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Nanette L. Yragui

Washington State Department of Labor & Industries

Caitlin A. Demsky

Portland State University

Leslie B. Hammer

Portland State University, hammerl@pdx.edu

Sarah Van Dyck

Portland State University

Moni B. Neradilek

The Mountain-Whisper-Light Statistical Consulting

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Linking Workplace Aggression to Employee Well-Being and Work: The Moderating Role of Family-Supportive Supervisor Behaviors (FSSB)

Nanette L. Yragui¹, Caitlin A. Demsky², Leslie B. Hammer², Sarah Van Dyck², and Moni B. Neradilek³

¹Washington State Department of Labor & Industries, SHARP Program, 243 Israel Rd SE, Bldg 3, Olympia, WA 98501, USA

²Department of Psychology, Portland State University, Portland, OR, USA

³The Mountain-Whisper-Light Statistical Consulting, Seattle, WA, USA

Abstract

Purpose—The present study examined the moderating effects of family-supportive supervisor behaviors (FSSB) on the relationship between two types of workplace aggression (i.e., patient-initiated physical aggression and coworker-initiated psychological aggression) and employee well-being and work outcomes.

Methodology—Data were obtained from a field sample of 417 healthcare workers in two psychiatric hospitals. Hypotheses were tested using moderated multiple regression analyses.

Findings—Psychiatric care providers' perceptions of FSSB moderated the relationship between patient-initiated physical aggression and physical symptoms, exhaustion and cynicism. In addition, FSSB moderated the relationship between coworker-initiated psychological aggression and physical symptoms and turnover intentions.

Implications—Based on our findings, family-supportive supervision is a plausible boundary condition for the relationship between workplace aggression and well-being and work outcomes. This study suggests that, in addition to directly addressing aggression prevention and reduction, family-supportive supervision is a trainable resource that healthcare organizations should facilitate to improve employee work and well-being in settings with high workplace aggression.

Originality—This is the first study to examine the role of FSSB in influencing the relationship between two forms of workplace aggression: patient-initiated physical and coworker-initiated psychological aggression and employee outcomes.

Keywords

Workplace aggression; Family-supportive supervisor behaviors; Occupational stress; Health; Conservation of resources theory

Workplace aggression has emerged over the past 25 years as an important worldwide research topic in occupational health psychology, and refers to physical and nonphysical negative acts carried out against an organization or its members, which harms employees (Neuman and Baron 2005). Limited prevalence estimates suggest that six percent of the U.S. employees across all occupations have experienced physical violence at work in the previous 12 months, while 41.4 % of employees have experienced psychological aggression at work within the past year (Schat et al. 2006). A recent review of workplace violence prevalence acknowledges that much of the empirical research since 2000 has focused on employees in professional and service occupations (e.g., nurses, social workers, police officers, etc.), as these employees exhibit a higher likelihood of experiencing workplace violence (Piquero et al. 2013).

Thus, while workplace aggression may be a concern for all employees, research has indicated higher frequencies of physical and nonphysical aggression in the healthcare sector, particularly in psychiatric settings (Gerberich et al. 2004). Recent data from the U.S. Department of Justice suggest that those in government mental health occupations have one of the highest levels of workplace physical violence at 7.8 %, second only to law enforcement-security and teaching (Harrell 2013). However, these statistics should be considered in the context of reporting practices. Healthcare workers experience patient aggression as being “a part of the job” and subsequently underreport physical aggression incidents to their employers (Findorff et al. 2005). More recent prevalence estimates in the healthcare industry suggest that approximately 30 % of nurses report having experienced some form of workplace aggression (Campbell et al. 2011). Those in psychiatric hospitals report the highest levels of exposure to workplace aggression with 70 % of care providers reporting patient physical aggression and 92 % reporting coworker verbal conflict (Kelly et al. 2015). In a recent review of violence research, Spector et al. (2014) reported that in the Anglo world region which includes the United States, 87.7 % of nurses and nursing assistants were exposed to physical aggression from patients. In addition, 37.4 % of nurses were exposed to nonphysical aggression from healthcare staff. While these statistics emphasize the pervasive nature of workplace aggression for healthcare providers, some important research gaps exist in understanding forms and sources of aggression as well as processes that affect the impact aggression has on care provider health and work outcomes.

To address these gaps, our study examines two distinct forms (i.e., physical and psychological) and sources (i.e., patient and coworker) of aggression—patient physical aggression and coworker psychological aggression—in a sample of psychiatric hospital workers. Patient physical aggression is an assault that may or may not result in injury (e.g., hitting, biting, etc.). Coworker psychological aggression is nonphysical aggression (e.g., yelling, insulting, excluding, etc.) from a hospital employee including coworkers and supervisors (e.g., nursing, social work, psychology, etc.). While patient psychological aggression does commonly occur in psychiatric settings, nursing staff adjust to this knowing patients are mentally ill and are committed to the institution against their will (Chapman et al. 2010). We chose to focus on patient physical aggression because it has greater consequences for care providers in terms of physical harm. Prior research has documented psychiatric hospital staff exposure to patient physical aggression (Kelly et al. 2015), and a range of consequences may include injury (Spector et al. 2014), psychological distress

(McKenna et al. 2003), post-traumatic stress symptoms (Gates et al. 2011; Gillespie et al. 2013), and fatality in rare circumstances (CDC 2012). In addition, coworker physical aggression is a rare occurrence in healthcare settings; thus, we chose to focus on coworker psychological aggression as it occurs with greater frequency (Lanza et al. 2006). Spector et al. (2007) found that physical violence and verbal aggression were common in a hospital setting with physical violence perpetrated primarily by patients and family members and verbal aggression by staff members. Our choice to examine different forms and sources of workplace aggression is in line with recent calls by researchers (e.g., Hershcovis and Barling 2010) in an effort to identify potential differential relationships with employee and organizational outcomes.

In addition, we examine FSSB as a key element of the relational and social contexts in which an individual is embedded at work. We propose FSSB has an influence on reactions to workplace physical and psychological aggressions, work stressors that negatively impact employee health, well-being, and work outcomes (Aquino and Thau 2009; Bowling and Beehr 2006; Hershcovis and Barling 2010). We further propose that the contextual resource of supervisor support is important in the context of psychiatric care settings where the stressors of patient-initiated physical aggression and coworker-initiated psychological aggression occur. In our formative research described below, psychiatric supervisors and care providers reported on the challenges of managing employees' work–family conflict. Thus, family-specific supervisor support, or FSSB, is expected to serve as an important resource for employees that creates a positive context where employees are valued and respected and thus will moderate the negative effects of physical and psychological aggressions on employee work and well-being outcomes. FSSB has been defined as “those behaviors exhibited by supervisors that are supportive of families and consist of managerial-initiated actions to restructure work to facilitate employee effectiveness on and off the job” (Hammer et al. 2009, p. 839). The construct of FSSB is composed of emotional support, instrumental support, role modeling, and creative work–nonwork management across the two interrelated domains of work and nonwork.

The importance of the construct of FSSB in psychiatric settings emerged in our formative research at the psychiatric hospitals in which we attended management meetings, conducted direct observations on the wards as well as care provider focus groups and supervisor/manager individual interviews (Yragui et al. 2009, 2011). We sought to learn about sources and types of aggression as well as the context for aggression and its impact on employees' health and work. The qualitative analyses revealed the importance of family-supportive supervision for care providers among other themes related to social support and patient- and coworker-initiated aggression. The results included several points: (1) care providers reported that they wanted their supervisors to appreciate them as a whole person and acknowledge their challenges in managing work–nonwork conflicts including assistance with solving the problems they encountered in managing their time and effort across the two spheres; (2) care providers took unscheduled absences as “mental health days” to cope with stress from patient and coworker aggression; (3) care providers reported using unscheduled sick leave to attend to nonwork responsibilities because on many units the supervisors would not allow schedule flexibility and the hospital had no policy to support switching schedules with another care provider. The unscheduled absences left wards understaffed which

increased the risk of patient aggression; (4) some supervisors confirmed the lack of schedule flexibility; however, other supervisors reported that they used their discretion to provide this resource to their employees as a reward for reliable attendance and providing quality patient care; 5) finally, supervisors also reported that this approach led to more satisfied staff and therefore safer staff through reductions in patient aggression. These research results suggest that supervisor support for employees' work–nonwork management was variable. We found that some supervisors provided resources to support employees' effectiveness in both work and nonwork domains through family-supportive supervision. These supervisors chose to expand their support approach to include employees' work and nonwork domains rather than limiting their support solely to the work domain.

In sum, knowledge gained from our prior formative research informed our focus on FSSB in the context of workplace aggression. The current study is the first to examine this particular constellation of relationships in a setting that is understudied, namely psychiatric hospitals. We therefore chose to examine direct effects of two types and sources of aggression as well as supervisor support for the work–nonwork interface as a boundary condition for workplace patient-initiated physical and coworker-initiated psychological aggression and care provider well-being and work outcomes.

Prior research has shown FSSB improves both familyspecific and more general work and well-being outcomes for employees (Hammer et al. 2011; Kossek et al. 2011). In validating the FSSB measure, Hammer et al. (2009, 2013) found FSSB was significantly negatively related to workto- family conflict, turnover intentions, and significantly positively related to job satisfaction, over and above the effects of general supervisor support. In addition, Odle-Dusseau et al. (2012) found significant relationships over time between employee perceptions of FSSB and reduced turnover intentions, increased job satisfaction, and increased supervisor ratings of employee job performance. We argue that FSSB provides resources to employees in line with the conservation of resources theory (COR; Hobfoll 1989) and thus results in improved work, health, and well-being outcomes for employees that are workrelated, nonwork-related, and more general, including support that leads to increased personal resources for employees. Thus, FSSB provides employees a means to better manage competing work and family demands and is especially relevant in the context of the demands of workplace aggression. Supervisors that proactively provide work–nonwork-specific support meet their employees' need to replenish resources within and outside the work domain (Hammer et al. 2015).

Furthermore, it is important to note that training supervisors to enact FSSBs has proven to be effective in improving work and well-being outcomes for employees in several randomized control trials (e.g., Hammer et al. 2011, 2015; Kelly et al. 2014; Olson et al. 2015). More specifically, such FSSB training provides an organizational approach to improving work and health outcomes for employees and thus provides a potential intervention for high stress occupations such as that of psychiatric care workers who experience numerous stressors on the job including workplace aggression.

To our knowledge, no studies have examined the role of FSSB in influencing the relationship between workplace aggression and employee outcomes. Work–family research

has shown that employees managing demands from multiple roles such as work and family leads to reduced resources and increased strain (Grandey and Cropanzano 1999; Hammer et al. 2013). In a psychiatric care context, work–nonwork support is a meaningful resource emotionally and practically because care providers must manage work and nonwork stressors in the context of workplace aggression. General supervisor support focuses solely on employee performance in the work domain. Supervisor work–nonwork support facilitates employees' ability to effectively manage in both work and nonwork spheres (Hammer et al. 2009; Thomas and Ganster 1995). This is enacted through supervisor helping behaviors and attitudes such as empathy with an employee's motivation and need to balance work and nonwork roles (Thomas and Ganster 1995).

Supervisor work–nonwork support is valuable in that it offers more than general support in buffering stress from job demands (i.e., patient-initiated and coworker-initiated aggression) and helps to conserve resources in the *two* domains of work and nonwork (Allen 2001). For example, a supervisor may provide schedule flexibility and time off from work with the understanding that an employee's unaddressed strain due to patient physical aggression may impact their ability to manage in the domains of work and nonwork as well as understanding that it is in the nonwork domain that the care provider may find respite from workplace physical aggression incidents. In the case of physical aggression, sick leave may be desired for physical recovery and rest at home if injury occurred. In many cases, psychiatric care providers return to work in the same ward with the same aggressive patient and time away to regroup physically and mentally may be welcome.

In addition, psychological aggression has been documented as a stressor that depletes personal resources and may be associated with exhaustion (Estryn-Behar et al. 2008). In this case, resource replenishment in the nonwork domain is more likely to be achieved where the target can separate from the source of aggression either through time spent with family, with friends, or through leisure activities. Therefore, employees who experience psychosomatic or psychological strain due to coworker psychological aggression, may value FSSBs as a particularly important resource in buffering the negative effects of the aggression. Supervisors may proactively provide needed emotional support to prevent exhaustion that may occur in work and nonwork domains and schedule flexibility that allows for separation or recovery should negative effects occur or to prevent their occurrence.

In sum, the current study provides two important contributions to the literature. First, workplace aggression scholars have called for examining the source of workplace aggression (Hershcovis and Barling 2010), and in response, we examine two distinct forms and sources of aggression— patient physical aggression and coworker psychological aggression experienced by a sample of psychiatric hospital workers. Second, the majority of workplace aggression literature has focused on identifying the antecedents and outcomes of various aggression constructs (e.g., Bowling and Beehr 2006; Hershcovis and Barling 2010). However, we identify a trainable workplace resource (i.e., FSSB; Hammer et al. 2009, 2011, 2015; Kelly et al. 2014) that may reduce the negative impacts of workplace aggression and we examine the moderating effects of FSSB on employees' health and work outcomes. In this study, we examine direct relationships that allow us to replicate prior research regarding

two types and sources of workplace aggression specific to psychiatric settings while also providing contextual knowledge for understanding the moderating effects of FSSB.

Theoretical Rationale and Hypothesis Development

Drawing on previous empirical research, as well as the conservation of resources theory (COR; Hobfoll 1989, 2001), we argue that workplace aggression is a workplace stressor that depletes employees' resources. COR theory proposes that strain results from the loss of resources, threat of resource loss, or a lack of resource replenishment after the investment of resources. Resources are defined as objects, valued conditions, personal resources, or energies that serve as a means for obtaining additional resources which the individual values and strives to obtain, preserve, and protect (Hobfoll 1989). Resources are particularly valuable in psychiatric care environments where patient physical aggression can result in injury, lost work time, and increased fear of patients (Myers et al. 2005; Whittington and Wykes 1992). In addition, patient physical and coworker psychological aggression may stimulate anxiety and frustration (Bowling and Beehr 2006) which may increase resource loss over time through expenditures of personal energies in managing affect (e.g., distress). Through the lens of COR theory (Hobfoll 1989, 2001), experienced psychological aggression from coworkers can also be conceptualized as a job stressor that depletes employee cognitive and affective resources. In the absence of resource replenishment, employees may experience reduced levels of well-being or poor work outcomes. In addition, employees may be left without sufficient motivational resources to enact key behaviors in the workplace, such as maintaining therapeutic interactions with distressed patients to prevent patient aggression. Finally, the loss of employment may occur if the target is severely injured in a patient-initiated aggression incident or determines the strain of coworker psychological aggression outweighs the benefits of employment and leaves the organization (Deery et al. 2011; Estryn-Behar et al. 2008; Sofield and Salmond 2003).

In psychiatric care settings, relationships among care providers are critical to maintain patient and staff safety. For example, providing patient care safely requires that hospital staff work in pairs frequently and rely on one another to monitor and communicate each patient's status. Social exchange theory (SET) posits that individual interactions tend to be seen as interdependent and contingent on the actions of the other person. These interactions also generate obligations, and can have the potential to generate high-quality relationships under certain circumstances (Blau 1964; Cropanzano and Mitchell 2005). In a review article, Parzefall and Salin (2010) argued that both relationships with coworkers and contextual features are factored into employees' judgments about their social exchange relationships at work. Under these circumstances, it is likely that the experience of workplace aggression from coworkers may have different effects on employees than aggression from patients who have severe mental illness and histories of aggression associated with mental illness.

Drawing on SET (Cropanzano and Mitchell 2005; Parzefall and Salin 2010), coworker psychological aggression may be seen as violating norms of workplace exchange-based relationships, and thus detract from employees' overall evaluations of the work environment. Experiencing aggression from coworkers may be seen as a form of injustice, which has been associated with negative employee attitudes and decreased performance (Berry et al. 2007;

Cohen-Charash and Spector 2001). In addition, coworkers that are seen as representatives of the organization may influence employee attitudes via social exchange processes (Chang and Lyons 2012). In the context of psychiatric care provision, in which coworkers are vital to work safely with patients, coworkers may play a similar exchange communication role in promoting or undermining aggression preventative behaviors.

Patient Physical Aggression

Hogh and Viitasara (2005) reviewed a number of consequences of patient nonfatal workplace violence and found a range of psychological symptoms including fear of the assaultive patient, anger, and resentment toward the patient, distress, and fatigue. Aggression from outsiders, which would include patient aggression, has been associated with increased psychological distress, emotional exhaustion, and decreased physical well-being (Hershcovis and Barling 2010; Speroni et al. 2014).

Empirical evidence suggests that workplace aggression from patients significantly influences the recruitment of nurses and turnover intentions (Deery et al. 2011; Estryn-Behar et al. 2008; Sofield and Salmond 2003). In addition, recent research has suggested that employees who perceived that their employer took steps to prevent violence were less likely to exhibit intentions to leave the organization (Mueller and Tschan 2011). Finally, exposure to workplace aggression from patients has been associated with higher levels of job dissatisfaction (Merecz et al. 2009). Therefore, in line with COR theory, SET theory, and prior empirical evidence, we propose the following:

Hypothesis 1a Patient physical aggression will be positively related to poor employee health and psychological strain (i.e., stress-related physical outcomes, exhaustion, and cynicism).

Hypothesis 1b Patient physical aggression will be positively related to poor employee work outcomes (i.e., job dissatisfaction and organizational turnover intentions).

Coworker Psychological Aggression

Research suggests coworker aggression is associated with reduced health and well-being and negative work attitudes including worse physical symptoms, burnout, and job satisfaction (Bowling and Beehr 2006; Lapierre et al. 2005; Merecz et al. 2009). Guidroz et al. (2012) found that interpersonal conflicts with doctors, patients, and supervisors influenced nurses' retention outcomes by increasing their emotional exhaustion. In addition, previous research suggests that coworker psychological aggression is related to somatic symptoms such as headaches (Bowling and Beehr 2006; Hershcovis and Barling 2010).

In a longitudinal study, evidence demonstrated a causal relationship between workplace coworker aggression and self-reported health and work outcomes (De Raeve et al. 2008). In this study, coworker aggression was shown to be a statistically significant risk factor for an elevated need for recovery, prolonged fatigue, and turnover. Other research has also linked coworker psychological aggression to turnover (Chang and Lyons 2012), a costly outcome for organizations. Drawing on COR and SET theory and prior research, we propose the following:

Hypothesis 2a Coworker psychological aggression will be positively related to poor employee health and psychological strain (i.e., stress-related physical symptoms, exhaustion, and cynicism).

Hypothesis 2b Coworker psychological aggression will be positively related to poor employee work outcomes (i.e., job dissatisfaction and organizational turnover intentions).

The Moderating Role of Family-Supportive Supervisor Behaviors

FSSB has been linked to a number of employee outcomes, including lower levels of turnover intentions and higher levels of job satisfaction (Hammer et al. 2009, 2011; Odle-Dusseau et al. 2012). COR theory suggests that job resources may buffer the impact of job demands on stress reactions, which include burnout. FSSB serves as a workplace resource that may halt resource loss spirals, and in turn buffer the negative effects of workplace aggression. Furthermore, Cohen and Wills' (1985) stress buffering hypothesis states that social support protects employees from the negative effects of stressful experiences. Schat and Kelloway (2003) found that organizational support moderated the effects of workplace violence on both individual and organizational outcomes. As mentioned earlier, FSSB is a form of social support that is specifically support provided by the supervisor (an aspect of organizational support) that is suggested to moderate the relationship between workplace aggression and strain outcomes. Thus, organizational researchers consider the supervisor as the linking pin between the worker and the organization, and FSSB as a moderator serves as a proximal indicator of a social support process that accounts for the whole person who must manage effectively in two domains: work and nonwork.

In addition to serving as a potential buffer of the relationship between workplace aggression and employee outcomes, we also suggest that FSSB may have a direct, preventative effect on employee negative health and well-being and work outcomes. Though limited, some previous research has identified the role of support as a resource for employees experiencing workplace aggression. For example, supervisor support has been shown to decrease the odds of both physical and psychological aggression in a healthcare organization (Findorff et al. 2004). Similarly, supervisors may provide FSSB in an exchange process that rewards employees for their commitment to high stress psychiatric work.

In line with COR theory and SET theory (Cropanzano and Mitchell 2005; Hobfoll 2001), supervisors play a key role in helping employees to manage work and family demands. Psychiatric care can be psychologically demanding work and may be understood as a strain-based form of work–nonwork conflict that supervisors address with FSSB. With regard to the present study, we propose that employees experiencing higher levels of patient and coworker aggression may have an increased need for support for work–nonwork management. Supervisors who provide FSSB skillfully enact a key role in creating a positive work environment through providing support. This support allows care providers time off to obtain additional nonwork resources such as respite from a high demand work environment, family and friend support, or healthcare services. Recent research has shown that work–nonwork specific support is more strongly related to reduced work–nonwork conflict than general supervisor support (Kossek et al. 2011), which may also be relevant in response to

job stressors (i.e., workplace aggression) that are likely to spillover to negatively impact the nonwork domain.

Hypothesis 3a FSSB will be negatively related to poor employee health and well-being (i.e., stress-related physical outcomes, exhaustion, and cynicism).

Hypothesis 3b FSSB will be negatively related to poor employee work outcomes (i.e., job dissatisfaction and organizational turnover intentions).

Hypothesis 4 FSSB will moderate the relationship between patient physical aggression and poor employee health and well-being outcomes (i.e., stress-related physical outcomes, exhaustion, and cynicism), and poor work outcomes (i.e., job dissatisfaction and organizational turnover intentions), such that high FSSB will attenuate the relationship between patient physical aggression and employee outcomes.

Hypothesis 5 FSSB will moderate the relationship between coworker psychological aggression and poor employee health and well-being outcomes (i.e., stress-related physical outcomes, exhaustion, and cynicism), and poor work outcomes (i.e., job dissatisfaction and organizational turnover intentions), such that high FSSB will attenuate the relationship between coworker psychological aggression and negative employee outcomes.

Method

Participants and Procedure

Survey data were collected from hospital employees working at two public psychiatric healthcare hospitals in the Northwestern United States. The hospitals were in the same healthcare system and had similar organizational structures, policies, procedures, and resources such as staffing levels and training programs. They were located in different geographic areas and provided treatment for voluntarily and involuntarily committed patients with severe mental illnesses such as schizophrenia, major depression, and bipolar disorder including some patients with criminal histories of violence. The larger hospital operated with 806 beds and the smaller hospital with 287 beds. Of the 1200 surveys distributed, 496 were returned for a response rate of 41.3 %. Seventeen cases with missing data were deleted. In addition, 62 cases identified as participants with no direct patient contact such as those in managerial, clerical, and administrative positions were removed from the analysis leaving a sample of $N_1 = 257$ for the first hospital and $N_2 = 160$ for the second hospital with a combined final sample of $N = 417$.

Participants were recruited through email notices and through union meetings. We staffed each hospital area in available conference rooms during each of the three shifts over the course of a week to recruit and administer paper surveys; surveys were returned directly to study researchers. Participants completed the surveys during their work time. In addition, an online survey was set up for hospital care providers. Of the final sample of 417 participants, 43 completed the survey electronically.

In terms of demographic characteristics, participants were mostly female (56.5 %) and predominately European American/White (63.3 %). The majority of participants were in the

40–49 (26.3 %) or 50–59 (33.5 %) age ranges, and 65.2 % were married or living as married with 42.6 % of the sample reporting one or more children living at home. Fifty-four percent of the participants had an associate's degree or a bachelor's degree and 56.3 % reported an annual household income of \$50,000–\$60,000 or less. Participants reported contact with their supervisor with 76.5 % reporting one to multiple face-to-face contacts daily. Disciplines represented in the sample included 38.4 % licensed nursing, 36.2 % nonlicensed nursing, 8.4 % psychology, 5.5 % occupational therapies, 2.4 % social work, and 9.1 % other care provision.

Measures

Participants rated their supervisor's family-supportive supervisory behaviors with four items from the FSSB-SF (Hammer et al. 2009, 2013; $\alpha = 0.92$), and indicated their level of agreement with items such as "Your supervisor makes you feel comfortable talking to him/her about your conflicts between work and non-work." The items were rated on a five-point Likert-type scale (1 = *strongly disagree* to 5 = *strongly agree*) with higher scores indicating greater FSSB. Following common practice in studies of nursing violence (Arnetz et al. 1998; Camerino et al. 2008; Erikson and Einarsen 2004; Niedhammer et al. 2008; Pai and Lee 2011; Spector et al. 2007), patient physical aggression was measured with one item asking when the participant experienced physical assault from a patient in the past 2 years. The response set was 5 = *past month*, 4 = *past 3 months*, 3 = *past 6 months*, 2 = *past year*, 1 = *past 2 years*, and 0 = *never*. The variable was dichotomized, 0 = *No*, 1 = *Yes*, to conceptually clarify whether or not there was exposure to patient physical aggression. We determined a single-item measure was appropriate as a recall measure of unidimensional and concrete events, meaning that it consists of one object that is readily and uniformly imagined, and the attribute of the construct is concrete, again meaning that it is readily and uniformly imagined (Bergkvist and Rossiter 2007). In this case, we followed practices in organizational research to reduce survey response burden with the use of a single-item measure with the goal of preserving response rates and minimizing nonresponse bias (Rogelberg and Stanton 2007).

A 2-year reporting time frame was chosen for patient physical aggression, which has a low base rate. Hulin and Rousseau (1980) reported that a common means of studying infrequent events is to gather criterion data over longer time intervals. That is, because physical aggression incidents are low base-rate events, longer time periods for gathering incident data are often necessary for amounts of variance to be sufficient for detection of relationships between incidents and health and work outcomes. Moreover, these low-frequency physical events are very memorable to workers, therefore, a 2-year time frame captures enough incidents while limiting recall bias effects.¹

¹Psychiatric hospitals are complex high demand work environments where psychiatric care providers may calm an agitated patient, assist coworkers in restraining a patient, or be targeted in an aggressive incident. It can be very dangerous work and injury and stress reactions may occur as strains immediately after an incident or in a delayed response. During the time of our research, there were patient fatalities and staff hospitalizations due to patient physical aggression, and these events were potentially traumatizing for the staff on those wards that were directly exposed to the aggression or witnessed it. The strain of health worker psychosomatic or physical symptoms resulting from patient physical aggression may be long lasting or not depending on the individual response, severity of injury (hospitalization), disability or impairment, and many other factors. For example, research has found posttraumatic stress symptoms in health workers exposed to patient physical aggression (Gillespie et al. 2013) and somatic symptoms may emerge immediately or over time with as much as a 6 month delay before appearing (Gupta 2013). Therefore, stressors and strains can be

In addition, a 1-year time period is considered in psychological aggression research to be what individuals can recall accurately on more subtle, covert, and frequently occurring forms of behavior such as psychological aggression (Chang and Lyons 2012; Deery et al. 2011; Lanza et al. 2006; Schat et al. 2006).

We measured coworker psychological aggression with the Negative Acts Questionnaire–Revised (Einarsen et al. 2009; $\alpha = 0.94$) which assessed the frequency of employees' exposure to workplace psychological aggression from coworkers within the past year. Participants responded to twenty-two items on a five-point Likert-type scale ranging from 1 (never) to 5 (daily). Items include "Spreading gossip or rumors about you."

The well-being outcome measures included physical symptoms and the burnout dimensions of exhaustion and cynicism. Participants reported the frequency of eight stress-related physical symptoms (e.g., headaches or trouble sleeping) experienced in the past month (Brim et al. 2004). The items were rated on a five-point scale (1 = *never* to 5 = *very often*; $\alpha = 0.87$). Two dimensions of burnout were assessed including exhaustion and cynicism with the Maslach Burnout Inventory (Maslach and Jackson 1981; $\alpha = 0.91$ and 0.78 , respectively). Items were measured with a seven-point Likert type scale ranging from 1 (never) to 7 (every day). Exhaustion was measured with nine items (e.g., "I feel burned out from my work.") and cynicism with five items (e.g., "I worry that this job is hardening me emotionally.").

We also measured the work outcomes of job dissatisfaction and intent to quit the organization. Respondents' experience of job satisfaction was assessed with three items (Cammann et al. 1983; $\alpha = 0.89$). A sample item included "All in all, I am satisfied with my job." All items were measured on a five-point scale (1 = *strongly disagree* to 5 = *strongly agree*). After reverse coding, higher scores indicated greater job dissatisfaction. To assess participants' intent to leave the organization, we used three items (Hom et al. 1984; $\alpha = 0.89$) which were measured on a five-point agreement scale (1 = *strongly disagree* to 5 = *strongly agree*). A sample item was "If I have my own way, I will be working for some other organization one year from now."

Control Variables—We selected control variables based on prior organizational research. In analyses with work-related outcomes, time spent with supervisor was selected because more contact with a supervisor allows for more opportunities for FSSB (Hammer et al. 2009). The single item was rated on a sixpoint scale 1 (never) to 6 (multiple times daily) ($M = 5.42$, $SD = 1.06$). We controlled for income because lower income nonlicensed care providers tend to have greater contact with patients and coworkers on the ward in residential psychiatric settings and are at greater risk for aggression (Myers et al. 2005). Income was measured on a 9-point scale in \$10,000 increments from 1 = less than \$25,000 to 9 = over \$100,000 ($M = 4.52$, $SD = 2.41$). Hospital (coded as Hospital₁ = 1, Hospital₂ = 2) was controlled for because the two hospitals were of different sizes and in different geographic locations which could account for potential differences in participant responses. In analyses

linked over varying periods of time. In addition, Ford et al. (2014) conducted a meta-analysis to examine stressor– strain effects over time and found that lagged effects were initially small and increased in magnitude over time.

with well-being outcomes, we controlled for age reported in 10-year increments to protect respondent confidentiality in light of the sensitive nature of aggression research (Bordia et al. 2008). Age was coded as 1 = 18–29 years, 2 = 30–39 years, 3 = 40–49 years, 4 = 50–59 years, 5 = 60–69 years, and 6 = 70 or more years. We also controlled for relationship status (single = 0, partnered = 1), income, and hospital.

Analytical Strategy—A series of moderated multiple regressions was performed to examine potential relationships between workplace aggression and care provider well-being and work outcome variables, and to evaluate the moderating effects of FSSB on the workplace aggression and care provider well-being and work relationships. The control variables (Step 1), the predictor, the moderator (Step 2), and the interaction term (Step 3) were entered into the regression equation in successive order. To increase the interpretability of the analysis output, both the predictors and the moderator in these hypotheses (i.e., patient physical aggression, coworker psychological aggression, and FSSB) were centered around the grand mean of each independent variable (Aiken and West 1991). We created multiplicative interaction terms to test for moderation effects. All regression coefficients (β) were standardized, and calculations were carried out in R version 3.0.2 (R Development Core Team 2013). All tests are two-sided and were not adjusted for multiple comparisons. A p value <0.05 was used to denote statistical significance.

Results

Descriptive statistics and correlations among all study variables are presented in Table 1. The majority of participants reported exposure to patient physical aggression (57 % of the sample) with 90 % exposed to coworker psychological aggression. While many participants reported exposure to coworker psychological aggression, the mean was low ($M = 1.58$; $SD = 0.69$). Patient physical aggression, coworker psychological aggression, and FSSB were all significantly correlated with each other in the hypothesized directions. Furthermore, patient physical aggression was significantly and positively related with exhaustion, cynicism, and turnover intentions, while coworker psychological aggression was significantly and positively correlated with all employee health and well-being outcomes and the work outcomes of job dissatisfaction and turnover intentions. FSSB was significantly and negatively correlated with all health, well-being, and work outcomes. The means of job dissatisfaction ($M = 2.24$; $SD = 0.89$) and intent to quit ($M = 2.50$; $SD = 1.21$) were low considering the high demands of residential psychiatric care provision. Even though the jobs are difficult in some respects, they are valued by health workers in part because they are union-represented positions in the public sector and provide employees stability and a pension upon retirement. In addition, the research was conducted during the weak recovery period following the Great Recession in the U.S. when unemployment was high.

Hypothesized Results

Results from the patient and coworker aggression analyses respectively can be found in Table 2 for health and wellbeing outcomes and in Table 3 for work outcomes. We present the results thematically as they relate to the study hypotheses.

Health and Well-Being Outcomes—As shown in Table 2, Step 2, patient physical aggression was significantly and positively related to exhaustion ($\beta = 0.30$; $p < 0.01$), and cynicism ($\beta = 0.36$; $p < 0.01$), but was not significantly related to physical symptoms. Thus, Hypothesis 1a was partially supported. FSSB was significantly and negatively associated with all health and well-being outcomes (Tables 2, Step 2): physical symptoms ($\beta = -0.20$; $p < 0.01$), exhaustion ($\beta = -0.34$; $p < 0.01$), and cynicism ($\beta = -0.27$; $p < 0.01$).

Coworker psychological aggression was significantly and positively associated with all health and well-being outcomes (Table 2, Step 2): physical symptoms ($\beta = 0.31$; $p < 0.01$), burnout-exhaustion ($\beta = 0.46$; $p < 0.01$), and burnout-cynicism ($\beta = 0.41$; $p < 0.01$) providing full support for Hypothesis 2a. FSSB was significantly associated with burnout-exhaustion ($\beta = 0.14$; $p < 0.01$) but was not significantly associated with the other health and wellbeing outcomes despite the significant bivariate correlations between the variables and their significant associations in the multivariate models with patient physical aggression. Consequently, Hypothesis 3a was partially supported.

Work Outcomes—As displayed in Table 3, Step 2, patient physical aggression was significantly and positively related to the work outcome of organizational turnover intentions ($\beta = 0.22$; $p < 0.05$) but was not significantly related to job dissatisfaction providing partial support for Hypothesis 1b. FSSB was significantly associated with job dissatisfaction ($\beta = -0.45$; $p < 0.01$) and turnover intentions ($\beta = -0.25$; $p < 0.01$) in full support of hypothesis 3b.

Coworker psychological aggression was significantly and positively associated with job dissatisfaction ($\beta = 0.30$; $p < 0.01$) and organizational turnover intentions ($\beta = 0.22$; $p < 0.01$); see Table 3, Step 2). FSSB was significantly and negatively associated with job dissatisfaction ($\beta = -0.32$; $p < 0.01$) and, turnover intentions ($\beta = -0.17$; $p < 0.01$). The pattern of significant relationships provides full support for Hypotheses 2b and 3b.

Moderating Effects of FSSBs

Hypotheses 4 and 5 test the moderating influence of FSSBs on the relationships between the patient physical aggression and coworker psychological aggressions, and health, well-being, and work outcomes.

Health and Well-Being Outcomes—As Table 2, Step 3 shows, FSSB moderated the relationship between patient physical aggression and physical symptoms ($\beta = -0.30$; $p < 0.01$; see Fig. 1), exhaustion ($\beta = -0.22$; $p < 0.05$; see Fig. 2), and cynicism ($\beta = -0.28$; $p < 0.01$; see Fig. 3). The relationship between patient physical aggression and well-being outcomes was less pronounced for employees who reported high FSSB compared with employees who reported low FSSB. Thus, consistent with Hypothesis 4, high levels of FSSB served as a protective factor, or buffer of the effects of patient physical aggression, with care providers reporting fewer physical symptoms, as well as less exhaustion and cynicism under conditions of high FSSB.

Consistent with Hypothesis 5, FSSB also moderated the relationship between coworker psychological aggression and physical symptoms ($\beta = -0.14$; $p < 0.01$; see Fig. 4), with no

other significant moderating effects found for any other health and well-being outcomes (Table 2, Step 3). This finding suggests that care providers who reported high FSSB had a less-pronounced positive relationship between psychological aggression and physical symptoms than did care providers with low FSSB.

Work Outcomes—The relationships between patient physical aggression and work outcomes were not significantly moderated by FSSB (Table 3, Step 3). However, FSSB did moderate the relationships between coworker psychological aggression and turnover intentions ($\beta = 0.13$; $p < 0.05$; see Fig. 5). Care providers with high FSSB reported reduced turnover intentions compared to those with low FSSB. However, the moderating effect of FSSB on turnover intentions is stronger when psychological aggression is low.

Contrary to our hypothesis, the moderating effects of FSSB on the coworker psychological aggression with turnover intentions was less pronounced under conditions of high coworker psychological aggression which suggests that high coworker psychological aggression is a strong stressor limiting the influence of FSSB on this work outcome. The pattern of significant moderation relationships provides partial support for Hypotheses 4 and 5.

Finally, the effect sizes for the significant moderation results were in the range of 1 % to 2 %. These findings are in line with the literature that states interaction effects in real data typically range from explaining 1 % to 3 % of the variance in the dependent variable (Dawson 2013; McClelland and Judd 1993). In light of these findings, we discuss the meaning and implications of the study results in the following section.

Discussion

Psychiatric healthcare providers' exposure to various forms of workplace aggression has been well documented (Campbell et al. 2011; Kelly et al. 2015; Spector et al. 2014) and the exposures found in the current study are in alignment with those reported in the most recent studies of psychiatric care providers (Kelly et al. 2015; Spector et al. 2014).

We sought to test the link between workplace aggression and health, well-being, and work outcomes and examine the role of FSSB as a boundary condition for these relationships. Drawing on COR theory (Hobfoll 1989, 2001) and SET (Blau 1964; Cropanzano and Mitchell 2005), we developed and tested a model that examined relationships and the interaction between two types of workplace aggression and FSSB to predict health, well-being, and work outcomes.

Consistent with COR theory and prior research, results demonstrated that patient physical aggression has a deleterious effect on care provider health and well-being (Hogh and Viitasara 2005; Lasalvia et al. 2009; Laschinger and Grau 2012). However, contrary to prior research, patient physical aggression was not related to work outcomes (Deery et al. 2011; Estry-Behar et al. 2008; Sofield and Salmond 2003). Coworker psychological aggression, also in alignment with prior research, was negatively related to well-being and work outcomes (Bowling and Beehr 2006; Hershcovis and Barling 2010; Walrath et al. 2010). FSSB served as a resource that provided protection against resource threat and loss due to patient physical aggression on health and well-being outcomes and from coworker

psychological aggression on physical symptoms outcomes. We also found that FSSB interacted with patient physical aggression and coworker psychological aggression to predict health, well-being, and work outcomes.

Theoretical Implications

In the current study, we examined the unique effects of two sources and types of workplace aggression—patient physical and coworker psychological aggression—and found direct effects wherein patient physical aggression led to poor health and well-being outcomes, but did not impact work outcomes; and coworker psychological aggression led to poor health, well-being, and work outcomes. These findings suggest that in line with COR theory (Hobfoll 1989, 2001), patient- and coworker-initiated aggression are stressors that deplete resources through a health and wellbeing impairment process. An important contribution of the study findings suggests that FSSB might improve care providers' health, well-being, and work outcomes; FSSB mitigated the adverse effects of patient physical aggression on health and well-being outcomes, but not work outcomes, and FSSB mitigated the adverse effects of coworker psychological aggression on physical symptoms and the work outcome of turnover intentions. Although we did not specifically hypothesize differences between the effects of patient physical aggression and coworker psychological aggression, since there was no theoretical guidance as to how these differences would specifically manifest, our findings show that FSSB as a moderator of these two types of aggression has demonstrated effects in terms of employee work and health outcomes that identify FSSB as an important resource in the context of workplace aggression.

With regard to patient- and coworker-initiated aggression, there are several reasons that these two sources of aggression may differ for employees. For example, physical aggression from patients tends to be much less frequent than other forms of workplace aggression, such as psychological aggression from coworkers, which can occur daily (Gerberich et al. 2004). Patient physical aggression may result in injury and loss of work time (Lanza et al. 2006; Myers et al. 2005); thus, health and well-being are likely to be compromised. Our findings demonstrate that FSSB provided a resource that ameliorated the negative effects of patient physical aggression on health and wellbeing.

Concerning coworker psychological aggression, our findings show that FSSB allows care providers to remain engaged at work and maintain the care they give to patients under conditions of low coworker psychological aggression but fails to provide an ameliorative influence under high coworker psychological aggression. This finding illustrates the strength of coworker aggression as a stressor and the limitations of FSSB to provide resources that fully address the stressor–strain relationship. It is possible that in work environments or climates where coworker aggression is tolerated, the supervisor influence may be limited especially if the team is interdisciplinary, as in healthcare, where coworkers may have different supervisors. A recent meta-analytic study examined the influence of workplace mistreatment climate (specific to incivility, aggression, and bullying) and found significant mean correlations between psychological mistreatment climate and employee and organizational outcomes such as mistreatment exposure, strains, and job attitudes (Yang et al. 2014).

In light of COR theory, the findings that FSSB moderates the relationships between patient aggression and employee well-being outcomes make a strong case for developing interventions that target building supervisory resources to support employees' successful work–nonwork management and that can help defray negative effects of patient physical aggression. The FSSB moderating effects between the coworker psychological aggression and turnover intentions were opposite to the expected direction and indicate that organizations need to provide additional resources to prevent or diminish the negative effects of coworker psychological aggression.

Practical Implications

Our study suggests several ways that family-supportive supervision may foster a work environment in which care providers are less susceptible to work stressors such as patient and coworker aggression. In the first place, regarding patient physical aggression, FSSB may serve a preventive function in creating a positive work context for employees' need to effectively manage in work and nonwork domains. Secondly, FSSB may be critical in the event of care providers sustaining injuries from patient-initiated physical aggression. For example, supervisors engaging in FSSB may be more equipped to accommodate a care provider's need to schedule days away from work for recovery and doctor's appointments, as well as the care provider's need to discuss the effects of an injury at work and at home. In addition, FSSB may facilitate a difficult transition from home back to work, as a care provider may once again be working with the same patient who initiated the aggression.

Based on the current findings for coworker psychological aggression, it is possible that supervisors engaging in FSSB may also ameliorate the negative effects of coworker psychological aggression for employee physical symptoms and turnover intentions. Such work–nonwork support acknowledges the importance of managing both work and nonwork domains under highly stressful working conditions of handling coworker psychological aggression when also providing care to severely mentally ill patients. However, under conditions of high coworker aggression, our findings indicate that FSSB is not sufficient as a sole resource for care providers who may seek work in another setting. Supervisors may also encourage employees experiencing coworker aggression to utilize leisure or family activities to separate from work demands while the source of coworker aggression is being addressed in the workplace.

Although our study findings suggest it is fruitful to increase FSSB, our findings also suggest organizational attention should be paid to implementing additional interventions toward preventing and decreasing patient and coworker aggression. Patient physical aggression may result in serious injury and, in extreme circumstances, fatality to other patients or care providers, making it all the more critical for organizations to create a range of interventions including implementing engineering controls to address hazards in the physical environment. With regard to coworker psychological aggression, our findings suggest that high levels of FSSB ameliorate the adverse consequences on physical symptoms. However, high FSSB improves negative effects only under the condition of low psychological aggression on the work outcome of turnover intentions, indicating that high psychological aggression is a very strong stressor and, as previously stated, organizations should provide

additional resources that are salient to address this form of aggression. For example, attention should be paid to providing relevant policies and procedures to address coworker psychological aggression, as well as supervisor training to prevent or intervene in coworker aggression, role model civil and respectful interactions, build positive team interactions to develop team cohesion, and coach the team on professional behaviors in the workplace.

While we cannot infer causality, it is also possible that FSSB could help to prevent workplace aggression from the start. The statistically significant correlations between FSSB and patient physical ($r = -0.10, p < 0.05$) and coworker psychological ($r = -0.44, p < 0.01$) aggression suggest this could be a possibility, especially in the case of coworker psychological aggression. Further investigation is warranted. In a review of intervention studies, Kelloway and Barling (2010), propose that leadership training is an effective occupational health psychology intervention. Training supervisors on FSSB (see Hammer et al. 2011) can increase their support for employee's work–nonwork management, providing a resource which, in turn, could facilitate employees' efforts toward aggression prevention and could be trained in conjunction with other aggression prevention trainings.

FSSB has potential as an organizational and relational approach to foster a positive workplace context. Training for healthcare supervisors might include teaching the importance of redefining their supervisory role to embrace a stronger identification with promoting aggression prevention and supporting employee work–nonwork management. Specific behaviors to enact this expanded role identity can be taught to supervisors in the context of aggressive incidents at work where family-supportive supervision is offered as a proactively presented resource that could mutually benefit the organization and the employee. Supervisor training might also address the concept of employee work–nonwork integration in the context of stressful work and teach supervisors specific behaviors for differential response to employees based on their preference and needs for work–nonwork support that may change over time. Providing such support has been shown in a recent FSSB intervention group-randomized control trial to protect against declines in safety compliance and organizational citizenship behaviors in workers employed by extended healthcare facilities (Hammer et al. 2015). Another intervention approach is to facilitate supervisors and healthcare staff in discussions and exercises that specifically address coworker aggression prevention and behavior change similar to the Civility, Respect, and Engagement in the Workplace (CREW) intervention (Osatuke et al. 2009; Leiter et al. 2011). This approach could include discussions of the importance of effective work–nonwork management in the context of patient physical and coworker psychological aggression stresses.

Limitations and Directions for Future Research

In describing the limitations of our study, we simultaneously suggest future research directions. Self-report measures were used in a cross-sectional design which may lead to issues regarding response bias. For example, responses to earlier measures in the surveys might have affected responses to later instruments. We attempted to limit the potential for common method effects by following the recommendations of Podsakoff et al. (2003), who suggested careful scale placement through physically spacing the predictor and criterion

variables in different locations in the survey instrument. Doing so reduces the salience of the predictor and moderator when the dependent variable is being assessed, thereby reducing recall-related biases and demand effects. Furthermore, measurement of the aggression constructs was based on reports of specific behavior, rather than subjective labeling. We also protected the confidentiality of the respondents to diminish evaluation apprehension, which reduces the effects of socially desirable responding (Podsakoff et al. 2003) and the fear of retaliation for any reporting of aggression. Moreover, the cross-sectional design impacts our ability to draw definitive conclusions about causality of workplace aggression relationships with health, well-being, and work outcomes and the moderating role of FSSB. Researchers should consider further exploring the nature of these relationships utilizing longitudinal research designs, as reviews of the literature have noted the reliance on cross-sectional designs and need for increased longitudinal research, which would be useful for inferring causation (Casper et al. 2007; Zapf et al. 1996).

Many work stress researchers have called on fellow researchers to create study designs that incorporate multiple sources of data, including objective administrative data. In future studies that focus on workplace settings, collecting administrative data on objective outcomes such as actual reported aggression incidents and employee turnover would strengthen the study design. In addition, multilevel and longitudinal designs linking supervisors to their care provider groups would allow an examination of the relationships at two levels to examine team processes and outcomes over time that encompass the interaction and coordination between team members and their supervisors with discrete context (Johns 2006) variables such as aggression prevention climate, sources of social support, and workplace aggression sources and types.

We expected to find more significant direct relationships between patient physical aggression and work outcomes than we did, and this may indicate a potential limitation in using a single item to assess patient aggression which may not be optimal. External confirmation from hospital incident reports is a potential source of measurement. However, it may be difficult to get accurate information from these records due to underreporting (Findorff et al. 2005). Single-item measures have been critiqued for lack of validity, because they tend to insufficiently capture the conceptual domain of most constructs (Nunnally and Bernstein 1994), and for unreliability (Spector 1992). However, when a construct is judged to be concrete and unidimensional, the use of single-item measures is considered reasonable (Bergkvist and Rossiter 2007; Wanous et al. 1997) and some single-item measures have been validated in recent organizational research (Fisher et al. 2015). Our single-item measure of patient physical aggression included the term, assault, which is the term used by the hospital to describe the construct with the meaning; to use force or violence to do bodily harm to another without their permission and any unwanted touch whether or not injury occurs, intentional or unintentional. Patients are involuntarily committed to psychiatric hospitals because they are assessed to be at risk for physically harming themselves or others, and for the purposes of this study we did not seek to examine the multidimensionality of patient physical aggression because our hypotheses did not include tests requiring a multidimensional measure.

Even so, one way to improve this single-item measure of patient physical aggression would be to create an index measure of items specific to objectively observable physically aggressive acts (e.g., hitting, kicking, etc.) as recommended by Spector and Fox (2003). In addition, future research should measure aggression utilizing a fully crossed design to allow for a more thorough comparison of type (physical and psychological) and source (coworker, patient) of aggression. Future research could investigate if patient psychological or verbal aggression is a factor in subsequent physical aggression from patients. Coworker physical aggression, even if a rare event, may be particularly distressing and consequential for healthcare workers.

Other explanations for the lack of relationship with the patient physical aggression and care provider outcomes exist. Care providers have greater control over work resources to address patient aggression situations such as silent alarm systems to call for assistance or working with the treatment team to incorporate aggression management strategies in the patient's treatment plan. Care providers likely have patient aggression prevention training and greater supervisor and coworker support on the job to manage patient physical aggression which may result in fewer strains. In contrast, coworker aggression can occur daily, and often supervisors and care providers are not trained to identify or respond effectively to manage negative interactions with coworkers, and may have little control over its occurrence. Moreover, patients are severely mentally ill, physical aggression can be part of that illness, and psychiatric care providers may adjust to accept patient aggression as part of the job (Chapman et al. 2010).

Coworkers, in comparison to patients, are mentally healthy, are not expected to be psychologically aggressive, and are important sources of support for patient aggression prevention; critical support for safety that may be lacking under circumstances of coworker hostility. Therefore, in the context of coworker psychological aggression, care providers may experience greater strain reactions. An additional suggestion for future research includes asking whether employees intend to leave the profession due to aggression as this is a consequential outcome in the context of future nursing shortages especially if younger health workers are choosing to leave their profession. We also suggest employing COR to develop and test integrated interventions through field research (Halbesleben et al. 2014) that focuses on increasing supervisor support for aggression prevention and work and nonwork—building on recent research on work–nonwork interventions (Hammer et al. 2015) and including assessment of intervention effects on the nonwork or family domain. It would also be worthwhile to examine additional workplace resources that may reduce the frequency and impact of workplace aggression, building on recent research by Lepping et al. (2009).

Conclusion

The current study addresses a gap in the literature surrounding workplace aggression and family-supportive supervision by examining relationships between patient physical aggression, coworker psychological aggression, FSSB, and health, well-being, and work outcomes as well as the moderating effects of FSSB on those relationships. The study findings advance the field through identifying FSSB as an important resource to counter the

negative effects of work stressors of patient physical and low coworker psychological aggression. Our study suggests that FSSB should be examined in future research as a buffer of the negative effects of workplace aggression in combination with training that targets direct prevention of patient physical and coworker psychological aggression. Finally, an important study contribution of practical value is that the findings identify interactions that are potentially useful in designing an integrated supervisor aggression prevention and family-supportive intervention.

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References

- Aiken, LS., West, SG. Multiple regression: Testing and interpreting interactions. Thousand Oaks, CA: Sage; 1991.
- Allen TD. Family-supportive work environments: The role of organizational perceptions. *Journal of Vocational Behavior*. 2001; 58(3):414–435. DOI: 10.1006/jvbe.2000.1774
- Aquino K, Thau S. Workplace victimization: Aggression from the target's perspective. *Annual Review of Psychology*. 2009; 60:717–741. DOI: 10.1146/annurev.psych.60.110707.163703
- Arnetz JE, Arnetz BB, Soderman E. Violence toward health care workers: Prevalence and incidence at a large, regional hospital in Sweden. *American Association of Occupational Health Nurses*. 1998; 46(3):107–114.
- Bergkvist L, Rossiter JR. The predictive validity of multiple-item versus single-item measures of the same constructs. *Journal of Marketing Research*. 2007; 44(2):175–184.
- Berry CM, Ones DS, Sackett PR. Interpersonal deviance, organizational deviance, and their common correlates: A review and meta-analysis. *Journal of Applied Psychology*. 2007; 92:410–424. DOI: 10.1037/0021-9010.92.2.410 [PubMed: 17371088]
- Blau, P. Exchange and power in social life. New York: Wiley; 1964.
- Bordia P, Restubog SL, Tang RL. When employees strike back: Investigating mediating mechanisms between psychological contract breach and workplace deviance. *Journal of Applied Psychology*. 2008; 93(5):1104–1117. DOI: 10.1037/0021-9010.93.5.1104 [PubMed: 18808228]
- Bowling NA, Beehr TA. Workplace harassment from the victim's perspective: A theoretical model and meta-analysis. *Journal of Applied Psychology*. 2006; 91:998–1012. DOI: 10.1037/0021-9010.91.5.998 [PubMed: 16953764]
- Brim, OG, Ryff, CD., Kessler, RC., editors. How healthy are we? A national study of well-being at midlife. Chicago: The University of Chicago Press; 2004.
- Camerino D, Estryn-Behar M, Conway PM, van Der Heijden BIJM, Hasselhorn HM. Work-related factors and violence among nursing staff in the European NEXT study: A longitudinal cohort study. *International Journal of Nursing Studies*. 2008; 45:35–50. [PubMed: 17362960]
- Cammann, C., Fichman, M., Jenkins, GD., Klesh, JR. Assessing the attitudes and perceptions of organizational members. In: Seashore, SE, Lawler, EE, Mirvis, PH., Cammann, C., editors. *Assessing organizational change: A guide to methods, measures and practices*. New York: Wiley; 1983. p. 71-138.
- Campbell JC, Messing JT, Kub J, Agnew J, Fitzgerald S, Fowler B, Bolyard R, et al. Workplace violence: Prevalence and risk factors in the safe at work study. *Journal of Environmental Medicine*. 2011; 53:82–89. DOI: 10.1097/JOM.0b013e3182028d55
- Casper WJ, Eby LT, Bordeaux C, Lockwood A, Lambert D. A review of research methods in IO/OB work–family research. *Journal of Applied Psychology*. 2007; 92:28–43. DOI: 10.1037/0021-9010.92.1.28. [PubMed: 17227149]

- Centers for Disease Control. California Fatality Assessment and Control Evaluation (CA/FACE) Program. A Psychiatric Technician Dies from a Patient Assault at a Forensic Psychiatric Facility (Trougakos, Beal, Cheng, Hideg, & Zweig, 2015). 2012. California FACE Report #10CA009. Retrieved from <http://www.cdc.gov/niosh/face/pdfs/10CA009.pdf>
- Chang CHD, Lyons BJ. Not all aggressions are created equal: A multifoci approach to workplace aggression. *Journal of Occupational Health Psychology*. 2012; 17:79–92. DOI: 10.1037/a0026073 [PubMed: 22122549]
- Chapman R, Styles I, Perry L, Combs S. Nurses' experience of adjusting to workplace violence: A theory of adaptation. *International Journal of Mental Health Nursing*. 2010; 19(3):186–194. DOI: 10.1111/j1447-0349.2009.00663.x [PubMed: 20550642]
- Cohen S, Wills TA. Stress, social support, and the buffering hypothesis. *Psychological Bulletin*. 1985; 98:310–357. DOI: 10.1037/0033-2909.98.2.310 [PubMed: 3901065]
- Cohen-Charash Y, Spector PE. The role of justice in organization: A meta-analysis. *Organizational Behavior and Human Decision Processes*. 2001; 86:278–321. DOI: 10.1006/obhd.2001.2958
- Cropanzano R, Mitchell MS. Social exchange theory: An interdisciplinary review. *Journal of Management*. 2005; 31:874–900.
- Dawson JF. Moderation in management research: What, why, when, and how. *Journal of Business and Psychology*. 2013; 29(1):1–19. DOI: 10.1007/s10869-013-9308-7
- De Raeve L, Jansen NWH, van den Brandt PA, Vasse R, Kant IJ. Interpersonal conflicts at work as a predictor of self-reported health outcomes and occupational mobility. *Journal of Occupational and Environmental Medicine*. 2008; 66:16–22. DOI: 10.1136/oem.2007.037655
- Deery S, Walsh J, Guest D. Workplace aggression: The effects of harassment on job burnout and turnover intentions. *Work, Employment & Society*. 2011; 25:742–759. DOI: 10.1177/0950017011419707
- Einarsen S, Hoel H, Notelaers G. Measuring exposure to bullying and harassment at work: Validity, factor structure, and psychometric properties of the Negative Acts Questionnaire— Revised. *Work & Stress*. 2009; 23:24–44. DOI: 10.1080/02678370902815673
- Erikson W, Einarsen S. Gender minority as a risk factor of exposure to bullying at work: The case of male assistant nurses. *European Journal of Work and Organizational Psychology*. 2004; 13:473–492.
- Estryng-Behar M, van der Heijden B, Camerino D, Fry C, Le Nezet O, Conway PM, Hasselhorn HM. Violence risks in nursing: Results from the European 'NEXT' study. *Occupational Medicine*. 2008; 58:107–114. DOI: 10.1093/occmed/kqm142 [PubMed: 18211910]
- Findorff MJ, McGovern PM, Wall M, Gerberich S. Reporting violence to a healthcare employer: A cross sectional study. *AAOHN Journal*. 2005; 53:399–406. [PubMed: 16193912]
- Findorff MJ, McGovern PM, Wall M, Gerberich SG, Alexander B. Risk factors for work related violence in a health care organization. *Injury Prevention*. 2004; 10(5):296–302. DOI: 10.1136/ip.2003.004747 [PubMed: 15470011]
- Fisher, GG., Matthews, RA., Gibbons, AM. *Journal of Occupational Health Psychology*. 2015. Developing and investigating the use of single-item measures in organizational research. Advance online publication
- Ford MT, Matthews RA, Wooldridge JD, Mishra V, Kakar UM, Strahan SR. How do occupational stressor/strain effects vary with time? A review and meta-analysis of the relevance of time lags in longitudinal studies. *Work & Stress*. 2014; 28(1):9–30. DOI: 10.1080/02678373.2013.877096
- Gates DM, Gillespie GL, Succop P. Violence against nurses and its impact on stress and productivity. *Nursing Economics*. 2011; 29(2):59–66. Retrieved from <https://www.nursingeconomics.net/ce/2013/article29059066.pdf>. [PubMed: 21667672]
- Gerberich SG, Church TR, McGovern PM, Hansen HE, Nachreiner NM, Geisser MS, Watt GD, et al. An epidemiological study of the magnitude and consequences of work related violence: The Minnesota Nurses' Study. *Occupational Environmental Medicine*. 2004; 61:495–503. DOI: 10.1136/oem.2003.007294 [PubMed: 15150388]
- Gillespie GL, Bresler S, Gates DM, Succop P. Posttraumatic stress symptomatology among emergency department workers following workplace aggression. *Workplace Health & Safety*. 2013; 61(6): 247–254. DOI: 10.3928/21650799-20130516-07 [PubMed: 23701003]

- Grandey AA, Cropanzano R. The conservation of resources model applied to work–family conflict and strain. *Journal of Vocational Behavior*. 1999; 54(2):350–370. DOI: 10.1006/jvbe.1998.1666
- Guidroz AM, Wang M, Perez LM. Developing a model of source-specific interpersonal conflict in health care. *Stress & Health*. 2012; 28:69–79. DOI: 10.1002/smi.1405 [PubMed: 22259160]
- Gupta MA. Review of somatic symptoms in post-traumatic stress disorder. *International Review of Psychiatry*. 2013; 25(1):86–99. DOI: 10.3109/09540261.2012.736367 [PubMed: 23383670]
- Halbesleben JRB, Neveu JP, Paustian-Underdahl SC, Westman M. Getting to the “COR”: Understanding the role of resources in conservation of resources theory. *Journal of Management*. 2014; 40(5):1334–1364. DOI: 10.1177/0149206314527130
- Hammer LB, Johnson RC, Crain TL, Bodner T, Kossek EE, Davis KD, Berkman L, et al. Intervention effects on safety compliance and organizational citizenship behaviors: Evidence from the Work, Family, and Health Study. *Journal of Applied Psychology*. 2015; Advance online publication. doi: 10.1037/apl0000047
- Hammer LB, Kossek EE, Anger WK, Bodner T, Zimmerman KL. Clarifying work–family intervention processes: The roles of work–family conflict and familysupportive supervisor behaviors. *Journal of Applied Psychology*. 2011; 96:134–150. DOI: 10.1037/a0020927 [PubMed: 20853943]
- Hammer LB, Kossek EE, Bodner T, Crain T. Measurement development and validation of the FSSB Shortform (FSSB-SF). *Journal of Occupational Health Psychology*. 2013; 18:285–296. DOI: 10.1037/a0032612 [PubMed: 23730803]
- Hammer LB, Kossek EE, Yragui NL, Bodner TE, Hanson GC. Development and validation of a multidimensional measure of family-supportive supervisor behavior (FSSB). *Journal of Management*. 2009; 35:837–856. DOI: 10.1177/0149206308328510 [PubMed: 21660254]
- Harrell, E. *Workplace violence against government employees 1994–2011*. Washington, DC: Bureau of Justice Statistics; 2013.
- Hershcovis MS, Barling J. Towards a multi-foci approach to workplace aggression: A meta-analytic review of outcomes from different perpetrators. *Journal of Organizational Behavior*. 2010; 31:24–44. DOI: 10.1002/job.689
- Hobfoll SE. Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*. 1989; 44:513–524. DOI: 10.1037/0003-066X.44.3.513 [PubMed: 2648906]
- Hobfoll SE. The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology*. 2001; 50:337–421. DOI: 10.1111/1464-0597.00062
- Hogh A, Viitasara E. A systematic review of longitudinal studies of nonfatal workplace violence. *European Journal of Work and Organizational Psychology*. 2005; 14:291–313. DOI: 10.1080/13594320500162059
- Hom PW, Griffeth RW, Sellaro CL. The validity of Mobley’s (1977) model of employee turnover. *Organizational Behavior and Human Performance*. 1984; 34:141–174. DOI: 10.1016/0030-5073(84)90001-1 [PubMed: 10268421]
- Hulin, CL., Rousseau, DM. Analyzing infrequent events: Once you find them, your troubles begin. In: Roberts, KH., Burstein, L., editors. *Issues in aggregation: New directions for methodology and behavioral science*. Vol. 6. San Francisco: Jossey-Bass; 1980. p. 65-75.
- Johns G. The essential impact of context on organizational behavior. *Academy of Management Review*. 2006; 31:386–408.
- Kelloway EK, Barling J. Leadership development as an intervention in occupational health psychology. *Work & Stress*. 2010; 24(3):260–279. DOI: 10.1080/02678373.2010.518441
- Kelly EL, Moen P, Oakes JM, Fan W, Okechukwu C, Davis KD, Casper LM, et al. Changing work and work–family conflict: Evidence from the Work, Family, and Health Network. *American Sociological Review*. 2014; 79(3):485–516. DOI: 10.1177/0003122414531435 [PubMed: 25349460]
- Kelly EL, Subica AM, Fulginiti A, Brekke JS, Novaco RW. A cross-sectional survey of factors related to inpatient assault of staff in a forensic psychiatric hospital. *Journal of Advanced Nursing*. 2015; 71(5):1110–1122. DOI: 10.1111/jan.12609 [PubMed: 25546118]
- Kossek E, Pichler S, Bodner T, Hammer L. Workplace social support and work–family conflict: A meta-analysis clarifying the influence of general and work–family specific supervisor and

- organizational support. *Personnel Psychology*. 2011; 64:289–313. DOI: 10.1111/j1744-6570.2011.01211.x [PubMed: 21691415]
- Lanza ML, Zeiss RA, Rierdan J. Non-physical violence: A risk factor for physical violence in health care settings. *AAOHN Journal*. 2006; 54:397–402. [PubMed: 17001838]
- Lapierre LM, Spector PE, Leck JD. Sexual versus nonsexual workplace aggression and victims' overall job satisfaction: A meta-analysis. *Journal of Occupational Health Psychology*. 2005; 10(2): 155–169. DOI: 10.1037/1076-8998.10.2.155 [PubMed: 15826225]
- Lasalvia A, Bonetto C, Bertani M, Bissoli S, Cristofalo D, Marrella G, Ruggeri M, et al. Influence of perceived organisational factors on job burnout: Survey of community mental health staff. *British Journal of Psychiatry*. 2009; 195:537–544. DOI: 10.1192/bjp.bp.108.060871 [PubMed: 19949206]
- Laschinger HKS, Grau AL. The influence of personal dispositional factors and organizational resources on workplace violence, burnout, and health outcomes in new graduate nurses: A cross-sectional study. *International Journal of Nursing Studies*. 2012; 49:282–291. DOI: 10.1016/j.ijnurstu.2011.09.004 [PubMed: 21978860]
- Leiter MP, Laschinger HK, Day A, Oore DG. The impact of civility interventions on employee social behavior, distress, and attitudes. *Journal of Applied Psychology*. 2011; 96(6):1258–1274. DOI: 10.1037/a0024442 [PubMed: 21744942]
- Lepping P, Steinert T, Needham I, Abderhalden C, Flammer E, Schmid P. Ward safety perceived by ward managers in Britain, Germany, and Switzerland: Identifying factors that improve ability to deal with violence. *Journal of Psychiatric and Mental Health Nursing*. 2009; 16:629–635. DOI: 10.1111/j.1365-2850.2009.01425.x [PubMed: 19689556]
- Maslach C, Jackson SE. The measurement of experienced burnout. *Journal of Organizational Behavior*. 1981; 2:99–113. DOI: 10.1002/job.4030020205
- McClelland GH, Judd CM. Statistical difficulties of detecting interactions and moderator effects. *Psychological Bulletin*. 1993; 114:376–390. [PubMed: 8416037]
- McKenna BG, Poole SJ, Smith NA, Coverdale JH, Gale CK. A survey of threats and violent behaviour by patients against registered nurses in their first year of practice. *International Journal of Mental Health Nursing*. 2003; 12:56–63. [PubMed: 14685960]
- Merecz D, Drabek M, Mo cicka A. Aggression at the workplace—psychological consequences of abusive encounter with coworkers and clients. *International Journal of Occupational Medicine and Environmental Health*. 2009; 22:243–260. DOI: 10.2478/v10001-009-0027-2 [PubMed: 19819835]
- Mueller S, Tschan F. Consequences of client-initiated workplace violence: The role of fear and perceived prevention. *Journal of Occupational Health Psychology*. 2011; 16:217–229. DOI: 10.1037/a0021723 [PubMed: 21244166]
- Myers D, Kriebel D, Karasek R, Punnett L, Wegman D. Injuries and assaults in a long-term psychiatric care facility: An epidemiologic study. *AAOHN Journal*. 2005; 53:489–498. [PubMed: 16309011]
- Neuman, JH., Baron, R. Aggression in the workplace: A social-psychological perspective. In: Fox, S., Spector, PE., editors. *Counterproductive workplace behavior: An integration of both actor and recipient perspectives on causes and consequences*. Washington, DC: American Psychological Association; 2005.
- Niedhammer I, Chastang JF, David S. Importance of psychosocial work factors on general health outcomes in the national French SUMER survey. *Occupational Medicine*. 2008; 58(1):15–24. DOI: 10.1093/occmed/kqm115 [PubMed: 17965447]
- Nunnally, JC., Bernstein, IH. *Psychometric theory*. 3. New York: McGraw-Hill; 1994.
- Odle-Dusseau HN, Britt TW, Greene-Shortridge TM. Organizational work–family resources as predictors of job performance and attitudes: The process of work–family conflict and enrichment. *Journal of Occupational Health Psychology*. 2012; 17:28–40. DOI: 10.1037/a0026428 [PubMed: 22149204]
- Olson R, Crain TL, Bodner TE, King R, Hammer LB, Klein LC, Buxton OM, et al. A workplace intervention improves sleep: Results from the randomized controlled Work, Family, and Health Study. *Sleep Health: Journal of the National Sleep Foundation*. 2015; 1(1):55–65. DOI: 10.1016/j.sleth.2014.11.003

- Osatuke K, Mohr D, Ward C, Moore SC, Dyrenforth S, Belton L. Civility, Respect, Engagement in the Workforce (CREW): Nationwide organization development intervention at Veterans Health Administration. *Journal of Applied Behavioral Science*. 2009; 45:384–410. DOI: 10.1177/0021886309335067
- Pai HC, Lee S. Risk factors for workplace violence in clinical registered nurses in Taiwan. *Journal of Clinical Nursing*. 2011; 20:1405–1412. [PubMed: 21492284]
- Parzefall MR, Salin DM. Perceptions and reactions to workplace bullying: A social exchange perspective. *Human Relations*. 2010; 63:761–781. DOI: 10.1177/0018726709345043
- Piquero NL, Piquero AR, Craig JM, Clipper SJ. Assessing research on workplace violence, 2000–2012. *Aggression and Violent Behavior*. 2013; 18:383–394. DOI: 10.1016/j.avb.2013.03.001
- Podsakoff PM, MacKenzie SB, Lee JY, Podsakoff NP. Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*. 2003; 88:879–903. DOI: 10.1037/0021-9010.88.5.879 [PubMed: 14516251]
- R Development Core Team. R Foundation for Statistical Computing; Vienna: 2013. R: A language and environment for statistical computing. <https://www.R-project.org/>
- Rogelberg SG, Stanton JM. Introduction: Understanding and dealing with organizational survey nonresponse. *Organizational Research Methods*. 2007; 10:195–209. DOI: 10.1177/1094428106294693
- Schat, ACH., Frone, M., Kelloway, EK. Prevalence of workplace aggression in the U.S. workforce: Findings from a national study. In: Kelloway, EK, Barling, J., Hurrell, JJ., editors. *Handbook of workplace violence*. Thousand Oaks, CA: Sage; 2006. p. 47-90.
- Schat ACH, Kelloway EK. Reducing the adverse consequences of workplace aggression and violence: The buffering effects of organizational support. *Journal of Occupational Health Psychology*. 2003; 8:110–122. DOI: 10.1037/1076-8998.8.2.110 [PubMed: 12703877]
- Sofield L, Salmond SW. Workplace violence: A focus on verbal abuse and intent to leave the organization. *Orthopedic Nursing*. 2003; 22:274–283. [PubMed: 12961971]
- Spector, PE. A consideration of the validity and meaning of self-report measures of job conditions. In: Cooper, CL., Robertson, IT., editors. *International Review of Industrial and Organizational Psychology*: 1992. New York: Wiley; 1992. p. 123-151.
- Spector PE, Coulter ML, Stockwell HG, Matz MW. Perceived violence climate: A new construct and its relationship to workplace physical violence and verbal aggression, and their potential consequences. *Work & Stress*. 2007; 21:117–130.
- Spector PE, Fox S. Reducing subjectivity in the assessment of the job environment: Development of the Factual Autonomy Scale (FAS). *Journal of Organizational Behavior*. 2003; 24:417–432.
- Spector PE, Zhou ZE, Che XX. Nurse exposure to physical and nonphysical violence, bullying, and sexual harassment: A quantitative review. *International Journal of Nursing Studies*. 2014; 51(1): 72–84. DOI: 10.1016/j.ijnurstu.2013.01.010 [PubMed: 23433725]
- Speroni KG, Fitch T, Dawson E, Dugan L, Atherton M. Incidence and cost of nurse workplace violence perpetrated by hospital patients or patient visitors. *Journal of Emergency Nursing*. 2014; 40(3):218–228. DOI: 10.1016/j.jen.2013.05.014 [PubMed: 24054728]
- Thomas LT, Ganster DC. Impact of family-supportive work variables on work–family conflict and strain: A control perspective. *Journal of Applied Psychology*. 1995; 80(1):6–15. DOI: 10.1037/0021-9010.80.1.6
- Walrath JM, Dang D, Nyberg D. Hospital RNs’ experiences with disruptive behavior: A qualitative study. *Journal of Nursing Care Quality*. 2010; 25:105–116. DOI: 10.1097/NCQ.0b013e3181c7b58e [PubMed: 19935429]
- Wanous JP, Reichers AE, Hudy MJ. Overall job satisfaction: How good are single item measures? *Journal of Applied Psychology*. 1997; 82(2):247–252. [PubMed: 9109282]
- Whittington R, Wykes T. Staff strain and social support in a psychiatric hospital following assault by a patient. *Journal of Advanced Nursing*. 1992; 17:480–486. DOI: 10.1111/j.1365-2648.1992.tb01933.x [PubMed: 1578071]
- Yang LQ, Caughlin DE, Gazica MW, Truxillo DM, Spector PE. Workplace mistreatment climate and potential employee and organizational outcomes: A metaanalytic review from the target’s

- perspective. *Journal of Occupational Health Psychology*. 2014; 19(3):315–335. DOI: 10.1037/a0036905 [PubMed: 24885687]
- Yragui, NL., Silverstein, B., Foley, M., Smith, C., Spann, C. The work, stress, and health project: Western State Hospital workplace violence report (87-7-2016). Washington State Department of Labor & Industries, SHARP Program. 2009. Retrieved from <http://www.lni.wa.gov/safety/research/files/WSHWorkplaceViolenceReport1209SHARPFINALwpub.pdf>
- Yragui, NL., Silverstein, BA., Jellison, JL. The work, stress, and health project: Eastern State Hospital workplace violence report (87-6-2016). Washington State Department of Labor & Industries, SHARP Program. 2011. Retrieved from <http://www.lni.wa.gov/safety/research/files/ESHFinalReport022211wpub.pdf>
- Zapf D, Dormann C, Frese M. Longitudinal studies in organizational stress research: A review of the literature with reference to methodological issues. *Journal of Occupational Health Psychology*. 1996; 1:145–169. DOI: 10.1037/1076-8998.1.2.145 [PubMed: 9547043]

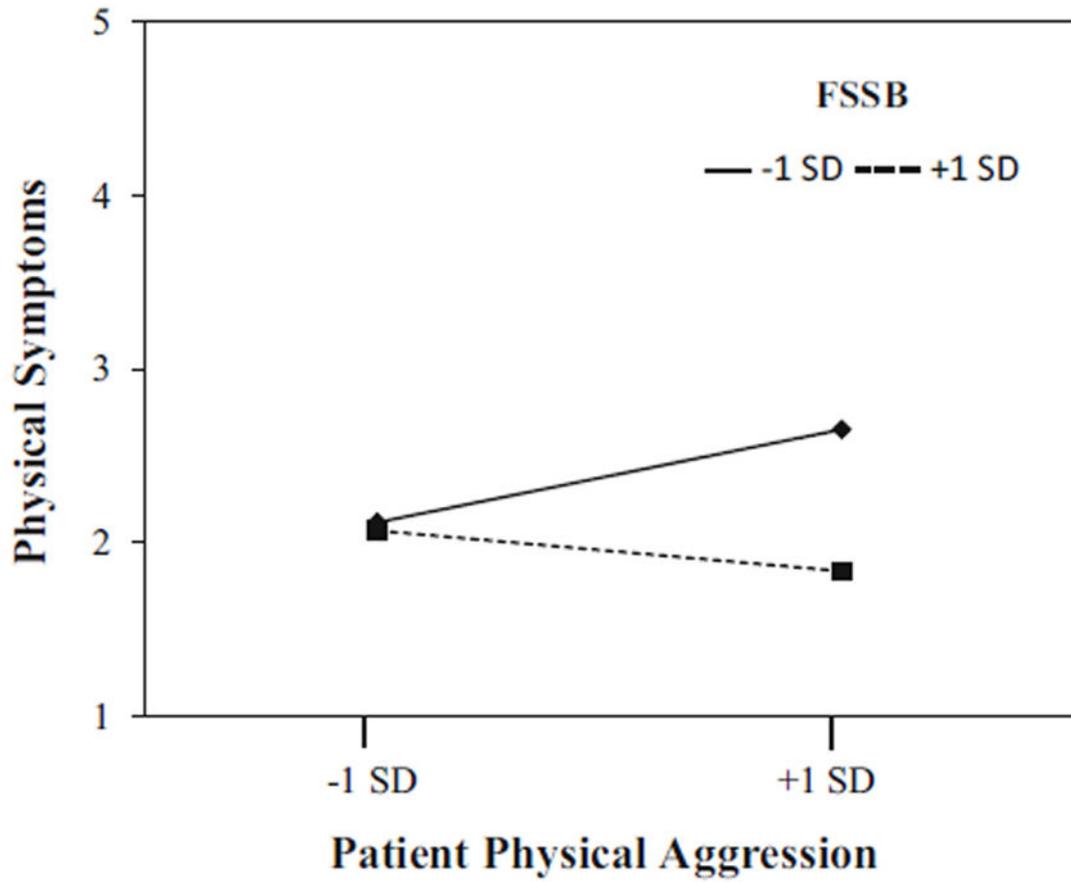


Fig. 1. FSSB as a moderator of the relationship between patient physical aggression and physical symptoms. *FSSB* family-supportive supervisor behaviors

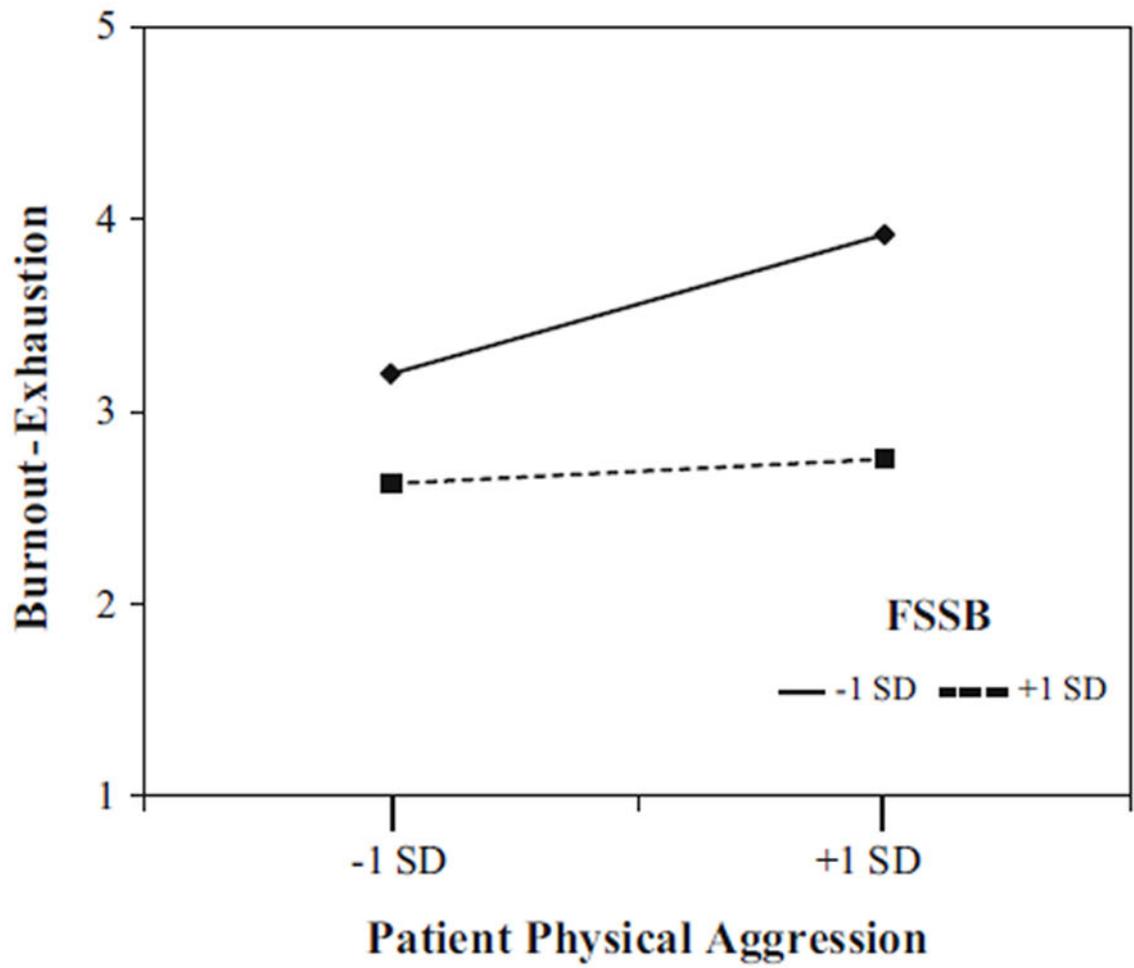


Fig. 2. FSSB as a moderator of the relationship between patient physical aggression and burnout-exhaustion. *FSSB* family-supportive supervisor behaviors

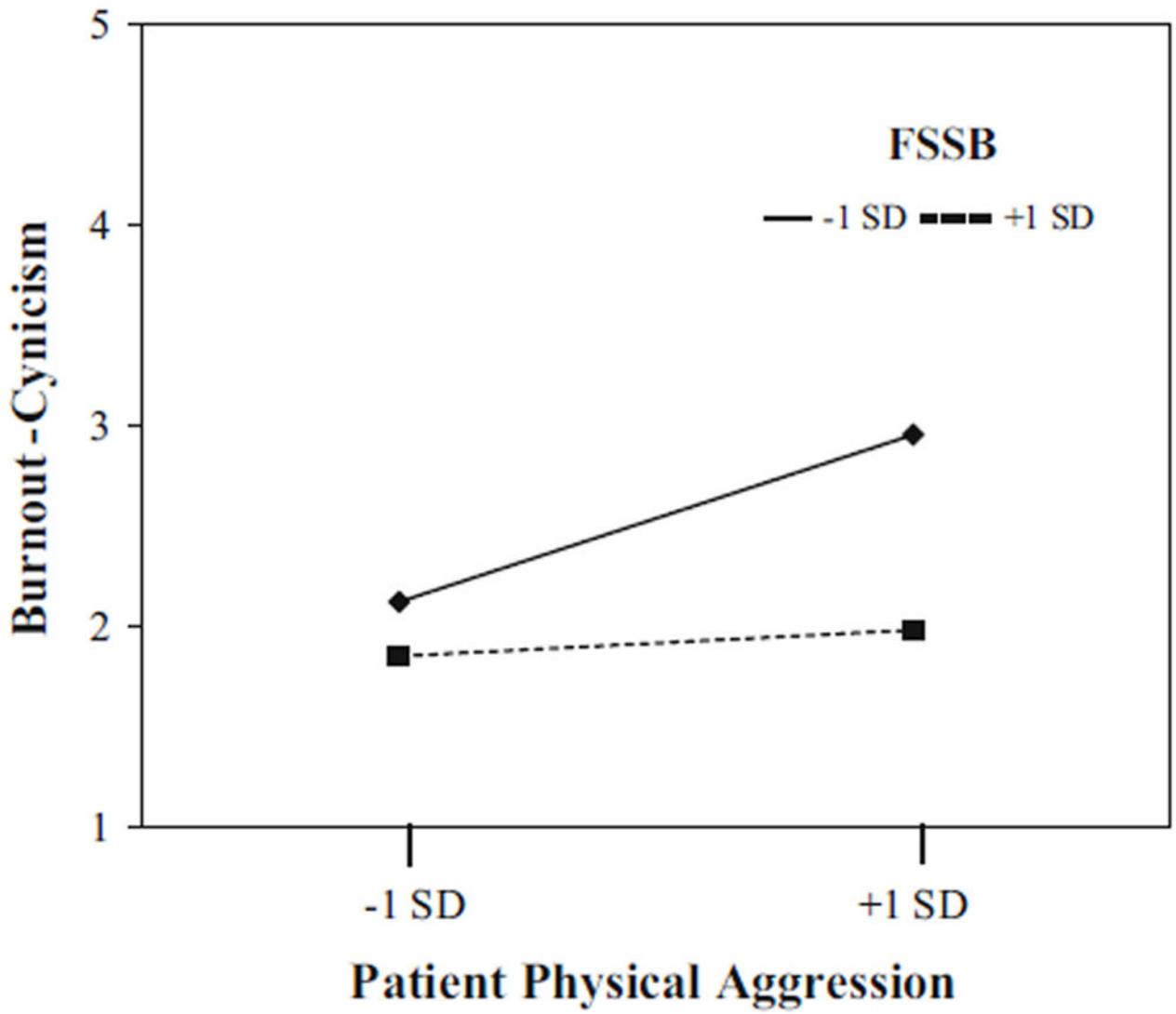


Fig. 3. FSSB as a moderator of the relationship between patient physical aggression and burnout-cynicism. *FSSB* family-supportive supervisor behaviors

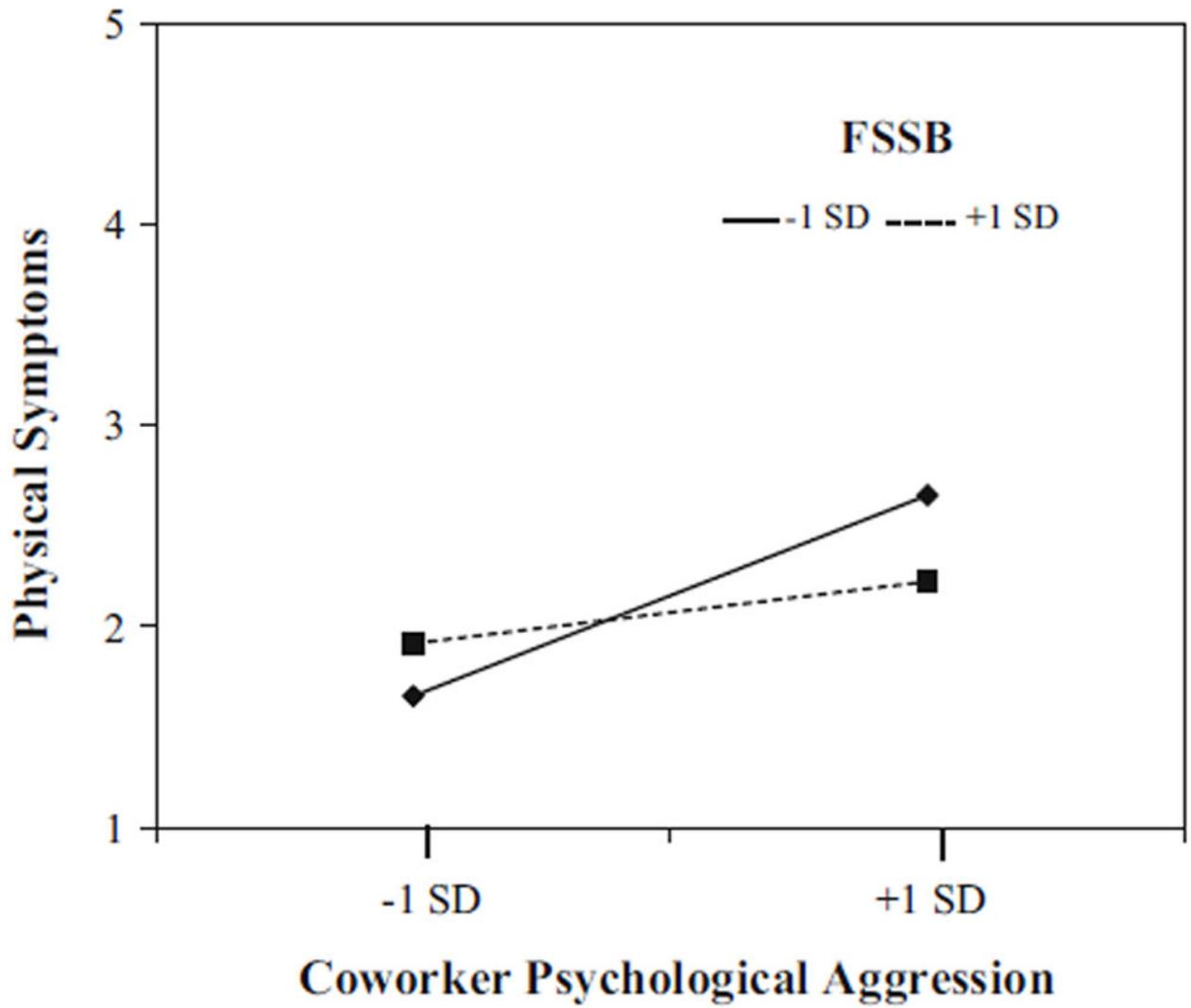


Fig. 4. FSSB as a moderator of the relationship between coworker psychological aggression and physical symptoms. *FSSB* familysupportive supervisor behaviors

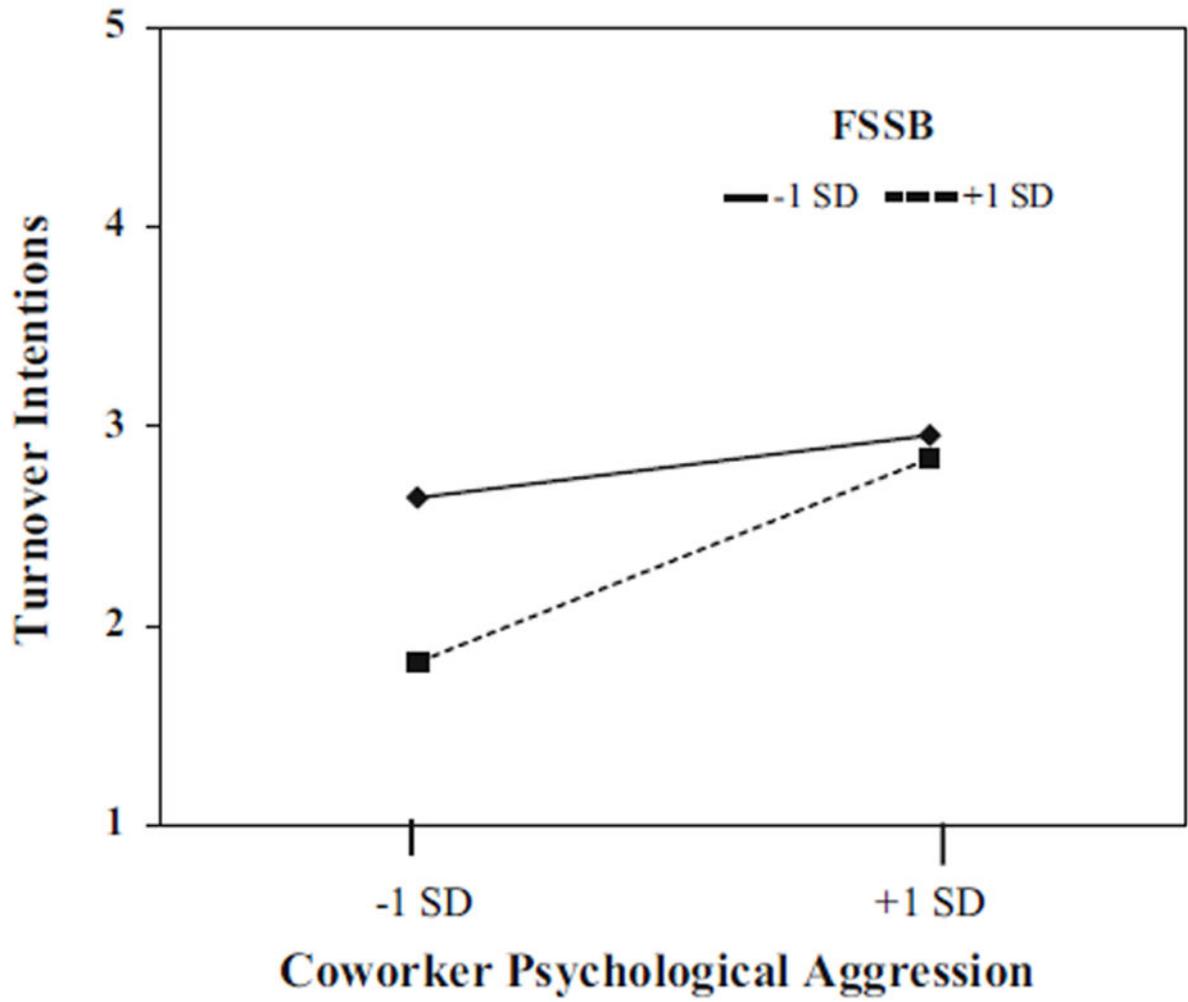


Fig. 5. FSSB as a moderator of the relationship between coworker psychological aggression and turnover intentions. *FSSB* familysupportive supervisor behaviors

Table 1

Descriptive statistics and intercorrelations of variables

Variable	N	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age	400	3.35	1.17	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Relationship status	405	0.65	0.48	-0.01	-	-	-	-	-	-	-	-	-	-	-	-
3. Time spent with supervisor	417	5.42	1.06	-0.05	-0.02	-	-	-	-	-	-	-	-	-	-	-
4. Income	364	4.52	2.41	0.17**	0.29**	-0.02	-	-	-	-	-	-	-	-	-	-
5. Hospital	417	1.38	0.49	-0.09	0.00	0.04	-0.06	-	-	-	-	-	-	-	-	-
6. FSSB	408	3.17	1.05	-0.04	-0.05	0.22**	0.04	-0.02	-	-	-	-	-	-	-	-
7. Patient physical aggression	417	0.57	0.50	0.01	0.03	0.07	-0.04	-0.01	-0.10*	-	-	-	-	-	-	-
8. Coworker psychological aggression	417	1.58	0.69	-0.06	0.02	-0.11*	-0.10	0.04	-0.44**	0.17**	-	-	-	-	-	-
9. Physical symptoms	405	2.19	1.25	-0.04	-0.04	-0.03	-0.20**	0.04	-0.16**	0.07	0.29**	-	-	-	-	-
10. Burnout-exhaustion	404	3.15	1.39	-0.06	-0.04	-0.10*	-0.05	0.11*	-0.32**	0.14**	0.46**	0.35**	-	-	-	-
11. Burnout-cynicism	403	2.30	1.30	-0.12*	-0.01	-0.09	-0.08	0.07	-0.30**	0.18**	0.40**	0.27**	0.71**	-	-	-
12. Job dissatisfaction	413	2.24	0.89	-0.02	-0.02	-0.04	0.00	0.13**	-0.42**	0.10	0.36**	0.26**	0.55**	0.41**	-	-
13. Intent to quit	411	2.50	1.21	-0.03	-0.05	-0.05	0.00	0.00	-0.26**	0.10*	0.24**	0.20**	0.44**	0.36**	0.54*	-

FSSB family-supportive supervisor behaviors

* $p < 0.05$;

** $p < 0.01$

Table 2

Hierarchical regression models for health and well-being outcomes

Variable	Patient physical aggression						Coworker psychological aggression											
	Physical symptoms			Burnout-exhaustion			Burnout-cynicism			Physical symptoms			Burnout-exhaustion			Burnout-cynicism		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Age	0.01	-0.01	0.01	-0.06	-0.09	-0.08	-0.11*	-0.14**	-0.13*	0.01	0.01	0.02	-0.06	-0.06	-0.06	-0.11*	-0.11*	-0.12*
Relationship status	0.03	0.00	0.00	-0.03	-0.08	-0.08	0.02	-0.02	-0.02	0.03	0.00	-0.01	-0.03	-0.08	-0.08	0.02	-0.03	-0.03
Income	-0.22**	-0.20**	-0.21**	-0.04	0.00	0.00	-0.08	-0.04	-0.05	-0.22**	-0.19**	-0.18**	-0.04	0.02	0.02	-0.08	-0.03	-0.03
Hospital	-0.08	-0.07	-0.07	0.03	0.04	0.04	0.02	0.02	0.03	-0.08	-0.08	-0.06	0.03	0.02	0.02	0.02	0.01	0.00
FSSB	-0.20**	-0.20**	-0.02	-0.34**	-0.21*	-0.21*	-0.27**	-0.11	-0.11	-0.06	-0.06	-0.03	-0.14**	-0.14**	-0.14*	-0.10	-0.10	-0.11
Aggression	0.10	0.10	0.12	0.30**	0.31**	0.31**	0.36**	0.38**	0.38**	0.31**	0.31**	0.26**	0.46**	0.46**	0.46**	0.41**	0.41**	0.43**
FSSB × aggression			-0.30**		-0.22*	-0.22*		-0.28**	-0.28**		-0.14**		-0.01					0.05
R ²	0.05	0.09	0.11	0.01	0.15	0.16	0.02	0.14	0.15	0.05	0.16	0.18	0.01	0.29	0.29	0.02	0.23	0.23
R ²	0.05**	0.04**	0.02**	0.01	0.14**	0.01*	0.02	0.11**	0.02**	0.05**	0.11**	0.02**	0.01	0.28**	0.00	0.02	0.20**	0.00

Standardized regression coefficients are shown
FSSB family-supportive supervisor behaviors

The interaction terms are FSSB × patient aggression and FSSB × coworker aggression for each analysis, respectively

* $p < 0.05$;

** $p < 0.01$

Table 3

Hierarchical regression models for work outcomes

Variable	Patient physical aggression			Intent to quit			Coworker psychological aggression					
	Job dissatisfaction			Intent to quit			Job dissatisfaction			Intent to quit		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Time spent with supervisor	-0.03	0.06	0.06	-0.02	0.04	0.04	-0.03	0.08	0.08	-0.02	0.05	0.04
Income	0.00	0.02	0.03	-0.03	-0.01	-0.01	0.00	0.04	0.04	-0.03	0.00	-0.01
Hospital	0.08	0.09	0.09	-0.04	-0.03	-0.03	0.08	0.08	0.08	-0.04	-0.04	-0.06
FSSB		-0.45**	-0.51**		-0.25**	-0.24**		-0.32**	-0.32**		-0.17**	-0.19**
Aggression		0.19	0.18		0.22*	0.22*		0.30**	0.30**		0.22**	0.27**
FSSB × aggression			0.10			-0.01			-0.01			0.14**
R ²	0.01	0.21	0.21	0.00	0.08	0.08	0.01	0.27	0.27	0.00	0.10	0.12
R ²	0.01	0.20**	0.00	0.00	0.07**	0.00	0.01	0.26**	0.00	0.00	0.10**	0.02**

Standardized regression coefficients are shown
 FSSB family-supportive supervisor behaviors

The interaction terms are FSSB × patient aggression and FSSB × coworker aggression for each analysis, respectively

* $p < 0.05$;

** $p < 0.01$