87*(2), 255.

Response Scale: 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*)

	Original	Adapted
	No Instructions Provided	Please respond to the following questions indicating how you behaved **during the current work week** in response to a coworker who was dealing with a personal or family issue (e.g., issue with spouse, children, parent, significant other, etc.).
Person-Focused ICB		
1	Listens to coworkers when they have to get something off their chest	ICB1_T1 - Listened to coworkers when they had to get something off their chest
2	Takes time to listen to coworkers' problems and worries	ICB2_T1 - Took time to listen to coworkers' problems and worries
3	Takes a personal interest in coworkers	ICB3_T1 - Took a personal interest in coworkers
4	Shows concern and courtesy toward coworkers, even under the most trying business situations	ICB4_T1 - Showed concern and courtesy toward coworkers, even under the most trying business situations
5	Makes an extra effort to understand the problems faced by coworkers	ICB5_T1 - Made an extra effort to understand the problems faced by coworkers
6	Always goes out of the way to make newer employees feel welcome in the workgroup	ICB6_T1 - Always went out of the way to make newer employees feel welcome in the workgroup
7	Tries to cheer up coworkers who are having a bad day	ICB7_T1 - Tried to cheer up coworkers who were having a bad day
8	Compliments coworkers when they succeed at work	ICB8_T1 - Complimented coworkers when they succeeded at work

Task-Focused ICB		
9	Takes on extra responsibilities in order to help coworkers when things get demanding at work	ICB9_T1 - Took on extra responsibilities in order to help coworkers when things got demanding at work
10	Helps coworkers with difficult assignments, even when assistance is not directly required.	ICB10_T1 - Helped coworkers with difficult assignments, even when assistance was not directly required.
11	Assists coworkers with heavy work loads even though it is not part of the job	ICB11_T1 - Assisted coworkers with heavy work loads even though it is not part of the job
12	Helps coworkers who are running behind in their work activities	ICB12_T1 - Helped coworkers who were running behind in their work activities
13	Helps coworkers with work when they have been absent	ICB13_T1 - Helped coworkers with work when they had been absent
14	Goes out of way to help coworkers with work-related problems	ICB14_T1 - Went out of way to help coworkers with work-related problems

3. Focal Employee Role Overload

Citation: Thiagarajan, P., Chakrabarty, S., & Taylor, R. D. (2006). A confirmatory factor analysis of Reilly's Role Overload Scale. *Educational and Psychological Measurement*, *66*(4), 657-666.

Response Scale: 1 (*never*) to 7 (*always*).

	Original	**Adapted**
	No instructions provided.	Please indicate how frequently you experienced the following during **the current work week.**
1	I have to do things that I do not really have the time and energy for.	RO1_T1 - I have had to do things I did not really have the time and energy for.
2	I need more hours in the day to do all the things that are expected of me.	RO2_T1 - I needed more hours in the day to do all the things that were expected of me.
3	I cannot ever seem to catch up.	RO3_T1 - I could not ever seem to catch up.

4	I do not ever seem to have any time for myself.	RO4_T1 - I did not seem to have any time for myself.
5	There are times when I cannot meet everyone's expectations.	RO5_T1 - There were times when I could not meet everyone's expectations.
6	I seem to have more commitments to overcome than other parents I know.	RO6_T1 - I seemed to have more commitments to overcome than other people I know.

4. Focal Employee WIF

Citation: Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work–family conflict and family–work conflict scales. *Journal of Applied Psychology*, *81*(4), 400.

Response Scale: 1=strongly disagree to 7= strongly agree.

	Original	Adapted
	No instructions provided.	Please indicate your agreement with each statement reflecting on **the current work week.**
1	The demands of my work interfere with my home and family life.	WIF1_T1 - The demands of my work interfered with my home and family life.
2	The amount of time my job takes up makes it difficult to fulfill family responsibilities.	WIF2_T1 - The amount of time my job took up made it difficult to fulfill family responsibilities.
3	Things I want to do at home do not get done because of the demands my job puts on me.	WIF3_T1 - Things I wanted to do at home did not get done because of the demands my job put on me.
4	My job produces strain that makes it difficult to fulfill family duties.	WIF4_T1 - My job produced strain that made it difficult to fulfill family duties.
5	Due to work-related duties, I have to make changes to my plans for family activities.	WIF5_T1 - Due to work-related duties, I had to make changes to my plans for family activities.

5. Focal Employee Need for Recovery

Original measure citation: Veldhoven, M. V., & Meijman, T. (1994). *Het meten van psychosociale arbeidsbelasting met een vragenlijst: de vragenlijst beleving en beoordeling van de arbeid (VBBA)*. Nederlands Instituut voor Arbeidsomstandigheden (NIA).

Translated measure citation: Sluiter, J. K. (1999). The influence of work characteristics on the need for recovery and experienced health: a study on coach drivers. *Ergonomics*, *42*(4), 573-583.

<u>Response Scale</u>: no = 0; yes = 1. Scale score is the sum score of "yes" items

	Original	**Adapted**
	No instructions provided.	Please indicate whether you experienced the following during **the current work week.**
1	I find it hard to relax at the end of a working day.	NFR1_T1 - I found it hard to relax at the end of the working day.
2	At the end of a working day I am really feeling worn-out.	NFR2_T1 - At the end of the working day I really felt worn-out.
3	My job causes me to feel rather exhausted at the end of a working day.	NFR3_T1 - My job caused me to feel rather exhausted at the end of the working day.
4	Generally speaking, I'm still feeling fresh after supper (R)	NFR4_T1 - Generally speaking, I was still feeling fresh after supper (R)
5	Generally speaking, I am able to relax only on a second day off.	NFR5_T1 - Generally speaking, I was able to relax only on a second day off.
6	I have trouble concentrating in the hours after my working day.	NFR6_T1 - I had trouble concentrating in the hours after my working day.
7	I find it hard to show interest in other people when I just came home from work.	NFR7_T1 - I found it hard to show interest in other people when I just came home from work.
8	In general, it takes me over an hour to feel fully recovered after work.	NFR8_T1 - In general, it took me over an hour to feel fully recovered after work.
9	When I get home, people should leave me alone for some time.	NFR9_T1 - When I get home, people should leave me alone for some time.
10	After a working day I am often too tired to start other activities.	NFR10_T1 - After the working day I was often too tired to start other activities.
11	During the last part of the working day I cannot optimally perform my job because of fatigue sometimes.	NFR11_T1 - During the last part of the working day I could not optimally perform my job because of fatigue sometimes.

6. Focal Employee Relationship Quality Perceptions

Citation: Rusbult, C. E., Martz, J. M., & Agnew, C. R. (1998). The investment model scale: Measuring commitment level, satisfaction level, quality of alternatives, and investment size. *Personal relationships*, *5*(4), 357-387.

<u>Response Scale</u>: 1 = strongly disagree to 5 = strongly agree

	Original	**Adapted**
	Please indicate the degree to which you agree with each statement regarding your current relationship.	Please indicate the degree to which you agree with each statement regarding your relationship with your coworkers who had work-family issues over the past week.
1	I feel satisfied with our relationship.	RELQ1_T1 - I feel satisfied with our working relationship.
2	My relationship is much better than others' relationships.	RELQ2_T1 - My working relationship is much better than others' relationships.
3	My relationship is close to ideal.	RELQ3_T1 - My working relationship is close to ideal.
4	Our relationship makes me very happy.	RELQ4_T1 - Our working relationship makes me very happy.
5	Our relationship does a good job of fulfilling my needs for intimacy, companionship, etc.	RELQ5_T1 - Our working relationship does a good job of fulfilling my needs.

Level 2 Measures

1. CFIW_TYP - On how many days during a **typical workweek (on average)** does one of your coworkers deal with family-to-work conflict? Family-to-work conflict refers to when one's family or personal life responsibilities/activities interfere with one's ability to perform work tasks or responsibilities.

    Examples of coworker family-to-work conflict include, but are not limited to:

    - your coworker having to miss work or take breaks during the work day to home-school children due to Covid-19 school interruptions.
    - your coworker being interrupted during the workday to care for children, their spouse, or other family members.
    - your coworker being distracted at work or unable to complete work tasks due to marital problems or problems with managing children, aging parents, or other family members.
    - your coworker venting about a problem they are having with their spouse, significant other, children, parents, or other family members.
    - your coworker having to leave work early to pick up a child from school or daycare or to attend a child's school or extracurricular activity.
    - your coworker having to miss work or work from home because a child is sick and unable to attend school/or daycare.
    - other situations where a coworker is unable to be physically or mentally present at work or complete their work tasks due to family responsibilities or issues.

    a) 1 = never (0 days)
    b) 2 = rarely (1 day per week)
    c) 3 = sometimes (2-3 days per week)
    d) 4 = often (4 or 5 days per week)

2. CFIW_LW - Thinking about **last week** specifically, on how many days did one of your coworkers deal with family-to-work conflict?
    a. 1 = never (0 days)
    b. 2 = rarely (1 day)
    c. 3 = sometimes (2-3 days)
    d. 4 = often (4 or 5 days)

3. History of Coworker FIW

Citation: Grzywacz, J. G., Frone, M. R., Brewer, C. S., & Kovner, C. T. (2006). Quantifying work–family conflict among registered nurses. *Research in nursing & health*, *29*(5), 414-426.

Response Scale: (0) never, (1) less than once a month, (2) 1 – 3 days per month, (3) 1–2 days per week, (4) 3 – 4 days per week, and (5) 5or more days per week.

	Original Measure	**Adapted Measure**
	In the last 6 months how often did your home life:	In the last 6 months how often did your coworkers' home life:
1	interfere with your responsibilities at work, such as getting to work on time, accomplishing daily tasks, or working overtime?	CFIW_HIST1 - interfere with their responsibilities at work, such as getting to work on time, accomplishing daily tasks, or working overtime?
2	keep you from spending the amount of time you would like to spend on job or career-related activities?	CFIW_HIST2 - keep them from spending the amount of time they would like to spend on job or career-related activities?
3	interfere with your job or career?	CFIW_HIST3 - interfere with their job or career?

4. Focal Employee Prosocial Motivation

Citation: Grant, A. M. (2008). Does intrinsic motivation fuel the prosocial fire? Motivational synergy in predicting persistence, performance, and productivity. *Journal of applied psychology*, *93*(1), 48.

Response Scale: 7-point Likert-type scales with anchors of 1 (*disagree strongly*) to 7 (*agree strongly*)

	Original	**Adapted**
	Why are you motivated to do your work?	Indicate how much you agree or disagree with the following statements.
1	Because I care about benefitting others through my work.	PROSOCIAL1 - I care about benefitting others.
2	Because I want to help others through my work.	PROSOCIAL2 - I want to help others.
3	Because I want to have positive impact on others.	PROSOCIAL3 - I want to have a positive impact on others.
4	Because it is important to me to do good for others through my work.	PROSOCIAL4 - It is important to me to do good for others.

5. Focal Employee Other-Orientation (not adapted)

   Citation: De Dreu, C. K., & Nauta, A. (2009). Self-interest and other-orientation in organizational behavior: implications for job performance, prosocial behavior, and personal initiative. *Journal of Applied Psychology*, *94*(4), 913.

   Response Scale: 5- point scale from 1 = not at all to 5 = very much

   At work . . .
   1. OTHER1 - I am concerned about the needs and interests of others such as my colleagues
   2. OTHER2 - The goals and aspirations of colleagues are important to me
   3. OTHER3 - I consider others' wishes and desires to be relevant.

6. Focal Employee Positive and Negative Affect (not adapted)

   Citation: Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology, 54,* 1063-1070. doi:10.1037/0022-3514.54.6.1063

   Note. PA and NA will both be measured, but only NA subscale will be used as a potential control variable in study.

   Response Scale: 1 – very slightly or not at all, 2 – a little, 3 – moderately, 4 – quite a bit, 5 – extremely

   Instructions:

   This scale consists of a number of words and phrases that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you generally feel this way, that is, how you feel on the average.

   1. interested
   2. distressed
   3. excited
   4. upset
   5. strong
   6. guilty
   7. scared
   8. hostile
   9. enthusiastic
   10. proud
   11. irritable
   12. alert

13. ashamed
14. inspired
15. nervous
16. determined
17. attentive
18. jittery
19. active
20. afraid

7. Focal Employee FIW

Citation: Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work–family conflict and family–work conflict scales. *Journal of Applied Psychology*, *81*(4), 400.

Response Scale: 1=strongly disagree to 7= strongly agree.

	Original	**Adapted**
	No instructions provided.	Please indicate your agreement with each statement reflecting on **the current work week.**
1	The demands of my family or spouse/partner interfere with work-related activities.	FIW1_T1 - The demands of my family or spouse/partner interfered with work-related activities.
2	I have to put off doing things at work because of demands on my time at home.	FIW2_T1 - I had to put off doing things at work because of demands on my time at home.
3	Things I want to do at work don't get done because of the demands of my family or spouse/partner.	FIW3_T1 - Things I wanted to do at work didn't get done because of the demands of my family or spouse/partner.
4	My home life interferes with my responsibilities at work such as getting to work on time, accomplishing daily tasks, and working overtime.	FIW4_T1 - My home life interfered with my responsibilities at work such as getting to work on time, accomplishing daily tasks, and working overtime.
5	Family-related strain interferes with my ability to perform job-related duties.	FIW5_T1 - Family-related strain interfered with my ability to perform job-related duties.

8. ATN1_T1 – Please choose "neither agree nor disagree" for this item. (item is between FIW3 and FIW4)

9. SEX - What is your sex?
    1 = Male
    2 = Female
    3 = Not listed (please specify)
    4 = prefer not to answer

10. AGE - What is your age in years? (fill in)

11. RACE - What is your race/ethnicity?
    1 = American Indian or Alaska Native
    2 = Asian
    3 = Black or African American
    4 = Hispanic or Latinx
    5 = Native Hawaiian or other Pacific Islander
    6 = White or Caucasian
    7 = Multiple races
    8 = other (please specify)

12. CHILD - How many children do you have currently living in your home with you full-time?
    1 = 0 children
    2 = 1 child
    3 = 2 children
    4 = 3 children
    5 = 4 children
    6 = 5 or more children

13. CHILD_AGE - What is the age of your youngest child?
    1 = 5 years old or younger
    2 = between 6 years old and 12 years old
    3 = between 13 years old and 17 years old
    4 = 18 years old or older
    5 = not applicable

14. CARE - Aside from children, do you have any other family members for which you currently provide care?
    0 = No
    1 = Yes
        i. Who? [text entry]

15. MARITAL - What is your marital status?
    1 = Single
    2 = In a committed relationship
    3 = Married
    4 = Divorced
    5 = Widowed

16. EDU - What is the highest level of education you have completed?
    1 = Some high school
    2 = High school graduate
    3 = Completed some college
    4 = Associate degree
    5 = Bachelor's degree
    6 = Master's degree
    7 = PhD, law, or medical degree

17. JOB_TITLE - What is your current job title? (fill in)

18. TENURE_JOB - How long have you been in your current job role? Please indicate months or years. (fill in)

19. TENURE_ORG – How long have you been at your current organization? Please indicate months or years. (fill in)

20. VIRTUAL_C - Are you currently working remotely/virtually or in-person?
    1 = working remotely
    2 = working remotely some of the time and in-person some of the time
    3 = working in-person

21. VIRTUAL_N - Do you normally work remotely/virtually or in-person? (i.e., did you work remotely/virtually prior to the pandemic?)
    1 = normally work remotely all of the time
    2 = normally work remotely some of the time and in-person some of the time
    3 = normally work in-person all of the time

Qualitative Prompts

Thank you so much for your thoughtful responses so far! We just have 2 more open-ended questions for you. We appreciate any insights you could give us.

These are the only 2 open-ended questions we will ask at any point during the study.

1. STORY - Please share a story of a time where you had to help out a coworker because your coworker was dealing with a family issue (e.g., coworker had to leave work early to pick a child up from school or attend a child's event, coworker had to miss work due to a child being sick, coworker was distracted at work due to a fight with spouse or impending divorce).
   a. What was their family issue?
   b. How did you help?
   c. How did you feel about helping?

   If you have not experienced this, please put N/A.

Participants were then randomly assigned to answer the Unsupportive or Supportive Prompt below.

2. SUPPORTIVE:
   Think about a specific experience you had at work when your direct boss acted in a way that made it EASIER for you to manage your family needs/responsibilities. Describe this situation using as much detail as possible, including the concrete actions/behaviors your direct boss took during this event.

   OR

3. UNSUPPORTIVE:
   Think about a specific experience you had at work when your direct boss acted in a way that made it HARDER for you to manage your family needs/responsibilities. Describe this situation using as much detail as possible, including the concrete actions/behaviors your direct boss took during this event.

APPENDIX B: DETAILED DESCRIPTION OF PILOT STUDY CFA RESULTS

Below is a detailed description of the confirmatory factor analytic work I did in the pilot study ($N = 311$) to ensure the adapted measures I created were still valid measures of my constructs. These results correspond with Tables 1-4.

Self-Other Referent Change

Two of my adapted measures had a self-to-other referent change. Specifically, I adapted a measure that originally captured a respondent's own history of FIW (Grzywacz et al., 2006) and a measure that assessed a person's general FIW (Netemeyer et al., 1996), and changed the referent so both measures now ask respondents to report a *coworker's* history of FIW and current FIW, rather than their own. For example, an item from the original FIW scale was, "The demands of my family or spouse/partner interfere with work-related activities," which was adapted to read, "The demands of my coworkers' family or spouse/partner interfered with their work-related activities." According to Heggestad and colleagues (2019), changing a referent from self to other is only slightly concerning, but it is still important to make sure the rater can still provide meaningful ratings for reach item. I believe participants will be able to accurately assess their coworkers' level and history of FIW, given the regular communication and close working arrangement individuals have with their coworkers. Heggestad and colleagues (2019) also suggest conducting a CFA to show that the factor structure of the adapted and original measures are similar.

History of Coworker FIW Measure

I first ran a CFA for my history of coworker FIW control variable. There appeared to be an issue with this variable, as the results of the CFA indicated the model

may not have run (e.g., chi-square value was 0; see Table 2). I tried running the model using Amos 26.0 software and got the same result. I also tried re-coding the values, as the response scale ran from 0-5, and I wanted to make sure having zeroes as values was not impacting my results. I still got the same outcome of perfect values for the CFI, TLI, and RMSEA values, and no chi-square value. I also tried a two-factor model and assigned the first two scale items to Factor 1 and the last item to Factor 2 and got the same result. It could be the case the model did not run because the model was just-identified (Brown & Moore, 2012). To solve this issue, I tried running the history of coworker FIW variable with role overload. I first ran a one-factor model with the three items for history of coworker FIW and the six items for role overload together as one factor. This model did not fit the data well (see Table 2). I then ran a two-factor model with specifying the three history of coworker FIW items as the first factor and the six items for role overload as the second factor. This model did fit the data well and had CFI, TLI and RMSEA values within the acceptable cutoffs.

Because I experienced an issue running a model with the coworker FIW items on their own, I decided to go back and look at the original scale to determine if there was something unusual about the items or the scale in general. It appears that the original scale for the history of FIW was created by Grzywacz and colleagues (2006) by using two items from a previous FIW scale (created by Frone et al., 1992), and adding a third item that the authors created. Grzywacz et al. did not provide any CFA work or other validity evidence for their created scale. Thus, it is possible that the original scale was never valid to begin with, which would impact my ability to assess the validity of a measure of the history of coworker FIW that was adapted from this measure. However,

the issue with history of coworker FIW could also be because the model was just identified, and I was able to get a model to run when I ran history of coworker FIW with another study variable. Thus, I believe I can still use these items of history of coworker FIW in my main study. These items still assess information relevant to my study, and if needed, I can separate out each item and treat each individual item as a separate control variable.

Coworker FIW Measure

After running a CFA on the history of coworker FIW, I ran a CFA for the 5-item coworker FIW scale. This adapted measure should have one-factor, similar to the original scale, so I first ran a one-factor model. This model appears to fit the data well, as the TLI and CFI are above the recommended cutoff of .90 and the RMSEA value is below .10 (see Table 2). To provide further evidence of the one-factor solution, I also tried running a two-factor model to compare to the one-factor model. For the two-factor model, I assigned all odd-numbered items to Factor 1 and all even-numbered items to Factor 2. The results of the two-factor model were very similar to the one-factor model, though the TLI and RMSEA were slightly worse than the one-factor model. Because the two-factor model is more complex, yet did not significantly improve the model fit, I should choose the more parsimonious one-factor model.

I should also mention that not only does the coworker FIW measure include a referent shift, it does also include a timeframe change as well. The original FIW measure was worded using general language (e.g., I have to put off doing things at work because of demands on my time at home), and did not include instructions reflecting any particular time during which the FIW occurred. Because my study is a weekly diary

study, I needed participants to report on what has occurred during the current work week. Thus, I adapted the coworker FIW items such that all verbs are in the past-tense, and the instructions were worded to ask participants to report their coworker's FIW during the current work week. Following guidelines from Heggestad et al. (2019) time-referent changes should be accompanied by factor analytic evidence demonstrating a similar factor structure and factor loadings to the original scale. As I previously demonstrated, coworker FIW has a similar factor structure to the original FIW measure. However, in the scale creation paper for the FIW measure (Netemeyer et al., 1996), the authors did not report specific factor loadings, and only said that all items had standardized factor loadings of above .60. All of the standardized factor loadings for the items in the one-factor solution for the coworker FIW in my pilot study were above .83, which is consistent with the original scale.

Time Referent Changes

In addition to the coworker FIW scale having a changed timeframe, many of the other scale items had a timeframe change as well. Specifically, the WIF, FIW, role overload, need for recovery, and relationship quality measures were slightly adapted so that they would be appropriate in a weekly diary study. Items were changed from present tense to past tense, and the instructions for each measure were changed to specifically ask about the current work week. According to recommendations from Heggestad and colleagues (2019), when changing the timeframe of a measure, it is important to conduct a CFA of the adapted measures and compare the number of factors and factor loadings between the adapted and original scales.

WIF and FIW Measures

I began by running a CFA on the WIF and FIW adapted measures. The WIF and FIW measures used in my study were developed together by Netemeyer and colleagues (1996). Netemeyer et al. (1996) ran their own CFA analyses, comparing a one-factor model containing all WIF and FIW items to a two-factor model separating out the WIF scale items from the FIW scale items, and found that the two-factor model fit the data best. I decided to run a similar set of analyses, and first ran a one-factor model containing all WIF and FIW items. This model fit the data reasonably well (see Table 3), however the RMSEA value was above the cutoff of .10. I then ran a two-factor model, with one factor containing all of the adapted WIF items and the second factor containing all the adapted FIW items. The two-factor model fit the data better, and showed improved CFI, TLI, and RMSEA values, as well as a significant reduction in the chi-square value. This suggests the two-factor model fit the data better than the one-factor model, demonstrating a similar factor structure in the adapted measure as compared to the original measure.

Following guidelines from Heggestad et al. (2019) time-referent changes should also be accompanied by factor analytic evidence demonstrating similar factor loadings to the original scale. However, as discussed in the coworker FIW section above, in the scale creation paper for the original WIF and FIW measures (Netemeyer et al., 1996), the authors did not report specific factor loadings, and only said that all items had standardized factor loadings of above .60. All of the standardized factor loadings for the items in the two-factor model for WIF and FIW in my pilot study were above .86, which is consistent with the original scale. Based on this evidence and the similarity in factor structure, I can conclude there is validity evidence to support my adapted measures of WIF and FIW, and I can move forward and use these measures in my main study.

Role Overload Measure

The role overload measure I used in my study comes from a validated shortened version of the O'Reilly Role Overload Scale (Thiagarajan et al., 2006). For this measure, I changed the item wording from present tense to past tense and changed the measure instructions to ask about the current work week. For example, the original item, "There are times when I cannot meet everyone's expectations," was changed to, "There were times when I could not meet everyone's expectations." I also changed the item "I seem to have more commitments to overcome than other parents I know" to "I seemed to have more commitments to overcome than other people I know" to ensure the item would apply to non-parents. The original measure was found to have one factor, so I first ran a one-factor CFA model containing all six of the adapted RO items. This model fit the data pretty well, however the RMSEA value was .13 which is above the generally accepted cutoff of .10 (see Table 3).

To provide further evidence of the one-factor solution, I also tried running a two-factor model to compare to the one-factor model. For the two-factor model, I assigned all odd-numbered items to Factor 1 and all even-numbered items to Factor 2. The fit statistics of the two-factor model were slightly better than the hypothesized one-factor model, but, overall, were very similar to the one-factor model. For example, the CFI of the one-factor model was .965 and the CFI of the two-factor model was .970. However, although the two-factor model had slightly better fit statistics, the two-factor model is more complex than the one-factor model and adding a second factor did not significantly improve the model fit, nor was there a theoretical basis to divide the items into two

different factors. Thus, I believe I should choose the more parsimonious one-factor

model, which is consistent with the factor-structure of the original measure.

I did also seek to compare the factor loadings between the original measure and

my adapted measure of role overload. However, Thiagarajan et al. (2006) did not provide

factor loadings in their study. However, the standardized factor loadings for the one-

factor model of role overload in my study do appear to be good, as they are all above .80.

Need for Recovery

The need for recovery scale I used in my pilot study was slightly adapted from

Sluiter's (1999) English translation of the Dutch Need for Recovery scale (Sluiter, 1999;

Van Veldhoven & Meijman, 1994). My only changes to the scale were to change the verb

tense to be past tense instead of present tense, and to change the measure introduction to

ask participants to think about the current work week. For example, the item, "My job

causes me to feel rather exhausted at the end of a working day" was changed slightly to,

"My job caused me to feel rather exhausted at the end of the working day." Previous

studies have reported that this need for recovery scale is unidimensional (e.g., van

Veldhoven & Broersen, 2003). Because the response scale for this measure is not

continuous (i.e., response options were 0 = no; 1 = yes), this measure cannot be factor

analyzed. However, the internal consistency reliability of the measure was adequate (α =

.80) and was similar to what has been reported previously (see Table 1).

Context Changes

The last type of scale adaptation I had in my study was context changes. The

interpersonal citizenship behavior (ICB), relationship quality, and prosocial motivation

measures all included context changes (the ICB and relationship quality measures also

included a timeframe shift and therefore were also changed to past tense and included

instructions to reflect on the past week like the measures in the previous section).

According to recommendations from Heggestad and colleagues (2019), when changing

the context of a measure, it is important to conduct a CFA of the adapted measures and

compare the factors and parameter estimates between the adapted and original scales.

Thus, for each of these scales with an adapted context, I ran a CFA and compared the

adapted measures to the original measures.

Interpersonal Citizenship Behavior (ICB)

The original ICB measure (Settoon & Mossholder, 2002) was intended to be a

general measure of how much emotional and instrumental support one has provided to

coworkers. However, in my study, I included the instructions "Please respond to the

following questions indicating how you behaved during the current work week in

response to a coworker who was dealing with a personal or family issue (e.g., issue with

spouse, children, parent, significant other, etc.)." Thus, I changed to context to have

participants reflect specifically on help provided to coworkers who were dealing with a

FIW issue, rather than coworkers in general. I also changed the items to be in past tense

to fit the needs of my daily diary design. The ICB measure is a two-dimensional scale,

and includes items referring to person-focused ICB and items referring to task-focused

ICB. Thus, a two-factor CFA model should fit my data best.

However, I first began by running a one-factor model with all of the ICB items

from both sub-scales loading onto the same factor. This model had CFI and TLI values

below the recommended cutoff of .90, though the RMSEA value was below .10 (see

Table 4). I then ran a two-factor model, with Factor 1 including all of the person-focused

ICB items, and Factor 2 including all the task-focused ICB items. This model fit the data better than the one-factor model, with CFI and TLI values that were higher, and an RMSEA value that was lower, than in the one-factor model (see Table 4). This is consistent with Settoon and Mossholder (2002) who created the scale and also found that a two-factor model fit the data better than a one-factor model. Settoon & Mossholder (2002) did provide the factor loadings for the two sub-scales, and all the original person-focused items had factor loadings of at least .65 and all original task-focused items had factor loadings of at least .78. Despite the good fit of my two-factor model of the adapted ICB measure, the standardized factor loadings for the adapted measure were lower than what was found in the original measure, though still above the typical cutoff of .40 (Tabachnick & Fidell, 2013).

To provide further support for the two-factor model, I also tried running a three-factor model. In looking at the items, three of the person-focused ICB items seemed to focus on going above and beyond for coworkers. I created a three-factor model where one factor contained the three above-and-beyond person-focused ICB items, another factor contained the remaining 5 person-focused ICB items, and the third factor contained the 6 task-focused ICB items. This model fit the data almost exactly as well as the two-factor model. Because there was not a substantial improvement in the model fit with the three-factor model, the more parsimonious, two-factor model should be chosen.

Taken together, these analyses support the validity of the two-factor model, and suggested I could move forward using the adapted ICB measure in my main study.

Relationship Quality Measure

The relationship quality measure I used in my pilot study was more significantly adapted than the ICB measure. The original relationship quality measure (Rusbult et al., 1998) came from the romantic relationships literature and asked participants to reflect on their current relationship (implying a romantic or at least friendship relationship). I adapted the measure instructions to have participants answer the questions thinking of their relationship with their coworkers who had work-family issues over the past week. I also adapted the items and changed "relationship" in all of the items to "working relationship," to reflect the work context. For example, one original item was, "I feel satisfied with our relationship," which I changed to, "I feel satisfied with our working relationship." I also changed the original item "Our relationship does a good job of fulfilling my needs for intimacy companionship, etc." to "Our working relationship does a good job of fulfilling my needs," since intimacy and companionship are not typically expected or normative in a working relationship.

The original measure was conceptualized as a unidimensional measure, so I began by running a one-factor CFA with all of the relationship quality measures loading onto one factor. This one-factor model fit the data exceptionally well, with the CFI and TLI indices both at .999, and the RMSEA value at .014 (see Table 4). To provide further evidence for the one-factor model, I also ran a two-factor model with the odd-numbered items loading on Factor 1 and the even-numbered items loading on Factor 2. This model fit the data only slightly better than the one-factor model, and given the lack of a theoretical rationale for the two-factor solution and scientific goal of parsimony, the one-factor model made the most sense. The factor loadings of the original relationship quality measure were reported by the authors and were all above .75 (Rusbult et al., 1998). While

the factor loadings of the adapted items in my pilot study were slightly lower, they were all above the standard cutoff of .40.

Taken together, these results support the validity of the adapted relationship quality measure, suggesting that it can be used in my main study.

Prosocial Motivation Measure

The last measure I adapted was prosocial motivation (Grant, 2008). The original prosocial motivation measure was contextualized to the workplace. However, in my study, I am using prosocial motivation as a control variable, reflecting a person's general prosocial disposition. Therefore, I adapted the measure to be more general and to not be specifically about the workplace. For example, the original scale begins with the question stem, "Why are you motivated to do your work?" and is followed by items such as "because I care about benefitting others through my work." I changed to measure to have the more generic stem of "Indicate how much you agree or disagree with the following statements." An example of an adapted item is, "I care about benefitting others."

The original prosocial measure was conceptualized as a unidimensional measure, so I began by running a one-factor model. The fit statistics for this model were suspicious, as the CFI value was 1.00, the TLI value was above 1.00, and the RMSEA value was 0. I tried re-running my analysis in AMOS, making sure there was no missing data, and this resulted in similar estimates. It could be the case there is significant multicollinearity in the measure, preventing the CFA from running properly. I also tried running a two-factor model and got a similar result (see Table 4). It could be the case the model did not run because the model was just-identified (Brown & Moore, 2012). To solve this issue, I tried running a model that included prosocial motivation with

relationship quality. I first ran a one-factor model with the four items for prosocial

motivation and the five items for relationship quality together as one factor. This model

did not fit the data well (see Table 4). I then ran a two-factor model with specifying the

four prosocial motivation items as the first factor and the five items for relationship

quality as the second factor. This model did fit the data well and had CFI, TLI and

RMSEA values within the acceptable cutoffs.

Because I experienced an issue running a model with the prosocial motivation

items on their own, I decided to go back and look at the original scale to determine if

there was something unusual about the items or the measure in general. Upon looking

back at the original measure, it appears that the Grant (2008) created the prosocial

motivation measure using items adapted from a self-regulation scale. However, Grant

(2008) did not conduct any analyses to demonstrate the validity of the prosocial

motivation scale, so it is possible the original scale was not valid to begin with. However,

the issue with the prosocial motivation CFA could be because the model was just

identified, and I was able to successfully run a measurement model with prosocial

motivation when I combined it the relationship quality measures. Thus, I believe I should

be able to use the prosocial motivation measure in my main study. I will also include a

second measure of prosocial motivation in my main study just in case the prosocial

motivation measure is problematic. For example, De Dreu and Nauta (2009) used a 3-

item measure of other-orientation that I could use in my main study without needing to

adapt it.