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Title:

Incivility at Work, Upset at Home? Testing the Cross-Level Moderation Effect of Emotional Dysregulation among Female Nurses from Primary Health Care.

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Abstract

Workplace incivility is a growing problem in nursing. However, most studies that explore this psychosocial risk and its consequences do so considering a single level and a between-person perspective. The aims of the study were to explore whether the effects of experiencing incivility during work-time could explain the daily levels of well-being of nurses at home; and to analyze if that relationship could be moderated by their levels of emotional dysregulation as a trait. This is a multilevel study with diary methodology. The study was carried out in 18 primary health-care centres belonging to Madrid and the Basque Country, in Spain. 94 nurses completed a general questionnaire and 54 of them a diary booklet over 5 consecutive working days in two different moments, immediately after work and at bedtime. The results showed that nurses' emotional dysregulation moderated the relationship between daily workplace incivility and daily fatigue, and positive affect at night at home. However, there were no direct effects of daily incivility on these outcome variables. In conclusion, the presence of difficulties in emotional regulation among nurses can increase the negative effects of daily workplace incivility on their health and well-being.

Keywords: Workplace Incivility; Emotional Dysregulation; Nursing; Well-Being; Diary Study; Cross-Level Analysis.

Introduction

Currently, aggressions and workplace incivility are two significant and growing problems in the nursing profession (Farrell & Shafiei, 2012; Mikaelian & Stanley, 2016). A fact that is consistent with the latest results of the European Working Conditions Survey (Eurofound, 2017), which highlights that the health sector continues to be one in which there is a greater prevalence of adverse social behaviors (e.g., verbal abuse, threats, physical violence, workplace harassment, or humiliating behaviors). In this line, Spector, Zhou, & Che (2011), in an extensive review where they analyzed 136 scientific works with a total sample of 151,347 nurses from different countries, detected percentages of 36.4% for physical violence, 66.9% for nonphysical violence, 39.7% for bullying, and 25% for sexual harassment.

A type of workplace aggression that can occur within organizations is workplace incivility (Lim, Cortina, & Magley, 2008). This is defined as a "low-intensity deviant behavior with ambiguous intent to harm the target, in violation of workplace norms for mutual respect" (Andersson & Pearson, 1999, p. 457). Incivility can include "both subtle and obvious levels of rude and discourteous behavior, exclusion from important work activities, taking credit for another's work, withholding important information, yelling, screaming, verbal attacks, and expression of negative verbal comments in front of others" (Felblinger, 2008, p.235).

Workplace incivility has negative effects on the health and well-being of workers (Cortina, Magley, Williams, & Langhout, 2001). It usually provokes emotions such as anger, frustration, shame, sadness and fear among those who sufferer it (Felblinger, 2008; McNamara, 2012; Porath & Pearson, 2012), besides diminishing their energy and the experience of other positive psychological states (Bunk & Magley, 2013; Giumetti et al., 2013). In the long-term, workplace incivility has been related to higher levels of nurses'

burnout, fatigue and physical discomfort (Fida, Spence-Laschinger, & Leiter, 2018; Leiter, Price, & Spence-Laschinger, 2010; McNamara, 2012). Experiencing incivility can also cause a decrease in the levels of commitment at work and job satisfaction, greater intentions to leave the organization, and the appearance of counterproductive behaviors (Felblinger, 2011; Spence-Laschinger, Leiter, Day, & Gilin, 2009; Lim et al., 2008; Pearson & Porath, 2005; Penney & Spector, 2005; Spence-Laschinger, 2012). Moreover, its consequences will not only affect the worker, but will also extend to patients and organizations because the presence of incivility can cause a decrease in performance, higher rates of absenteeism and a decrease of the quality of care (Cortina et al., 2001; Felblinger, 2011; Mikaelian & Stanley, 2016).

Taking into account these negative effects, attention is drawn to the small body of empirical studies that explore the workplace incivility construct and its consequences among nursing workers. In addition, most empirical works that have explored the construct of workplace incivility in this and other professions have done so considering it as a chronic social labor stressor and through cross-sectional studies. These studies adopt a between-person perspective and they have been enormously valuable to know the different negative effects of exposure to incivility among different individuals in the long term (Cole, Shipp, & Taylor, 2016; Cortina et al., 2001; Schilpzand, De Pater, & Erez, 2016). Nevertheless, at present, there is a call within scientific community to explore workplace incivility from a within-person perspective, exploring its short-term consequences, namely, from a perspective that understands that exposure to incivility and its immediate consequences may vary over time (e.g., throughout the days or weeks) in each individual (Schilpzand et al., 2016; Tremmel & Sonnentag, 2017). Moreover, this call has also extended to explore how personal or situational factors could affect these short-term relationships, adopting a multilevel and transactional approach that studies

how the daily consequences of experiencing incivility at work could be boosted or buffered by variables of a more stable character (Tremmel & Sonnentag, 2017; Zhou, Yan, Che, & Meier, 2015). Thus, the aims of this study were twofold: first, to explore whether the effects of experiencing workplace incivility during work-time could explain the daily levels of nurses' well-being at home, i.e., their levels of fatigue and positive affect at bedtime from a within perspective; secondly, to analyze if those relationships could be moderated by their levels of emotional dysregulation, taking into account a transactional (work context and person) and a cross-level (day and person levels) perspective.

The outcome variables in this study are fatigue and positive emotions at night, and the choice of these two variables was made based on several reasons. First, incivility can affect both the emotional and physical health of workers, according to workplace incivility models (Lim et al., 2008). However, many authors have drawn attention to the fact that the majority of studies that explore the consequences of incivility focus on variables related to psychological well-being, paying very little attention to variables of a psychosomatic nature (Cortina et al., 2001) especially in diary studies (Meier et al., 2013). In this sense, we believe that the incorporation in our study of fatigue as an outcome variable can contribute significantly to the existing literature because it includes aspects such as levels of physical energy, exhaustion, physical discomfort, or the level of drowsiness of workers.

On the other hand, regarding the study of affect, the literature has reflected a more evident harmful effect of daily incivility on workers negative affect (Garrosa et al., 2015; Tremmel & Sonnentag, 2017; Zhou et al., 2015). However, there are very few studies that explore the effects of incivility on positive affect on a daily basis, and these studies are not conclusive (Garrosa et al., 2015). In this way, through the incorporation of positive

affect as an outcome variable, this study, aims to contribute to a deeper understanding of the emotional effects of daily incivility, taking into account other variables that could moderate this relationship, such as the worker's emotional dysregulation.

Emotional Dysregulation as a Risk Factor against Workplace Incivility

The impact of incivility experiences on workers' health and well-being can be boosted or buffered by certain personal factors. Thus, variables such as temperament (Andersson & Pearson, 1999), emotional intelligence (Bibi, Karim, & Din, 2013), self-efficacy (Fida et al., 2018) or resilience (Spence-Laschinger, Wong, Regan, Young-Ritchie, & Bushell, 2013), can moderate the relationships between incivility and negative affectivity, mental health, or counterproductive behaviors directed against the organization. However, once again most of the studies that have explored this moderating role have done so either from a single level of analysis and from a cross-sectional perspective, or spanning long periods in the case of longitudinal studies. By contrast, the literature that explores how workers respond to incivility in the short term and based differentially on their personal characteristics is quite limited (Beattie & Griffin, 2014; Meier & Gross, 2015; Nicholson & Griffin, 2015; Zhou et al. 2015). In this sense, individual differences can also influence how workers respond to job events immediately after leaving work or when they get home (Liu, Wang, Zhan, & Shi, 2009). For example, in the study carried out by Zhou et al. (2015), in those days in which workers experienced more workplace incivility, those with greater emotional instability, were the individuals showing most negative affect at the end of their workday (showing a boosting effect). On the contrary, those with greater emotional stability behaved in a more calm and self-confident way, which caused a lower level of negative affect at home.

A personal factor related to emotional instability, although conceptually different is emotional dysregulation. Gratz and Roemer (2004) conceptualized emotion dysregulation

as a multidimensional construct involving the following: lack of awareness, understanding, and acceptance of emotions; lack of access to adaptive strategies for modulating the intensity and/or duration of emotional responses; an unwillingness to experience emotional distress as part of pursuing desired goals; and the inability to engage in goal-directed behaviors when experiencing distress. The effect of all these emotional regulation difficulties has been studied separately, that is, analyzing how each difficulty can be related to different health indicators, or as a global index of emotional dysregulation (Hill & Updegraff, 2012; Roemer et al., 2009). In one way or another, it has been proven that presenting difficulties of emotional regulation is a factor associated with disorders such as anxiety or depression, among other emotional problems (Mennin, Holaway, Fresco, Moore, & Heimber, 2007; Blanco-Donoso, Garrosa, Demerouti, & Moreno-Jiménez, 2017).

Workers emotional dysregulation could moderate the relationship between incivility, well-being and health on a daily basis. The way in which workers regulate their emotions can be a key resource to confront and mitigate the experiences of incivility and its effects when they get home, as the individuals who appropriately regulate their emotions can use more adaptive coping mechanisms (Bai, Lin, & Wang, 2016; Ten Brummelhuis & Bakker, 2012). In this sense, having emotional regulation skills can allow the worker who experiences incivility to activate other resources or personal coping strategies, in addition to facilitating a greater recovery of negative work events that may result in greater well-being upon arriving home (Ten Brummelhuis & Bakker, 2012). By contrast, workers who have greater difficulties in regulating their emotions may have higher levels of exhaustion, fatigue and negative emotions on a daily basis (Blanco-Donoso et al., 2017). However, to the best of our knowledge, there are not studies that have yet addressed this construct in the organizational field from a cross-level perspective and as a moderating

variable between the experiences of incivility at work and daily well-being (i.e., experience of positive affect and low levels of fatigue). Considering all these arguments, four hypotheses were formulated:

Hypothesis 1: Emotional dysregulation (as trait) will be positively related to fatigue at night at home

Hypothesis 2: Emotional dysregulation (as trait) will be negatively related to positive affect at night at home.

Hypothesis 3: Emotional dysregulation (as trait) will moderate the relationship between daily workplace incivility and fatigue at night at home. Specifically, nurses with higher levels of emotional dysregulation will show higher levels of fatigue at night on days experiencing more incivility at work (boosting effect).

Hypothesis 4: Emotional dysregulation (as trait) will moderate the relationship between daily workplace incivility and positive affect at night at home. Specifically, nurses with higher levels of emotional dysregulation will show lower levels of positive affect at night on days experiencing more incivility at work (boosting effect).

Daily incivility at work and its short-term effects

Workplace incivility can have immediate and short-term effects on the well-being and workers' health (Garrosa, Carmona-Cobo, Moreno-Jiménez, & Sanz-Vergel, 2015, Nicholson & Griffin, 2015, Zhou et al., 2015). However, most studies that have been carried out, have conceptualized incivility as a chronic job stressor, and they have asked workers for their experience of incivility in recent months or years, associating these experiences with well-being and health in general terms (Cortina et al., 2001; Leiter et al., 2010). By contrast, recent studies have shown that the experiences of incivility at work can cause different emotional states and behaviors immediately, when leaving work (Zhou et al., 2015), upon arriving home at night (Garrosa et al., 2015), or the next day

(Tremmel & Sonnentag, 2017). For example, in the diary study conducted by Nicholson & Griffin (2015), workers who experienced incivility in the workplace needed more time to recover from negative work experiences because they were not able to detach from work, which caused them a greater psychological discomfort on a daily basis. In the same way, in the diary study carried out by Tremmel & Sonnentag (2017), incivility in the workplace predicted negative affect at bedtime. Namely, these studies would support the fact that the effects of negative job events do not dissipate when workers finish their workday, but that they can persist at home (Meier, Gross, Spector, & Semmer, 2013; Nicholson & Griffin, 2015, Tremmel & Sonnentag, 2017). Accordingly, studying these spill-over effects from a daily perspective could be relevant because it allows us to observe more closely the negative spiral that can be triggered with this type of disrespectful behaviors. Thus, it would be important to analyze the short-term effects of workplace incivility with the ultimate goal of proposing more immediate actions in order to prevent long-term effects. However, as far as we know, there are still no studies in the nursing professional group that have addressed the variations that may occur throughout the days in the experience of incivility, as well as its short-term effects on worker's personal life. Taking into account the aforementioned arguments, the following hypothesis is proposed:

Hypothesis 5: Daily workplace incivility will be positively related to fatigue at night at home

Hypothesis 6: Daily workplace incivility will be negatively related to positive affect at night at home.

Insert figure 1 about here

Theoretical Background

The *Resource Conservation Theory (COR-theory)* (Hobfoll 2002, 2011) provides a very good theoretical framework in order to explain the relationships that we hypothesize in this study (Taylor, Bedeian, Cole, & Zhang, 2017; Zhou et al., 2015). The main principle of this theory is that people are motivated to reach, maintain and accumulate those things and resources that they value (e.g., objects, personal characteristics, energy, social support, etc.). When these resources are lost or threatened, the stress and exhaustion response may appear. In this sense, incivility could be considered a threat to the worker's health and personal and social well-being, since it would reflect the potential loss of a positive and friendly work context. For example, research has shown that when workers are facing situations of incivility, their emotional, energy and cognitive resources can be compromised and translated into a loss of well-being and health (Demskey, Fritz, Hammer, & Black, 2018; Hershcovis, Cameron, Gervais, & Bozeman, 2018; Taylor et al., 2017; Zhou et al., 2015).

On the other hand, another of the basic principles of the *COR-theory* is that people in adverse situations mobilize additional resources to face external demands. If the individual already has a good pool of personal resources, coping with adversity will be more successful. However, if the person hardly has the resources to face these demands, then their impact on health and well-being will be greater (Hobfoll, 2002). In this sense, the emotional dysregulation of the nurses may reflect a depletion of their personal and emotional resources that, in the face of situations of incivility, it could lead to a severe increase of their physical and emotional discomfort. On the contrary, good emotional regulation skills could facilitate the activation of other coping resources in the face of adverse situations and therefore buffer its negative effect (Hershcovis et al., 2018; Zhou et al., 2015). In short, according with COR-Theory, workers with more personal resources

will be less vulnerable to a decrease in well-being and health in the face of adverse contexts (Hobfoll, 2011).

The present study

Incivility is a common problem in the workplace today. There is abundant literature on its long-term effects, considering incivility as a chronic job stressor and from a between-person perspective. However, it has not been studied in depth how the daily experience of incivility can affect the worker day-to-day, both inside and outside the workplace, and based on the possible variations that could occur in the experience of incivility within the same worker throughout the days (Beattie & Griffin, 2014; Nicholson & Griffin, 2015; Tremmel & Sonnentag 2017; Zhou et al., 2015). Our diary study contributes to the emerging literature that investigates the short-term effects of incivility in the workplace and how these effects can be transferred to the personal life of the worker when he or she is at home (Garrosa et al., 2015; Nicholson & Griffin, 2015; Tremmel & Sonnentag, 2017). In this way, with a diary-based methodology, we capture in a more optimized way the experiences of incivility and its consequences on a daily basis (Jex, Geimer, Clark, Guidroz, & Yugo, 2010). In addition, by studying the role of emotional regulation in the association between incivility and daily well-being, we deepen into the factors that can boost or buffer the daily experience of negative events at work (Liu et al., 2009; Meier & Gross, 2015; Schilpzand et al., 2016). Thus, the multilevel design of the current research implies that emotional dysregulation will act as a cross-level moderator of the within-person relationships (Fisher & To, 2012).

Method

Sample and Procedure

Nurses from ten primary healthcare centres in Madrid and from eight primary healthcare centres in the Basque country (Spain) participated in this study. With respect to Madrid, we contacted with the Primary HealthCare Management of the Central Area of Madrid. Then, ten centres and their respective supervisors showed interest in participating in this study, offering to their subordinates the possibility to participate. With respect to the Basque country, participants were recruited through a snowball technique, using the social networks of the researchers. The study protocol was approved by the Ethical Committee of the Universidad Autónoma de Madrid, and all participants gave informed consent.

Those nurses who wanted to participate voluntarily received a package that included: a letter describing the objective of the study, and the general and daily questionnaires. Firstly, they had to fill in the general questionnaire and subsequently, they had to complete daily questionnaires (paper-and-pencil surveys) two times a day (in the afternoon after work and at night before going to bed) for five consecutive workdays from Monday to Friday. In order to reduce the common-method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), the scales of the diary study were not administered at the same time. More specifically, the scale of incivility was administered after leaving work in the afternoon and the scales of fatigue and positive affect at night before going to bed, exclusively. During the study, researchers regularly contacted the participants and supervisors to sustain their participation. To guarantee confidentiality, responses were matched using anonymous codes.

Of the 114 general and 92 diary surveys distributed, 94 general and 54 diary surveys were returned (response rate = 82% and 58%, respectively). Although this is a considerable sample for a diary study with good statistical power ($N = 54 * 5 \text{ days} = 270$

observations), there were 40 nurses who completed the general questionnaire, but not the diary survey, meaning that our results could be affected by non-response bias. To test for such a bias, we performed an attrition analysis to examine differences between both groups and the results showed that there were no significant differences in fatigue ($t = -1.54, p > .05$), positive affect ($t = -.334, p > .05$), workplace incivility ($t = -.039, p > .05$), and emotional dysregulation ($t = -.042, p > .05$). However, there were significant differences between both groups in age, tenure and hours of work per week: those older nurses, with more tenure in their jobs and more working hours completed in higher proportion the diary surveys. For this reason, these variables were controlled in the analyses.

Regarding socio-demographic characteristics, all nurses were female (only two men answered the daily questionnaires). In this sense, with the aim of homogenizing the final sample and reducing possible biases in the generalization of our results, these two participants were excluded. The mean age was 46.87 years ($SD = 11.28$; range from 23 to 65 years). Most employees worked 35.23 hours per week ($SD = 4.84$) and the average years of tenure in their work centres was 8.78 years ($SD = 9.25$). All the professionals worked the morning shift. Our sample size met the minimum number of 30 proposed by Scherbaum & Ferreter (2009) for diary studies and multilevel analysis.

Measures

General and Daily Workplace Incivility. These were measured using the *Workplace Incivility Scale* (Cortina et al., 2001), which measures the frequency that participants have experienced incivility in their current job (e.g., disrespect, rudeness). The questionnaire consists of 7 items with a five-point Likert-type scale, ranging from 0 (*never*) to 4 (*most of the time*). Sample items include “put you down or was condescending to you” and “made demeaning or derogatory remarks about you”. The seven items were presented in

the general and daily surveys. In the last case, after completing the work for the day, participants reported their experienced incivility with the items adjusted to refer to day-level experiences of incivility (e.g., “Today, my coworkers or supervisor have made humiliating or degrading comments about me”). In this study, Cronbach's alpha for the general measure was $\alpha = .90$, and ranging from .88 to .94 ($M = .91$) for the daily measure.

Emotional Dysregulation (Trait). This construct was measured through the Spanish adaptation (Hervás & Jódar, 2008) of the *Difficulty of Emotion Regulation Scale (DERS;* Gratz & Roemer, 2004). The scale used for this study contains 28 items divided into 5 subscales: Lack of Emotional Awareness (e.g., “I am attentive to my feelings”; reversed item), Lack of Emotional Clarity (e.g., “I have no idea how I am feeling”), Emotional Non-acceptance (e.g., “When I’m upset, I feel guilty for feeling that way”), Emotional Interference (e.g., “When I’m upset, I have difficulty getting work done”), and Lack of Emotional Control (e.g., “When I’m upset, I feel out of control”). For this study, we calculated and used a general index of emotion regulation difficulties, which also showed good psychometric properties in the Spanish validation study of this scale (Hervás & Jódar, 2008). The instrument format is a graduated Likert-type scale, ranging from 1 (*almost never*) to 5 (*almost always*). The higher the score, the greater the emotion regulation difficulty. In this study, Cronbach's alpha for the general measure was $\alpha = .94$.

General and Momentary Fatigue at Night. Fatigue was measured with the Spanish version (González, Moreno, Garrosa, & López, 2005) of the *Swedish Occupational Fatigue Inventory (SOFI;* Ahsberg, Gamberale, & Kjellberg, 1997). This version of *SOFI* considers five dimensions of fatigue (3 items each): Lack of Energy (e.g., “In general, I feel drained”), Physical Effort (e.g., “In general, I feel palpitations”), Physical Discomfort (e.g., “In general, I feel my muscle are tense”), Lack of Motivation (e.g., “In general, I feel uninterested”), and Sleepiness (e.g., “In general, I feel sleepy”). Participants were

asked to rate on an 11-point scale the extent to which the expressions described their own feelings, ranging from 1 (*not at all*) to 11 (*very much*). For this study, we calculated and used a general index of fatigue. Daily fatigue at night was measured with the same scale but modified, so that the items referred to the present moment (e.g., “At this moment, I feel drained”). In this study, Cronbach's alpha for the general measure was $\alpha = .94$, and ranging from .93 to .95 ($M = .93$) for the daily measure.

General and Momentary Positive Affect at Night. Positive affect was measured with the Spanish short version (Robles & Páez, 2003) of the *Positive and Negative Affect Schedule* (PANAS; Mackinnon et al. 1999). The Positive subscale assesses with five items the general tendency to feel positive emotions (e.g., “inspired” or “determined”). Participants were asked to rate on a 5-point scale the extent to which the expressions described their own feelings, ranging from 1 (*very slightly*) to 5 (*extremely*). Daily positive affect at night was measured with the same scale but modified, so that the items referred to the present moment (e.g., “At this moment, I feel inspired”). In this study, Cronbach's alpha for the general measure was $\alpha = .82$, and ranging from .84 to .88 ($M = .87$) for the daily measure.

Data analysis

Hierarchical linear modeling was used to test our hypotheses because the current data included variables from two levels, with days (Level 1; $N = 270$ study occasions) nested within individuals (Level 2; $N = 54$ participants). Data was analyzed using MLwiN 2.28 software (Rasbash, Charlton, Browne, Healy, & Cameron, 2013). Following Ohly, Sonnentag, Niessen, & Zapf (2010), we centered predictor variables at the person level around the grand mean (Level 2: emotional dysregulation as a trait and general fatigue and positive affect), and predictor and outcome variables at the day level around the respective person mean (Level 1: daily workplace incivility, fatigue and positive affect at

night at home). Interpretations of our results based on stable differences between persons can be ruled out because we used person-level variables as control variables before entering day-level variables in subsequent models of analysis (Nezlek 2012). In this study, significant interactions indicated that the effect of daily workplace incivility on fatigue and positive affect at night at home depends on the Level 2 variable (i.e., cross-level interaction). Simple slope tests were conducted following suggestion in Preacher, Curran, & Baue (2006) for significant interactions.

Results

Preliminary Analyses

Table 1 shows the means, standard deviations, intra-class correlations, reliability of day-level and general measures, and bivariate correlations among all the study variables. In order to examine the proportion of variance that is attributed to the different levels of analysis, we also calculated the intra-class correlation (ICC) for each day-level variable. Results showed that 68% of the variance in daily workplace incivility, 84% of the variance in fatigue at night at home, and 55% in positive affect at night at home was attributable to within-person variations, thus justifying our multilevel approach (Fisher & To 2012).

The average levels of general incivility ($M = 0.86$) and daily incivility were low (ranging from 0.13 to 0.24 over the 5 days) (see note in table 1).

Insert table 1 about here

Hypotheses Testing

We calculated four multilevel models for each outcome variable. In Model 1, we entered the control variables (i.e, age, tenure, hours of work per week and the outcome

trait). In Model 2 and 3, we entered the main effects of predictors, namely the experience of daily workplace incivility (Level 1) and emotional dysregulation (Level 2), respectively. In Model 4, we entered the interaction term between the daily experience of workplace incivility and emotional dysregulation. We tested the improvement of each model over the previous one by computing the differences of their log likelihood statistic $-2*\log$ and submitted this difference to a χ^2 -test.

With regard to *Hypothesis 1 and 2*, nurses' emotional dysregulation was neither significant and positively related to daily fatigue at night at home ($\beta = -.057$, $SE = .192$, $t = -.29$, $p < .05$; nor significant and negatively related to daily positive affect at night at home ($\beta = .078$, $SE = .128$, $t = 0.60$, $p > .05$) (see tables 2 and 3, model 4). Therefore, the results of this study did not show direct effects of emotional dysregulation as a trait on the levels of fatigue and positive affect at night at home.

Insert table 2 about here

Insert table 3 about here

However, according to *Hypothesis 3*, nurses' emotional dysregulation levels moderated the relationship between daily workplace incivility and daily fatigue at night at home ($\beta = .732$, $SE = .291$, $t = 2.51$, $p < .01$). Furthermore, the interaction model showed a significant improvement in explained variance over the previous model ($-2x \log = 6.21$, $df = 1$, $p < .01$). To examine the interaction patterns in more detail, we conducted simple slope tests using the online tool suggested by Preacher, Curran, & Bauer (2006). Thus, simple slope tests showed that workplace incivility were more significant and positively related to fatigue at night at home among nurses with higher levels of emotional dysregulation ($\gamma = 1.75$, $SE = 0.704$, $z = 2.49$, $p < .01$), whereas it was unrelated among nurses with lower levels of emotional dysregulation ($\gamma = 0.292$, $SE = 0.282$, $z = 1.032$, $p > .05$) (see figure 2).

Nurses emotional dysregulation also moderated the relationship between daily workplace incivility and daily positive affect at night at home, in accordance to *Hypothesis 4* (see model 4 in table 3) ($\beta = -0.448$, $SE = .195$, $t = -2.29$, $p < .05$). In this case, the interaction model also showed a significant improvement in explained variance over the previous model ($-2x \log = 5.21$, $df = 1$, $p < .05$). Here, simple slope tests showed that workplace incivility was more significant and negatively related to positive affect at night at home among nurses with higher levels of emotional dysregulation ($\gamma = -1.378$, $SE = 0.680$, $z = -2.02$, $p < .05$), whereas it was unrelated among nurses with lower levels of emotional dysregulation ($\gamma = -0.370$, $SE = 0.260$, $z = -1.418$, $p > .05$) (see figure 3).

Insert figure 2 about here

Insert figure 3 about here

Finally, in contrast to *Hypothesis 5* and *6*, daily workplace incivility was neither significant and positively related to daily fatigue at night at home ($\beta = -.057$, $SE = .192$, $t = -.29$, $p < .05$), nor significant and negatively related to daily positive affect at night at home ($\beta = .078$, $SE = .128$, $t = 0.60$, $p > .05$) (see table 2 and 3, model 4). Therefore, the results of this study did not show direct effects of workplace incivility on the levels of fatigue and positive affect on a daily basis.

Discussion

The aims of this study were twofold: firstly, to explore whether the effects of experiencing workplace incivility during work-time could explain the daily levels of nurses' well-being at home from a within-person perspective, and secondly, to analyze if that relationship could be moderated by the nurses' levels of emotional dysregulation. Thus, this is the first study that examines the cross-level and within-person associations between daily workplace incivility, emotional dysregulation, and daily well-being outcomes in the nursing field. The study contributes to the emerging literature that

explores the possible variations that can occur throughout the days in the experience of workplace incivility and its consequences within the same individual, and to the research about more stable resources that would help to deal with those daily experiences (Meier & Gross, 2015; Zhou et al., 2015). Analyzing the immediate consequences of incivility and the resources that can mitigate them can help us to implement earlier intervention strategies that contribute to stop the negative spiral of health and well-being impairment that could also initiate behaviors of incivility in the workplace (Andersson & Pearson, 1999).

Overall, the results of this study revealed that there were significant intra-individual fluctuations in workplace incivility throughout days, in line with previous literature (Garrosa et al., 2015; Tremmel & Sonnentag, 2017; Zhou et al., 2015). Moreover, emotional dysregulation significantly moderated the within-person workplace incivility-well-being associations. Specifically, emotional dysregulation showed to amplify the negative impact of workplace incivility on daily levels of fatigue, in such a way that those nurses with higher levels of emotional dysregulation showed higher levels of fatigue at home at night on those days that had experienced incivility at work (boosting effects). These results could be interpreted from the *COR-Theory*, and they would reflect that among those workers with less personal resources, namely emotional dysregulation, the loss of other resources, i.e., energy, when faced with adverse situations, that is, workplace incivility, is higher (Hobfoll, 2002, 2011). Moreover, emotional dysregulation can cause the worker to be confused by the experiences of incivility and the emotions that they provoke, not being clear about their feelings, rejecting them or even developing a chain of impulsive behaviors that end up draining their energy levels.

On the other hand, in the case of positive affect, emotional dysregulation showed also to boost the negative impact of the incivility, in such a way that those nurses with higher

levels of emotional dysregulation presented lower levels of positive affect at night at home on those days that they had experienced incivility at work. Probably, workers with emotional dysregulation are not able to mitigate the negative impact of negative work experiences at home, since they are unable to implement more adaptive coping strategies (Bai et al., 2016; Tem Brummelhuis & Bakker, 2012). In addition, these workers may not be able to get involved in other activities or tasks that could increase their levels of positive affect when they experiencing negative events (Garrosa et al., 2015). Moreover, according to the model of Gratz and Roemer (2004), in the face of stressful events at work, i.e., incivility, workers with higher levels of emotional dysregulation could be affected to a greater extent in their levels of well-being since they may feel more confused with their emotions, feel more rejection experiences, be unable to control their emotions and keep moving toward their goals. This fact does not imply that emotional dysregulation is the cause of workplace incivility, but that maladaptive emotional regulation can reduce well-being levels in the victims of incivility at work, showing a boosting effect of its negative consequences.

This study could not establish that workplace incivility was directly related to the levels of fatigue and positive affect on a daily basis. The study also did not reflect a direct effect of emotional dysregulation as a trait on these daily outcomes. These results contrast with other diary studies that reflect that incivility and emotional dysregulation affects the levels of fatigue and negative affect of the workers when they are at home (Blanco-Donoso et al., 2017; Garrosa et al., 2015; Tremmel & Sonnentag, 2017; Zhou et al., 2015). In the case of fatigue at night, being a psychosomatic indicator, perhaps a week of evaluation is a short time to observe these relationships on a daily basis. In the case of positive affect, these results show the independence of positive and negative affect (Dimotakis, Scott, & Koopman, 2011; Watson, 2000) and resemble other diary studies in

which no association was found between incivility and positive affect (Garrosa et al., 2015). In addition, the absence of direct effects of daily incivility and emotional dysregulation could also be due to factors such as the low sample size or the voluntary participation of the professionals in this study, which could be underestimating the real impact of these predictor variables on their well-being. By contrast, what this research clearly reveals is that both, daily workplace incivility and the workers emotional dysregulation can interact with each other in order to explain the daily levels of well-being.

Limitations and future research

The current study has several limitations. First, we assessed all data with self-report measures, which raises concerns about common-method variance. However, the self-report measures are essential to assess affective experiences. Moreover, in this study some actions were taken to reduce this potential threat. On the one hand, by using person-centred scores in the analyses, we eliminated the potential influence of response tendencies stemming from individual differences and, thereby, reduced the problems associated with common-method variance. On the other hand, by separating the predictor variable from the outcome variable in time (afternoon and evening) we also contributed to reduce this threat (Podsakoff et al., 2003).

Secondly, although this is one of the first studies exploring workplace incivility and its consequences from a multilevel perspective in the nursing field, the low sample size of this study and its voluntary nature compels us to be cautious about the generalization of its results. In this regard, we must take into account the difficulty and commitment that implies that workers respond to the measures for 5 days in two moments per day. However, multilevel approach affords more statistical power than traditional between-

subjects techniques, and the sample of this study would reach the minimum recommended criterion (Scherbaum & Ferreter, 2009).

Thirdly, we used an overall index of emotional dysregulation. Although the internal consistency of this overall scale was good in our sample and in other studies (Gratz & Roemer, 2004; Hervás & Jódar, 2008), this procedure does not offer the possibility of knowing the specific role of each emotional dimension. However, the main interest of this study was to conceptualize difficulties in emotion regulation as a global vulnerability factor (emotional dysregulation) and to explore its specific boosting or buffering role between the incivility-well-being associations. Nevertheless, future research should analyse the moderating effects of each emotion regulation difficulty on workers' well-being in the face of incivility. Additionally, it would be interesting that, in future studies, researchers continue deepening in the mediating mechanisms that help us to understand why the effects of incivility at work persist upon arriving home, or how they could affect our family relationships.

Fourthly, the results of this study do not allow us to know if the effects of daily workplace incivility on the daily levels of health and well-being are different depending on who exercises uncivil behaviors (co-workers or supervisors). In this sense, in future studies it would be advisable to measure incivility from both sources separately.

Finally, participants in our study were exclusively women, and emotion regulation difficulties and its consequences in the face of workplace incivility could vary by gender (Wang, Repetti, & Campos, 2011). Although is well known the overrepresentation of the female gender in nursing profession, future studies should try to replicate the results with a representative sample of males.

Practical implications

This work has several practical implications. First, it is important that organizations do not wait for the appearance of visibly aggressive behavior before they intervene in the field of the prevention of work conflicts and their consequences. On many occasions, less overt behaviors such as those described in this work, have the potential to impact on the health of workers in the short term and therefore provoke long-term consequences. At the organizational level, it is essential to establish an organizational culture that is committed to zero tolerance with aggressive and disrespectful behavior that threatens the dignity of people. At the same time, organizations must foster positive leadership and the leader must guarantee safe and healthy work environments for all of their workers. It is also the responsibility of the leader and the rest of the team members to guarantee a positive work climate, where positive work interactions and civic behaviors that imply treating others with dignity are reinforced, thus preserving social norms of respect. Organizations should also offer training to their workers on what incivility is, its signs, its causes and consequences, as well as providing tools that allow them to face these adverse situations. In this sense, it would be interesting for the organization to offer learning spaces to its workers on how to manage conflicts with peers and supervisors and adaptive coping strategies through courses, workshops, groups, etc. The results of this study highlights the importance that workers acquire emotional regulation skills in order to mitigate the negative impact that experiences such as incivility have on their health and well-being. Training aimed at improving the emotional competences of the workers, their assertiveness, or their ability to disconnect from work and relax when they get home can be very useful in order to prevent the negative effects of incivility at work.

To conclude, the interesting achievement of this study is that it shows that there are daily variations in incivility throughout the days, and that these variations affect the levels of fatigue and positive affect when another variable such as emotional dysregulation

interacts with daily incivility. Therefore, the role of the worker's emotional dysregulation is highlighted. Thus, when the level of emotional dysregulation is high, the negative effect of those daily experiences of workplace incivility can increase in terms of higher levels of fatigue and lower levels of positive affect at night at home. To our knowledge, this is the only study to address the interactive role of incivility and emotional dysregulation using a daily methodology and within a group of health professionals.

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Table 1.

Means, standard deviations, intra-class correlations, Cronbach's alphas and correlations among variables.

Variables	M	Range	SD	ICC	α	1	2	3	4	5	6	7
1. General WI	.86	0-4	.74		.90	1	.24*	.23*	-.01			
2. ED (trait)	1.93	1-5	.63		.94	.12*	1	.51**	-.48**			
3. General Fatigue	3.76	1-11	2.06		.94	.28**	.48**	1	-.23*			
4. General PA	3.63	1-5	.72		.82	-.03	-.48**	-.17**	1			
5. Daily WI	.18 ^a	0-4	.53	.68	.92	.54**	.15*	.41**	-.25**	1		
6. Fatigue at night at home	3.47	1-11	2.06	.84	.94	.17**	.42**	.76**	-.17**	.41**	1	
7. PA at night at home	2.39	1-5	.81	.55	.87	.08	-.22	-.24**	.26**	-.06	-.35**	1

Note: WI = Workplace Incivility; ED = Emotional Dysregulation; PA = Positive Affect.

Above the diagonal appear the correlations between the variables studied in the full sample (N = 94), while below the diagonal the correlations appear between the variables studied in the sample that completed the daily survey (N = 54 participants* 5 days = 270 observations).

α = Cronbach's alpha. For daily measures, we calculated the mean (in parentheses) and range between five days.

*ICC= intra-class correlation for daily measures; M = mean; SD= standard deviations

^a = Mean over the five reported days (day 1= .13; day 2= .17; day 3= .14; day 4= .24; day 5= .21)

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

Table 2.

*Multilevel estimates for models predicting fatigue at night at home (N=54 nurses*5days=270 statistical observations)*

Variables	Null Model			Model 1			Model 2			Model 3			Model 4		
	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>
Intercept	3.46	.26	13.31***	3.46	.15	22.07***	3.46	.15	22.07***	3.46	.15	22.21***	3.46	.15	22.21***
Age ^a				-.02	.01	-1.47	-.02	.01	-1.47	-.02	.01	-1.68	-.02	.01	-1.68
Hours of work per week ^a				-.02	.06	-.43	-.02	.06	-.43	-.03	.06	-.46	-.03	.06	-.46
Tenure				.02	.01	1.41	.02	.01	1.41	.02	.01	1.47	.02	.01	1.47
General Fatigue ^a				.68	.07	9.67***	.68	.07	9.67***	.64	.08	8.00***	.64	.08	8.00***
Daily WI ^b							.07	.18	.42	.07	.18	.41	-.05	.19	-.29
ED (trait) ^a										.29	.29	1.00	.29	.29	1.00
Daily WI X ED trait ^c													.73	.29	2.51**
-2 X Log(lh)		815.12			729.65			729.47			728.47			722.25	
Difference of -2 X Log					85.47***			.17			1.00			6.21**	
df					3			1			1			1	
Level 1 intercept variance (SE)		.65(.06)			.65(.06)			.65(.06)			.65(.06)			.63(.06)	
Level 2 intercept variance (SE)		3.52(.70)			1.15(.25)			1.15(.25)			1.12(.24)			1.13(.24)	

Note: WI = Workplace Incivility; ED = Emotional Dysregulation; PA = Positive Affect

^a Person-Level variables; ^b Day-Level variables. ^c Cross-Level interaction

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

SE = Standard errors

Table 3.

*Multilevel estimates for models predicting positive affect at night at home (N=54 nurses*5days=270 statistical observations)*

Variables	Null Model			Model 1			Model 2			Model 3			Model 4		
	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>
Intercept	2.39	.08	26.89***	2.40	.08	28.24***	2.40	.08	28.24***	2.40	.08	28.24***	2.40	.08	28.24***
Age ^a				.00	.00	.55	.00	.00	.55	.00	.00	.44	.00	.00	.44
Hours of work per week ^a				.02	.03	.66	.02	.03	.66	.01	.03	.52	.01	.03	.52
Tenure				-.01	.00	-1.11	-.01	.00	-1.11	-.01	.00	-1.22	-.01	.00	-1.22
General PA ^a				.31	.12	2.53**	.31	.12	2.53**	.24	.14	1.66	.24	.14	1.66
Daily WI ^b							-.00	.12	-.04	-.00	.12	-.04	.07	.12	.60
ED (trait) ^a										-.16	.15	-1.06	-.16	.15	-1.06
Daily WI X ED (trait) ^c													-.44	.19	-2.29*
-2 X Log(lh)		536.69			502.00			502.00			500.88			495.67	
Difference of -2 X Log					34.69***			.00			1.12			5.21*	
df					3			1			1			1	
Level 1 intercept variance (SE)		.30(.02)			.29(0.02)			.29(.02)			.29(.02)			.28(.02)	
Level 2 intercept variance (SE)		.36(.38)			.31(.07)			.31(.07)			.30(.07)			.30(.07)	

Note: WI = Workplace Incivility; ED = Emotional Dysregulation; PA = Positive Affect

^a Person-Level variables; ^b Day-Level variables. ^c Cross-Level interaction

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

SE = Standard errors

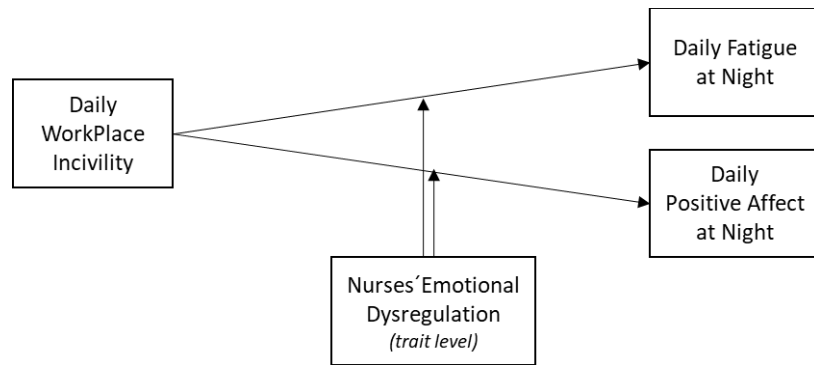


Figure 1. Research model

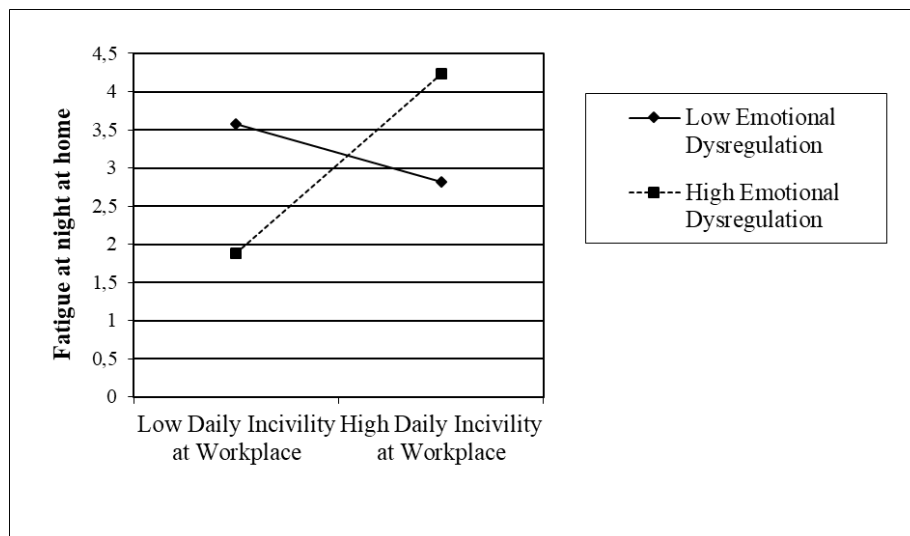


Figure 2. Cross-level interaction between daily workplace incivility and emotional dysregulation in predicting fatigue at night at home.

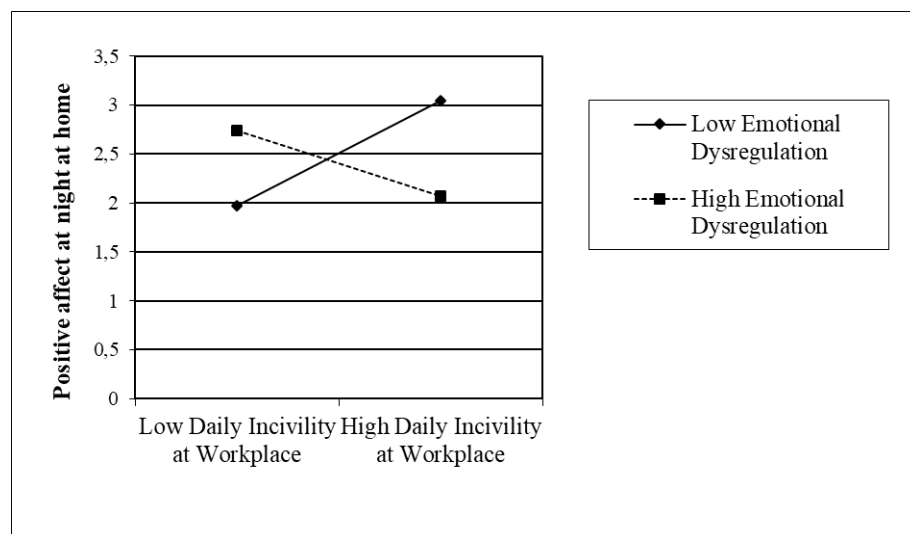


Figure 3. Cross-level interaction between daily workplace incivility and emotional dysregulation in predicting positive affect at night

