



Does taking the good with the bad make things worse? How abusive supervision and leader–member exchange interact to impact need satisfaction and organizational deviance

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ABSTRACT

We integrate and extend past work on self-determination theory and mixed relationships, or relationships characterized by both conflict and support, to address the question of how abusive supervision promotes subordinate organizational deviance. In so doing, we propose a mediated moderation model wherein abusive supervision and leader–member exchange interact to predict organizational deviance, with psychological need satisfaction mediating the effect of the interaction on organizational deviance. This hypothesized model was supported with multi-wave data collected from 260 employees. Notably, our model was supported after controlling for justice perceptions and organizational social exchange as alternative mediators. Theoretical and practical implications are discussed.

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Introduction

Organizational deviance, or counter-normative behaviors initiated by employees which target employers (Bennett & Robinson, 2003), continues to have a crippling effect on organizations worldwide. Employee theft is increasing yearly, with costs associated with fraud increasing 40% from 2005 to 2007 (Needleman, 2008). As well, unauthorized web surfing has been estimated to cost upwards of \$600 million dollars in lost productivity yearly (Taylor, 2007). Organizational deviance also extracts a significant human cost: Employee performance, morale, and well-being are all impacted by such deviant behaviors (Robinson & Greenberg, 1998). Understandably, these costs are a major concern to organizations, and researchers have in turn focused on the antecedents of organizational deviance. In particular, numerous authors have proposed that abusive supervision, or “subordinates’ perceptions of the extent to which their supervisors engage in the sustained display of hostile verbal and nonverbal behaviors, excluding physical contact” (Tepper, 2000, p. 178), is a primary cause of organizational deviance (Tepper, Henle, Lambert, Giacalone, & Duffy, 2008; Tepper et al., 2009).

In order to better understand the relation between abusive supervision and organizational deviance, researchers have suggested different intervening mechanisms such as social exchange (Thau, Bennett, Mitchell, & Marrs, 2009) and justice (Tepper, 2000). In particular, previous research has suggested that abusive supervision decreases individuals’ perceptions of justice and social exchange quality with their organizations, which in turn translate into deviant behaviors which harm the organization. Such work is important in that it advances theory and suggests leverage points for practitioners to influence and mitigate the negative effects of abusive supervision (Kenny, 2008). Along these lines, it has recently been suggested that the satisfaction of *basic human needs*, or essential conditions for psychological growth and well-being (Ryan, 1995), may be the primary underlying psychological mechanism linking abusive supervision to outcomes such as organizational deviance (Aquino & Thau, 2009). Such a proposition is intriguing in that it situates the abusive supervision literature within well-established needs-based motivational theories (Deci & Ryan, 2000), addressing recently raised concerns that abusive supervision research risks becoming atheoretical (Tepper, 2007).

In the present paper, we apply self-determination theory (Deci & Ryan, 2000) to provide an empirical test of the mediating role basic psychological needs play in the relation between abusive supervision and organizational deviance, while simultaneously ruling out alternate mediating mechanisms such as justice perceptions and social exchange. In so doing, we provide a test of

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competing predictions regarding why abusive supervision relates to organizational deviance: by adversely impacting psychological need satisfaction, by adversely impacting feelings of fairness and justice, or by adversely impacting social exchange relationships with the organization. The results of our study thus hold the potential to inform our knowledge regarding the underlying psychological processes through which abusive supervision results in deviant behavior.

Aside from providing a broader view of the mechanisms through which abusive supervision impacts deviance, however, a second goal of our study was to provide a broader view of the relational context within which abusive supervision itself occurs. In particular, we ask the question: What effects does abusive supervision have once the broader relationship with one’s leader (for better or for worse) is taken into account? Although past work on abusive supervision has primarily considered the presence of abusive supervision to indicate a bad relationship with one’s supervisor, we argue that abusive supervisory behaviors may happen within high quality supervisor–subordinate relationships, or high *leader-member exchange* (LMX), similar to how negative interpersonal behaviors such as yelling and ostracism can occur even in otherwise supportive relationships (e.g., spouse, sibling, parents; Berscheid & Regan, 2005). While one might expect high LMX would mitigate the impact of abusive supervision, we make the counterintuitive argument that the impact of abusive supervision on need satisfaction is *exacerbated* when it occurs in the context of high LMX. This prediction is grounded in work on mixed relationships (Duffy, Ganster, & Pagon, 2002; Hobman, Restubog, Bordia, & Tang, 2009; Major, Zubek, Cooper, Cozzarelli, & Richards, 1997) which suggests that not only are positive and negative aspects of relationships distinct, but that conflicts occurring within highly supportive relationships are detrimental to psychological well-being.

Fig. 1 provides an overview of our study and illustrates the mediated moderation model we propose to explain the relation among abusive supervision, LMX, need satisfaction, and organizational deviance, while controlling for justice perceptions and social exchange mechanisms. More specifically, we suggest that after controlling previously suggested mediators, basic need satisfaction will mediate the effect of abusive supervision on subordinates’ organizational deviance. In addition, we suggest that LMX moderates the relation between abusive supervision and need satisfaction. Overall, we propose that subordinates’ basic need satisfaction mediates the moderating effect of LMX on the relation between abusive supervision and organizational deviance.

Self-determination theory and basic need satisfaction

Dating back to McDougall (1908), Murray (1938), and Maslow (1954), psychological needs theories have had a considerable influence in psychology. Arguably the most prominent modern needs-based theory of human motivation is self-determination theory (Deci & Ryan, 2000). While previous psychological needs theories considered any individual want, desire, or goal to represent a need, self-determination theory holds that only those elements whose absence produces marked declines in psychological functioning and well-being should be considered basic psychological needs (Ryan, 1995). From this perspective, needs are not individual-variant and learned but universal and innate, as basic psychological needs must be satisfied in order for all individuals to thrive, much like how plants need key nutrients – i.e., soil, water, and sun – to grow healthy (Deci & Ryan, 2000). As such, something like the desire for wealth is not regarded as a need by self-determination theory, as it is not universal and inherent; moreover, even when satisfied, it may not produce and may even hinder psychological well-being (Greguras & Diefendorff, 2009; Kasser & Ryan, 1993).

Self-determination theory thus advocates that humans possess three innate psychological needs whose absence are universally detrimental to humans: a need for competence, a need for relatedness and a need for autonomy. The *need for competence* refers to the desire to attain valued outcomes and succeed at challenging tasks (Skinner, 1995; White, 1959); the *need for relatedness* refers to the desire to feel a sense of connection and mutual respect with others (Baumeister & Leary, 1995); the *need for autonomy* refers to the desire to initiate one’s own action and choose activities consistent with one’s integrated sense of self (Ryan & Connell, 1989). Numerous studies have shown that satisfaction of these needs is linked directly to well-being (e.g., Deci & Ryan, 2000; Kasser & Ryan, 1999). Moreover, relative to other theorized psychological needs, such as the need for security, self-actualization, meaning, influence, and so on, satisfaction of needs for competence, relatedness, and autonomy contribute the most to people’s feelings of fulfillment in various events (Sheldon, Elliot, Kim, & Kasser, 2001). Notably, while the three needs are distinguishable conceptually, thwarting of any need produces similar negative outcomes (Deci & Ryan, 2000) and the three needs overlap considerably in naturalistic settings (e.g., Baard, Deci, & Ryan, 2004; Sheldon & Niemiec, 2006; Uysal, Lin, & Knee, 2010). Consequently, prior empirical studies have modeled need satisfaction as an overall construct

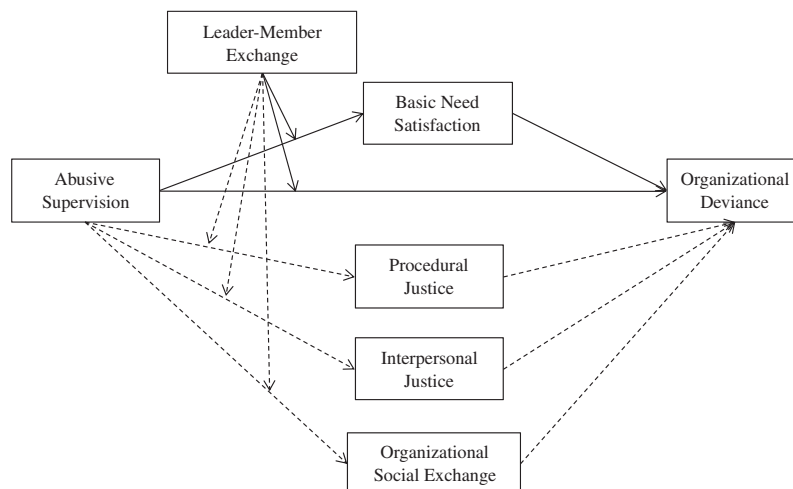


Fig. 1. The mediated moderated relationship between abusive supervision and organizational deviance. Alternate pathways tested are illustrated with dashed lines.

(e.g., Baard et al., 2004; Gagné, 2003; Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008).

By regarding these needs as inherent to human nature, self-determination theory does not focus on individual differences in need strength or the extent to which individuals value particular needs. Instead, self-determination theory focuses on examining satisfaction of these needs in specific situations, with past research outlining the negative consequences associated with thwarted need satisfaction (Deci & Ryan, 2000). More specifically, self-determination theory suggests that need satisfaction facilitates self-regulatory processes and adjustment (Kuhl, 2000), while thwarted need satisfaction is experienced as aversive, undermines self-regulation and causes suboptimal performance (Deci & Ryan, 2000). In line with this proposition, research has found that need satisfaction is associated with better job performance (Greguras & Diefendorff, 2009), being more engaged at work, and better psychological adjustment (Deci et al., 2001). In contrast, thwarted need satisfaction is related to behavioral disregulation and aggression (Shields, Ryan, & Cicchetti, 2001) and health-undermining behaviors such as drug use (Williams, Cox, Hedberg, & Deci, 2000).

Self-determination theory thus represents a comprehensive theory of human motivation and adjustment, wherein need satisfaction leads to human thriving, and need thwarting leads to maladjustment and impaired regulatory functioning. Building on this theoretical perspective, it has recently been suggested that one of the reasons individuals may react negatively to mistreatment at work is due to the impact of such mistreatment on psychological needs (Aquino & Thau, 2009). More specifically, it has been suggested that being the target of abusive supervision may thwart subordinates' feelings of belongingness, worthiness, and ability to predict and control their environment, which ultimately harm subordinates' psychological well-being (Aquino & Thau, 2009).

Abusive supervision and organizational deviance: the mediating role of basic need satisfaction

Abusive supervision, characterized by ridiculing and humiliating subordinates publicly, improperly blaming subordinates, and invading subordinates' privacy (Tepper, 2000) is estimated to impact between 10% and 16% of American workers (Namie & Namie, 2000). Abusive supervision has significant negative ramifications for a wide range of relevant organizational outcomes (see Tepper (2007), for a review); perhaps one of the most troubling outcomes associated with abusive supervision is its positive relation with subordinates' organizational deviance, or deviant behaviors intended to harm the organization. Previous studies have shown that in reaction to abusive supervision, employees will engage in deviant behaviors such as theft, fraud, or working slower than usual (Tepper et al., 2009).

Based on a self-determination theory perspective, the negative effects of abusive supervision on organizational deviance should lie in abusive supervision's ability to threaten the fundamental psychological needs of the subordinate. By definition, abusive supervision encompasses behaviors which are likely to negatively impact an individual's basic psychological needs. For example, abusive supervision comprises behaviors such as belittling subordinates and emphasizing their shortcomings through negative evaluations, lying to subordinates, and threatening, excluding, or otherwise behaving rudely to subordinates. Being belittled or having one's competence assailed calls into question one's abilities and achievements, and thus can negatively affect one's sense of competence. Negative evaluations and threats also shift one's perceived locus of causality from internal to external sources (Deci & Cascio, 1972; Lepper & Greene, 1975). Employees subsequently begin to behave in line with what they believe their supervisor desires, so

as to avoid being subject to abuse; as a result, one's sense of autonomy is undermined. Finally, excluding, belittling, and rude behaviors communicate to an individual that he or she is not a well-respected member of the group, reducing one's sense of belonging and relatedness (Ferris, Brown, Berry, & Lian, 2008; Tyler, DeGoey, & Smith, 1996). Based on this, we propose abusive supervisors negatively impact the overall basic need satisfaction of subordinates.

Hypothesis 1. Abusive supervision is negatively related to subordinates' basic need satisfaction.

The impact of abusive supervision on subordinates' basic need satisfaction can explain why abusive supervision ultimately results in subordinates' organizational deviance. When subordinates' basic need satisfaction is blocked by an abusive supervisor, subordinates may develop the desire to retaliate against the supervisor. Retaliation refers to behavior with the purpose of punishing an offender because of the perceived harm caused by the offender (Bies & Tripp, 1996; Skarlicki & Folger, 2004). Notably, experiencing threats to basic psychological needs is inherently harmful – decreased need satisfaction is experienced as painful and frustrating, causing anxiety, depression, somatic symptoms and insomnia to individuals (see Deci and Ryan (2000), for a review). To relieve these aversive experiences, individuals may retaliate against the wrongdoer; such acts of revenge can reduce the likelihood of future threats to one's basic needs (Baumeister, Smart, & Boden, 1996; Berkowitz, 1989) and are also expected to feel good (Carlsmith, Wilson, & Gilbert, 2008).

However, retaliation against supervisors may not be possible (Dollard, Doob, Miller, Mowrer, & Sears, 1939) or may provoke an escalation in supervisor hostility and abuse (Aquino & Thau, 2009; Tepper et al., 2009). Moreover, given that supervisors control desirable resources (e.g., salaries, benefits, promotions, expertise), retaliating against a supervisor may have more widespread negative repercussions for the individual (Aquino, Tripp, & Bies, 2001; Thau & Mitchell, 2010). As a result, abused subordinates may retaliate against the organization as a whole through covert and indirect behaviors such as theft or taking extended breaks. Such behaviors are both more convenient and not directly targeting the supervisor, and hence are less likely to cause further harm to the subordinate (so long as they remain covert and indirect; Mitchell & Ambrose, 2007). Moreover, as supervisors represent agents of the organization, subordinates may hold organizations accountable for supervisors' needs thwarting behaviors and thus target the organization in an effort to retaliate against the supervisor (Ambrose, Seabright, & Schminke, 2002).

Although organizational deviance such as sabotaging equipment, ignoring one's supervisor, daydreaming, or being late or absent can satisfy one's desire to retaliate against abusive supervision, they also cause serious cost to subordinates' basic psychological need satisfaction. For instance, leaving early and coming in late may invoke resentment among others in the workplace, as they may need to work harder to cover for the individual, thwarting satisfaction of one's relatedness need. Such behaviors may also cause peers and supervisors to form negative perceptions of the work ethic of the individual, resulting in closer supervision, provision of low-priority assignments, or negative feedback which ultimately thwarts needs for autonomy and competence. In this sense, deviant behaviors are *self-defeating* in that they satisfy the desire to retaliate at the expenses of attaining the nutrients individuals really need (Thau, Aquino, & Poortvliet, 2007). As such, rather than satisfying basic psychological needs, engaging in organizational deviance ultimately thwarts the attainment of such needs, trapping individuals in a cycle of continued need thwarting.

The above argument is premised on the notion that subordinates develop a desire to retaliate and thus engage in organizational deviance after their basic needs are thwarted by abusive supervision. An alternate explanation suggested by self-determination theory is that thwarted basic need satisfaction impairs individuals' ability to regulate their behaviors (Deci & Ryan, 2000). In particular, it has been suggested that when basic needs are thwarted, individuals have fewer emotional and cognitive resources to self-regulate their behavior by following norms and acting rationally (Ferris, Brown, & Heller, 2009; Kuhl, 2000). Accordingly, subordinates' organizational deviance may also reflect a form of behavioral dysregulation following thwarted basic need satisfaction. Although the retaliation and regulation perspectives offer slightly different suggestions on why need thwarting results in organizational deviance, both perspectives converge on the notion that decreased need satisfaction is likely to result in increased organizational deviance. Thus, based on the above, we hypothesize the following:

Hypothesis 2. Basic need satisfaction is negatively related to organizational deviance.

The interaction between abusive supervision and LMX on basic need satisfaction and organizational deviance: a mediated moderation model

To this point we have suggested that basic need satisfaction mediates the effect of abusive supervision on organizational deviance; although this proposition has yet to be empirically tested, it is consistent with recent literature reviews (Aquino & Thau, 2009) and self-determination theory in general (Deci & Ryan, 2000). However, we also sought to extend the application of the self-determination theory by integrating it with past work on mixed relationships. In particular, we regard abusive supervision as representing only one aspect of the supervisor–subordinate relationship: like in any relationship, our relationship with our leaders can have ups and downs. However, in organizational research, we tend to view specific behaviors (e.g., being yelled at) as indicative of the tone of the relationship in general. Similarly, research which focuses on the quality of overall relationships (e.g., LMX) tends to ignore the possibility that even good relationships have their bad days. As such, we sought to consider the overall quality of the supervisor–subordinate relationship and examine how it interacts with abusive supervision to influence subordinate's basic need satisfaction and organizational deviance.

In essence, while it might be assumed that abusive supervision usually happens within low quality supervisor–subordinate relationships, we suggest that one may experience abusive supervision within a high quality exchange relationship with one's supervisor. Although this may seem strange, previous research has shown that high quality relationships include both positive and negative interpersonal behaviors (Braiker & Kelly, 1979; Fincham & Linfield, 1997). These negative and positive aspects of a relationship typically form related, but distinct, factors; that is, they do not represent opposite endpoints on a continuum where a lack of positive aspects implies the presence of negative aspects, or vice-versa (see Baumeister, Bratslavsky, Finkenauer, and Vohs (2001), for a review of empirical studies).

In the current paper, we use LMX to indicate the quality of the supervisor–subordinate relationship. Unlike abusive supervision, which represents specific supervisor behaviors that can occur at any time, LMX represents the quality of the relationship developed over time between a supervisor and a subordinate (Dansereau, Graen, & Haga, 1975), with high LMX representing high levels of supervisory support and guidance (Gerstner & Day, 1997; Graen & Uhl-Bien, 1995). More specifically, when subordinates report

high levels of LMX, they perceive their supervisors are satisfied with their work, understand their job problems and needs, recognize their potential, and are willing to help them solve work-related problems (Graen & Uhl-Bien, 1995). Consequently, subordinates feel as though they are liked, respected, and trusted, and are likely to reciprocate with their loyalty, obligations, and trust directly to their supervisor, or indirectly to their organization (Gerstner & Day, 1997).

Similar to how past work has shown negative instances occur within otherwise supportive relations for spouses, siblings, and parents, we argue that abusive supervision can represent negative instances within the context of otherwise supportive supervisory relationships. Abusive supervision represents *specific* supervisory behaviors which can occur at any time and need not reflect an ongoing relationship (Tepper & Henle, 2011); LMX, however, indicates a general relationship which develops over a longer period of time. Thus, while one may have an overall positive relationship with one's supervisor, this does not rule out the possibility that one's supervisor may occasionally engage in negative behaviors. For example, although people may generally feel that their supervisor "understands their problems and needs" and believe that their supervisor is "very likely to be helpful" (both items taken from LMX scales; Scandura & Schriesheim, 1994), they may also recall occasional incidents of mistreatment such as being "given the silent treatment" or "not being given credit for their work" (both items taken from the abusive supervision scale; Tepper, 2000). Consistent with this, empirical research has found that LMX and abusive supervision formed into distinguishable constructs (Burriss, Detert, & Chiaburu, 2008).

Accepting abusive supervision and LMX are independent concepts, one might expect high LMX would mitigate, not exacerbate, the effects of abusive treatment. In particular, one might expect that high LMX provides a respite against the negative impact of abusive supervision (Lepore, 1992) or provides individuals with resources to deal with negative treatment (Hobfoll, 1989). However, there is also reason to believe that negative treatment will be *more* impactful when the abuse occurs within the context of a supportive relationship, when one considers the signaling function negative treatment plays within a relationship (Major et al., 1997).

In particular, negative treatment and more generally, negative information, have been argued to have strong effects on individuals because it is rare, unexpected, and surprising (Fiske, 1980; Kanouse & Hanson, 1972). As a result, more attention and consideration is elicited by negative information as it signals to the individual that they are in imminent danger of being excluded or that something is otherwise unusual or amiss with the situation (Williams & Zadro, 2005). Consequently, abusive supervisory behaviors should be closely attended to by the subordinate, with the concomitant results as outlined in Hypothesis 1. However, in the context of a typically unsupportive relationship (e.g., low LMX), such abusive behaviors will be considered less rare, unexpected, or surprising, and hence less likely to be interpreted as a signal that something unusual is occurring. As such, the impact of supervisor abuse is minimized in the context of low LMX, but is maximized in the context of high LMX.

With respect to psychological needs in particular, in the context of high LMX where subordinates feel acknowledged, supported, and trusted by their supervisors, self-determination theory predicts that their needs for competence, belongingness and autonomy will be fulfilled (Deci & Ryan, 2000). In other words, high levels of LMX indicate that supervisors are important sources of basic need satisfaction. As a result, subordinates within high LMX relationships may feel especially deprived when perceiving supervisor abuse as it signals the loss of existing vital sources of need satisfaction. For subordinates within low LMX relationships, however, the satisfaction of competence, relatedness, and

autonomy needs is not provided by their supervisor; as a result, they may experience less threat to their basic need satisfaction when perceiving abusive signals from supervisors, because there is – in effect – nothing to lose. Consistent with the argument, past work has found that supervisors' abusive behaviors have stronger negative effects on recipients' psychological well-being and/or deviant behaviors, when such abuse is accompanied with supervisors' supportive behaviors (Duffy et al., 2002; Hobman et al., 2009). Taken together, we suggest that the need-threatening effects of abusive supervision are likely to be *exacerbated*, not mitigated, when one has a typically good relation with one's supervisor (as indexed by high LMX levels). More formally, we propose:

Hypothesis 3. LMX moderates the negative relation between abusive supervision and subordinates' basic need satisfaction, such that the relation is stronger when LMX is high rather than low.

In summary, we propose a model (see Fig. 1) in which abusive supervision negatively relates to subordinates' basic need satisfaction, and this negative relationship is moderated by LMX; decreased basic need satisfaction in turn relates to increased organizational deviance. As discussed below, the interactive effect of abusive supervision and LMX on organizational deviance may be mediated by mechanisms other than basic need satisfaction, we propose that the mediating effect of basic need satisfaction will be partial. More formally, we hypothesize that:

Hypothesis 4. The interactive effect of abusive supervision and LMX on organizational deviance is partially mediated by basic need satisfaction, such that mediated effect of abusive supervision on organizational deviance through basic need satisfaction is stronger when LMX is high rather than low.

Although our paper promotes a self-determination theory explanation of the relation between abusive supervision and organizational deviance, especially in the context of high levels of LMX, our study sought to consider alternative explanations as well. More specifically, previous research has suggested that social exchange or justice perceptions may account for the relation between abusive supervision and organizational deviance. According to social exchange theory, employees develop a reciprocal interdependent relationship with their organizations and their organizational behaviors are contingent on the treatment they receive from their organizations (Cropanzano & Mitchell, 2005). When supervisors, who represent agents of the organization, treat them poorly, employees may feel that they are not valued and respected by their organizations and therefore engage in organizational deviance to get even (Tepper et al., 2009; Thau et al., 2009). According to a justice perspective, abusive supervision may decrease subordinates' perception of interpersonal justice; moreover, it may also reflect organizations' lack of procedures to restrain abusers and thus result in decreased procedural justice perceptions (Tepper, 2000). Empirically, it has been found that abusive supervision negatively influences procedural and interpersonal justice (Aryee, Chen, Sun, & Debrah, 2007; Tepper, 2000); as perception of injustice increases, individuals are more likely to retaliate against their organizations by engaging in organizational deviance (Robinson & Greenberg, 1998).

As self-determination theory, social exchange theory and a justice perspective may all provide useful explanations, it is essential to include these mediating mechanisms to further understand the process through which abusive supervision and its interactions with LMX impact on organizational deviance. Therefore, we assessed procedural justice, interpersonal justice and employee-organization social exchange quality as alternative mediators.

Method

Procedure

Participants were recruited using advertisements placed in commuter areas (e.g. bus stops), newspapers, and other public places (e.g., coffee shops). The recruitment advertisements indicated that employed individuals were needed for a study on workplace attitudes and behaviors, and provided general details about what participation entailed (e.g., completing three surveys) and compensation (\$10 and a chance to win one of two \$200 prizes; participants were compensated by receiving checks through the mail). The recruitment advertisement directed interested individuals to complete an online pre-screen questionnaire. Of the 559 individuals who completed our pre-screen questionnaire, 89 (~16%) were not working at least 30 h per week and 14 (~3%) did not interact with other people at work, four (~1%) were self-employed and 17 (~3%) did not provide accurate email addresses, so we were not able to contact them. Finally, 435 individuals fulfilled our pre-screen requirements and were sent emails with a unique identifier code and links to the online surveys at three points in time.

The first survey included measures of abusive supervision and leader-member exchange; the second survey, sent out approximately 1 week later, assessed basic need satisfaction, perceptions of procedural and interpersonal justice, and organizational social exchange quality. Approximately 1 week after completing the second survey, participants were sent a link to the third survey, which assessed organizational deviance. In order to maximize response rates, we sent reminder emails to individuals who had not completed the survey after 1 week; we sent a second reminder 2 weeks later (Dillman, 2000).

Participants

A total of 318 individuals completed the first survey (73% response rate); 285 individuals completed the second survey (90% retention rate) and 260 individuals completed the third survey (91% retention rate), resulting in an overall response rate of 60%. Participants (48% male) came from a diverse set of occupations (e.g., teacher, engineer, financial advisor, cashier, physician) and were employed in a variety of industries including computers and mathematics (15%), business and finance (13%), sales and related (10%), education (8%), and government (8%). The mean age of participants was 34.30 years ($SD = 9.60$) and the average hours worked per week was 41.59 ($SD = 6.64$). Participants reported being employed in their current organization an average of 5.19 years ($SD = 6.04$), having worked in their present position for 3.73 years ($SD = 5.19$), and with their current supervisor for 2.68 years ($SD = 3.65$).

Measures

The measures largely instructed participants to respond with how they perceived their supervisors' behaviors, their relationships with supervisors and their attitudes in general; however, the instructions for the organizational deviance measure asked participants to respond with respect to their behaviors over the previous year.

Abusive supervision

Tepper's (2000) 15-item abusive supervision scale was used. Sample items include "My supervisor does not allow me to interact with my coworkers" and "My supervisor reminds me of my past mistakes and failures." Participants indicated the frequency with which their supervisors performed each behavior on a 5-point

Likert scale (1 = *I can't remember him/her ever using this behavior with me* and 5 = *he/she uses this behavior very often with me*; $\alpha = .96$).

Leader–member exchange

The seven-item LMX-7 scale (Scandura & Schriesheim, 1994) was used. Participants responded using a 4-point Likert scale (1 = *not at all* and 4 = *completely*; $\alpha = .89$) to questions such as “How well do you feel that your immediate supervisor understands your problems and needs”.

Basic need satisfaction

The 21-item basic need satisfaction scale (Deci et al., 2001) was used to assess the extent to which participants experience satisfaction of their basic needs – autonomy, competence, and relatedness – at work. Participants responded on a 7-point Likert scale (1 = *not at all true* and 7 = *very true*; $\alpha = .90$). Sample items include “Most days I feel a sense of accomplishment from working” (for competence), “People at work are pretty friendly towards me” (for relatedness), and “I am free to express my ideas and opinions on the job” (for autonomy). Consistent with our theoretical argument, we calculated an overall average of need satisfaction.

Procedural and interpersonal justice

Colquitt's (2001) seven-item procedural justice scale and four-item interpersonal justice scale were used to assess participants' perceptions of procedural and interpersonal justice. Participants were asked to respond on a 5-point Likert scale (1 = *to a small extent* and 5 = *to a large extent*) to a series of statements such as “You have been able to express your views and feelings during procedures used to arrive at outcomes you receive from your job” (procedural justice; $\alpha = .88$) and “Your supervisor has treated you with dignity” (interpersonal justice; $\alpha = .90$).

Organizational social exchange

We used Shore, Tetrick, Lynch and Barskdale's (2006) eight-item organizational social exchange measure. This measure indicates the social exchange quality between employees and organizations by assessing the extent to which employees agreed with a series of statements such as “My organization has made a significant investment in me” and “I try to look out for the best interests of my organization because I can rely on my organization to take care of me” on a 7-point Likert scale (1 = *strongly disagree* and 7 = *strongly agree*; $\alpha = .91$).

Organizational deviance

Bennett and Robinson's (2000) 12-item organizational deviance scale was used to measure deviant behaviors. Participants indicated the frequency with which they engaged in a variety of behaviors over the past year (e.g., “Come in late to work without permission”) on a 7-point Likert scale (1 = *never* and 7 = *daily*; $\alpha = .90$).

Data analysis

We tested our mediated moderation model with moderation on both the first stage and the direct effect because while we are modeling needs, there could be other unmodeled mediators also affected by the interaction between AS and LMX, such as rumination, or experience feelings of uncertainty. Following Edwards and Lambert's (2007) approach, we tested the model using the following three steps. First, the moderator (i.e., LMX) is shown to affect the relation between the independent variable (i.e., abusive supervision) and potential mediating variables (i.e., basic need satisfaction, procedural justice, interpersonal justice, and organizational social exchange; see Eq. (5), Edwards & Lambert, 2007); these tests are

presented in Table 2. Second, the effects of the independent variable (i.e., abusive supervision), the moderating variable (i.e., LMX), the interactive effects between the two, and the potential mediating variables (i.e., basic need satisfaction, procedural justice, interpersonal justice, and organizational social exchange) on the dependent variables (i.e., organizational deviance) are estimated (see Eq. (6), Edwards & Lambert, 2007); these tests are presented in Table 3. Finally, the estimates derived from the previous two steps are inserted into a larger equation to test for mediated moderation (see Eq. (19), Edwards & Lambert, 2007). This tests whether the indirect effect of the independent variable (i.e., abusive supervision) on the dependent variable (i.e., organizational deviance) through each mediator (i.e., basic need satisfaction, procedural justice, interpersonal justice, and organizational social exchange) varies according to the level of the moderator (i.e., LMX); these tests are presented in Table 4.

Accordingly, we used hierarchical multiple regression analysis in SPSS 19.0 for the first and second step estimates. For the first step estimates, the main effects (abusive supervision and LMX) were initially entered, followed by the two-way interaction (see Table 2). For the second step estimates, the main effects (abusive supervision and LMX) were initially entered, followed by the two-way interaction and subsequently the mediators (i.e., basic need satisfaction, procedural justice, interpersonal justice, and organizational social exchange; see Table 3). In these two steps, all lower-order terms were centered prior to creating the interaction term in order to reduce multicollinearity. In the final step, estimates from Step 1 and 2, together with high and low values ($\pm 1SD$) of the moderator (i.e., LMX) were used to calculate the indirect effects of abusive supervision on organizational deviance through the mediators of basic need satisfaction, procedural justice, interpersonal justice, and organizational social exchange at high and low levels of LMX.

We adopted a bootstrap approach to test the significance of the indirect effects. The bootstrap approach is chosen over the conventional Sobel (1982) approach, because the latter suffers from a high Type I error rate due to its violation of normal distribution assumptions (Shrout & Bolger, 2002). The bootstrap relaxes prior assumptions by repeatedly estimating the regression coefficients with bootstrap samples. Each bootstrap sample has the same size of the original sample and was created by randomly sampling cases with replacement from the original sample. Regression coefficients estimated from each bootstrap sample are used to compute the indirect effects and differences of the indirect effects between high and low levels of the moderator, yielding a distribution which can be used to determine percentile values for a desired confidence interval (e.g., 2.5 and 97.5 percentile values for a 95% confidence interval). The confidence intervals were further corrected for differences between the indirect effects estimated from the original sample and the median of the indirect effects estimated from the bootstrap sample, resulting in bias-corrected confidence intervals. Following previous recommendations, 1000 samples were bootstrapped to obtain bias-corrected confidence intervals in the current study (Edwards & Lambert, 2007; Mooney & Duval, 1993).

Results

Table 1 presents the means, standard deviations, alphas, and correlations of the measured variables; the means of our focal variables were comparable to those previously reported (Deci et al., 2001; Ferris et al., 2008; Tepper et al., 2008). An examination of the zero-order correlations provides preliminary support for our hypotheses, with basic need satisfaction being significantly related to its hypothesized antecedent, abusive supervision ($r = -.47$, $p < .01$), and hypothesized outcome, deviant behaviors ($r = -.34$,

Table 1
Descriptive statistics, zero order correlations, and alphas.

	Mean	SD	1	2	3	4	5	6	7
1. AS	1.62	.79	.96						
2. LMX	2.82	.59	-.38**	.89					
3. BNS	4.88	.91	-.47**	.53**	.90				
4. PJ	3.49	.80	-.32**	.50**	.56**	.88			
5. IJ	3.98	.90	-.57**	.58**	.58**	.64**	.90		
6. OSE	4.69	1.21	-.32**	.49**	.64**	.69**	.49**	.91	
7. OD	1.87	.94	.45**	-.14*	-.34**	-.20**	-.23**	-.22**	.90

Note: AS = abusive supervision. LMX = leader–member exchange. BNS = basic need satisfaction. PJ = procedural justice. IJ = interpersonal justice. OSE = organizational social exchange. OD = organizational deviance. The numbers in bold on the diagonal are the alphas.

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

Table 2
Abusive supervision by LMX interactions on basic need satisfaction, interpersonal justice, procedural justice and organizational social exchange.

Variable	BNS Step 1	BNS Step 2	IJ Step 1	IJ Step 2	PJ Step 1	PJ Step 2	OSE Step 1	OSE Step 2
Intercept	4.88**	4.84**	3.98**	4.01**	3.49**	3.50**	4.69**	4.66**
AS	-.36**	-.38**	-.46**	-.45**	-.16**	-.15*	-.24**	-.25**
LMX	.63**	.64**	.65**	.64**	.60**	.59**	.88**	.89**
ΔR^2	.36**		.48**		.27**		.26**	
AS \times LMX		-.24*		.15		.09		-.17
ΔR^2		.01*		.01		.00		.00
Overall R^2		.38		.49		.28		.27

Note: AS = abusive supervision. LMX = leader–member exchange. BNS = basic need satisfaction. IJ = interpersonal justice. PJ = procedural justice. OSE = organizational social exchange. OD = organizational deviance. Values are unstandardized regression coefficients.

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

$p < .01$). Consistent with justice and social exchange theories, procedural justice, interpersonal justice and organizational social exchange were significantly related to abusive supervision ($r = -.32, -.57, \text{ and } -.32$ respectively, all $p < .01$) and organizational deviance ($r = -.20, -.23$ and $-.22$, respectively, all $p < .01$).

To provide evidence that the independent variables (i.e., abusive supervision and LMX) and mediating variables (i.e., basic need satisfaction, procedural justice, interpersonal justice, and organizational social exchange) assessed in the study represent distinct constructs, we conducted a confirmatory factor analysis in AMOS 19.0. Following Hu and Bentler (1999), model fit was assessed using the root mean squared error of approximation (RMSEA) and standardized root-mean-square residual (SRMR). Satisfactory model fit is indicated by RMSEA values no higher than .08, and SRMR values no higher than .10. The fit indices suggest that the hypothesized 6-factor model provided a good fit to the data ($\chi^2_{(1814)} = 4291.51, p < .01, \text{ RMSEA} = .06, \text{ SRMR} = .08$). The hypothesized 6-factor measurement model also had a significant improvement in χ^2 over other more parsimonious models: where the abusive supervision and LMX items were set to load on a single factor ($\Delta\chi^2_{[5]} = 908.76, p < .01$); where the LMX and basic need satisfaction items were set to load on a single factor ($\Delta\chi^2_{[5]} = 506.88, p < .01$); where the abusive supervision and interpersonal justice items were set to load on a single factor ($\Delta\chi^2_{[5]} = 745.96, p < .01$); where the LMX and interpersonal justice items were set to load on a single factor ($\Delta\chi^2_{[5]} = 483.01, p < .01$); where the basic need satisfaction and procedural justice items were set to load on a single factor ($\Delta\chi^2_{[5]} = 491.39, p < .01$); where the basic need satisfaction and interpersonal justice items were set to load on a single factor ($\Delta\chi^2_{[5]} = 593.28, p < .01$); where the basic need satisfaction and organizational social exchange items were set to load on a single factor ($\Delta\chi^2_{[5]} = 500.77, p < .01$); where the procedural justice and interpersonal justice items were set to load on a single factor ($\Delta\chi^2_{[5]} = 435.38, p < .01$); where the procedural justice and organizational social exchange items were set to load on a single factor

Table 3
The effects of abusive supervision and basic need satisfaction on organizational deviance.

Variable	OD Step 1	OD Step 2	OD Step 3
Intercept	1.88**	1.95**	2.83**
AS	.55**	.59**	.54**
LMX	.06	.05	.16
ΔR^2	.20**		
AS \times LMX		.40**	.35**
ΔR^2		.04**	
BNS			-.21*
IJ			.11
PJ			-.11
OSE			.01
ΔR^2			.03*
Overall R^2			.27

Note: AS = abusive supervision. LMX = leader–member exchange. BNS = basic need satisfaction. OD = organizational deviance. Values are unstandardized regression coefficients.

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

($\Delta\chi^2_{[5]} = 316.16, p < .01$); and where the interpersonal justice and organizational social exchange items were set to load on a single factor ($\Delta\chi^2_{[5]} = 762.72, p < .01$). Therefore, we found support for the independence of our constructs.

We next assessed the hypothesized mediated moderation model with multiple regression analysis, using Edward and Lambert's (2007) approach. As can be seen in Table 2, in support of Hypothesis 1, abusive supervision was negatively related to subordinates' basic need satisfaction ($\beta = -.38, p < .01$). Consistent with Hypothesis 3, the interaction between LMX and abusive supervision significantly predicted basic need satisfaction ($\beta = -.24, p < .05$), and the additional proportion of the variance in basic need satisfaction explained by the interaction term was also significant ($\Delta R^2 = .01$,

Table 4
Analysis of simple effects.

Mediator	LMX	P_{MX}	P_{YM}	Direct effects (P_{YX})	Indirect effects ($P_{YM}P_{MX}$)	Total effects ($P_{YX} + P_{YM}P_{MX}$)
BNS	High	-.52**	-.21*	.75**	.11**	.86**
	Low	-.24**	-.21*	.34**	.05*	.39**
	Differences	-.28**	.00	.41*	.06**	.47**
IJ	High	-.36**	.11	.75**	-.04	.71**
	Low	-.54**	.11	.34**	-.06	.28*
	Differences	.18*	.00	.41*	.02	.43*
PJ	High	-.10	-.11	.75**	.01	.76**
	Low	-.20**	-.11	.34**	.02	.36**
	Differences	.11	.00	.41*	-.01	.40*
OSE	High	-.35**	.01	.75**	-.00	.75**
	Low	-.15	.01	.34**	-.00	.34**
	Differences	-.20	.00	.41*	.00	.41*

Note: LMX = leader–member exchange. BNS = basic need satisfaction. IJ = interpersonal justice. PJ = procedural justice. OSE = organizational social exchange. P_{MX} = path from abusive supervision to the mediator. P_{YM} = path from the mediator to organizational deviance. P_{YX} = path from abusive supervision to organizational deviance.

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

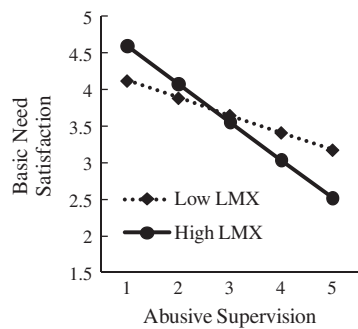


Fig. 2. Interaction between abusive supervision and LMX on basic need satisfaction.

$p < .05$). Table 2 also shows that the interactive effects of LMX and abusive supervision on procedural justice, interpersonal justice, and organizational social exchange were not significant ($\beta = .09, .15, \text{ and } -.17$ respectively, all $p > .05$), and the additional proportion of the variance in procedural justice, interpersonal justice, and organizational social exchange explained by the interaction term was not significant either ($\Delta R^2 = .00, .01, \text{ and } .00$ respectively, all $p > .05$). As presented in Table 3, in support of Hypothesis 2, subordinates' basic need satisfaction was negatively related to organizational deviance ($\beta = -.21, p < .05$).

We next calculated simple effects at high and low levels of LMX ($\pm 1SD$ around the mean). The estimates, which are shown in Table 4, indicate that the strength of the relation between abusive supervision and basic need satisfaction varied depending on LMX levels. In support of Hypothesis 3, for subordinates with high levels of LMX, abusive supervision was more negatively related to basic need satisfaction ($P = -.52, p < .01$) than for those with low levels of LMX ($P = -.24, p < .01$), with the difference being significant ($[-.52] - [-.24] = -.28, p < .01$). Fig. 2 depicts the negative relation between abusive supervision and subordinates' basic need satisfaction at both low and high levels of LMX; the relation was stronger when LMX is high rather than low.

Table 4 also shows that abusive supervision had a stronger indirect effect (through basic need satisfaction) on organizational deviance for those who experienced high levels of LMX ($P = .11, p < .01$) than for those who experienced low levels of LMX ($P = .05, p < .05$); the strength of the indirect relation differed significantly depending on LMX levels ($[.11] - [.05] = .06, p < .01$). Fig. 3 depicts the indirect effect of abusive supervision (through basic need satisfaction) on organizational deviance at both low

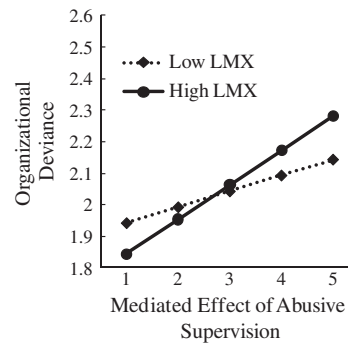


Fig. 3. Interaction between the mediated effect of abusive supervision through basic need satisfaction and LMX on organizational deviance.

and high levels of LMX; the relation was stronger when LMX is high rather than low. In summary, we found that LMX moderated the effect of abusive supervision on basic need satisfaction; the mediating effect of basic need satisfaction was stronger at high rather than low levels of LMX. Therefore, our mediated moderation model (i.e. Hypothesis 4, as shown in Fig. 1) was supported.

Table 4 also presents the results for alternative mediators: interpersonal justice, procedural justice and organizational social exchange. As shown in Table 4, the strength of the relation between abusive supervision and interpersonal justice varied depending on LMX levels. For subordinates with high levels of LMX, abusive supervision was less strongly related to interpersonal justice ($P = -.36, p < .01$) than for those with low levels of LMX ($P = -.54, p < .01$); this difference was significant ($[-.36] - [-.54] = -.18, p < .05$). However, the strength of the relation between abusive supervision and procedural justice/organizational social exchange did not differ significantly between high and low levels of LMX ($[-.10] - [-.20] = .11, \text{ and } [-.35] - [-.15] = -.20$ respectively, all $p > .05$). Moreover, the strength of the indirect relation through interpersonal justice/procedural justice/organizational social exchange did not differ significantly depending on LMX levels ($[-.04] - [-.06] = .02, [.01] - [.02] = -.01, \text{ and } [-.00] - [-.00] = .00, \text{ all } p > .05$).

Discussion

Considerable attention has been devoted to abusive supervision in the workplace, and extant evidence suggests abusive supervision has a positive relation to subordinates' organizational

deviance. To further our understanding of the relation between these variables, using a self-determination theory framework we tested the proposition that need satisfaction may play an important role in this relation (Aquino & Thau, 2009). We also simultaneously examined the moderating role of LMX on the proposed mediated relation. Using a multi-wave design, we found support for our mediated moderation framework, as the interaction between LMX and abusive supervision was mediated by basic need satisfaction in predicting organizational deviance. Moreover, we found that such a mediated moderation framework was supported after controlling for social exchange and justice mechanisms.

Our paper draws upon a self-determination theory framework to examine the important mediating role basic need satisfaction plays in the relation between abusive supervision and organizational deviance; as such, we contribute to the existing literatures on abusive supervision and deviance. Previous research has primarily focused on justice or social exchange explanations to account for the relation between abusive supervision and organizational deviance, with increased organizational deviance being explained as subordinates' reactions to injustice perceptions or reciprocating behaviors towards the organization (Tepper et al., 2008, 2009; Thau et al., 2009). By simultaneously including basic needs, social exchange and justice as mediating mechanisms, our findings highlight the role of basic need satisfaction compared to previously established mediators.

Our study also extends prior theoretical work on victimization and self-determination theory (e.g., Aquino & Thau, 2009; Deci & Ryan, 2000) by examining the moderating role of LMX on the relation between abusive supervision and basic human needs. In contrast to the intuitive thinking that high levels of LMX can buffer against the detrimental effects of supervisor abuse, our results showed that high levels of LMX magnify the negative relation between abusive supervision and basic need satisfaction. Such findings may come as a surprise to supervisors, who may expect that their "bad" behavior will not matter if they generally behave positively towards subordinates. Our results suggest the opposite: Good relations strengthen the negative effects of abusive supervision on basic need satisfaction. Subordinates who perceive a high quality relationship with their supervisors may find supervisors' mistreatment more threatening to their basic needs, which ultimately translates into greater organizational deviance. With that being said, the partial mediation found in the study implies that variables besides basic need satisfaction still play a role, and that LMX presumably also moderates these effects (given LMX also moderated the direct path from abusive supervision to organizational deviance in our study). It is possible, for example, that individuals with generally positive relations with their supervisors will be more likely to engage in rumination or expect deviant behaviors to be rewarded, when experiencing abusive supervisory behavior (Lian, Ferris, & Brown, 2011). Future research may wish to include these possible alternate mechanisms to further our understanding of the effects of abusive supervision, as well as effects arising from its interaction with LMX.

Our results thus highlight the importance of examining relationships in the workplace broadly. To date, most research has focused on positive aspects (e.g., LMX or perceived organizational support) or negative aspects (e.g., undermining, abusive supervision) of relationships exclusively (see Duffy et al., 2002; Hobman et al., 2009, for exceptions), but our results suggest a more complete picture is obtained when both aspects are examined simultaneously. Moreover, in applying a self-determination theory perspective, we examined basic need satisfaction as a mediator of the interactive effects of positive and negative aspects of workplace relationships, as well as compared different theoretical accounts (i.e., justice and social exchange theory) for such effects. Thus, our paper not only documents the effects of this interaction,

but also helps to explain the processes underlying such effects. Consistent with our results, we believe that organizational research stands to benefit from taking such a broad perspective when examining relationships at work.

Practical implications

Our results also hold practical implications for organizations wishing to reduce organizational deviance. In particular, our results regarding the exacerbating effects of abusive supervision in the context of high LMX suggest that supervisors should not view a good relationship with a subordinate as an excuse for occasionally mistreating the subordinate, as such subordinates are likely to react more negatively to the mistreatment. Indeed, our findings suggest that reducing abusive supervision should take priority over encouraging supportive supervision as a method to reduce subordinates' organizational deviance: Supportive supervisors who still maintain abusive aspects of their supervisory style are apparently no better than supervisors who provide less support. Thus, organizations should focus efforts on reducing, if not eliminating, abusive supervisory behaviors.

Aside from relations with supervisors, our results also point to the important role basic need satisfaction plays in organizational deviance. Indeed, our findings suggest that basic needs have a comparatively stronger relation with organizational deviance than social exchange or justice constructs. Thus, organizations seeking to minimize employee deviance may wish to focus on increasing employee basic need satisfaction through different channels. For example, by increasing feedback to employees, providing a friendly working environment, as well as increasing employees' interactions with customers and colleagues, organizations may be able to foster employees' feelings of competence and relatedness (Gagné & Deci, 2005; Grant, 2007). Similarly, employees' sense of autonomy may also be increased if they are provided with flexible work schedules, chances to make decisions, or choices in how they complete their work (Morgeson & Humphrey, 2006). Thus, there would appear to be a number of ways in which organizations can influence basic employee needs. However, efforts to apply self-determination theory to organizational contexts are still at an early stage (Ferris, Brown, Lian, & Keeping, 2009; Gagné & Deci, 2005; Greguras & Diefendorff, 2009); as such, we encourage more research to uncover what organizational factors influence employee needs.

Future directions, strengths, and limitations

Our work serves as a preliminary demonstration of how to situate the abusive supervision literature within a self-determination theory framework. Given research is shaped by the theoretical lens with which a construct is viewed, by integrating abusive supervision and self-determination theory, new research directions are suggested. For example, to date few studies have examined the relation between abusive supervision and job performance (Tepper, 2007). Self-determination theory is arguably most famous for its differentiation between intrinsic and extrinsic forms of motivation and their effects on performance (Deci & Ryan, 1985). By incorporating abusive supervision within self-determination theory, not only is a relation between abusive supervision and job performance suggested, but a mechanism explaining this relation is proffered.

Another future research direction involves extending our model to alternative outcomes. Given the substantial costs associated with organizational deviance and its established relation to abusive supervision, our study focused on organizational deviance as an outcome. However, we believe the mediated moderation mechanism tested in the present study may also be applied to the relationship between abusive supervision and other outcomes.

As basic need satisfaction is essential for psychological well-being and self-regulation (Deci & Ryan, 2000), we believe that the model tested here may hold considerable explanatory power for other attitudinal, behavioral, and psychological well-being consequences associated with abusive supervision. Moreover, corresponding to recent calls for more attention to the dynamic supervisor–subordinate relationship development process (Gerstner & Day, 1997; Nahrgang, Morgeson, & Ilies, 2009), our mediated moderation model may also help us understand how abusive supervision can affect the development and maintenance of supervisor–subordinate relationship *per se*.

Future research may also try to tease out different explanations for the relation between basic need satisfaction and organizational deviance. In particular, we noted that organizational deviance may represent a form of displaced aggression driven by a desire to retaliate, or reflect a consequence of self-regulation impairment. Although both explanations are consistent with the self-determination theory perspective (Deci & Ryan, 2000), future research may differentiate which explanation is tenable by examining moderators of the relation between basic need satisfaction and organizational deviance. For example, if displaced aggression is the main mechanism, an individuals' negative reciprocity beliefs (Cropanzano & Mitchell, 2005) should moderate the relation between basic need satisfaction and organizational deviance, such that those who hold strong beliefs about negative reciprocity should be more likely to engage in deviance when their basic needs are thwarted. On the other hand, if self-regulation impairment is the main mechanism, then individual differences in self-regulation capacity (Tangney, Baumeister, & Boone, 2004) should moderate the relation between basic need satisfaction and organizational deviance, such that those who have more self-regulation capacity should be less affected by thwarted basic needs and thus less likely to engage in organizational deviance. By examining and comparing different moderators representing different mechanisms, future studies may discern which mechanism is responsible for subordinates' organizational deviance.

Another direction for future research lies in considering individual differences in need strength as a boundary condition on the relation between situational factors (e.g., abusive supervision) and basic need satisfaction. Past work has found that a match between job characteristics and more strongly held needs promoted more positive job attitudes and behaviors (Fried & Ferris, 1987; Hackman & Oldham, 1976). Accordingly, individuals with weaker needs for relatedness, autonomy and competence should react less negatively to abusive supervision and thus experience less threat to their basic need satisfaction. Such work would serve to further extend self-determination theory, which has primarily focused on need satisfaction, not need strength (Deci & Ryan, 2000).

Finally, extending our model to the group level represents an intriguing future direction. It is quite possible that supervisors may exhibit different levels of abusive behaviors to different group members, and the existence of such differential treatment of group members might have more of an impact on subordinate need satisfaction compared to an abusive supervisor who is equally abusive to all. In particular, as we noted previously, one reason why the interaction of high LMX and high abusive supervision should negatively impact need satisfaction is because abusive supervisory behaviors stand out in the context of high LMX. That is, when a supervisor is typically nice but also directs abusive behaviors towards an individual, these abusive behaviors are more salient, *vis a vis* a supervisor whom one does not have a positive relationship with. Taking this logic up to the group level, this would lead one to predict that the experience of abusive supervision should similarly be more impactful if it is rendered more salient by the fact that

group-level abusive supervision is low. Additionally, one should also be less able to discount supervisors' mistreatment if such mistreatment is not directed at other group members. Thus, we strongly encourage future research on abusive supervision to consider the effects of group context and examine how within group variability of supervisor treatment effects subordinates' needs satisfaction and behaviors. Such a design is particularly attractive in that data collected from multiple group members may help overcome the limitations of relying on self-report data.

The present study has a number of strengths. As mentioned above, our study integrates the abusive supervision and self-determination theory literatures and empirically tests the notion that basic need satisfaction mediates the relation between abusive supervision and organizational deviance, and in so doing tests extant theoretical propositions (Aquino & Thau, 2009). Moreover, we extended these propositions (and self-determination theory) by examining LMX as a moderator which exacerbates abusive supervision's effect on basic need satisfaction. By testing competing theoretical paradigms in the second study and finding support for the self-determination mechanisms instead of justice/social exchange mechanisms, our study provides a new perspective on the abusive supervision and organizational deviance relation and extends abusive supervision research in new directions. Methodologically, our research design used a multi-stage survey format; this represents an improvement over cross-sectional survey designs which can artificially increase the size of the relations between variables measured concurrently (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). By separating in time the measurement of our antecedent, mediator, and dependent variables, such concerns are minimized.

Despite these strengths, limitations should also be noted. First, it has been noted that the measure of basic need satisfaction used in the study may contain items that do not capture the satisfaction of basic needs (Van den Broeck, Vansteenkiste, De Witte, Soenens, & Lens, 2010). As a result, the findings of the study should be taken with caution pending future replication with better validated measures of basic need satisfaction. Another potential direction related to the measurement of need satisfaction is that, as a reviewer pointed out, the extent to which the supply of the work environment matches the demand of an employee is an alternative way to operationalized need satisfaction. That is, individuals may prefer a particular level of need for autonomy, competence and relatedness, yet ultimately be supplied with too little, too much, or just the right amount of the need. Given past studies have produced interesting findings when separating out the supply of relatedness needs from the demand for relatedness needs (Thau et al., 2007), the development of measures which take into account such distinctions represent an agenda for future need satisfaction research. Second, although a multi-stage study design was used, our data were cross-sectional in nature and no causal relations can be inferred from our findings. Finally, all of our data were collected from a single source, raising the possibility of common method variance bias. Yet as noted before, by using a multi-stage study design we minimized the effects of common method variance (Podsakoff et al., 2003). Moreover, the moderating effects of LMX also argue against the presence of common-method variance, as it is not readily apparent how common method variance may strengthen the relation between variables only for people experiencing high levels of LMX (Evans, 1985). Aside from these methodological controls, it has also been argued that self-report data is most appropriate for assessing workplace deviance (Aquino & Douglas, 2003) or when assessing perceptual constructs (Chan, 2009), such as abusive supervision, need satisfaction or relations with supervisors. Thus, self-report data seems the most appropriate, given the constructs examined in our study.

Summary

The present study applies self-determination theory to the abusive supervision – organizational deviance relation, modeling basic need satisfaction as an underlying motivational mechanism. Our study also found that the negative effects of abusive supervision were exacerbated by high levels of LMX, and that these moderating effects were mediated by basic need satisfaction. Furthermore, by concurrently including basic need satisfaction, organizational social exchange, and interpersonal and procedural justice as mediators, our study only found support for the mediating role of basic need satisfaction. In so doing, our findings contribute to the literature on abusive supervision and organizational deviance by modeling a mediated moderation framework, and further our understandings of why subordinates engage in organizational deviance in response to abusive supervision.

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References

- Ambrose, M. L., Seabright, M. A., & Schminke, M. (2002). Sabotage in the workplace: The role of organizational injustice. *Organizational Behavior and Human Decision Processes*, 89, 947–965.
- Aquino, K., & Douglas, S. (2003). Identity threat and antisocial behavior in organizations: The moderating effects of individual differences, aggressive modeling, and hierarchical status. *Organizational Behavior and Human Decision Processes*, 90, 195–208.
- Aquino, K., & Thau, S. (2009). Workplace victimization: Aggression from the target's perspective. *Annual Review of Psychology*, 60, 1–25.
- Aquino, K., Tripp, T. M., & Bies, R. J. (2001). How employees respond to personal offense: The effects of blame attribution, victim status, and offender status on revenge and reconciliation in the workplace. *Journal of Applied Psychology*, 86, 52–59.
- Aryee, S., Chen, Z. X., Sun, L., & Debrah, Y. A. (2007). Antecedents and outcomes of abusive supervision: Test of a trickle-down model. *Journal of Applied Psychology*, 92, 191–201.
- Baard, P. P., Deci, E. L., & Ryan, R. M. (2004). Intrinsic need satisfaction: A motivational basis of performance and well-being in two work settings. *Journal of Applied Social Psychology*, 34, 2045–2068.
- Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. (2001). Bad is stronger than good. *Review of General Psychology*, 5, 323–370.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachment as a fundamental human motivation. *Psychological Bulletin*, 117, 497–529.
- Baumeister, R. F., Smart, L., & Boden, J. M. (1996). Relation of threatened egotism to violence and aggression: The dark side of high self-esteem. *Psychological Review*, 103, 5–33.
- Bennett, R. J., & Robinson, S. L. (2000). Development of a measure of workplace deviance. *Journal of Applied Psychology*, 85, 349–360.
- Bennett, R. J., & Robinson, S. L. (2003). The past, present, and future of workplace deviance research. In J. Greenberg (Ed.), *Organizational behavior: The state of the science* (2nd ed., pp. 247–281). Mahwah, New Jersey: Lawrence Erlbaum Associates, Inc., Publishers.
- Berkowitz, L. (1989). Frustration-aggression hypothesis: Examination and reformulation. *Psychological Bulletin*, 106, 59–73.
- Berscheid, E., & Regan, P. C. (2005). *The psychology of interpersonal relationships*. Upper Saddle River, NJ: Pearson Prentice Hall.
- Bies, R. J., & Tripp, T. M. (1996). Beyond distrust: Getting even and the need for revenge. In R. M. Kramer & T. R. Tyler (Eds.), *Trust in organizations* (pp. 246–260). Thousand Oaks, CA: Sage.
- Braiker, H. B., & Kelly, H. H. (1979). Conflict in the development of close relationship. In R. L. Burgess & T. L. Huston (Eds.), *Social exchange in developing relationship* (pp. 135–168). New York: Academic Press.
- Burris, E. R., Detert, J. R., & Chiaburu, D. S. (2008). Quitting before leaving: The mediating effects of psychological attachment and detachment on voice. *Journal of Applied Psychology*, 93, 912–922.
- Carlsmith, K. M., Wilson, T. D., & Gilbert, D. T. (2008). The paradoxical consequences of revenge. *Journal of Personality and Social Psychology*, 95, 1316–1324.
- Chan, D. (2009). So why ask me? Are self-report data really that bad? In C. E. Lance & R. J. Vandenberg (Eds.), *Statistical and methodological myths and urban legends*. New York: Taylor & Francis Group, LLC.
- Colquitt, J. A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology*, 86, 386–400.
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31, 874–900.
- Dansereau, F., Graen, G., & Haga, W. J. (1975). A vertical dyad linkage approach to leadership within formal organizations: A longitudinal investigation of the role making process. *Organizational Behavior and Human Performance*, 13, 46–78.
- Deci, E. L., & Cascio, W. F. (1972). Changes in intrinsic motivation as a function of negative feedback and threats. Paper presented at the Eastern Psychological Association, Boston.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 4, 227–268.
- Deci, E. L., Ryan, R. M., Gagné, M., Leone, D. R., Usunov, J., & Kornazheva, B. P. (2001). Need satisfaction, motivation, and well-being in the work organizations of a former eastern bloc country: A cross-cultural study of self-determination. *Personality and Social Psychology Bulletin*, 27, 930–942.
- Dillman, D. A. (2000). *Mail and internet surveys: The tailored design method* (2nd ed.). New York: John Wiley & Sons.
- Dollard, J., Doob, L. W., Miller, N. E., Mowrer, O. H., & Sears, R. R. (1939). *Frustration and aggression*. New Haven, CT: Yale University Press.
- Duffy, M. K., Ganster, D., & Pagon, M. (2002). Social undermining in the workplace. *Academy of Management Journal*, 45, 331–351.
- Edwards, J. R., & Lambert, L. S. (2007). Methods for integrating moderation and mediation: A general analytical framework using moderated path analysis. *Psychological Methods*, 12, 1–22.
- Evans, M. G. (1985). A Monte Carlo study of the effects of correlated method variance in moderated multiple regression analysis. *Organizational Behavior and Human Decision Processes*, 36, 305–323.
- Ferris, D. L., Brown, D. J., Berry, J., & Lian, H. (2008). The development and validation of the Workplace Ostracism Scale. *Journal of Applied Psychology*, 93, 1348–1366.
- Ferris, D. L., Brown, D. J., & Heller, D. (2009). Organizational supports and workplace deviance: The mediating role of organization-based self-esteem. *Organizational Behavior and Human Decision Processes*, 108, 279–286.
- Ferris, D. L., Brown, D. J., Lian, H., & Keeping, L. M. (2009). When does self-esteem relate to deviant behavior? The role of contingencies of self-worth. *Journal of Applied Psychology*, 94, 1345–1353.
- Fincham, F. D., & Linfield, K. J. (1997). A new look at marital quality: Can spouses feel positive and negative about their marriage? *Journal of Family Psychology*, 11, 489–502.
- Fiske, S. T. (1980). Attention and weight in person perception: The impact of negative and extreme behavior. *Journal of Personality and Social Psychology*, 38, 889–906.
- Fried, Y., & Ferris, G. R. (1987). The validity of the job characteristics model: A review and meta-analysis. *Personnel Psychology*, 40, 287–322.
- Gagné, M. (2003). The role of autonomy support and autonomy orientation in prosocial behavior engagement. *Work and Emotion*, 27, 199–223.
- Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, 26, 331–362.
- Gerstner, C. R., & Day, D. V. (1997). Meta-analytic review of leader-member exchange theory: Correlates and construct issues. *Journal of Applied Psychology*, 82, 827–844.
- Graen, G. B., & Uhl-Bien, M. (1995). Relationship based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-domain perspective. *The Leadership Quarterly*, 6, 219–247.
- Grant, A. M. (2007). Relational job design and the motivation to make a prosocial difference. *Academy of Management Review*, 32, 393–417.
- Greguras, G. J., & Diefendorff, J. M. (2009). Different fits satisfy different needs: Linking person-environment fit to employee commitment and performance using self-determination theory. *Journal of Applied Psychology*, 94, 465–477.
- Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance*, 16, 250–279.
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44, 513–524.
- Hobman, E. V., Restubog, S. L. D., Bordia, P., & Tang, R. L. (2009). Abusive supervision in advising relationships: Investigating the role of social support. *Applied Psychology: An International Review*, 58, 233–256.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1–55.
- Kanouse, D. E., & Hanson, L. R. Jr., (1972). Negativity in evaluations. In E. E. Jones, D. E. Kanouse, H. H. Kelley, R. E. Nisbett, S. Valins, & B. Weiner (Eds.), *Attribution: Perceiving the causes of behavior* (pp. 47–62). Morristown, NJ: General Learning Press.
- Kasser, T., & Ryan, R. M. (1993). A dark side of the American dream: Correlates of financial success as a central life aspiration. *Journal of Personality and Social Psychology*, 65, 410–422.
- Kasser, T., & Ryan, R. M. (1999). The relation of psychological needs for autonomy and relatedness to vitality, well-being, and mortality in a nursing home. *Journal of Applied Social Psychology*, 29, 935–954.
- Kenny, D. A. (2008). Reflections on mediation. *Organizational Research Methods*, 11, 353–358.
- Kuhl, J. (2000). The volitional basis of Personality Systems Interaction theory: Applications in learning and treatment contexts. *International Journal of Educational Research*, 33, 665–703.

- Lepore, S. J. (1992). Social conflict, social support, and psychological distress: Evidence of cross-domain buffering effects. *Journal of Personality and Social Psychology*, 63, 857–867.
- Lepper, M. R., & Greene, D. (1975). Turning play into work: Effects of adult surveillance and extrinsic rewards on children's intrinsic motivation. *Journal of Personality and Social Psychology*, 31, 479–486.
- Lian, H., Ferris, D. L., & Brown, D. J. (2011). Does power distance exacerbate or mitigate the effects of abusive supervision? It depends on the outcome. *Journal of Applied Psychology*. doi:10.1037/a0024610.
- Major, B., Zubek, J. M., Cooper, M. L., Cozzarelli, C., & Richards, C. (1997). Mixed messages: Implications of social conflict and social support within close relationships for adjustment to a stressful life event. *Journal of Personality and Social Psychology*, 72, 1349–1363.
- Maslow, A. (1954). *Motivation and personality*. New York: Harper & Row.
- McDougall, W. (1908). *Introduction to social psychology*. London: Methuen.
- Mitchell, M. S., & Ambrose, M. L. (2007). Abusive supervision and workplace deviance and the moderating effects of negative reciprocity beliefs. *Journal of Applied Psychology*, 92, 1159–1168.
- Mooney, C. Z., & Duval, R. D. (1993). *Bootstrapping: A non-parametric approach to statistical inference*. Newbury Park, CA: Sage.
- Morgeson, F. P., & Humphrey, S. E. (2006). The Work Design Questionnaire (WDQ): Developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of Applied Psychology*, 91, 1321–1339.
- Murray, H. (1938). *Explorations in personality*. New York: Oxford University Press.
- Nahrgang, J. D., Morgeson, F. P., & Ilies, R. (2009). The development of leader-member exchanges: Exploring how personality and performance influence leader and member relationship over time. *Organizational Behavior and Human Decision Processes*, 108, 256–266.
- Namie, G., & Namie, R. (2000). *The bully at work*. Naperville, IL: Sourcebooks.
- Needleman, S. E. (2008). Businesses say theft by their workers is up. *The Wall Street Journal*, B8 (December 11).
- Podsakoff, P. M., MacKenzie, S. B., Lee, J., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 879–903.
- Robinson, S. L., & Greenberg, J. (1998). Employees behaving badly: Dimensions, determinants, and dilemmas in the study of workplace deviance. In C. L. Cooper & D. M. Rousseau (Eds.), *Trends in organizational behavior* (Vol. 5, pp. 1–30). New York: Wiley.
- Ryan, R. M. (1995). Psychological needs and the facilitation of integrative processes. *Journal of Personality*, 63, 297–427.
- Ryan, R. M., & Connell, J. P. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. *Journal of Personality and Social Psychology*, 57, 749–761.
- Scandura, T. A., & Schriesheim, C. A. (1994). Leader-member exchange and supervisor career mentoring as complementary constructs in leadership research. *Academy of Management Journal*, 37, 1588–1602.
- Sheldon, K. M., Elliot, A. J., Kim, Y., & Kassir, T. (2001). What is satisfying about satisfying events? Testing 10 candidate psychological needs. *Journal of Personality and Social Psychology*, 80, 325–339.
- Sheldon, K., & Niemiec, C. (2006). It's not just the amount that counts: Balanced need satisfaction also affects well-being. *Journal of Personality and Social Psychology*, 91, 331–341.
- Shields, A., Ryan, R. M., & Cicchetti, D. (2001). Narrative representations of caregivers and emotion dysregulation as predictors of maltreated children's rejection by peers. *Developmental Psychology*, 37, 321–337.
- Shore, L. M., Tetrick, L. E., Lynch, P., & Barksdale, K. (2006). Social and economic exchange: Construct development and validation. *Journal of Applied Social Psychology*, 36, 837–867.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, 7, 422–445.
- Skarlicki, D. P., & Folger, R. (2004). Broadening our understanding of organizational retaliatory behavior. In R. W. Griffin & A. M. O'Leary-Kelly (Eds.), *The dark side of organizational behavior* (pp. 373–402). Jossey-Bass: San Francisco.
- Skinner, E. A. (1995). *Perceived control, motivation, and coping*. Thousand Oaks, CA: Sage.
- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological methodology* (pp. 290–312). San Francisco: Jossey-Bass.
- Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High self-control predicts good adjustment, less pathology, better grades and interpersonal success. *Journal of Personality and Social Psychology*, 72, 271–322.
- Taylor, A. (2007). Gambling at work 'costs employers £300M a year'. *Financial Times* (January 4).
- Tepper, B. J. (2000). Consequences of abusive supervision. *Academy of Management Journal*, 43, 178–190.
- Tepper, B. J. (2007). Abusive supervision in work organizations: Review, synthesis, and research agenda. *Journal of Management*, 33, 261–289.
- Tepper, B. J., Carr, J. C., Breaux, D. M., Geider, S., Hu, C., & Hua, W. (2009). Abusive supervision, intentions to quit, and employees' workplace deviance: A power/dependence analysis. *Organizational Behavior and Human Decision Processes*, 109, 156–167.
- Tepper, B. J., & Henle, C. A. (2011). A case of recognizing distinctions among constructs that capture interpersonal mistreatment in work organizations. *Journal of Organizational Behavior*, 32, 487–498.
- Tepper, B. J., Henle, C. A., Lambert, L. S., Giacalone, R. A., & Duffy, M. K. (2008). Abusive supervision and subordinates' organizational deviance. *Journal of Applied Psychology*, 93, 721–732.
- Thau, S., Aquino, K., & Poortvliet, P. M. (2007). Self-defeating behaviors in organizations: The relationship between thwarted belonging and interpersonal work behaviors. *Journal of Applied Psychology*, 92, 840–847.
- Thau, S., Bennett, R. J., Mitchell, M. S., & Marrs, M. B. (2009). How management style moderates the relationship between abusive supervision and workplace deviance: An uncertainty management theory. *Organizational Behavior and Human Decision Processes*, 108, 79–92.
- Thau, S., & Mitchell, M. S. (2010). Self-gain or self-regulation impairment? Test of competing explanations of the supervisor abuse and employee deviance relationship through perceptions of distributive justice. *Journal of Applied Psychology*, 95, 1009–1031.
- Tyler, T., DeGoey, P., & Smith, H. (1996). Understanding why the justice of group procedures matters: A test of the psychological dynamics of the group-value model. *Journal of Personality and Social Psychology*, 70, 913–930.
- Uysal, A., Lin, H. L., & Knee, C. R. (2010). The role of need satisfaction in self-concealment and well-being. *Personality and Social Psychology Bulletin*, 36, 187–199.
- Van den Broeck, A., Vansteenkiste, M., De Witte, H., & Lens, W. (2008). Explaining the relationships between job characteristics, burnout, and engagement: The role of basic psychological need satisfaction. *Work & Stress*, 22, 277–294.
- Van den Broeck, A., Vansteenkiste, M., De Witte, H., Soenens, B., & Lens, W. (2010). Capturing autonomy, competence, and relatedness at work: Construction and initial validation of the work-related basic need satisfaction scale. *Journal of Occupational and Organizational Psychology*, 83, 981–1002.
- White, R. W. (1959). Motivation reconsidered: The concept of competence. *Psychological Review*, 66, 297–333.
- Williams, G. C., Cox, E. M., Hedberg, V. A., & Deci, E. L. (2000). Extrinsic life goals and health risk behaviors in adolescents. *Journal of Applied Social Psychology*, 30, 1756–1771.
- Williams, K. D., & Zadro, L. (2005). Ostracism: The indiscriminate early detection system. In K. D. Williams, J. P. Forgas, & W. von Hippel (Eds.), *The social outcast: Ostracism, social exclusion, rejection, and bullying* (pp. 19–34). New York: Psychology Press.