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The spillover effects of coworker, supervisor, and outsider workplace incivility on work-to-family conflict: A weekly diary design

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Summary

This study used an experience sampling design to examine the spillover effects of experienced workplace incivility from organizational insiders (coworkers and supervisors, respectively) and organizational outsiders (patients and their visitors) on targets' work-to-family conflict and to test the mediating effect of burnout and the moderating effect of display rules. Data collected over five consecutive weeks from 84 full-time nurses showed that within individuals, weekly experiences of coworker incivility and outsider incivility were positively related to weekly experience of work-to-family conflict, and burnout mediated these relationships while controlling for initial level of burnout before participants started a week's work. In addition, display rules, defined as the extent to which individuals perceive they are expected to display desired positive emotions and suppress negative emotions at work, moderated the relationship between outsider incivility and burnout; specifically, the positive relationship between weekly outsider incivility and burnout was stronger for individuals who perceived a higher level of display rules. Our findings contribute to the literature by demonstrating the mediating effect of burnout and the moderating effect of perceived display rules in the relationship between workplace incivility from multiple sources and work-to-family conflict from a resource perspective.

KEYWORDS

burnout, conservation of resources, display rules, workplace incivility, work-to-family conflict

1 | INTRODUCTION

Workplace incivility refers to rude and uncivil behaviors characterized by low intensity, ambiguous intent to harm, and violation of workplace norms for mutual respect (Andersson & Pearson, 1999). The accumulated evidence suggests that workplace incivility is alarmingly common in the workplace (Schilpzand, De Pater, & Erez, 2016). For example, Porath and Pearson (2013) reported that among thousands of participants in their studies over 14 years, 98% had reported being victims of workplace incivility and about 50% had experienced it on a weekly basis. In addition to its high prevalence, workplace incivility has been found to have detrimental effects on employee job attitudes, health

and well-being, performance, and behaviors (for reviews, see Cortina, Kabat-Farr, Magley, & Nelson, 2017; Schilpzand et al., 2016). In addition to the negative effects of workplace incivility on individuals' work- and health-related outcomes, Schilpzand et al. (2016) suggest that effects of workplace incivility can spill over to targets' nonwork lives.

One important nonwork outcome of workplace incivility that has been examined is work-to-family conflict (Ferguson, 2012; Lim & Lee, 2011). Work-to-family conflict has been shown to have detrimental effects on employee outcomes in both work and nonwork domains (Amstad, Meier, Fasel, Elfering, & Semmer, 2011), indicating the importance of exploring its potential antecedents to understand how

it develops. The current study aims to add to this literature by using a weekly diary design to examine the relationship between workplace incivility from three sources (coworkers, supervisors, and outsiders) and work-to-family conflict. In addition, we will investigate the mediating role of burnout and the moderating effect of display rules. Through examining these relationships, we believe our study contributes to the current literature in four ways.

First, we contribute to the understanding of why workplace incivility is linked with work-to-family conflict. Although Ferguson (2012) examined a mediator (perceived stress transmission) in the relationship, it still remains largely unclear on the underlying mechanisms linking workplace incivility to work-to-family conflict. Previous research suggests that workplace incivility positively predicts burnout (e.g., Taylor, Bedeian, Cole, & Zhang, 2017) and burnout positively predicts work-to-family conflict (e.g., Nohe, Meier, Sonntag, & Michel, 2015). Thus, on the basis of the conservation of resources COR theory (Hobfoll, 1989), we answer the recent calls to identify mediators of the effects of workplace incivility (Schilpzand et al., 2016) and examine burnout as a mediator in the relationship between workplace incivility and work-to-family conflict.

Second, we examine whether display rules as a stable resource-depleting job demand can exacerbate the workplace incivility–burnout relationship. Although previous studies have examined individual differences (e.g., personality, ethnicity, and culture values) and job attitudes (e.g., work engagement) as moderators of the relationship between workplace incivility and burnout (e.g., M. T. Sliter & Boyd, 2015; Welbourne, Gangadharan, & Sariol, 2015), little knowledge exists about how work-related characteristics may influence this relationship. On the basis of the COR theory (Hobfoll, 1989), we examine whether individuals' perception of display rules—the extent to which employees perceive being expected to display positive emotions and suppress negative emotions (Brotheridge & Grandey, 2002)—can exacerbate the negative effects of workplace incivility on burnout. Thus, we contribute to the theoretical understanding of the much-needed examination of boundary conditions of the effect of workplace incivility (Sakurai & Jex, 2012; Schilpzand et al., 2016).

Third, previous research examining the effect of workplace incivility on work-to-family conflict has focused either on incivility from supervisors and coworkers (Lim & Lee, 2011) or just from coworkers (Ferguson, 2012), although the potential negative effect of incivility from organizational outsiders such as customers or clients (Kern & Grandey, 2009; Sliter, Sliter, & Jex, 2012; van Jaarsveld, Walker, & Skarlicki, 2010) on employee work-to-family conflict remains unclear. In addition, the inconsistent findings between Lim and Lee (2011) and Ferguson (2012) on the relationship between coworker incivility and work-to-family conflict suggest that additional research is needed to strengthen our understanding of the relationship between incivility from different sources and work-to-family conflict. The current study contributes to this literature by simultaneously examining workplace incivility from coworkers, supervisors, and outsiders as potential antecedents of burnout and subsequent work-to-family conflict, providing a more holistic picture on the effects of incivility from different sources.

Fourth, given that about 50% of employees experience incivility on a weekly basis (Porath & Pearson, 2013), how these experiences might affect employees within a short timeframe (e.g., within the week) can help us gain a better understanding of the dynamic and temporal relationships beyond chronic relationships (Taylor et al., 2017) that were identified by Lim and Lee (2011) and Ferguson (2012). Thus, the current study is the first one to use a within-person design to examine a more proximal relationship between workplace incivility and work-to-family conflict. Like some previous studies using within-person designs (Taylor et al., 2017), we adopted a weekly design to capture the dynamic relationship between workplace incivility and work-to-family conflict because our sample were nurses who did not work on regular daily routine (instead, they worked three 7 p.m.–7 a.m. shifts per week) that allows them to have regular daily interactions with family members.

2 | WORKPLACE INCIVILITY

As one subtype of workplace deviance (Robinson & Bennett, 1995), workplace incivility is characterized by the following three features: violation of norms, ambiguous intent to harm, and low intensity (Cortina & Magley, 2009; Pearson, Andersson, & Wegner, 2001). First, although the specific cultures and norms might differ from one organization to another, there should be similar norms for mutual interpersonal respect across industries and organizations, and uncivil behaviors that violate these norms are considered as workplace incivility (Cortina & Magley, 2009; Pearson, Andersson, & Porath, 2005).

The second characteristic, unique to workplace incivility, is the ambiguous intent to harm. In the domain of workplace mistreatment, most of the specific constructs include intent to harm in their definitions, such as workplace aggression (Neuman & Baron, 1998) and social undermining (Duffy, Ganster, & Pagon, 2002), whereas others such as bullying (Einarsen & Skogstad, 1996) and abusive supervision (Tepper, 2000) imply so. Thus, targets of workplace incivility might not always be able to interpret whether the instigators are intentionally engaging the uncivil behaviors. Low intensity is the last defining characteristic of workplace incivility, which excludes physical violence from workplace incivility behaviors (Cortina & Magley, 2009). Pearson et al. (2001) suggested that incivility involves minor forms of workplace deviance that are not as strong as workplace aggression. Because it is of low intensity, workplace incivility might not always be reported or taken seriously, and this might contribute to its high prevalence.

3 | THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

The current study uses the COR theory (Hobfoll, 1989, 2001) as the main theoretical framework. The COR theory suggests that individuals are motivated to obtain and maintain important resources, and the threat of or actual loss of resources will lead to strain reactions. In addition, individuals with fewer resources are more vulnerable to

future resource loss and thus are more prone to stress experiences. Hobfoll (1989) conceptualized resources as objects, conditions, personal characteristics, and energy that people value. Given that the experience of workplace incivility is unpleasant and interferes with employees' goals for successfully completing work tasks or maintaining important professional relationships (Porath & Pearson, 2012), it can potentially deplete employees' important resources such as time, energy, and social relations. In addition, workplace incivility violates workplace norms for mutual respect (Andersson & Pearson, 1999) and thus is likely to deplete individuals' personal resources such as dignity, respect, and pride (Taylor et al., 2017). Taken together, it is reasonable to argue that workplace incivility as an important workplace social stressor (Kern & Grandey, 2009) can deplete employees' resources and lead to various stress reactions. Below, we will use the COR theory as the theoretical basis to develop hypotheses regarding the relationship between workplace incivility and work-to-family conflict, as well as the mediating role of burnout and the moderating role of display rules.

3.1 | Workplace incivility and work-to-family conflict

Work-to-family conflict refers to the extent to which demands from the work domain interfere with employees' ability to fulfill the demands of the family domain (Greenhaus & Beutell, 1985). As discussed above, workplace incivility can potentially threaten or deplete individuals' resources such as time, energy, and personal resources. When employees experience depletion of these resources, their ability to accomplish family responsibilities might be impaired. For example, given the ambiguous nature of workplace incivility, targets of workplace incivility are likely to devote additional time and cognitive resources to process their experiences even after work time (Demsky, Fritz, Hammer, & Black, 2018), thus leaving them less time and fewer cognitive resources to cope with family demands. Further, because targets of workplace incivility are more likely to think about work-related experiences after the events (Demsky et al., 2018; Nicholson & Griffin, 2015), they will be less likely to engage in resource gaining activities such as recovery activities, and thus, their resources can be further depleted even after they are away from work, making them less capable of coping with potential demands from family. Furthermore, individuals who experience workplace incivility are likely to experience negative emotions before leaving work due to depleted resources, and this negative effect can spill over to their time after work without sufficient resource recovery (Tremmel & Sonnentag, 2017; Zhou, Yan, Che, & Meier, 2015). Lastly, the COR theory (Hobfoll, 1989) also suggests that a lack of resources can lead to defensive attempts to conserve the remaining resources. Thus, when individuals experience resources loss due to workplace incivility experience, they might try to protect their remaining resources by reducing the investment of resources in the family domain, resulting in an increase in work-to-family conflict.

Supporting this argument, Lim and Lee (2011) found that workplace incivility from supervisors positively predicted work-to-family

conflict and incivility from coworkers and subordinates did not, whereas Ferguson (2012) found that coworker incivility positively predicted work-to-family conflict. Lim and Lee (2010) noted that one possible reason for them not to find the significant relationships of coworker incivility and subordinate incivility with work-to-family conflict was that their sample was recruited in Singapore, which is a high power distance society (Avolio, Zhu, Koh, & Bhatia, 2004). High power distance between supervisors and employees might make the experience of workplace incivility from supervisors more prominent and can spill over to their nonwork domain; in contrast, incivility experiences from coworkers and subordinates might not be appraised as detrimental as supervisor incivility and thus will not affect their feelings and behaviors outside of work. In contrast, when studying supervisor incivility and coworker incivility in Western culture with low power distance, both sources might have a similar effect on employees such that the effect of coworker incivility might also spill over the nonwork domain just like supervisor incivility does (Ferguson, 2012). Although outsider incivility has not been examined in the previous literature as a potential predictor of work-to-family conflict, previous research found that other types of workplace mistreatment from outsiders (e.g., daily customer mistreatment) positively predicted work-to-family conflict (e.g., Chi, Yang, & Lin, 2016). Building on the theoretical argument and empirical findings, we believe that workplace incivility from supervisors, coworkers, and outsiders can all potentially deplete employee resources and predict work-to-family conflict in Western culture. Further, it is likely that the same pattern will be observed within individuals. That is, in weeks, an employee experiences more workplace incivility, and his/her resources are likely to be more depleted than normal and thus experience more work-to-family conflict in the same week.

> **Hypothesis 1.** *Weekly experience of workplace incivility from (a) coworkers, (b) supervisors, and (c) outsiders will be positively related to weekly experience of work-to-family conflict.*

3.2 | Workplace incivility, burnout, and work-to-family conflict

Burnout has been suggested to be a stress reaction due to repeated resource loss without sufficient recovery (Halbesleben & Buckley, 2004; Taylor et al., 2017). Based on the COR theory (Hobfoll, 1989, 2001), individuals tend to experience strain reactions such as burnout when they experience resource loss or the threat of resource loss. We propose that workplace incivility can threaten or deplete targets' valuable resources and thus lead to more burnout. Specifically, workplace incivility can deplete individuals' emotional resources because targets of workplace incivility tend to experience more negative emotions (e.g., Zhou et al., 2015). In addition, workplace incivility can also drain individuals' cognitive resources (Porath & Erez, 2007) when targets devote cognitive resources to analyze the intent of incivility given the ambiguous nature of perpetrators' incivility behaviors or when they recall these experiences after work (Demsky et al., 2018).

Further, workplace incivility can also hinder targets' recovery activities such as sleep (Demsky et al., 2018) and thus deplete individuals' physical resources. Lastly, because workplace incivility violates the general workplace norm for mutual respect (Andersson & Pearson, 1999), it is likely to harm individuals' personal resources such as dignity, respect, and pride (Taylor et al., 2017). Thus, taken together, we believe that targets of workplace incivility from supervisors, coworkers, and outsiders are likely to deplete these important resources and thus experience more burnout.

Previous research using cross-sectional designs has demonstrated burnout as a significant correlate of workplace incivility from supervisors or coworkers (Hershcovis, Cameron, Gervais, & Bozeman, 2017; Sliter, Sliter, Withrow, & Jex, 2012; Welbourne et al., 2015), incivility from coworkers (Rhee, Hur, & Kim, 2017), and incivility from customers or clients (Kern & Grandey, 2009; Sliter & Boyd, 2015; Sliter, Jex, Wolford, & McInnerney, 2010; van Jaarsveld et al., 2010). Using within-person designs, Campana and Hammoud (2015) found that daily experience of incivility from outsiders (patients and visitors) positively predicted nurses' burnout. In a recent study, Taylor et al. (2017) found that the increase of workplace incivility positively predicted the subsequent increase of burnout. Thus, on the basis of a sound theoretical framework and empirical evidence, we predict that within individuals, the weekly experience of workplace incivility from coworkers, supervisors, and outsiders will be positively related to burnout measured at the end of a week.

> **Hypothesis 2.** *Weekly experience of workplace incivility from (a) coworkers, (b) supervisors, and (c) outsiders will be positively related to burnout at the end of the same week.*

Based on the COR theory (Hobfoll, 1989, 2001), when individuals cope with workplace incivility experiences, they will experience higher strain reactions such as burnout due to resource loss (Taylor et al., 2017). Meanwhile, burned out employees are generally emotionally, physically, and cognitively exhausted (Pines & Aronson, 1988) and thus will have fewer emotional, physical, and cognitive resources to deal with further demands from either work or home. When they cannot effectively deal with family demands, work-to-family conflict arises. Consistent with this argument, evidence has supported burnout as a mediator of the effect of abusive supervision on work-to-family conflict (Carlson, Ferguson, Hunter, & Whitten, 2012), the relationship between workplace bullying and work-to-family conflict (Raja, Javed, & Abbas, 2017), and the relationship between customer unethical behavior and employee work-to-family conflict (Greenbaum, Quade, Mawritz, Kim, & Crosby, 2014).

We would also like to point out that burnout has been traditionally considered as an outcome of work-to-family conflict (Allen, Herst, Bruck, & Sutton, 2000). However, studies have suggested that burnout could also be a potential predictor of work-to-family conflict and that a reciprocal relationship might exist (Innstrand, Langballe, Espnes, Falkum, & Aasland, 2008; Matthews, Wayne, & Ford, 2014). In addition, a recent meta-analysis of lagged studies (Nohe et al., 2015) also suggests that work-to-family conflict and burnout have a reciprocal relationship, and the COR theory might better explain this relationship. Specifically, the COR theory posits that individuals strive to obtain and maintain important resources and initial resource loss will make individuals more vulnerable to future resource loss (Hobfoll, 1989). Thus, when employees encounter resource-depleting experiences such as workplace incivility, they are likely to experience burnout due to resource loss and will have fewer resources to deal with family demands; thus, they might experience more work-to-family conflict. Meanwhile, because people with fewer resources are susceptible to future resource loss when encountering stressors (e.g., work-to-family conflict), they are likely to subsequently have increased burnout due to experienced work-to-family conflict. On the basis of this argument, we believe burnout could be a proximal outcome of workplace incivility and a potential predictor of work-to-family conflict and serve as a mediator in the relationship between workplace incivility and work-to-family conflict.

> **Hypothesis 3.** *Burnout will mediate the relationships of weekly experience of workplace incivility from (a) coworkers, (b) supervisors, and (c) outsiders with weekly experience of work-to-family conflict.*

3.3 | Moderating effect of display rules

It has been suggested that emotional labor plays an important role in the burnout process because jobs involving interaction with people are potentially emotionally taxing (Brotheridge & Grandey, 2002), and different aspects of emotional labor have been linked to burnout. On one hand, researchers found that display rules, referred to perceived expectations to display positive emotions and suppressing negative emotions, positively related to burnout (Brotheridge & Grandey, 2002; Cheung & Tang, 2007; Kammeyer-Mueller et al., 2013). On the other hand, specific emotional regulation strategies such as deep acting (when individuals change their actual experienced emotions to conform to display rules) and surface acting (when individuals fake desired emotions or suppress undesired emotions to meet job requirements) have also been found to positively relate to burnout (Becker & Cropanzano, 2015; Grandey & Melloy, 2017; Kammeyer-Mueller et al., 2013; Sliter et al., 2010). In addition, previous research has found that display rules, which tend to be stable within individuals (Xanthopoulou, Bakker, Oerlemans, & Koszucka, 2018), positively predicted both deep acting and surface acting (Mesmer-Magnus, DeChurch, & Wax, 2012), indicating that individuals' perception of display rules can affect how they regulate their emotions at work and is thus likely to affect how they react to emotion-depleting experiences such as workplace incivility. Given the current study's focus on examining stable resource-depleting job characteristics as potential boundary conditions, we will examine the moderating role of display rules on the relationship between workplace incivility and burnout.

As noted by COR theory (Hobfoll, 1989), the loss of resources leads to increased psychological strains such as burnout. We believe display rules will strengthen targets' reactions to workplace incivility experiences because display rules are likely to deplete individuals'

resources and make further resource depleting experiences (e.g., workplace incivility experience) more salient. On one hand, Brotheridge and Lee (2002) suggested that display rules can represent emotional demands of people's jobs that require resources to cope with and thus can deplete emotional resources. Further, to conform to display rules, employees need to devote important resources such as self-regulatory resources to regulate their behaviors (Diefendorff & Gosserand, 2003). Thus, for individuals perceiving stronger display rules, they are likely to have low emotional and self-regulatory resources. On the other hand, workplace incivility is related with increased negative emotions (Tremmel & Sonnentag, 2017; Zhou et al., 2015) and requires further emotional resources to suppress these negative emotions and fake positive ones; meanwhile, workplace incivility is likely to deplete individuals' self-regulatory resources (Rosen, Koopman, Gabriel, & Johnson, 2016). Taken together, although individuals who perceive stronger display rules tend to experience more resource depletion on a regular basis, their experience of additional resource-depleting experiences such as workplace incivility will make them more vulnerable to further resource losses (Hobfoll, 1989) and thus experience more burnout.

Although there has been no direct test of this argument, there is indirect evidence to support it. For example, Bhave and Glomb (2016) found that occupational emotional labor (an occupational requirement for displaying positive emotions and suppressing negative emotions) strengthened the negative effect of surface acting on job satisfaction, suggesting that the emotional labor requirement of an occupation (e.g., display rules) can play an important role in shaping the effects of other resource-depleting experiences. Therefore, on the basis of the theoretical argument, we proposed the following hypothesis.

> **Hypothesis 4.** *The relationships of weekly experience of workplace incivility from (a) coworkers, (b) supervisors, and (c) outsiders with burnout will be moderated by person-level display rules, such that the positive relationships will be stronger for individuals who perceive stronger display rules.*

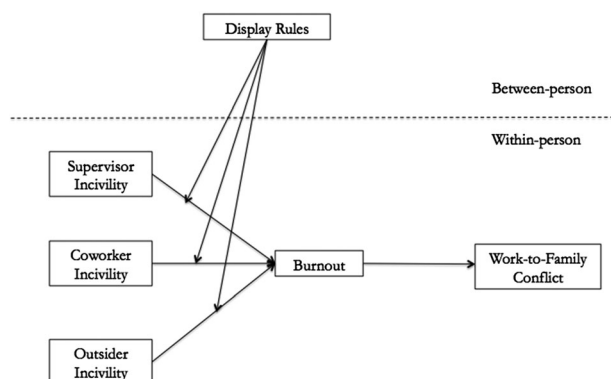Figure 1 presents a summary of the above-proposed relationships in the current study.

FIGURE 1 Summary of proposed relationships in the study

4 | METHOD

4.1 | Participants

We sent a recruiting email to 422 nursing graduates from a large public southeastern university in the United States who were part of a different project. By the time they were contacted, they had graduated for at least 6 months. We specified that only those who worked at least 30 hours per week in nursing were eligible to participate. One hundred and fifty-five targeted participants (response rate = 36.7%) responded to the recruiting email to show their interest in the study. After they were sent detailed instructions about the study's data collection procedure (see Section 4.2), 102 participants took the baseline survey. Among them, 93 decided to participate in the weekly surveys. Nine participants' weekly surveys were dropped because the participants completely only 1 weekly survey and could not be included for further analyses. The final sample included 84 participants with a total of 365 weekly survey responses, and the majority of the participants were female (94%). Their average age was 30 years old (*SD* = 9.1), and they worked on average 37.3 hours per week (*SD* = 5.5). All of them had received a bachelor's degree in nursing.

4.2 | Procedure

A recruiting email was sent to the potential participant pool (*N* = 422) of eligible nurses, and people who were willing to participate provided their contact information, including name, addresses, email addresses, and phone numbers in their response emails. Those agreeing to participate were then asked to take a baseline online survey that measured display rules, as well as demographic information including age, gender, and working hour per week. Further, because most of the nurses did not work on regular daily work routine, we also asked them to provide the starting day and time of their first shift and ending day and time of last shift per week for the following 5 weeks.

Starting the week following the baseline survey and for five consecutive weeks, we sent two emails with survey links per week to the participants. Specifically, we sent a before-work survey link 2 hours before the starting time of their first shift of the week; we assessed their burnout level in this survey as a baseline level of burnout before they started this week's work. We sent an after-work survey link 2 hours before the ending time of the last shift of the week; we assessed participants' experience of workplace incivility, burnout, and work-to-family conflict in this survey. At the end of all surveys (baseline survey and weekly before- or after-work surveys), we asked participants to answer self-generated identification questions (Schnell, Bachteler, & Reiher, 2010): city of birth, high school name, and mother's birthday (month and day). Baseline surveys and weekly surveys were matched using the self-generated identification questions; thus, survey data were anonymous.

4.3 | Measures

4.3.1 | Experience of workplace incivility

Experience of workplace incivility was measured with an adapted version of the Nursing Incivility Scale (Guidroz, Burnfield-Geimer, Clark, Schwetschenau, & Jex, 2010) in after-work surveys, which measured nurses' experience of incivility from coworkers (10 items), supervisors (seven items), and outsiders (patients/family members/visitors, 10 items) in the prior week. Response options ranged from 1 (*never*) to 6 (*five times and more*). Example items for experienced workplace incivility were "Other nurses claim credit for your work" (coworker incivility), "Your direct supervisor is condescending to you" (supervisor incivility), and "Patients and/or their family and visitors are condescending to you" (outsider incivility). The average Cronbach's alphas were .70 (coworker incivility), .60 (supervisor incivility), and .92 (outsider incivility), respectively.

4.3.2 | Burnout

Burnout was measured in the before- and after-work survey for 5 weeks using an adapted version of the 21-item Burnout Measure (Pines & Aronson, 1988). Participants were asked to rate to what degree they felt each of the 21 feelings when they thought about their work overall. Response options were from 1 (*very slightly or not at all*) to 5 (*extremely*). Example items were "Being tired," "Being emotionally exhausted," and "Being physically exhausted." The average Cronbach's alphas were .94 for before-week surveys and .93 for after-week surveys, respectively.

4.3.3 | Work-to-family conflict

Work-to-family conflict was measured in after-work surveys with five items from Netemeyer, Boles, and McMurrian (1996). They were asked how often they had experienced the described situations over the past week, with response options ranging from 1 (*not at all*) to 6 (*four times and more*). An example item was "The demands of my work interfere with my home and family life." The average Cronbach's alpha was .96.

4.3.4 | Display rules

Display rules were measured in the baseline survey with five items from Wong and Law (2002). Participants were asked to rate to what extent they perceive that it is necessary for them to perform the listed behaviors at their job. One example item was "hide my negative feelings (e.g., anger and depression)." Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). The Cronbach's alpha was .65.

4.4 | Data analysis

Our data have two levels with weekly measurements of incivility, burnout, and work-to-family conflict (Level 1) nested within individuals (Level 2). We used multilevel modeling to test our hypotheses with Mplus 7.02 (Muthén & Muthén, 2010). Three models were tested. In Model 1, we examined the effect of weekly experience of workplace incivility on work-to-family conflict at Level 1. In Model 2, we examined our mediation hypothesis by estimating the effect of weekly experience of workplace incivility on burnout while controlling for before-work burnout and the effect of burnout on work-to-family conflict; all effects were tested at Level 1. On the basis of Model 2, in Model 3, we used Level 2 display rules to predict the slopes of workplace incivility from coworkers, supervisors, and outsiders in predicting burnout. Because our hypotheses involved within-person effects and cross-level interactions, we followed the recommendations from Enders and Tofighi (2007), and all our within-person predictors were group-mean centered (which means variable deviations are relative to each individual's own average across the 5 weeks) and display rules were grand-mean centered (which means variable deviations are relative to the grand mean of all participants). In all models, we specified random slope effects for all Level 1 relationships proposed in our hypotheses.

5 | RESULTS

Table 1 shows means, standard deviations, and the intercorrelations among the variables for both Levels 1 and 2. As shown in Table 1,

TABLE 1 Descriptive statistics and bivariate correlations at Levels 1 and 2

Variables	M	SD	ICC	1	2	3	4	5
Within person								
1 Coworker incivility	1.14	0.27	0.41					
2 Supervisor incivility	1.08	0.21	0.34	.14**				
3 Outsider incivility	1.36	0.63	0.42	.17**	.07			
4 Burnout	2.05	0.69	0.85	.23**	−.01	.21**		
5 Work-to-family conflict	1.88	1.12	0.67	.11*	.05	.17**	.10	
Between person								
1 Coworker incivility	1.15	0.21						
2 Supervisor incivility	1.09	0.16		.51**				
3 Outsider incivility	1.37	0.49		.38**	.16			
4 Burnout	2.08	0.65		.42**	.38**	.61**		
5 Work-to-family conflict	1.94	1.03		.50**	.40**	.38**	.60**	
6 Display rules	3.79	0.54		.10	.07	.26*	.38**	.28*

Note. Level 1, *n* = 358–365; Level 2 *n* = 84.

*p < .05.

**p < .01.

the ICC(1) for burnout was .85, suggesting that 15% of the variance of burnout was within individuals across weeks; the ICC(1) for work-to-family conflict was .76, suggesting that 24% of the variance of work-to-family conflict was within individuals across weeks. The Level 1 data were group mean centered so the correlations reflect pooled correlations across people. The Level 2 variables from the diaries were the means for each individual across the weeks, so the correlations represent the overall between-person relationships.

5.1 | Multilevel confirmatory factor analysis

We first conducted a multilevel confirmatory factor analysis to examine the factorial validity of five weekly measures (coworker incivility, supervisor incivility, outsider incivility, burnout, and work-to-family conflict). Because we had a small sample size at the person level, we followed practices in studies using similar within-person designs (e.g., Liu et al., 2017; van Hooff & Geurts, 2015) and recommendations from Little, Cunningham, Shahar, and Widaman (2002) by using three item parcels as indicators for all our variables. Our five-factor model fitted our data well, $\chi^2(160) = 282.06$, $p < .01$, CFI = .95, TLI = .93, RMSEA = .05, and was significantly better than a three-factor model where all workplace incivility from supervisors, coworkers, and outsiders were combined, $\chi^2(174) = 756.20$, $p < .01$, CFI = .74, TLI = .69, RMSEA = .09, with $\Delta\chi^2(14) = 474.14$, $p < .01$; a two-factor model where all workplace incivility from supervisors, coworkers, and outsiders were combined and work-to-family conflict and burnout were combined, $\chi^2(178) = 1120.72$, $p < .01$, CFI = .58, TLI = .51, RMSEA = .12, with $\Delta\chi^2(18) = 838.66$, $p < .01$; or a one-factor model, $\chi^2(180) = 1471.15$, $p < .01$, CFI = .42, TLI = .33, RMSEA = .14, with $\Delta\chi^2(20) = 1189.09$, $p < .01$, providing evidence for the distinction among the within-person weekly constructs in the current study.

5.2 | Hypothesis testing

Table 2 shows the unstandardized path coefficients and standard errors from results of the three models we tested. As shown in Model 1, coworker incivility ($\gamma = 0.73$, $SE = 0.33$, $p < .05$) and outsider incivility ($\gamma = 0.26$, $SE = 0.12$, $p < .05$) were positively related to work-to-family conflict, whereas supervisor incivility ($\gamma = 0.03$, $SE = 0.35$, n.s.) was not. Thus, Hypothesis 1a,c was supported, whereas Hypothesis 1b was not. Together, the three workplace incivility measures explained 17% of within-person variance of work-to-family conflict.

Model 2 results showed that coworker incivility ($\gamma = 0.39$, $SE = 0.14$, $p < .01$) and outsider incivility ($\gamma = 0.11$, $SE = 0.05$, $p < .05$) were positively related to burnout, supporting Hypothesis 2a,c; supervisor incivility was not related to burnout ($\gamma = 0.19$, $SE = 0.20$, n.s.), failing to support Hypothesis 2b. Together, the three workplace incivility measures explained 46% of within-person variance of burnout. Results from Model 2 also showed that coworker incivility (indirect effect = 0.27, $SE = 0.11$, $p < .05$, 95% CI [0.05, 0.49]) and outsider incivility (indirect effect = 0.08, $SE = 0.04$, $p < .05$, 95% CI [0.005, 0.15]) had indirect effects on work-to-family conflict through burnout, whereas

TABLE 2 Unstandardized coefficients and standard errors of the multilevel model results

Predictors	Model 1 WFC	Model 2 Burnout	Model 2 WFC	Model 3 Burnout	Model 3 WFC
Coworker incivility	.73 (.33) *	.39 (.14) **		.43 (.19) *	
Supervisor incivility	.03 (.35)	.19 (.20)		.10 (.19)	
Outsider incivility	.26 (.12) *	.11 (.05) *		.09 (.04) *	
Burnout t2			.70 (.15) ***		.63 (.17) ***
Burnout t1			.19 (.05) ***	.19 (.05) **	
Coworker incivility * Display rules				.13 (.23)	
Supervisor incivility * Display rules				−.03 (.33)	
Outsider incivility * Display rules				.22 (.09) *	
Display rules				.01 (.42)	

Abbreviation: WFC, work-to-family conflict.

*$p < .05$.

**$p < .01$.

***$p < .001$.

supervisor incivility did not (indirect effect = 0.14, $SE = 0.14$, n.s., 95% CI [−0.14, 0.41]). Thus, Hypothesis 3a,c was supported, but Hypothesis 3b was not.

Model 3 results showed that display rules significantly moderated the relationship between outsider incivility and burnout ($\gamma = 0.22$, $SE = 0.09$, $p < .05$) but not the relationships of coworker incivility ($\gamma = 0.13$, $SE = 0.23$, n.s.) or supervisor incivility ($\gamma = −0.03$, $SE = 0.33$, n.s.) with burnout. Simple slope analyses showed that the relationship between outsider incivility and burnout was significant for those who perceive higher display rules ($\gamma = 0.22$, $SE = 0.07$, $p < .01$) but not for those who perceive lower display rules ($\gamma = −0.05$, $SE = 0.08$, n.s.). In addition, Figure 2 shows that pattern of the interaction between outsider incivility and display rules, suggesting that the positive relationship between outsider incivility and burnout was higher for individuals who perceive higher display rules, thus, supports Hypothesis 4c. Hypothesis 4a,b was not supported.

6 | DISCUSSION

This study examined within-person relationships between experienced workplace incivility from multiple sources (coworkers, supervisors, and outsiders) and targets' work-to-family conflict with a weekly diary
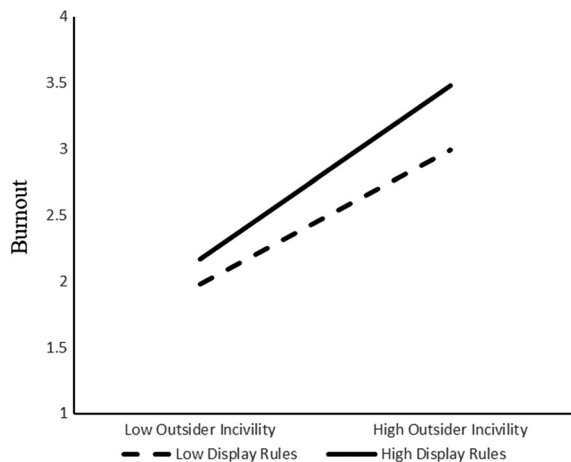
FIGURE 2 Moderating effect of display rules on the relationship between outsider incivility and burnout

survey design. Further, we tested the potential mediating effect of burnout and the moderating effect of display rules in these relationships. Our results supported the hypotheses that experienced weekly workplace incivility from coworkers and outsiders positively related to work-to-family conflict, and burnout mediated these relationships. In addition, display rules exacerbated the relationship between outsider incivility and burnout. Failing to support our hypotheses, we found that supervisor incivility was not significantly related to either work-to-family conflict or burnout.

6.1 | Theoretical and empirical implications

Our findings have several theoretical contributions based on the COR perspective (Hobfoll, 1989). The positive relationships of weekly experience of coworker incivility and outsider incivility with weekly experience of work-to-family conflict provide support for the notion that workplace incivility might deplete employees' important resources (e.g., time, energy, emotional resources, and cognitive resources), leaving them with fewer resources to fulfill family demands and thus experience more work-to-family conflict. Our findings are consistent with Ferguson's (2012) finding that coworker incivility positively predicted work-to-family conflict. However, our findings are opposite to results found by Lim and Lee (2011) in which coworker incivility did not significantly predict work-to-family conflict but supervisor incivility positively predicted work-to-family conflict; in our study, coworker incivility was significantly related to work-to-family conflict, whereas supervisor incivility was not. Moreover, our finding that outsider incivility was also positively related to work-to-family conflict expands the existing knowledge on the incivility–work-to-family conflict relationship.

There are several possible explanations for the inconsistency between findings from our study and Ferguson (2012) and those from Lim and Lee (2011). First, one of the reasons for Lim and Lee (2011) not being able to find a significant relationship between coworker incivility and work–family conflict might have been that their sample was

from Asia where a higher power distance might make the experience of supervisor incivility most prominent and the experience of coworker incivility less stressful. In contrast, in Western cultures where Ferguson (2012) and our study were conducted, coworker incivility might be perceived as more stressful and thus likely deplete targets' resources. Second, we failed to find a significant relationship between supervisor incivility and work-to-family conflict, which might be due to our within-person design over 5 weeks not capturing enough occurrences and variance of supervisor incivility given that our participants might not have a lot of interactions with supervisors during which incivility could occur. In contrast, they are likely to have more frequent interactions with coworkers and outsiders, so incivility behaviors from these two groups are more salient within individuals. This can be reflected by the relatively low mean score of supervisor incivility as compared with coworker incivility or outsider incivility (Table 1). Third, it is also likely that the effect of supervisor incivility might only manifest as a chronic between-person effect instead of a within-person effect because supervisors' occasional incivility incidents might be more likely to be accepted by employees but will become an issue when it repeats over time. This is reflected at the between-person correlations, where participants average supervisor incivility experience across 5 weeks positively correlated with their average burnout level across the same 5 weeks. Nevertheless, we encourage future research to further examine the potential similar and/or different effects of workplace incivility from multiple sources.

Consistent with the COR theory (Hobfoll, 1989, 2001), we found a mediating effect of burnout in relationships of coworker incivility and outsider incivility with work-to-family conflict, contributing to understanding *why* workplace incivility is related to work-to-family conflict. Our results suggest that workplace incivility experiences from coworkers and outsiders over a week can potentially lead to strain reactions (e.g., increased burnout) because of the depletion of physical, emotional, cognitive, and personal resources. Subsequently, when people are burned out, they will possess fewer resources and are more vulnerable to subsequent resource losses (Hobfoll, 1989); thus, they will be less likely to effectively cope with additional demands from the family domain and experience more work-to-family conflict. Our findings are consistent with previous research finding that burnout mediated the relationships of other interpersonal workplace stressors such as abusive supervision (Carlson et al., 2012), customer unethical behavior (Greenbaum et al., 2014), and workplace bullying (Raja et al., 2017) with work-to-family conflict. It is also in line with Taylor et al. (2017) finding that burnout mediated the within-person relationship between experienced incivility and turnover intention. Our findings not only extend our understanding of the relationships between workplace incivility from multiple sources and burnout but also extend our understanding of the potential mediating role of burnout in the relationship between workplace incivility and work-to-family conflict from a resource perspective.

Although this is perhaps the first study to examine display rules as a potential boundary condition of the relationship between workplace incivility and its outcomes, findings are consistent with the propositions from the COR theory that individuals with fewer resources are

more likely to experience resource loss (Hobfoll, 1989). When there is a stronger requirement for employees to display positive emotions and suppress negative ones, this requirement can be perceived as a stable job demand that might deplete individuals' emotional and cognitive resources (e.g., Brotheridge & Lee, 2002; Goldberg & Grandey, 2007). Thus, individuals who perceived stronger display rules are likely to have fewer resources and are thus more likely to be depleted and experience additional resource-depleting events such as workplace incivility. Additionally, our findings highlight the importance of examining not just individual differences as moderators of the effects of workplace incivility but also perceived job characteristics. In addition, our approach is different from prior studies that examined occupational emotional labor requirements by using O*NET ratings, which assumes that all individuals within one occupation experience the same requirements (Bhave & Glomb, 2016). Even though nursing is considered an occupation with high display rules (Glomb, Kammeyer-Mueller, & Rotundo, 2004), our data suggest that there is still variability among their subjective perceptions. Subsequently, nurses who perceive high (vs. low) display rules further feel the experience of workplace incivility to be worse and experience stronger burnout.

The current study joined the few studies (Sliter, Sliter, & Jex, 2012; Tremmel & Sonnentag, 2017) that examined the effects of experienced workplace incivility from both insiders (coworkers and supervisors) and outsiders (patients/visitors) but also extended them by examining both coworker incivility and supervisor incivility as distinct insider sources. When examined together, coworker incivility and outsider incivility positively related to work-to-family conflict through burnout, whereas supervisor incivility failed to do so. This has particularly important implications for employees who have to interact with various groups of people given that customer mistreatment is more frequent than coworker mistreatment for customer service industry employees (Grandey, Kern, & Frone, 2007). In the current case, rude and disrespectful behaviors from coworkers and outsiders seem to be the most detrimental to nurses' burnout, whereas supervisor incivility appears to be less of a concern. The finding that display rules are particularly important for outsider incivility suggests that individuals working in industries involving constant customer interaction are most vulnerable to the detrimental outcomes of workplace incivility.

Our study used a within-person weekly diary method that can capture more dynamic and short-term relationships between workplace incivility and outcomes. Previous research has established that daily workplace incivility positively predicted negative affect (e.g., Tremmel & Sonnentag, 2017; Zhou et al., 2015), and weekly increase in workplace incivility positively predicted subsequent burnout (Taylor et al., 2017). Adding to this increasing but still limited weekly diary approach of examining short-term workplace incivility (Schilpzand et al., 2016), our study found that coworker incivility and outsider incivility were positively related to burnout and work-to-family conflict, whereas supervisor incivility was not. We extend our knowledge of within-person short-term effects of workplace incivility to work-to-family conflict and provide a more holistic picture of how incivility from different sources might differentially related to these outcomes within a short-term time period.

6.2 | Practical implications

The current study has several practical contributions. First, the current study further demonstrates that although workplace incivility is a type of workplace mistreatment with low intensity (Andersson & Pearson, 1999), its negative effects can potentially go beyond work- and health-related outcomes and potentially spill over to the nonwork domain and contribute to work-to-family conflict. Given that work-to-family conflict is critical for employee productivity (Amstad et al., 2011), organizations that are concerned about promoting work-life balance should try to identify if workplace incivility from insiders and outsiders is a potential factor to address. If so, organizations can implement relevant training and intervention programs (e.g., civility, respect, and engagement in the workplace; Osatuke, Moore, Ward, Dyrenforth, & Belton, 2009) to reduce workplace incivility.

Second, the mediating effect of burnout suggests that organizations might provide support to employees who experience increased workplace incivility to better reduce or cope with burnout, and this could potentially reduce the effect of workplace incivility on work-to-family conflict. Thus, organizations should provide additional resources (e.g., supervisor support and organizational support) to people who are more likely to experience incivility and burnout and potentially mitigate the resource loss spiral.

Third, with the current service-dominated economy, many employees have to interact with people from both inside and outside their organizations. Our results suggest that both coworker incivility and outsider incivility can potentially be detrimental to employee burnout and work-to-family conflict; thus, organizations should implement policies, procedures, and practices that can best promote a civil work environment. This is particularly important when employees perceive that their jobs have a higher requirement of displaying desirable emotions and withholding negative emotions when facing negative interpersonal interactions. Thus, supervisors might need to pay special attention to employees who perceive a high demand for emotional labor at work and are meanwhile exposed to workplace incivility as they are most likely to be burned out.

6.3 | Limitations and directions for future research

The current study has several limitations that need to be addressed in future research on workplace incivility. First of all, all of the variables were measured with participants' self-reports, which may raise concerns of common method variance (CMV). However, the concern might be overestimated based on the argument by Spector (2006) that CMV is likely an urban legend, and interaction effects are unlikely to be produced by CMV (Siemsen, Roth, & Oliveira, 2010). In addition, given that we used a within-person design, some potential person-level sources of CMV (e.g., social desirability) have been controlled. Further, most of the variables of interest in the current study (e.g., burnout, work-to-family conflict, and display rules) are about individuals' own feelings and perceptions, which would be difficult to assess without self-report. Nevertheless, we encourage future researchers to

obtain data from multiple sources for comparison purposes. For example, participants' partners might be able to report participants' work-to-family conflict.

A second limitation of the current study is that temporal order cannot be determined based on the study design. Although a weekly within-person design adds new information above and beyond previous cross-sectional designs, it cannot inform us whether the experienced workplace incivility actually causes the outcomes. Therefore, future research that measures people's responses experiencing incivility episodes is strongly encouraged. One way to achieve this for future research is to use event sampling to track people's responses after each episode of workplace incivility.

Third, our measurement of burnout did not specify a timeframe, which might raise concerns that burnout was an outcome instead of the antecedent of work-to-family conflict. However, we do not think this is likely for two reasons. First, our weekly surveys asked participants about their recent (i.e., weekly) experiences with workplace incivility and work-to-family conflict. Given that they were asked to complete weekly measures, they would most certainly assume that was the timeframe, even though a specific timeframe was not provided in the scale itself. Second, although we acknowledged the potential reciprocal relationship between burnout and work-to-family conflict, in the current study, we think there is a theoretical reason to believe burnout could predict work-to-family conflict and not the reverse. In fact, our data supported the notion that the relationship between burnout and work-to-family conflict on the weekly level is likely to be consistent with our theoretical reasoning.[1] Nevertheless, we encourage future researchers to separate measurements with different timeframes of the variables (e.g., measuring state burnout before leaving work and work-to-family conflict from leaving work to the end of a day) to best test the theoretical relationships.

A fourth limitation is that the current study only sampled from a pool of early career nurses who graduated after 2010. It is not clear that these results would generalize to an older population of nurses or to other occupations. It is possible that more experienced nurses might be able to handle outsider incivility more effectively and are less likely to experienced increased burnout. In addition, for occupations with less contact with organizational outsiders, the potential moderating role of display rules might not be applicable. In addition, we did not assess if our participants had a family, so their perceptions of work-to-family conflict could be different (e.g., those who were single and leaving with their parents vs. those who were married with children). Thus, future research could assess their family/marital/children status to see if these factors affect results.

Fifth, the mean levels of incivility (especially for supervisor incivility) were relatively low, but our weekly design did find interesting results on

the relationships of coworker incivility and outsider incivility with burnout and work-to-family conflict, suggesting that even low levels of incivility from coworkers and outsiders (but not from supervisors) could have important negative effects. Nevertheless, a longer timeframe might capture more incivility from all parties and can provide additional evidence on the effects of workplace incivility from multiple sources. Thus, we encourage future research to use other within-person designs (e.g., cross-lagged designs assessing incivility on a monthly basis) to further examine the relationships and explore other potential mediators and boundary conditions of these relationships.

Lastly, the scale we used to measure display rules yielded relatively low reliability (.65). Although this was similar to the reported reliability coefficient in the original study (.69; Wong & Law, 2002), we encourage future research to measure display rules with other alternative measures to further understand its potential moderating role on relationships between employee negative experiences and their responses.

7 | CONCLUSION

Porath and Pearson (2013) suggest that 98% of sample participants have experienced workplace incivility, and Laschinger, Leiter, Day, and Gilin (2009) found that 67.5% and 77.6% of 612 Canadian staff nurses had experienced supervisor incivility and coworker incivility in the previous month, respectively. Given this high prevalence rate, research that focuses on its effects and factors that buffer and exacerbate these effects are important for us to better understand this phenomenon. The current study contributes to this literature by finding that experienced incivility from coworkers and outsiders positively relates to targets' work-to-family conflict through burnout with a weekly diary within-person design and that display rules exacerbated the effect of outsider incivility on burnout. These findings provide insight into how workplace incivility negatively affects targets and how perceived job characteristics can potentially contribute to the effect of workplace incivility.

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[1] We conducted some analyses for lagged effects to better determine the direction of the relationship between burnout and work-to-family conflict. In line with our model, results showed that week t burnout was positively related to week $t + 1$ work-to-family conflict ($\gamma = 0.60$, $SE = 0.14$, $p < .001$), which is similar to the corresponding relationship shown in the paper ($\gamma = 0.70$, $SE = 0.15$, $p < .001$). Yet week t work-to-family conflict was not significantly related to week $t + 1$ burnout ($\gamma = 0.02$, $SE = 0.03$, n.s.). Thus, this suggests that the relationship between burnout and work-to-family conflict on the weekly level is likely to be consistent with our theoretical reasoning in the paper.

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