

SOME THINGS, IF NOT ALL THINGS, ARE ABOUT CHANGE:

A TIME-BASED THEORY OF ABUSIVE SUPERVISION

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*I dedicate this dissertation to
my father, my mother, my beloved wife and son
for their constant support and unconditional love.*

I love you all dearly.

ABSTRACT

This dissertation develops and tests a multilevel, time-based model of abusive supervision by addressing three interrelated puzzles in three essays: (a) Do subordinates vary in their daily experience of abusive supervision, and if so, how does this variability affect subordinates' performance? (b) Is there a spiral of abusive supervision, and if so, which factors might facilitate or mitigate the spiral of abusive supervision over time? and (c) How do team members' differential experiences of abusive supervision make a difference in teams over time? This dissertation enriches our understanding of the occurrence, process, and consequences of abusive supervision.

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ESSAY ONE

When Your Boss is Chameleonic: An Investigation of Abusive Supervision Variability and its Consequences

SYNOPSIS

Research on abusive supervision has predominantly focused on between-person differences in average levels of abusive supervision. Recently, researchers have also demonstrated the importance of considering dynamic, within-person fluctuations in abusive supervision over time. Drawing on uncertainty management theory, I integrate these two streams of research and introduce the concept of “abusive supervision variability”, which captures between-person differences in the stability of abusive supervision over time. To further delineate the consequences of abusive supervision variability, I expand uncertainty management theory by integrating insights from resource depletion theory and affective events theory, respectively, to build and test a mediation chain, dual-process (resource-based and emotion-based) model. Results from a multilevel, experience-sampling field study indicate that abusive supervision variability resulted in greater uncertainty among subordinates, which in turn, depleted subordinate cognitive resources and triggered feeling of anxiety, respectively, which ultimately and jointly, decreased subordinate task performance and organizational citizenship behaviors, but increased counterproductive work behaviors. This study challenges and extends theory and research on abusive supervision by demonstrating that, beyond the intuitive notion that average lower level of abusive supervision is better, consistent experience of abusive supervision can be better for subordinates than sporadic experience of abusive supervision.

Keywords: abusive supervision, anxiety, resource depletion, uncertainty, variability

INTRODUCTION

My supervisor ...

“Ridicules me.”

“Puts me down in front of others.”

“Doesn’t give me credit for jobs requiring a lot of effort.”

--Tepper, 2000

Consider two scenarios at the workplace. In scenario A, your boss directs the above statements toward you on every single day during a single week of work. In scenario B, your boss directs those statements only on some days, but not on others. Which one would be the worst scenario in terms of your workplace experience? Intuitively, it might seem better to experience at least some days of lower levels of such statements from your boss, which depict a phenomenon that organizational scholars called abusive supervision, described as subordinates’ experience of “hostile verbal and non-verbal supervisory behaviors” that stop just short of physical contact (Tepper, 2000: 178). Indeed, research has shown that average higher levels of supervisory abuse can lead to profoundly detrimental consequences for employees and their organizations (for qualitative and quantitative reviews see Mackey, Frieder, Brees, & Martinko, 2015; Martinko, Harvey, Brees, & Mackey, 2013; Tepper, 2007), suggesting that scenario A might be worse. However, you would know what to expect each day in scenario A. In other words, there would be some level of predictability in your daily interactions, even if they were negative. Yet, in scenario B, the behavior of your boss is erratic and unpredictable, and you can’t easily figure out why and how to behave next day. In that case, would it be better if your boss were consistently abusive toward you?

Clearly, it would be ideal if employees never received such treatment from their supervisors. Unfortunately, however, a recent national survey indicates that more than a third of U.S. employees report experiencing abusive supervision (Healthy Workplace Bill, 2013). To date, the majority of research on abusive supervision has focused on the average effect, that is, between-person differences in abusive supervision (i.e., examining what happens when employees experience more or less abusive supervision than one another), concluding that the less supervisory abuse, the better (for reviews and meta-analysis, see Mackey et al., 2015; Martinko et al., 2013; Tepper, 2007). Recently, researchers are investigating the notion of “within-person fluctuation” in abusive supervision - examining what happens when a given employee experiences more or less abusive supervision over time. Results from this nascent body of work show that abusive supervision varies on a daily basis (Barnes, Lucianetti, Bhave, & Christian, 2015; Courtright, Gardner, Smith, McCormick, & Colbert, 2016; Johnson, Venus, Lanaj, Mao, & Chang, 2012). However, neither cross-sectional (between-person) nor dynamic (within-person) studies have considered the potential *between-person variability in abusive supervision*, that is, individual differences in the experience of abusive supervision fluctuations over time.

More importantly, the current golden rule (i.e., the less abusive supervision, the better) might not be sufficient to answer the question at the outset (i.e., whether scenario A or B is worse). As a more concrete illustration, consider two employees, one for each scenario, rated their experience of supervisor treatment on a 5-point scale where 1 indicates no abuse and 5 indicates a lot of abuse. The employee from scenario A marks 3 on all days whereas the employee from scenario B marks 1 on half of days and 5 on the

other half of days. The current literature would suggest that these two employees have the same experience because both produce the same average level of abusive supervision (i.e., 3 on the scale). However, I suggest these are two distinct experiences to employees, as the data points that give rise to the average level of abusive supervision differ dramatically. That is, the consistency or variability of abusive events that constitute overall abusive supervision experience may matter to employees even controlling for average levels of abusive supervision.

With the above in mind, the primary objective of this study is to extend and challenge theory and research on abusive supervision by introducing the concept of “*abusive supervision variability*” (ASV), which captures between-person differences in the variability of abusive supervision over time. This concept is distinct from, and indeed, an integration of the current between-person and within-person approach in study of abusive supervision, because it focuses on individual differences (between-person) in terms of the variability/stability of one’s experience of abusive supervision (within-person) over time. Drawing from uncertainty management theory (UMT; Lind & van den Bos, 2002; Van den Bos & Lind, 2002), I propose that inconsistent or variable abusive supervision is more taxing to employees as opposed to consistent abusive supervision because variable abusive supervision creates greater uncertainty regarding supervisor-employee interactions. I further expand uncertainty management theory by integrating insights from resource depletion theory (RDT; Baumeister, Bratslavsky, Muraven, & Tice, 1998) and affective events theory (AET; Weiss & Cropanzano, 1996) to propose a dual-process (resource-based and emotion-based) model. Specifically, I theorize that abusive supervision variability (ASV) generates more uncertainty, which in turn, depletes

employees' cognitive resources and elicits feelings of anxiety, which ultimately, affect employees' work-related performance (i.e., decrease task performance and organizational citizenship behaviors [OCBs], and increase counterproductive work behaviors [CWBs]). I conducted a multilevel, experience-sample study to test this model (see Figure 1 for my theoretical model).

Insert Figure 1 about here

This study makes several contributions to abusive supervision literature. First, it demonstrates the importance of abusive supervision variability and answers the important question of whether consistent or variable abusive supervision is the worst workplace experience. By illustrating that employees suffer more from sporadic experience of abusive supervision rather than consistent experience of abusive supervision after controlling for the average levels, this study extends and challenges the conventional wisdom by showing not only “the less abuse, the better”, but importantly, “the more consistent, the better”. Second, it offers a theoretically motivated examination of the consequences of abusive supervision variability. By integrating resource depletion theory and affective events theory with the uncertainty management theory, this study broadens the explanatory power of uncertainty management theory in the study of abusive supervision. Although the uncertainty management theory was introduced to explain how individuals utilize fairness judgment to manage uncertainty, this study takes one step further to chart new theoretical territory within the uncertainty management literature by identifying a dual-process model linking uncertainty induced by abusive supervision variability, to a parallel process: resource depletion and anxiety activation, and to the distal important work-related outcomes. In so doing, this study answers calls for research

on examination and comparison of multiple mechanisms explaining effects of abusive supervision (Tepper, Simon, & Park, 2017). Third, this study also complements earlier work predominantly focusing on anger as the proximal emotional response to abusive supervision by identifying that anxiety is another possible emotion particularly following variable experiences of abusive supervision. Taken together, these advancements reveal the complex ways in which abusive supervision can affect employees, thereby enhancing the richness of theories in abusive supervision literature as well as offering new insights to organizations interested in preventing its occurrence and associated costs.

THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

Defining Abusive Supervision Variability

Decades of years ago, psychologists have contended that there are individual differences in the variability versus consistency of attitudes, emotional states, and behaviors. For example, Fiske argued that variability represents a “dependable” individual difference (1961: 340). Despite much of research on variability has been conducted in mood and emotions indicating that people exhibit different patterns of affective fluctuation (e.g., Glomb, Bhave, Miner, & Wall, 2011; Judge, Scott, & Ilies, 2006), it has been suggested that individuals may be variable or consistent in any domain (Bem & Allen, 1974). Indeed, the average tendencies as well as variability have been incorporated into the theory and research in a variety of domains in recent management literature to paint a more complete picture of individuals’ attitudes, affects, and behaviors in organizations, including personality (e.g., Fleeson, 2004), interpersonal trust (e.g., Fleeson & Leicht, 2006), self-esteem (e.g., Kernis, Gornell, Sun, Berry, & Harlow, 1993), emotional labor (e.g., Scott, Barnes, & Wagner, 2012), fairness (e.g., Matta, Scott, Colquitt, Koopman, & Passantino, 2017), and job satisfaction (e.g., Chen, Ployhart,

Thomas, Anderson, & Bliese, 2011; Diestel, Wegge, & Schmidt, 2014; Dineen, Noe, Shaw, Duffy, & Wiethoff, 2007; Liu, Mitchell, Holtom, & Hinkin, 2012). Here, I introduce the concept of variability to the domain of abusive supervision to deepen our understanding of how this unethical leadership affects employees in the workplace.

In line with the aforementioned variability research, “abusive supervision variability” (ASV) represents between-person differences in the stability of abusive supervision over time. A couple of points about this definition should be noted. First, I conceptualize abusive supervision variability as a characteristic emanating from the source—employees’ supervisors, but manifests itself on subordinates’ perceptions. Previous studies have suggested that abusive leadership behaviors vary on a daily basis, and identified leader identity (Johnson et al., 2012) and leader sleep quality (Barnes et al., 2015) as important sources of this variability. In this study, I focus on fluctuations in subordinates’ experiences of abusive supervision not only because it is aligned with the conceptualization of abusive supervision (i.e., subordinates’ perceptions, Tepper [2000]) but because this study investigates how subordinates respond to consistent or inconsistent abusive supervision which are driven by subordinates’ perceptions. It is noted that this subjective sense of what is consistent or variable abusive supervision can be contrasted with objective principles, and indeed, are not necessarily justified by reference to the external standards.

Second, other scholars also use the term *variability* in study of abusive supervision (e.g., Ogunfowora, 2013). This stream of research is distinct from my study in that it describes a team-level phenomenon, focusing on a dispersion-based model of team-level abusive supervision (i.e., examining what happens when the abuse is unevenly

distributed in teams). My study, however, focuses on individual differences in terms of one's consistent or variable experience of abusive supervision over time, as well as how individuals react to such different experiences. To be sure, judgments of consistent or variable abusive supervision may be socially shared, but such a consensus indicates only grounds for inter-subjectivity, not for objectivity. Although this stream has a different focus, it lends credibility to my study that subordinates' experience of abusive supervision can vary.

Third, it should be noted that the concept of abusive supervision variability introduced in this study share similarities with previous research on social undermining and social support. Scholars have argued that social undermining and social support are not the opposite poles of the same factor, instead, high levels of both social undermining and social support from the same source were associated with poor mental health (Vinokur & van Ryn, 1993) as well as negative work-related outcomes (e.g., Duffy, Ganster, Pagon, 2002; Hobman, Restubog, Bordia, & Tang, 2009). A recent study further indicated that whether supervisor support buffers or exacerbates the adverse effects of supervisor undermining depends on employees' self-esteem and quality of work life (Nahum-Shani, Henderson, Lim, & Vinokur, 2014). Moreover, studies also found that a mix of abusive supervision and leader-member exchange causes more injury (e.g., Lian, Ferris, & Brown, 2012a; Xu, Loi, & Lam, 2015). Departing from and building on this line of research, this study is distinct in that abusive supervision variability is introduced here to capture the extent to which individuals are different in terms of their own experience of abusive supervision fluctuations over time. Furthermore, this study examines how individuals react to consistent vs. inconsistent experience of abusive

supervision as well as the underlying mechanisms, without possible confounding effects from social support or leader-member exchange.

Having detailed the central construct—abusive supervision variability, in this study, I next consider the meaningfulness and the full performance-based consequences of abusive supervision variability and develop specific hypotheses.

Abusive Supervision Variability and Subordinate Uncertainty

People have a fundamental need to feel certain about their world and their place within it.

--Van den Bos & Lind, 2002: 5

When employees experience inconsistency at work and are unable to predict the future workplace events, “uncertainty” is likely to occur (Van den Bos & Lind, 2002). It could result from a belief that something is probabilistically determined or a belief that however deterministic an event is, one does not understand the event well enough to predict it. A central tenet of uncertainty management theory is that individuals utilize judgments of fairness of their treatment to manage and cope with workplace uncertainty they face (Lind & van den Bos, 2002). People become especially attentive to the information they need to form fairness judgments because such judgments either remove uncertainty or alleviate much of the discomfort that uncertainty would otherwise generate. As Lind and van den Bos (2002: 181) noted, “fairness and uncertainty are so closely linked that it is in fact impossible to understand the role of one of these concepts in organizational psychology without reference to the other.” Yet, this raises a critical question: what if those judgments of fairness themselves are uncertain?

Leadership, or authority processes, is viewed as an important component of social relations (Tyler & Lind, 1992). People often feel uneasy about their relationship with

authorities and about the outcomes they receive from the authority. As an important form of fairness treatment at the workplace, how supervisors treat their employees has received increasing attention, particularly since the construct of abusive supervision was introduced by Tepper (2000). Clearly, supervisory abuse represents a specific form of unfair treatment, and employees who experience no abuse consistently are less likely to feel uncertain. Importantly, abusive supervision that is variable should be more uncertain than abusive supervision that is consistent over time. In this latter situation, there is likely at least some comfort in knowing what to expect from one interaction to the next. The consistency in experience of abusive supervision indeed provides a level of predictability for employees in repeated interactions with their supervisors. However, when supervisors display abusive behaviors sporadically, employees are unable to predict future supervisory treatment, provoking feelings of doubt or confusion (Jones & Skarlicki, 2013). That is, inconsistency in abusive supervision enables employees to be involved in an “uncertainty-provoking situation” (McGregor, Zanna, Holmes, & Spencer, 2001). Therefore, I suggest that abusive supervision variability is a potentially important source of workplace uncertainty for employees. I expect that this effect will hold controlling for the average level of abusive supervision. That is, given two employees with the same average level of abusive supervision over time, the employee whose abusive supervision experience is variable will be worse off (i.e., experience more uncertainty) than the employee whose abusive supervision experience is stable. As such, I propose:

Hypothesis 1. Abusive supervision variability is positively associated with subordinate uncertainty.

Dual-Process Mechanisms and Downstream Outcomes of Abusive Supervision Variability

People need certainty in their social life, because it is the “critical organizing principle, referent point, or integrative framework for diverse perceptions, feelings, and behaviors” (Lind & van den Bos, 2002: 5). Certainty has its evolutionary base as uncertainty deprives one of confidence in how to behave and what to expect from the social environment, threatens the meaning of existence, and ultimately, poses threats to survival (Hogg & Mullin, 1999). In the above section, I expect that abusive supervision variability is likely to generate a specific form of uncertainty regarding future supervisor-subordinate interactions, and now I explain how it may affect how subordinates react to abusive supervision in an unexpected way. Specifically, I integrate insights from resource depletion theory (RDT; Baumeister et al., 1998) and affective events theory (AET; Weiss & Cropanzano, 1996) to propose a dual-process model explaining the full performance-based consequences of abusive supervision variability.

Resource-Based Process

The resource depletion theory (RDT; Baumeister & Heatherton, 1996) suggests that the resources available to individuals for self-regulation are finite, and effective self-regulation is compromised when resources are depleted (Muraven & Baumeister, 2000). Following the principle of behavioral consistency (Fiske, 1961), when a subordinate is experiencing consistent abuse over time, he or she is less likely to feel uncertain; rather, such consistent abuse enables the subordinate to relatively easily figure out a way to respond to the current abuse, and perhaps, as well as to prepare for the upcoming abuse because he or she expects such abuse to continue. In other words, with repeated abuse and less uncertainty, a subordinate’s cognitive, emotional, and behavioral responses can be elicited automatically, and developed into a routine and a defining property of his or

her supervisor-subordinate relationship over time (Chan & McAllister, 2014). Although subordinates suffering from repeated abuse are still likely to experience continuing resource-depletion, the depletion process will slow down as the responses of subordinates who experienced consistently supervisory abuse gradually develop into a routine (i.e., respond in a familiar and automatic manner) which requires minimal resources and effort to operate later on.

Conversely, encountering abusive behaviors that are more variable or inconsistent generates greater uncertainty, which in turn, requires greater cognitive resources, attention, deliberation, and self-control from abused subordinates, because they must continuously search for, monitor, and process new and unpredictable information concerning present and future behaviors of their supervisors, and accordingly keep developing appropriate episode-based specific responses (Bell, Halligan, & Ellis, 2006). Uncertainty elicits feelings of reduced control over one's life (Van den Bos & Lind, 2002). Moreover, those subordinates experiencing uncertainty from inconsistent abuse tend to revisit, ruminate, and reexamine abuse-related issues (Chan & McAllister, 2014; Lind, 2001), as they attempt to make sense of why unexpected supervisory abuse occurs and whether it would occur again in the near future; as a result, such acts consume more valuable cognitive resources (Lind, 2001) and induce subsequent self-control deficits (Muraven & Baumeister, 2000; Vohs & Heatherton, 2000). As such, I suggest that:

Hypothesis 2: Subordinate uncertainty is positively associated with subordinate resource depletion.

Hypothesis 3: Abusive supervision variability is positively associated with subordinate resource depletion, as mediated by subordinate uncertainty.

Given people's available resources are limited, once an individual's resources are depleted, recent research indicates that a variety of adverse consequences are likely to occur, such as, lower levels of attention, limited ability for self-control, decreased motivation and task focus (Beal, Weiss, Barros, & MacDermid, 2005; Hagger, Wood, Stiff, & Chatzisarantis, 2010; Muraven, Tice, & Baumeister, 1998; Muraven & Baumeister, 2000). More importantly, people often have to use resources otherwise for other tasks to deal with the unpredictable situations. Evidence suggests that the breadth of domains requiring self-regulatory exertion makes it likely that self-restraint in one domain results in subsequent regulatory failures in seemingly unrelated domains (Hagger et al., 2010). In addition, recent research also suggests that keeping searching for, monitoring, and processing those abuse-related information may increase the likelihood that subordinates found greater evidence for abusive supervision, which fuels more adverse work outcomes (Chan & McAllister, 2014).

With the above in mind, given two subordinates experiencing the same average level of abusive supervision, compared to subordinate *Alex* suffering from abusive supervision on a consistent basis, I expect that subordinate *Brandon* experiencing abusive supervision in a more variable and erratic pattern is likely to continuously deplete more cognitive resources. As a result, subordinate *Brandon* is likely to suffer more from self-control deficits and experience more adverse consequences in other work-related domains, including lower levels of task performance, and OCBs which often requires extra more cognitive resources on extra role tasks. In addition, depleted resources and lack of self-control also play an important role in influencing counterproductive work behaviors (CWBs; e.g., Barnes, Schaubroeck, Huth, & Ghumman, 2011; Hagger et al.,

2010; Mead, Baumeister, Gino, Schweitzer, & Ariely, 2009; Rawn & Vohs, 2011).

Because being abused inconsistently (i.e., high level of abusive supervision variability) is depleting and diminishing an abused subordinate's resources and ability for self-control, then it is expected that high level of abusive supervision variability is associated with the reduced capability to suppress the temptation to engage in counterproductive or unethical behaviors. It has been suggested that in resource-depletion situations, people's limited cognitive resources are diverted to protect the self and to facilitate a quick response (Hermans et al., 2011). This self-protective and rapid defense mode causes people to focus narrowly on their self-interest, which can cause them to be less mindful of principles that guide ethical and moral reasoning, thus leading them to behave unethically. I draw on the cumulative arguments to propose a novel mediation chain hypothesis:

Hypothesis 4: The relationships between abusive supervision variability and a) subordinate task performance, b) OCBs, and c) CWBs, are serially mediated through subordinate uncertainty and resource depletion.

Having mapped out the resource-based process and consequences of abusive supervision variability, I now turn my attention toward the emotion-based process. Specifically, I draw from AET to further examine how abusive supervision variability and its associated uncertainty elicit subordinates discrete emotion—*anxiety*, which in turn, influences their behavioral responses.

Emotion-based Process

According to uncertainty management theory (Van den Bos & Lind, 2002), abusive supervision variability creates more uncertainty. A major component of uncertainty management theory is the process of appraising and managing such

uncertainty. However, beyond the general explanation that individuals use fairness judgments to manage workplace uncertainty, this theory does not offer much guidance on the nature of the specific appraising process, nor does it refer directly to possible emotional and behavioral responses in uncertainty-provoking situations. To address this, I turn to AET to explain the affective states generated by the uncertainty in variable abusive supervision situation. At the core of AET is the focus on emotional reactions to workplace events (Weiss & Cropanzano, 1996). This theory recognizes that emotional responses fluctuate over time, creating patterns that can be predicted by work events. Supervisory abuse events, are prime examples of affective events that may generate emotional responses. Extant cross-sectional studies provided evidence that abused subordinates are likely to experience hostility or anger, which in turn, triggers detrimental consequences (i.e., deviance) in the workplace (e.g., Lian, Brown, Ferris, Liang, Keeping, & Morrison, 2014). However, this line of research is grounded on an assumption that abusive supervision is stable over time. It thus raises a critical question: what emotional and behavioral responses would subordinates take when encountering variable abusive supervision and subsequent uncertainty?

According to Weiss and Cropanzano (1996), emotions are a response to relational meaning. Variable abusive supervision represents salient workplace events because they provide information, though in an ambiguous format, about supervisor-subordinate interactions in the future. The integration of AET with uncertainty management theory provides the basis for modeling anxiety as a discrete emotion following the specific uncertainty-provoking situation, that is, variable abusive supervision. Anxiety is defined as “a state of distress and/or physiological arousal in reaction to stimuli including novel

situations and the potential for undesirable outcomes” (Brooks & Schweitzer, 2011: 44). Lazarus (1991) asserted that anxiety is an anticipatory emotion that may result from uncertainty. As previously noted, variable abusive supervision evokes uncertainty over whether or not subordinates will experience supervisory abuse again. Indirect evidences are from studies that showed uncertainty increased stress and emotional exhaustion, which may share some conceptual space with anxiety. Indeed, the notion that uncertainty-provoking events may be related to anxiety is featured prominently not only in AET, but also in uncertainty management theory (for a review, see Van den Bos & Lind, 2002). For example, research showed that anxiety increases when individuals experience uncertainty from unpredictable shocks as opposed to immediate, expected ones (e.g., Badia, McBane, Suter, & Lewis, 1966). Anxiety is different from fear, which is another discrete emotion subordinates are likely to experience when encountering abusive supervision. Whereas fear is an intense emotional reaction to an identifiable source of danger, anxiety is a more diffuse emotion with vague apprehensions (e.g., feeling uneasy without knowing why, Ekman, 1993; Rachman, 2004). Overall, based on the above, I predict the following relationship involving anxiety:

Hypothesis 5: Subordinate uncertainty is positively associated with subordinate anxiety.

Hypothesis 6: Abusive supervision variability is positively associated with subordinate anxiety, as mediated by subordinate uncertainty.

AET provides an overarching framework that suggests that certain behaviors are emotional responses to workplace events (Weiss & Cropanzano, 1996). In order to study performance-based consequences of variably supervisory abuse events in particular, I pair uncertainty management theory with AET to provide a useful rationale for emotion-

based behavioral reactions to abusive supervision variability. Specifically, after specifying that variably supervisor abuse events and induced uncertainty generate anxiety as an emotional reaction, I now turn to how anxiety influences subsequent performance-based behaviors at work.

The tenet of AET is that people engage in behaviors that are intended to deal with their particular emotional reactions (Weiss & Cropanzano, 1996). In addition to helping people deal with their emotions, these behaviors can either contribute to or detract from task performance, citizenship, and counterproductive behaviors, respectively (Weiss & Cropanzano, 1996). These discretionary behaviors can be seen as outlets with which to respond to emotions (Spector & Fox, 2002) and serve as what Lazarus and Folkman would call emotion-focused coping (Folkman & Lazarus, 1980; Lazarus & Folkman, 1984). In line with the uncertainty management theory, these behaviors are designed to manage emotional reactions to stressful experiences (Lazarus & Folkman, 1984), such as the uncertainty induced by variable abusive supervision.

Anxiety is an unpleasant and aversive emotion that can induce certain behaviors. Recent theoretical development in anxiety literature suggests that anxiety impairs efficient functioning of the goal-directed attentional system and increases attention to threat-related stimuli, thereby causing adverse effects on task performance (Eysenck & Calvo, 1992; Eysenck, Derakshan, Santos, & Calvo, 2007). Anxiety is characterized by concerns over evaluation and failure and expectations of aversive consequences, involving cognitive interference by preempting the processing and temporary storage capacity of working memory (see Eysenck & Calvo, 1992 for a review). Therefore, I expect that subordinate anxiety is negatively associated with job performance.

Lazarus (1991) argued that a major action tendency of anxiety is avoidance and escape. Individuals respond to stimuli that make them anxious (i.e., uncertainty triggered by variable abusive supervision) by orienting themselves away from the stimuli and related consequences (i.e., abusive supervisor, Roth & Cohen, 1986). In other words, avoidance offers the opportunity to reduce uncertainty and potential threats that lead to the feelings of anxiety (Roth & Cohen, 1986). Therefore, this avoidance action tendency of anxiety would necessarily limit prosocial action, as such behaviors demand more involvement, engagement, and interactions at the workplace, particularly with the source of anxiety. Subordinates who experienced anxiety in a variable abusive supervision situation are thus less likely to engage in citizenship behaviors, particularly towards abusive supervisors.

Although anxiety is expected to reduce citizenship behaviors in order to avoid interactions at the workplace, scholars recently suggest that anxiety may also result in counterproductive behaviors (e.g., Kouchaki & Desai, 2015; Rodell & Judge, 2009). Anxiety signals the presence of a potential but often vague threat (Mathews, 1990), that evokes psychological defense processes to reduce the aversive situation and cope with perceived threat activated by experienced anxiety (Pacheco-Unguetti, Acosta, Callejas, & Lupiañez, 2010; Paulhus, Fridhandler, & Hayes, 1997). People can respond in maladaptive ways in order to reduce perceived uncertainty and anxiety in the environment (Staw, Sandelands, & Dutton, 1981). For example, Kouchaki and Desai (2015) found that anxiety, both induced and measured, can lead to self-interested unethical behavior. Similarly, anxiety about sexual performance has been identified as one of the leading causes of moral lapses in the form of male infidelity (Mark, Janssen, &

Milhausen, 2011). Moreover, uncertainty management theory has been also applied to predict CWBs (e.g., Thau, Aquino, & Wittek, 2007; Thau, Bennett, Mitchell, & Marrs, 2009). For example, Mayer, Thau, Workman, Van Dijke, and De Cremer (2012) posited that employees experiencing uncertainty are more likely to reciprocate that uncertainty with engagement in deviant behavior. Pairing this prediction with the previously specified relationship among abusive supervision variability, uncertainty, and anxiety, I propose a novel mediation chain hypothesis:

Hypothesis 7: The relationships between abusive supervision variability and a) subordinate task performance, b) OCBs, and c) CWBs, are serially mediated through subordinate uncertainty and anxiety.

METHODS

Sample and Procedure

Similar to other research assessing variability constructs (e.g., Matta et al., 2017; Scott et al., 2012), I conducted a multilevel experience-sampling field study at a mobile phone accessories manufacturing company located in China. Targeted participants were manufacturing workers (viz., subordinates) and their direct supervisors. All subordinates performed similar jobs and were responsible for assembling mobile phone accessories, and supervisor' responsibilities included scheduling and organizing subordinates' work, providing support with task-related problems, and monitoring subordinate performance. I first contacted the vice president and HR manager and introduced my study. With the approval and assistance of senior management, I sent the invitation email to a total of 1,312 employees across organizational ranks and positions, and directed those interested (a total of 776 employees) in my study to the website where I explained the purpose and requirements of the study. I used organizational records to match each supervisor with one subordinate, and chose one subordinate randomly when multiple subordinates were

available (on average, four employees were supervised by one common leader; for a similar approach see Tepper et al. [2011]).

I collected data in three steps. First, a total of 548 employees from 274 matched supervisor-subordinate dyads completed a one-time baseline survey about their demographic information. Second, one week later, with the permission of senior management, I conducted a mini-training session right after the monthly meeting which all employees were required to attend. The purposes of this training session were to highlight the importance of integrity in the scientific process, emphasize that it was essential to complete daily surveys within the specified time period, and answer any questions participants may have. Third, one week later, the next stage of the study used interval-contingent experience-sampling methodology (Dimotakis, Ilies, & Judge, 2013) to capture daily variance in the constructs of my theoretical model.

Subordinates and their supervisors, respectively, completed one daily survey during a three-week work period (Monday to Friday), resulting in a total of 15 possible subordinate daily surveys and a total of 15 possible supervisor daily surveys. Daily surveys were designed and programmed into a smartphone application to maximize participant convenience in completing surveys. In keeping with other ESM research on abusive supervision (Barnes et al., 2015; Courtright et al., 2016), daily surveys were sent to the subordinates and supervisors at 4:00 PM prior to their leaving work for the day. On these surveys the subordinates made ratings of abusive supervisor behavior, uncertainty, resource-depletion, and anxiety at work on that day, and the supervisors were asked to report their direct subordinate's OCBs and CWBs. Information regarding subordinate's daily task performance was retrieved from company's records. Electronic time stamps

were used to confirm that each supervisor or subordinate daily survey was completed within the specified time period (i.e., 4:00 PM to 6:00 PM for subordinate and supervisor daily surveys). In exchange for participation, each participant received 100 Yuan (approximately \$15), and the company received a report on the results of the study.

Overall, I received 3,873 out of a possible total of 4,110 subordinate surveys (94.2% response rate) and 3,642 out of a possible total of 4,110 possible supervisor surveys (88.6% response rate). To maximize statistical power while limiting the amount of missing data, only those participants that completed 13 or more of the 15 daily surveys were retained for the analyses (260 subordinates and 252 supervisors were retained as a result, for a similar approach, see Livingston & Judge, 2008). In addition, I followed procedures outlined by Meade and Craig (2012) to identify and remove careless responders. Participants who responded with the same answer across the surveys (such as selecting the midpoint on all the 5-point scales), or who completed the survey within a very brief time frame were excluded from the analyses (9 participants were excluded as a result). Consistent with previous research (Barnes et al., 2015), I also excluded from the analyses data for days on which a supervisor-subordinate dyad reported “none” or “little” interpersonal interaction (112 daily data were removed as a result). This yielded a final sample size of 188 independent supervisor-subordinate dyads (2820 matched subordinate-supervisor daily surveys across 15 workdays), representing an overall response rate of 68.6%.

Among subordinates, the average age was 26.2 years ($SD = 7.3$ years), 58.4% were men, and they had an average of 2.46 years of work experience ($SD = 4.21$ years), and 1.67 years of working experience with the immediate supervisor ($SD = 2.03$ years).

Among supervisors, the average age was 35.3 years ($SD = 11.4$ years), 79.2% were men, and they had an average of 4.51 years of work experience ($SD = 6.13$ years). On average, subordinates interacted with their immediate supervisors “once per day” 1%, “a few times per day” 15%, and “several times per day” 84%.

Measures

I followed Brislin’s (1980) procedures for translation-back translation of all scales from English to Chinese, the native language of the participants. For variables measured on a daily basis, I report the average Cronbach’s coefficient alpha across 15 days.

Abusive supervision variability. In keeping with other ESM research on daily abusive supervision (Barnes et al., 2015; Johnson et al., 2012), I measured daily abusive supervisor behavior using the 5-item scale developed by Johnson et al. (2012). In each daily survey, subordinates were asked to indicate the “frequency with which your supervisor engaged in each of the following behaviors today at work”, using a 6-point Likert scale ($1 = \textit{never}$, $6 = 5 \textit{ or more times}$). A sample item was “Today at work, the supervisor behaved in a nasty or rude manner toward me” ($\alpha = .86$). Previous research suggested that when interested in modeling both mean and variance, standard deviation may be a better dispersion index in multilevel research (Roberson, Sturman, & Simons, 2007). As such, following previous research on variability constructs (e.g., Eid & Diener, 1999; Fleeson, 2001; Kernis et al., 1993; Matta et al., 2017; Scott et al., 2012), I operationalized *abusive supervision variability* (ASV) as the standard deviation of each subordinate rated abusive supervisor behavior over the three-week period. I then controlled for the potential confounding effects of average abusive supervision using each subordinate’s mean level of overall abusive supervision experience over the three-

week period.

Subordinate uncertainty. I measured subordinate uncertainty using the 4-item scale developed by Colquitt and colleagues (2012). In each daily survey, subordinates were asked to indicate when thinking about their interactions with supervisor today at work, the extent to which they agreed with each statement such as “There was a lot of uncertainty” and “Many things seemed unsettled” on a 5-point Likert scale (*1 = strongly disagree, 5 = strongly agree; $\alpha = .89$*).

Subordinate resource depletion. Subordinate resource depletion was measured with a 4-item scale (Lanaj, Johnson, & Barnes, 2014). In each daily survey, subordinates were asked to indicate their response to items such as “Today, I feel mentally exhausted” and “Today, my mental energy is running low” on a 7-point Likert scale (*1 = never, 7 = always; $\alpha = .92$*).

Subordinate anxiety. Subordinate anxiety at work was assessed using the 2-item subscale (i.e., nervous and anxious) of the Positive and Negative Affect Schedule-Expanded form (PANAS-X; Watson & Clark, 1994). This scale has been used in previous research on anxiety at work (e.g., Kouchaki & Desai, 2015; Rodell & Judge, 2009). In each daily survey, subordinates were asked to indicate the extent to which they experienced the aforementioned states at work today on a 5-point Likert scale (*1 = very slightly or not at all, 5 = very much; $\alpha = .81$*).

Subordinate task performance. The company used a piece-rate pay system through which subordinate’s monthly salary was based on the quantity of their production output. Specifically, a team of independent work inspectors conducted daily check of the number of products assembled by each subordinate and recorded the respective

information in a standardized form on a daily basis. I obtained this performance information for each subordinate from company records.

Subordinate OCBs toward supervisor. Subordinate OCBs toward supervisor was measured with a 6-item scale (Dalal et al., 2009). In each daily survey, supervisors were asked to indicate “how often your direct subordinate engaged in the behavior today” such as “(My subordinate) tried to help me” and “(My subordinate) defended my opinion or suggestion” on a 5-point Likert scale ($1 = \textit{never}$, $5 = \textit{often}$; $\alpha = .93$).

Subordinate CWBs toward supervisor. Subordinate CWBs toward supervisor was measured with a 6-item scale (Dalal, Lam, Weiss, Welch, & Hulin, 2009). In each daily survey, supervisors were asked to indicate “how often your direct subordinate engaged in the behavior today” such as “(My subordinate) excluded me from a conversation” and “(My subordinate) tried to avoid interacting with me” on a 5-point Likert scale ($1 = \textit{never}$, $5 = \textit{often}$; $\alpha = .89$).

Control variables. In addition to controlling for the potential confounding effects of average abusive supervision, I controlled for other variables that are theoretically linked to the key variables and relationships of interest (Lind & van den Bos, 2002; Matta et al., 2017; Simon, Hurst, Kelley, & Judge, 2015). Specifically, I controlled for subordinate daily anger and fear using 4 items (for anger: “anger” and “hostility”, and for fear: “frightened” and “scared”) from PANAS-X (Watson & Clark, 1994) on a 5-point Likert scale ($1 = \textit{very slightly or not at all}$, $5 = \textit{very much}$), and for subordinate daily stress using the single item “Today, to what extent have you experienced stress?” on a 5-point Likert scale ($1 = \textit{not at all}$, $5 = \textit{extremely}$) (Bono, Foldes, Vinson, & Muros, 2007). Controlling for these subordinate factors should provide evidence as to whether abusive

supervision variability is simply in the eye of the beholder, or whether it reflects differences that are not just perceptual. That said, results are qualitatively identical with or without any of the control variables included in the model.

Analytical Strategy

The ESM data collected in this study included variables at two levels of analysis as daily responses (Level 1: subordinate uncertainty, resource depletion, anxiety, task performance, OCBs, CWBs, and day-level controls of anger, fear, and stress) were nested within persons (Level 2: abusive supervision variability and average abusive supervision as a control), thus violating assumptions of independence of observations required for ordinary least squares regression analyses. Therefore, I applied multilevel path analysis to test the theoretical model using MPlus with maximum likelihood estimation with robust standard errors (MacKinnon, 2008; Preacher, Zyphur, & Zhang, 2010). The RMediation program was used to compute 95% asymmetric, bias-corrected confidence intervals for the indirect effects (MacKinnon, Fritz, Williams, & Lockwood, 2007; Tofighi & MacKinnon, 2011). Following the recommendations of Hoffmann, Griffin, and Gavin (2000) to avoid spurious cross-level interactive effects, I centered variables measured at the daily level (Level 1) around each person's mean ("group-mean centering") and grand-mean centered individual level variables (Level 2).

Before testing specific hypotheses, I first investigated whether daily variables displayed significant within-person variation in order to empirically justify the appropriateness of the use of a multilevel modeling strategy. Results from Table 1 revealed that the proportion of all variance attributable to within-person causes was substantial: abusive supervision (61%), subordinate uncertainty (56%), resource depletion

(48%), anxiety (63%), task performance (41%), OCBs (46%), and CWBs (57%). This evidence supported proceeding with the intra-individual analyses.

Insert Table 1 about here

Results

The descriptive statistics and correlations for the study variables are presented in Table 2. Following recommendations from previous research on variability (e.g., Fleeson, 2001; Matta et al., 2017; Scott et al., 2012), I first compared the average of each person's standard deviation in abusive supervision to the overall standard deviation in average abusive supervision over the three-week period "to determine whether individuals differed from themselves over time as much as they differed from one another at the average level" (Scott et al., 2012: 913). The results of this analysis, as shown in Table 2, revealed that the average of each person's abusive supervision variability was .38, and the standard deviation of average abusive supervision was .39.

Insert Table 2 about here

To examine whether the substantive constructs measured in the study were distinguishable from one another, I conducted a multilevel confirmatory factor analysis. The results revealed that the six-factor within-person model (i.e., abusive supervision, uncertainty, resource depletion, anxiety, OCBs, and CWBs) fit the data well ($\chi^2 = 895.32$, $df = 309$, CFI = .97, RMSEA = .06), and was better than all 15 constrained models in which any two of the six factors were combined ($284.24 \leq \Delta\chi^2 \leq 1103.52$, $\Delta df = 5$). These results demonstrate the dimensionality and discriminant validity of measures in my proposed model.

Multi-level path analysis results are displayed in Table 3 and Figure 2. Hypothesis 1 predicted that abusive supervision variability is positively associated with subordinate uncertainty. The path model results indicated that abusive supervision variability had a positive cross-level association with subordinate uncertainty ($\gamma = .46, p < .01$) over and above average levels of abusive supervision. Thus, Hypothesis 1 was supported.

Insert Table 3 and Figure 2 about here

Hypothesis 2 and 5 predicted that subordinate uncertainty is positively associated with subordinate resource depletion and anxiety, respectively. Results suggested that subordinate uncertainty was positively associated with subordinate resource depletion ($\gamma = .37, p < .01$) and anxiety ($\gamma = .31, p < .01$), respectively. Therefore, Hypothesis 2 and 5 were supported.

Hypothesis 3 and 6 predicted that subordinate uncertainty mediates the positive indirect relationship between abusive supervision variability and subordinate resource depletion and anxiety, respectively. In supporting of these hypotheses, as shown in Table 4, the indirect effects were significant (IE = .15, 95% CI [.079, .214] on resource depletion; IE = .13, 95% CI [.086, .193] on anxiety).

Insert Table 4 about here

Hypothesis 4 and 7 described a set of serial mediation effects. Specifically, in the proposed model, abusive supervision variability was the independent variable, subordinate uncertainty was the first-stage mediator, subordinate resource depletion and anxiety were the second-stage mediators, and subordinate task performance, OCBs, and CWBs were the dependent variables. As shown in Table 4, through subordinate

uncertainty (the first-stage mediator) and subordinate resource depletion (the second-stage mediator), the indirect effects of abusive supervision variability were significant (IE = -.04, 95% CI [-.077, -.005] on subordinate task performance; IE = -.02, 95% CI [-.053, -.001] on subordinate OCBs; IE = .07, 95% CI [.018, .091] on subordinate CWBs).

Through subordinate uncertainty (the first-stage mediator) and subordinate anxiety (the second-stage mediator), the indirect effects of abusive supervision variability were also significant (IE = -.02, 95% CI [-.034, -.008] on subordinate task performance; IE = -.03, 95% CI [-.051, -.010] on subordinate OCBs; IE = .05, 95% CI [.013, .072] on subordinate CWBs). Therefore, Hypothesis 4 and 7 were supported.

GENERAL DISCUSSION

A recent national campaign reveals that an increasing number of U.S. employees reported experience of abusive supervision in organizational life (Healthy Workplace Bill, 2013). Importantly, while it is hardly debatable that supervisory abusive behavior is a part of employee's everyday work life, studies showed that such behavior varies on a daily basis (e.g., Barnes et al., 2015; John et al., 2012). To date, although there is clear and compelling evidence that abusive supervision can be harmful to employees, teams, and organizations (Martinko et al., 2013; Tepper, 2007; Tepper et al., 2017), little is known about the nature and impact of variability in abusive supervision on employee performance-related behaviors. This study advances our understanding on this issue.

Theoretical and Practical Implications

The bulk of the abusive supervision literature has exclusively focused on average levels of abusive supervision, ignoring the way in which the average level of abusive supervision is composed. The results of this study, however, suggest that the abusive

supervision literature can be enhanced (and, in some cases, challenged) by incorporating the concept of abusive supervision variability. For instance, although the abusive supervision literature typically assumes that the less supervisory abuse, the better (for meta-analysis, see Mackey et al., 2015), this study demonstrated that beyond the average effect, variably supervisory abuse was more taxing than always being treated abusively. Drawing from the tenet of uncertainty management theory (Lind & van den Bos, 2002; Van den Bos & Lind, 2002), this study illustrated that abusive supervision variability results in greater uncertainty among employees. To further expand the explanatory power of uncertainty management theory on the consequences of abusive supervision variability, I integrated theoretical insights from resource depletion theory and affective events theory, respectively, to propose and test a dual-process (resource-based and emotion-based) model. Specifically, the results of a multilevel, experience-sampling field study supported the linkage between abusive supervision variability and daily uncertainty, holding the average level of abusive supervision constant, showed that this abusive supervision variability induced daily uncertainty and subsequently affected work outcomes through dual process: depleted cognitive resources and activated feelings of anxiety, which jointly decreased task performance and OCBs, but increased CWBs.

This study makes several theoretical contributions to abusive supervision literature. First, this study shows that abusive supervision has more complex effects on employees than currently recognized in the literature. Extant theory and research has for the most part focused on the average levels of abusive supervision and its consequences, while ignored the pattern of data points that constitute the average levels of abusive supervision. This limited scope is problematic because the same average level of abusive

supervision can be reached by totally different patterns of a series of abusive supervision events (i.e., consistent vs. variable); accordingly, the influence on employees should be different. Drawing from the uncertainty management theory, this study provides rich insights on the unique effect of abusive supervision variability above and beyond the mean levels, highlighting that whether an employee's abusive supervision experience is consistent or viable over time deserves a more visible place in abusive supervision theorizing.

Second, this study contributes to abusive supervision literature by examining and comparing two key mechanisms used to explain effects of abusive supervision variability. Tepper and his colleagues (2017), in their recent review, made calls for “multi-pathway research” that can shed light on the relative explanatory power of different theoretical perspectives. In this study, I examined both resource- and emotion-based processes linking abusive supervision variability to uncertainty and to distal performance outcomes. Results showed that the uncertainty induced by abusive supervision variability can both deplete subordinate's cognitive resources and trigger feelings of anxiety, which jointly affect subordinate's performance, OCBs, and CWBs.

Third, this study contributes to abusive supervision literature by examining the full performance-based outcomes of abusive supervision. Departing from previous research, this study showed when holding average level of abusive supervision constant, abusive supervision variability has significant effect on subordinate's OCBs and CWBs. Importantly, to date, only a handful studies have examined the job performance consequences of abusive supervision, and most of them are based on “soft” performance (i.e., performance ratings are supplied by the supervisor). While informative,

it is important to understand how abusive supervision may affect hard performance (Tepper et al., 2017). This study echoes recent work conducted by Walter, Lam, Van der Vegt, Huang, X. and Miao (2015) and demonstrates that abusive supervision variability can have unique effect on employees' actual output (i.e., number of assembling mobile phone accessories).

This study also points to practical implication that differs from the modal abusive supervision study. As shown here, subordinates suffered more from supervisors who displayed variable abusive behaviors over time than those who displayed consistent abusive behaviors. Therefore, besides of training and education programs that organizations often used to reduce the occurrence of abusive supervision, it may be prudent for organizations to highlight the importance of behavioral consistency to people who occupy leadership position.

Limitations and Future Research Directions

This study has its own limitations which I hope can spur future avenues of related research. Echoing recent work (e.g., Barnes et al., 2015; Johnson et al., 2012), this study shows that abusive supervision varies as much within person as it does between person. That variation remains a relatively uncharted territory in the current literature. While this study explored the unique effect of abusive supervision variability and underlying mechanisms, one important question remains, that is, where that variation lives. Scholars recently found that leader identity (Johnson et al., 2012), sleep quality (Barnes et al., 2015), and family-to-work conflict (Courtright et al., 2016) are antecedents of daily abusive behavior. Future research are encouraged to continue investigating other supervisor characteristics to further ascertain why supervisors choose to act consistently

or inconsistently at the workplace, as well as whether abusive supervision variability can be construed as an individual difference between supervisors.

Another profitable direction could be weaving in subordinate characteristics and contextual variables that other scholars have used to predict average abusive supervision. For example, Tepper et al (2011) showed that low-performing subordinates tended to receive higher levels of abusive supervision on average. It may be that the change in subordinate's performance could predict variability in supervisor's abusive behavior. A recent meta-analysis on predictors of abusive supervision (Zhang & Bednall, 2016) reveals that subordinate negative affectivity is a reliable antecedent to abusive supervision. It is possible that subordinates who are high in neuroticism or unstable in their emotionality are more likely to perceive "inconsistent" experience of abusive supervision.

Another fruitful area for future research on abusive supervision variability is to examine potential moderators of the relationships depicted in the current study, thus exploring questions such as which type of employees are most or least affected by the variability. It could be that an employee high in mindfulness will be less likely influenced by abusive supervision variability because such individuals tend to experience workplace events without prejudgment or over-identifying them (Brown & Ryan, 2003), and are thus less likely to feel uncertainty when encountering sporadic mistreatment from supervisors.

Conclusion

In this study, I introduced the concept of abusive supervision variability to the abusive supervision literature, and showed that such variability is more taxing for

employees above and beyond the effects of mean levels of abusive supervision. I hope this study can serve as a catalyst for a dialogue among scholars and can motivate future research to explore the full nomological network of abusive supervision variability as well as its implications for employees, supervisors, and organizations.

ESSAY TWO

The Spiral of Abuse...? Reciprocal Relationships among Abusive Supervision, Subordinate Performance, and Supervisor Motives

SYNOPSIS

In this essay, I propose a dynamic reciprocal relationship between abusive supervision and subordinate performance (i.e., task performance, citizenship behaviors, and deviance) in which subordinate performance promotes changes in abusive supervision and the altered abusive supervision, in turn, fuels further changes in subordinate performance. Drawing from theories of attribution and motivation, I further propose that this spiral of abuse is facilitated or mitigated by subordinate's attributed motives behind abusive supervision (i.e., injury initiation motive vs. performance promotion motive) and supervisor's own motives (i.e., self-serving motive vs. pro-social motive). In a five-wave longitudinal study based on a sample of 512 supervisor-subordinate dyads from a large medical system, results support the existence of the spiral of abuse, and the moderating effects of subordinate's attributed motives and supervisor's own motives on the corresponding loop of such spiral, respectively.

Keywords: abusive supervision, motives, performance, reciprocal relationships, spiral of abuse

INTRODUCTION

Abusive supervision, defined as “subordinate’s perceived sustained hostile verbal and non-verbal supervisory behaviors, excluding physical contact”, is becoming a vibrant research field (Tepper, 2000: 178). Past research clearly documents substantial relationships between abusive supervision and subordinate performance including lower levels of task performance (e.g., Harris, Kacmar, & Zivnuska, 2007), extra-role performance (e.g., Aryee, Chen, Sun, & Debrah, 2007; Aryee, Sun, Chen, & Debrah, 2008; Zellars, Tepper, & Duffy, 2002), and higher levels of counterproductive performance (i.e., deviance) (e.g., Lian, Brown, Ferris, Liang, Keeping, & Morrison, 2014; Mitchell & Ambrose, 2007, 2012). Current theorizing has mainly framed these correlations as evidence that those subordinates’ detrimental work outcomes serve as consequences of abusive supervision (Schyns & Schilling, 2013; Tepper, 2007). Recently, scholars draw from victim precipitation literature (Aquino & Thau, 2009; Olweu, 1978) and took one step further to investigate alternative causal direction, that is, subordinates’ performance may serve as antecedents of abusive supervision (e.g., Lian, Ferris, Morrison, & Brown, 2014; Tepper, Moss, & Duffy, 2011). In short, subordinate deleterious work performance not only serves as consequences of abusive supervision but that they may also foster the occurrence of abusive supervision. This raises a critical question: does a reciprocal relationship exist between abusive supervision and subordinate’s performance?

Supervisor-subordinate interactions consist of a series of episodes, thus cause-effect relations are often ambiguous and challenging to disentangle (Chan & McAllister, 2014). Furthermore, accumulating evidence in leadership research documents that

subordinates' behaviors play a pivotal role in shaping leadership changes over time (Avolio, Walumbwa, & Weber, 2009). Scholars have increasingly recognized that abusive supervisory behavior, in particular, varies within supervisors, fluctuating on a daily basis (e.g., Johnson, Venus, Lanaj, Mao, & Chang, 2012; Barnes, et al., 2015). Taken together, the emerging evidence points to a vicious spiral of supervisory abuse and employee performance. More importantly, if the reciprocal relationship is supported, current recommendations solely focusing on terminating abusive supervisors might be problematic or at least, insufficient. Instead, strategies that target both agents (i.e., subordinates and supervisors) of the spiral of abuse might be more effective. A natural follow-up, but critical question would be: if the spiral of abuse exists, what factors contribute to the termination of such spiral of abuse in the workplace?

To explore these two questions, I first propose and examine two major “loops” in this reciprocal cycle: abusive supervision → changes in subordinate performance, and subordinate performance → changes in abusive supervision. In terms of the first loop, I then suggest that subordinates' attributions for *why* supervisors abuse them is critical for understanding how subordinates will respond to abuse. Specifically, I expect subordinate's *performance promotion* attributed motivation (rather than *injury initiation* attributed motivation) will help stop the first loop. In terms of the second loop, I hypothesize that supervisors' *prosocial motivation* (rather than *self-serving motivation*; De Dreu & Nauta, 2009; Grant & Berg, 2010) will decrease the likelihood to respond to subordinate's deleterious performance in the form of abusive supervision, thereby contributing to the stop of such spiral.

This study contributes to the scholarship on abusive supervision in two ways. First, given the lack of organizational studies looking at reciprocal relationships between abusive supervision and subordinates' work outcomes over time, this study contributes to the literature by showing that for abusive supervision, the causal direction flows not only from abusive supervision to subordinates' work outcomes but also in the opposite direction. A fundamental reciprocal relationship between abusive supervision and subordinate performance may exist, that is, subordinate performance has lagged effects on changes in abusive supervision that may then further modify subordinate performance. Second, to answer the question of how to stop such spiral of abuse in organizations, I integrate attribution theory and literature on work motivations to further examine the escalating or mitigating effects of supervisor's motives (i.e., prosocial vs. self-serving) and subordinate attributed motives behind abusive supervision (i.e., performance-promotion vs. harm-initiation) in the corresponding loop of the spiral of abuse. Together, this research deepens our understanding about the nature of the relationship between abusive supervision and subordinates' work variables.

The structure of this study unfolds as follows. I start by recapitulating theoretical bases supporting the presumed causal link between abusive supervision and changes in subordinates' work outcomes. Second, I draw from victim precipitation literature to develop hypotheses supporting the other causal link between subordinates' work outcomes and changes in abusive supervision. Third, based on different theoretical perspectives supporting each side of the reciprocal relationship, I propose a spiral of abuse between abusive supervision and subordinates' work outcomes. Fourth, I further articulate the moderating roles of subordinate attributed motives under supervisory abuse

and supervisor's own motives in such spiral of abuse. In order to test the theoretical model and developed hypotheses, I deigned a longitudinal panel study with a sample of new doctor-supervisor dyads from Northeastern medical system in China. A theoretical model is depicted in Figure 3.

Insert Figure 3 about here

THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

Theories of Abusive Supervision Development and Change

There are three theoretical perspectives regarding the development or changes in abusive supervision. First, much of the current abusive supervision research assumes that abusive supervision is a leadership style, which is relatively stable over time. Existing research adopting this perspective examines negative consequences of abusive supervision on subordinates' work outcomes (for reviews, see Martinko et al., 2013; Tepper, 2007; for a recent meta-analysis, see Schyns & Schilling, 2013). Second, researchers have recently started to investigate the fluctuations in abusive supervisory behavior. For example, Johnson and colleagues (2012) found that abusive leadership behavior fluctuates within-supervisor on a daily basis. A recent experience sampling study in abusive supervision conducted by Barnes and his colleagues (2015) not only found that a large portion of variance of abusive supervisor behavior remains within-supervisor, but that supervisor's differing levels of sleep quality the night before explained such fluctuations in abusive supervisory behavior. In short, this emerging line of research has provided indirect evidence that abusive supervisory behavior is malleable over time.

Third, departing from established static models of abusive supervision, Chan and McAllister (2014) proposed a paranoia-based framework, specifying concrete feedback mechanisms (i.e., paranoid arousal and paranoid cognition) to explain the persistence and escalation of abusive supervision over time. Building on this, the goal of this research is to study abusive supervision and subordinates' work outcomes as they change each other over time. This paper reconciles different theoretical perspectives with respect to the nature of the relationship between abusive supervision and subordinates' work behaviors. Specifically, I argue that abusive supervision that leads to subordinate deleterious outcomes will be strengthened over time by those subordinate deleterious outcomes. Put differently, when supervisors abuse their direct subordinates, these abused subordinates in turn, negatively respond to this abuse in the form of lowered performance outcomes, which in turn, reinforces the further occurrence and development of abusive supervision.

Abusive Supervision → Change in Subordinate Performance

Despite the plethora of studies examining the consequences of abusive supervision on a variety of subordinate outcomes, few studies have explicitly examined the relationship between abusive supervision and subordinate in-role job performance (see Harris et al., 2007 for one exception). However, primary work suggests that abusive supervision evokes lower levels of subordinate job performance for two reasons. First, the experience of abusive supervision may require subordinates to shift their resources and focuses to manage such abuse; consequently, subordinates have limited resources on job tasks. Second, based on the reciprocity principle stipulating that individuals respond in kind to the treatment they have received (Cropanzano & Mitchell, 2005), experiencing mistreatments from supervisors may drive subordinates to seek acts for negative

exchange, such as decreasing task performance, as a “return of injuries” (Gouldner, 1960: 172).

In terms of extra role performance (i.e., OCBs), research suggests a strong link between abusive supervision and reduced subordinate OCBs (e.g., Aryee et al., 2007, 2008; Zellars et al., 2002). For example, Zellars and colleagues (2002) conducted a field study among a sample of air national guard members and their military supervisors, and they found that subordinates reciprocate supportive leadership behaviors by performing OCBs but withhold OCBs when supervisors are less supportive. In addition, Aryee et al.’s (2007, 2008) studies have demonstrated that abused subordinates are likely to withhold their OCBs because of perceive interpersonal injustice. Furthermore, Chan and McAllister (2014) suggest that following the paranoid psychological states, abused subordinates often take safety behaviors--those enacted with the aim of reducing the risk and magnitude of threat from perpetrators (Freeman & Garety, 2004), to respond to abusive supervision (Tepper, Moss, Lockhart, & Carr, 2007). Avoidance, as the most prototypical behavioral response of safety behaviors (Freeman, Garety, Bebbington, Smith, Rollinson, Fowler, Kuipers, Ray, & Dunn, 2005; Freeman & Garety, 2004), can entail disengagement and psychological withdrawal, where subordinates chooses not to behave in ways that win supervisor’s attention and discloses as little of oneself as possible, such as withholding their OCBs.

In addition, subordinates may resort to aggression as a behavioral response to perceived abusive supervision, which has received relatively more attention in the current literature. Drawing from social exchange theory, studies suggests subordinates will retaliate against their abusive supervisors (Mitchell & Ambrose, 2007; Tepper, 2007;

Thau & Mitchell, 2010), particularly when subordinated perceive their supervisor to be low in coercive power (Lian et al., 2014). Furthermore, drawing on power/dependence theory, abusive supervision leads to more supervisor-directed deviance, especially when subordinate's intention to quit is higher (Tepper, Carr, Breaux, Geider, Hu, & Hua, 2009).

Building on and integrating these theoretical perspectives, I propose that abusive supervision (at time 1) will lead to decreases in subordinate's task performance and OCBs (from time 1 to time 2), but increases in subordinate's supervisor-directed deviance (from time 1 to time 2):

Hypothesis 1a: Abusive supervision is positively related to decreases in subordinate's task performance.

Hypothesis 1b: Abusive supervision is positively related to decreases in subordinate's OCB.

Hypothesis 1c: Abusive supervision is positively related to increases in supervisor-directed deviance.

Subordinate Performance → Changes in Abusive Supervision

The second component of the proposed reciprocal relationship is the effect of subordinates' work "outcomes" on changes in perceived abusive supervision. Do those variables that have been treated as consequences of abusive supervision (e.g., decreasing task performance, withholding OCBs and increasing supervisor-directed deviance) contribute to the occurrence and escalation of abusive supervision? Drawing from victim-precipitation research (Aquino & Lamertz, 2004; Olweus, 1978), I propose that those negative subordinates' work behaviors performed in response to the perceived supervisory abuse, and in the hope of reducing the occurrence of abusive treatment in the future, actually intensify the persistence and development of abusive supervision.

Abusive supervision, is a form of hostile aggression, which has historically been conceived as being impulsive, unplanned, driven by anger or hostility, having the motive of harming the target, and occurring as a reaction to some perceived provocation (Anderson & Bushman, 2002; Tepper, 2007). The emerging research on victim precipitation has identified two very distinctive patterns of behavior—submissive and provocative—that are prototypical of victims of abuse within organizations (Aquino & Lamertz, 2004; Olweus, 1978). In the context of abusive supervision, subordinates' negative work behaviors, including those performed in response to prior abuse (i.e., lower level of task performance and OCBs, and higher level of supervisor-directed deviance), are aligned with both the submissive or provocative behavioral category, which provide supervisors with impetus to treat subordinates in ways that are even more abusive (Cortina & Magley, 2003; Zapf & Gross, 2001).

Specifically, submissive subordinates often behave in ways that present themselves anxious, insecure, and socially withdrawn. Subordinates who respond to perceived prior supervisory abuse through withdrawal and avoidance (i.e., reducing task performance and withholding OCBs to avoid attention from supervisors and others) fit within this behavioral category. These subordinates appear to supervisors as attractive targets of abuse because they seem to be unable and/or unwilling to defend themselves against abuse. Indirect evidence comes from Tepper et al (2007) study, where they found abusive supervision leads to stronger negative effects on subordinates' psychological distress when they used avoidant patterns of communication, but weaker negative effects when they communicated directly with their supervisors. However, their study does not

address whether different responses (i.e., avoidant vs. direct communication) are associated with subsequent more or less abusive supervisory behaviors.

On the other hand, subordinates who respond to prior perceived supervisory abuse with aggression (i.e., supervisor-directed deviance) present themselves as provocative targets deserving of retaliation in the form of further abusive supervision. It has been suggested that supervisors may view subordinates' lower level of task performance and OCBs as provocative signal as well, thus invite more supervisory abuse (Tepper et al., 2011; Tepper, Duffy, & Breaux-Soignet, 2012). In sum, whereas submissive behaviors position the subordinate as an easy and attractive target for abuse, provocative behaviors renders the subordinate a deserving target of abuse (Aquino & Lamertz, 2004). Therefore, reduced task performance and OCBs, and increased supervisor-directed deviance, consistent with either submissive or provocative behavioral category, may similarly invite further abuse from supervisors.

The above argument is also consistent with an emerging view suggesting that instead of being a reactive form of aggression, supervisors may strategically take supervisory abuse to achieve certain goals (Tepper et al., 2012). For example, supervisors may exhibit abusive behaviors to control subordinates when they fail to meet performance standards. Tepper and colleagues' (2011) study supported the reverse relationship that subordinate's poor task performance induces supervisor's abusive behavior, because their lower level of performance is a source of frustration which is the blockage of goal attainment (Anderson & Bushman, 2002). Moreover, although no studies have directly examined the antecedent role of OCBs on the occurrence of abusive supervision, Zellars and colleagues (2002), in their discussion section, suggest that

supervisors may be more abusive toward subordinates who withhold OCBs because engaging in OCBs is beneficial to the morale and effectiveness in a unit. Similarly, supervisors may mistreat those subordinates who behave badly in order to maintain justice and balance the scales (e.g., Tepper et al., 2012). In other words, poor task performance, limited OCBs, and increased supervisor-directed deviance may all serve as a signal to supervisors that those subordinates deserve mistreatments, either from a “hot reaction” or from a “cold calculation”, thus instigating more abusive supervision.

Therefore, I propose:

Hypothesis 2a: Subordinate’s task performance is negatively related to increases in abusive supervision.

Hypothesis 2b: Subordinate’s OCB is negatively related to increases in abusive supervision.

Hypothesis 2c: Subordinate’s supervisor-directed deviance is positively related to increases in abusive supervision.

Reciprocal Relationships between Abusive Supervision and Subordinate Performance

It is not new for researchers to model dynamics of escalation in patterns of perception and behavior within relational contexts (Chan & McAllister, 2014). For example, McGregor’s (1960: 172) work suggested that supervisor’s assumptions about employees disliking work can “set in motion a powerful cycle of controlling managerial behavior and employee resistance that is self-fulfilling and self-perpetuating”. In addition, Andersson and Pearson’s (1999) theoretical work has also suggested incivility spirals between individuals’ perception of mistreatment from others and their retaliatory responses.

In general, previous research has shown that retaliation from perpetrators is not uncommon and that spirals of abuse may well exist in organizations (Aquino & Thau, 2009; Cortina & Magley, 2003; Zapf & Gross, 2001). For instance, Cortina and Magley (2003) found that victims' coping strategy in terms of confronting the source of mistreatment was related to further escalation through retaliation from perpetrators. Zapf and Gross (2001) found that victims' mistreatment escalated until victims left their organizations or moved to another department, no matter whether victims took constructive or destructive coping responses. Building on these pioneering works, I propose that there is a dynamic reciprocal relationship between perceived abusive supervision and subordinates' work "outcomes", such that perceived abusive supervision leads to changes in subordinates' work outcomes, and changed subordinates' work "outcomes" will then fuel further changes in perceived abusive supervision later on. In other words, there is a spiral of abuse in supervisor-subordinate relationship over time.

Building on and integrating different theoretical perspectives supporting each causal direction, I expect that the subordinate work outcomes that can be modified by abusive supervision are the same variables that may further develop abusive supervision, which implies essentially a *dynamic reciprocal* relationship. Building on Hypotheses 1 and 2, such reciprocal relationships may occur for task performance, OCBs, and supervisor-directed deviance. Therefore, I propose that:

Hypothesis 3a: There are dynamic reciprocal relationships of abusive supervision with subordinate's task performance over time: abusive supervision is positively related to decreases in subordinate's task performance; changed subordinate's task performance is in turn negatively related to further increases in abusive supervision.

Hypothesis 3b: There are dynamic reciprocal relationships of abusive supervision with subordinate's OCB over time: abusive supervision is positively related to

decreases in subordinate's OCB; changed subordinate's OCB is in turn negatively related to further increases in abusive supervision.

Hypothesis 3c: There are dynamic reciprocal relationships of abusive supervision with subordinate's deviance over time: abusive supervision is positively related to increases in subordinate's deviance; changed subordinate's deviance is in turn positively related to further increases in abusive supervision.

The Moderating Roles of Attributed Motivation for Abuse

According to attribution theory (Heider, 1958; Jones & Davis, 1965), individuals generate causal explanations for the behaviors of others around them to adjust their own behaviors to social environments, and the same behavior may be attributed to different causes. Moreover, individuals do not always make attributions for others' behavior, but instead are more likely to form attributions for those behaviors that are unexpected (e.g., Pyszczynski & Greenberg, 1981). Abusive supervision, for example, is a departure from the standard ethic model of work environment (Tepper, 2000, 2007). Thus, abusive supervision is not an expected workplace behavior, which suggests that subordinates are inclined to develop attributions for the reason why supervisors abuse them when encountering abuse in the workplace, which may result in changes in their behavioral responses.

Although Tepper (2007), in his review, has pointed out that how subordinates attributed the motives behind abusive supervision may differently affect how they respond to supervisory abuse, the role of attribution received far less attention in the existing literature on abusive supervision (see Liu, Liao, & Loi, 2012 for a notable exception). Indeed, researchers have identified two classes of subordinate's attributions for abusive supervision: attributions that abusive supervision is motivated by a prosocial desire to help the subordinate and attributions that abusive supervision is motivated by a

self-interest desire to harm the subordinate (Liu et al., 2012; Tepper, 2007). Accordingly, researchers have suggested that subordinates view supervisors whose behaviors they attributed to pro-social motives, such as the desire to improve their performance, more favorably than supervisors whose behavior they attribute to self-serving motives, such as the desire to initiate injury. For example, Liu and colleagues (2012) has shown these two attributed motives play different roles in the relationship between team leader's supervisory abuse and team members' creativity. Thus, attribution theory suggests that abusive supervision may have divergent consequences in terms of changes in subordinates' work outcomes, depending on the extent to which subordinates form other-serving and self-serving attributions for perceived supervisory abuse.

Specifically, it has yielded two narratives that are grounded in different assumptions regarding why supervisors abuse their subordinates. Specifically, the “other-serving” story is based on the assumption that supervisors abuse their subordinates to increase their job performance, whereas the “self-serving” story is based on the assumption that supervisors abuse their subordinates to purposely harm them. Extant scholarship indicates that the different assumptions— or attributions—subordinates make regarding the reasons under abusive supervision have consequences for subordinates' perceptions of supervisory abuse and behavioral tendencies to respond to such abuse (Liu et al., 2012; Tepper, 2007). Thus, accounting for subordinates' attributions for why supervisors abuse their subordinates may help explain when abusive supervision is less likely to invite subordinates' deleterious work outcomes, thus helps to terminate the one loop of the spiral of abuse in supervisor-subordinate relations over time.

I investigate this proposition by focusing on one other-serving abusive supervision attribution, *performance promotion motive*, and one self-serving abusive supervision attribution, *injury initiation motive*. According to previous research, performance promotion attributions are described as perceptions that a supervisor abuses subordinates to increase subordinates' performance, whereas injury initiation attributions are described as perceptions that a supervisor abuses subordinates to harm subordinates. In keeping with prior theory (Bolino, 1999), I conceptualize different abusive supervision attributions as distinct, but not mutually exclusive; subordinates may attribute a supervisor's abuse to both performance promotion and injury initiation motives. Although additional abusive supervision attributions may exist (blame to organizations, Burton, Taylor, & Barber, 2014; Shoss, Eisenberger, Restubog, & Zagenczyk, 2013), this focus on performance promotion and injury initiation attributions is consistent with evidence that these are two primary motives that underlie abusive supervision (Liu et al., 2012; Tepper, 2007).

Integrating attribution and abusive supervision research, I argue that after experiencing supervisory abuse, subordinates proceed to process relevant information to discern the intended objective of the behavior, which may affect the ways they interpret and respond to perceived abusive supervision. Specifically, subordinates' causal attributions and abusive supervision may interact to influence changes in subordinates' work outcomes. When subordinates perceive abusive supervision as triggered by the positive intent of improving their performance and thus as conducive to their personal growth, they may believe that supervisor's abusive supervision is aligned with their own personal interests and will be beneficial for their long-term career development.

Therefore, subordinate-attributed performance promotion motives for the leader abuse may stimulate subordinates to legitimize abusive supervision. To the extent that abusive supervision is attributed to improving subordinate performance, the subordinates will be less likely to form negative feelings towards supervisors. As a result, they are less prompted to decrease their task performance, withhold OCBs, and increase supervisor-directed deviance. I thus argue that the relationship between abusive supervision and changes in subordinate's work outcomes may be mitigated by subordinate-attributed performance promotion motives.

In direct contrast, when subordinates decode the motives behind abusive supervision as injury initiation, they may perceive abusive supervision as unethical and harmful to themselves. Therefore, in this case, subordinates are expected to engage in more negative behavioral outcomes including lower level of task performance, withholding OCBs, and increasing supervisor-directed deviance. Therefore, I theorize that the relationship between abusive supervision and changes in subordinate's work outcomes may be accentuated by subordinate-attributed injury initiation motives.

Hypothesis 4a: The lagged effects of abusive supervision on changes in subordinate task performance, OCBs, and supervisor-directed deviance will be a) stronger when subordinate attributes a higher (vs. lower) level of injury initiation motive, and b) weaker when subordinate attributes a higher (vs. lower) level of performance promotion motive.

The Moderating Roles of Supervisor Motives

Humans are driven by both self-interest and other-oriented motives (Bobocel, 2013; De Dreu & Nauta, 2009). In particular, work on leadership (Blake & Mouton, 1964) distinguishes between concerns for self and concern for other, and shows how these motives alone and in combination drive leader behavior. In the present research, I

integrate the theories on self-concern (i.e., self-serving motive) and other-orientation (i.e., prosocial motive) into abusive supervision by examining their contingent role on the loop from subordinates' work behaviors to changes in abusive supervision.

Growing evidence suggests that self-concern and other-orientation impact information processing tendencies and behavioral responses (e.g., De Dreu, 2006, 2007). Self-serving motive stimulates the individual to search and process personal characteristics and qualities (e.g., competency needs, need for dominance), personal inputs, and self-relevant outcomes and successes. Prosocial motive, in contrast, drives individuals to search and process collective (group/organization) characteristics and qualities (e.g., relatedness), joint inputs and outcomes, and collective consequences and success (Grant, 2007). This difference in information processing indicates that people with levels of self-serving and pro-social motives tend to respond to workplace events in different ways.

Prosocial motivation, or the desire to benefit a particular category of other people through a particular occupation, job, or role (Grant & Berg, 2010) is distinct from altruism and independent of self-interested motivations. In this article, I examine contextual prosocial motivation. For example, it would capture a supervisor's concern for helping subordinates, and ultimately a workgroup or team. Existing research shows that prosocial motivation is a theoretically and practically significant phenomenon because it has a substantial influence on employees' work behaviors and job performance. For example, recent research suggests that prosocial motivation can directly drive employees to take initiative (De Dreu & Nauta, 2009). Evidence also indicates that prosocial motivation can enable employees to receive more credit for proactive behaviors such as

helping, voice, issue-selling, and taking charge (Grant, Parker, & Collins, 2009); channel the efforts of employees who care about managing impressions toward becoming better citizens (Grant & Mayer, 2009); direct intrinsically motivated employees toward greater task persistence, performance, and productivity (Grant, 2008); and focus intrinsically motivated employees on developing ideas that are not only novel, but also useful, thus fostering greater creativity (Grant & Berry, 2011). Despite considerable attention, little research has examined whether prosocial motivation has the potential to discourage unethical or aggressive behavior.

Drawing on previous research (e.g., De Dreu, 2006, 2007; De Dreu & Nauta, 2009), stronger self-concern biases people to focus their information processing on self-serving cues in the workplace. Bobocel's (2013) study tested the proposed moderating effect of self-concern on the employees responses to unfair events in the workplace (i.e., forgiveness and revenge). The results showed that employees are more likely to forgive when they are attentive to relational information (other-oriented or pro-social). Of the direct relevance to abusive supervision, I propose that subordinates' negative work behaviors (i.e., lower level of task performance, OCBs, and high level of supervisor-directed deviance) are likely to lead to different behavioral responses from supervisors in the form of abusive supervision, depending on the level of supervisor's pro-social and self-serving motives. In particular, subordinates' negative work behaviors should invite less abusive supervisory abuse when supervisor has higher level of pro-social motive. If a supervisor attends to well-being of others (i.e., their subordinates) and the success of workgroups or teams, the supervisor is less likely to interpret subordinates' negative work behaviors as provocation deserving further supervisory abuse. As a result,

supervisors are less likely to engage in more supervisory abuse towards those subordinates. In direct contrast, subordinates' negative work behaviors should invite more supervisory mistreatment when supervisors have higher level of self-serving motive. In short, I theorize that the effect of subordinates' negative work behaviors on changes in abusive supervision is contingent on supervisors' levels of pro-social and self-serving motives.

Hypothesis 4b: The lagged effects of subordinate task performance, OCBs, and supervisor-directed deviance on changes in abusive supervision will be the a) stronger when supervisor has a higher (vs. lower) level of self-serving motive, and b) weaker when supervisor has a higher (vs. lower) level of prosocial motive.

METHODS

Sample and Procedure

The participants were recruited from new doctor—supervisor dyads from Northeastern Medical System in China. This sample is appropriate for examining the implications of changes in abusive supervision and subordinates' work outcomes over time for two reasons. First, because this is a newcomer context, I were able to establish the baseline level of supervisor-subordinate interactions and abusive supervision (i.e., zero in this essay). Second, scholars have found that abusive supervision is not an uncommon phenomenon in medical system due to high work demands, pressure and potential risks (Tepper, 2007).

With the approval and assistance of senior management, I sent the invitation email to all new doctors and their direct supervisors, and directed those who were interested in this study to the website where I presented the consent form and the surveys. This is a five-wave data collection over five months. Once participants were identified, I matched each senior doctor with one new doctor according to organizational record, and

chose one participating new doctor randomly when multiple new doctors were supervised by a common senior doctor. At each measurement time (one month apart), subordinates (i.e., new doctors) completed a survey regarding abusive supervision, attributed motives behind abusive supervision, and supervisor-directed deviance, and supervisors also completed a survey regarding their direct report's task performance and OCBs, and their own pro-social and self-serving motives. After completion of data collection, I offered one overall feedback report about the study to the senior management and offered 60 Yuan (about \$10) as an incentive for individual participation.

In the final sample, I included supervisor-subordinate dyads with complete information on key variables. These data collection procedures produced usable data from 512 independent supervisor-subordinate dyads, with the participation rate of 88 percent among supervisors and 92 percent among new doctors. The high response rate was facilitated by the senior management's enthusiastic support to participate in the study. The new doctors' average age was 28 years (*S.D.* = 5.62); 51 percent were women; 66 percent held master's degrees, and 34 percent held doctor's or professional degrees.

Measures

I followed Brislin's (1980) procedures for translation and back-translation from English to Chinese on all scales.

Abusive supervision. Tepper's (2000) 15-item scale was used to measure abusive supervision. Subordinates reported over the past month, how often their supervisors used the behaviors described in each item on a five-point scale (1 = *I cannot remember him/her ever using this behavior with me*, to 5 = *He/she uses this behavior very often with me*). Sample items include "(supervisor) tells me my thoughts and feelings are stupid"

and “(supervisor) puts me down in front of others.” ($\alpha = .85, .91, .89, .92,$ and $.88,$ respectively).

Task performance. Task performance was measured with 4-item scale used in previous abusive supervision research (Tepper et al., 2011). The items and response scales were as follows: “My subordinate is superior to other subordinates that I’ve supervised before” (1 = strongly disagree, 7 = strongly agree); “Rate the overall level of performance that you observe for this subordinate” (1 = unacceptable, 7 = outstanding); “What is your personal view of your subordinate in terms of his or her overall effectiveness?” (1 = very ineffective, 7 = very effective); and “Overall to what extent do you feel your subordinate has been effectively fulfilling his or her roles and responsibilities?” (1 = not effectively at all, 7 = very effectively). ($\alpha = .89, .90, .84, .86,$ and $.83,$ respectively).

OCBs. Supervisors indicated the frequency the specific subordinate engaged in the following behaviors over the past month on a 7-point Likert scale (from 1 = *never*, to 7 = *always*), using 8-item scale developed by Lee and Allen (2002). A sample item is: “Help others who have been absent.” ($\alpha = .88, .91, .92, .84,$ and $.88,$ respectively).

Supervisor-directed deviance. Supervisor-directed deviance was measured with Mitchell and Ambrose’s (2007) 10-item scale. Participants indicated the frequency with which they engaged in each behavior over the past month on a 7-point Likert scale (from 1 = *never*, to 7 = *daily*). A sample item is: “Made fun of my supervisor at work.” ($\alpha = .92, .93, .87, .88,$ and $.85,$ respectively).

Attributed motives behind abusive supervision. Attributed injury initiation and performance promotion motive were measured with the 10-item scale developed by Liu

and colleagues (2012). A sample item for attributed performance promotion motive is: “Desire to elicit high performance from me.” ($\alpha = .91, .94, .86, .88,$ and $.92,$ respectively). A sample item for attributed injury initiation motive is: “Desire to cause injury on me.” ($\alpha = .92, .94, .88, .88,$ and $.89,$ respectively).

Prosocial motive. Prosocial motive was measured with a 4-item scale developed by Grant (2008). Supervisors were asked to indicate why they are motivated to do their work. One sample item is: “Because I care about benefiting others through my work.” Response options: 1 (disagree strongly) to 7 (agree strongly). ($\alpha = .92, .92, .93, .89,$ and $.90,$ respectively).

Self-serving motive. Supervisor’s self-serving motive was measured with 3-item scale developed by De Dreu and Nauta (2009). One sample item is: “I am concerned about my own needs and interests.” Response options: 1=not at all, 5=very much. ($\alpha = .89, .91, .92, .89,$ and $.88,$ respectively).

Control variables. Negative affectivity has been linked to both abusive supervision (e.g., Tepper, Duffy, Henle, & Lambert, 2006; Zellar et al., 2002) and antisocial behaviors (Duffy, Scott, Shaw, Tepper, & Aquino, 2012). Thus, in order to eliminate negative affectivity as a confounding effect in the relationship between abusive supervision and subordinate work outcomes, I included subordinate negative affectivity as a control variable. Negative affectivity was measured using the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). Participants reported their general feelings in terms of ten negative adjectives (e.g., irritable, ashamed, and upset) on a five-point scale (1 = *usually do not feel this way*, to 5 = *usually feel this way*). ($\alpha = .89$).

Analytical Strategy

Following previous research exploring dynamic reciprocal relationships, I adopted the latent change score (LCS) approach (Ferrer & McArdle, 2010; McArdle, 2001, 2009) to test hypotheses. This approach is appropriate to test lagged and reciprocal effects associated with individual differences in change and is used in the fields of psychology and management to study personality change and dynamic relationships (Li, Fay, Frese, Harms, & Gao, 2014). Figure 4 presents an example of a path diagram of a bivariate LCS model with two factors: abusive supervision and supervisor-directed deviance. The latent change variable (e.g., Δ abusive supervision, T1-T2) is specified to be affected by three components: a linear systematic constant change from the slope (e.g., Slope 1), a proportional change from the same construct at a previous occasion (e.g., abusive supervision T1), and effects from the other variable at a previous occasion (e.g., Deviance T1), as indicated by γ_1 .

Insert Figure 4 about here

Results

I first conducted a series of confirmatory factor analyses (CFAs) to demonstrate that the study variables differed from each other at across all five measurement occasions. Results show that an eight-factor model (including abusive supervision, task performance, OCBs, supervisor-directed deviance, attributed injury initiation motive, attributed performance promotion motive, pro-social motive, and self-serving motive) yielded an adequate fit to the T1 data: $\chi^2(401) = 788.54, p < .01, CFI = .95, TLI = .94, RMSEA = .05, \text{ and } SRMR = .04$. This model fits the data well and substantially outperformed all of the alternative models (i.e., a one-factor model and others models in which combinations of theoretically or empirically correlated constructs loaded together).

Similar results were obtained for data collected at the other four waves: for Time 2, $\chi^2(401) = 898.23, p < .01, CFI = .93, TLI = .95, RMSEA = .06,$ and $SRMR = .05.$; for Time 3, $\chi^2(401) = 835.27, p < .01, CFI = .94, TLI = .94, RMSEA = .05,$ and $SRMR = .04.$; for Time 4, $\chi^2(401) = 791.33, p < .01, CFI = .95, TLI = .92, RMSEA = .05,$ and $SRMR = .05.$; for Time 5, $\chi^2(401) = 813.56, p < .01, CFI = .95, TLI = .93, RMSEA = .05,$ and $SRMR = .05.$; again, fitting alternative models resulted in poorer model fit. The evidence shows measures were distinct from each other for all the five occasions.

A prerequisite to conduct LCS analyses is measurement equivalence across measurement occasions. I tested configural (i.e., form invariance) and metric equivalence of each measure, respectively, across the five occasions. I further examined the two types of measurement invariance with the eight factors simultaneously in one model across the five occasions. As suggested by previous longitudinal research, measurement errors for the same items were allowed to be correlated over time. Results from Table 5 show that setting item loadings equally a one-factor model and others models in which combinations of theoretically or empirically correlated constructs loaded together across time did not significantly change model fitness for each scale, respectively. The findings therefore show sufficient measurement equivalence for measures across time.

Insert Table 5 about here

Table 6 displays the means, standard deviations, and correlations among study variables.

Insert Table 6 about here

Lagged effects of abusive supervision → changes in subordinate performance.

Hypothesis 1 predicted that abusive supervision is related to changes in subordinate's performance (H1a), OCBs (H1b), and subordinate's supervisor-directed deviance (H1c). Table 7 depicts results of fitting three bivariate LCS models. LCS analyses indicate that abusive supervision had a negative relationship with increase in subordinate's performance ($\gamma_2 = -.16, p < .01$, Model 1), and subordinate's OCBs ($\gamma_2 = -.15, p < .01$, Model 2). Likewise, results from Model 3 of Table 7 show that abusive supervision was significantly related to increases in subordinate's supervisor-directed deviance ($\gamma_2 = .31, p < .01$), supporting Hypothesis 1. Means for slope (Slope 1) and intercept (Intercept 1) of abusive supervision across time were also positive ($= 2.76, p < .01$, and $2.29, p < .01$, respectively), suggesting a positive trajectory after correcting for subordinate's negative affectivity.

Insert Table 7 about here

Lagged effects of subordinate's performance → changes in abusive supervision.

Hypothesis 2 stated that subordinate's performance (H2a), OCBs (H2b), and supervisor-directed deviance (H2c) have lagged effect on changes in abusive supervision. Analyses revealed significant effects for subordinate's performance ($\gamma_1 = -.08, p < .05$, Model 1), OCBs ($\gamma_1 = -.09, p < .05$, Model 2), and supervisor-directed deviance ($\gamma_1 = .11, p < .01$, Model 3). The results supported Hypothesis 2.

Reciprocal relationships between abusive supervision and subordinate's performance. H3 predicted reciprocal relationships of abusive supervision with subordinate's performance (H3a), OCBs (H3b) and supervisor-directed deviance (H3c). As discussed above, abusive supervision had lagged effects on decreases in subordinate's

performance (H1a) and OCBs (H1b), and increases in supervisor-directed deviance (H1c); decreased subordinate's performance (H2a) and OCBs (H2b), and increased supervisor-directed deviance (H2c) also enhanced abusive supervision. Thus, Hypothesis 3 was supported.

Moderating effects of motives. In order to test the moderating roles of subordinate's attributed motives behind abusive supervision (injury initiation vs. performance promotion) and supervisor's motives (i.e., pro-social vs. self-serving motive), the interaction terms were calculated and estimated using Klein and Moosbrugger's (2000) latent moderated structural equation approach. Interactive effects are present when the path from the interaction term to changes in dependent variables is significant and when model fit is significantly better when this path is freely estimated versus constrained to zero (for a similar approach see Lian et al., 2012b). Specifically, in order to test the moderating role of subordinate's attributed motives behind abusive supervision on the relationship between abusive supervision and changes in subordinate's work outcomes, results showed that the lagged effect on subordinate's performance ($\beta = -.45, p < .01$), OCBs ($\beta = -.38, p < .01$), and supervisor-directed deviance ($\beta = .36, p < .01$) was significant and stronger for higher level of attributed injury initiation motive, respectively; and was weaker for higher level of attributed performance promotion motive ($\beta = -.12, n.s.$ for subordinate's performance, $\beta = -.08, n.s.$ for OCBs, and $\beta = .11, n.s.$ for supervisor-directed deviance), and overall model fit was significantly better when this path was freely estimated versus constrained to zero, $\Delta\chi^2 = 19.21$. Likewise, in order to test the moderating role of supervisor's prosocial and self-serving motives on the relationship between subordinate's work outcomes and changes in abusive supervision,

results showed that the lagged effect of subordinate's performance ($\beta = -.43, p < .01$), OCBs ($\beta = -.34, p < .01$), and supervisor-directed deviance ($\beta = .31, p < .01$) was significant and stronger for higher level of supervisor's self-serving motive, respectively; and was weaker for higher level of supervisor's prosocial motive ($\beta = -.11, n.s.$ for subordinate's performance, $\beta = -.09, n.s.$ for OCBs, and $\beta = .15, n.s.$ for supervisor-directed deviance), and overall model fit was significantly better when this path was freely estimated versus constrained to zero, $\Delta\chi^2 = 23.41$. Therefore, Hypothesis 4 was supported.

GENERAL DISCUSSION

In this study, I proposed and tested a reciprocal relationship between abusive supervision and subordinate performance (i.e., task performance, OCBs, and deviance). A five-wave longitudinal study with data collection from supervisor-subordinate dyads supported predictions. Specifically, findings suggest that abusive supervision leads to changes in subordinate performance, and those changed subordinate performance, will in turn, further fuel changes in abusive supervision. Findings also suggest that subordinate attributed motives (i.e., injury initiation and performance promotion) behind abusive supervision significantly moderate the relationship between abusive supervision and changes in subordinate performance, and that supervisor own social motives (i.e., self-serving motive and prosocial motive) significantly moderate the opposite relationship between subordinate performance and changes in abusive supervision.

This research has several theoretical and practical implications. Theoretically, this study demonstrates that a dynamic reciprocal relationship between abusive supervision and subordinate performance exists in organizations. This departs from current literature

suggesting either abusive supervision leads to changes in subordinate performance or changes in subordinate performance (i.e., low performers) leads to changes in further abuse. Moreover, this study takes one step further to investigate the factors that might help to stop the proposed spiral of abuse. Specifically, I have theoretically proposed and empirically demonstrated that subordinates attributed motives and supervisors' own motives serve as critical moderators that may either mitigate or facilitate the occurrence and persistence of the spiral of abuse. In doing so, I thus provide insights for practical implications. According to previous research, organizations often seek supervisor-focused interventions to minimize the costs of abusive supervision. However, this study suggests a reciprocal relationship may exist and interventions focusing on both supervisors and subordinates might be more effective. It is noted that I do not simply blame either supervisors or subordinates for the occurrence of abusive supervision, instead, I suggest that an integrative perspective would benefit to our understanding of abusive supervision in the workplace.

EASSY THREE

HOW DIFFERENTIAL ABUSE MAKES A DIFFERENCE IN TEAMS? A DYNAMIC MULTILEVEL MODEL OF TRAJECTORY AND DISPERSION IN ABUSIVE SUPERVISION

SYNOPSIS

This study takes a dynamic multilevel approach to examine how the relationship between a team member's experience of abusive supervision trajectory and subsequent work-related outcomes (i.e., task performance, citizenship behaviors, and deviance) may change depending on the team's overall experience of abusive supervision trajectory and its dispersion among team members. Results from a longitudinal multilevel field study with a sample of 832 employees in 186 teams of an e-commerce company demonstrate a significant effect of individual team member's experience of abusive supervision trajectory. Further, team-level abusive supervision change and its dispersion jointly influence the individual performance as well as the overall team performance. The results indicate individual-level and team-level abusive supervision trajectories, as well as dispersion, have unique multilevel influences on performance above and beyond static levels of abusive supervision. Accounting for these dynamics substantially increases the explained variance in effects of abusive supervision, particularly in team contexts. The findings increases understanding of the abusive supervision-outcomes link over time and across levels.

Keywords: abusive supervision, dispersion, performance, teams, trajectory

INTRODUCTION

Abusive supervision, or “subordinates’ perceptions of the extent to which supervisors engage in the sustained display of hostile verbal and nonverbal behaviors, excluding physical contact” (Tepper, 2000: 178), continues to captivate researchers and practitioners. While current theories and research have predominantly focused on its detrimental consequences on individuals’ (i.e., abused subordinates) attitudes, behaviors, and well-being (for qualitative reviews, see Martinko et al., 2013; Tepper, 2007; for meta-analyses, see Mackey, Frieder, Brees, & Martinko, 2015; Schyns & Schilling, 2013), recent research started to explore abusive supervision in team contexts. This burgeoning area is beneficial to our understanding of abusive supervision given a growing number of organizations are adopting team-based structures (Mesmer-Magnus & DeChurch, 2009).

Current team-level abusive supervision research has been conducted in four different ways. First, most researchers examine team-level abusive supervision as an aggregated average level of abuse attributed to a common team leader by all team members. Conceptualized in this manner, team-level abusive supervision is linked to both individual and collective problem drinking (Bamberger & Bacharach, 2006), counterproductive behaviors (Detert, Trevino, Burris, & Andiappan, 2007), unethical behaviors (Hannah, Schaubroeck, Peng, Lord, Trevino, Kozlowski, Avolio, Dimotakis, & Doty, 2013), and deviance (Mawritz, Mayer, Hoobler, Wayne, & Marinova, 2012). Second, some researchers examine the behavioral reactions to individual experience of abusive supervision in the presence of team-level abuse. This research suggests that differing levels of aggregated abuse in the team significantly shape the way individual

team members interpret and respond to their own individualized experiences of abuse (e.g., Farh & Chen, 2014; Hannah et al., 2013). Third, team-level abusive supervision has also been conceptualized as a shared understanding or normative expectation by all team members, which is defined as abusive supervision climate (Priesemuth, Schminke, Ambrose, & Folger, 2014). This research links abusive supervision climate to group-level outcomes (e.g., group cooperation, group OCBs, and group performance) through group-level mechanisms (e.g., group identification and collective efficacy). Fourth, still others examine peer abusive supervision or third parties' reactions to coworkers' experience of abusive supervision (e.g., Mitchell, Vogel, & Folger, 2012, 2015; Peng, Schaubroeck, & Li, 2014), and results found that team members' experience of supervisory abuse significantly shapes the way the focal employee reacts to their own experience of abuse, their abused coworkers, and their abusive supervisor. Together, existing theories and studies imply that abuse resides and exerts consequences at both individual- and team-level simultaneously.

Despite these promising findings, existing theories and approaches remain limited, both theoretically and empirically. From a theoretical perspective, no theories and research have investigated influences of possible differing levels of team members' experienced changes of abusive supervision over time in teams. This seems a critical omission due to two reasons. First, leadership literature demonstrates that leadership behavior is plastic and occurs in a specific context, toward specific targets (Avolio et al., 2009; DeRue, 2011). Of direct relevance to abusive supervision, recent research suggests that not only that abusive leadership behavior fluctuates on a daily basis (Barnes et al., 2015; Johnson et al., 2012), but that a common leader behaves differently toward

different team members (Duffy, Shaw, Scott, & Tepper, 2006; Mitchell et al., 2015). In other words, abusive supervision is not necessarily a shared perception among team members; rather, a particular level of abusive supervision may be targeted toward one, some, or all team members.

Second, a large body of team literature shows that it is important to take team process and team members' interactions into consideration when examining individual behaviors in team context (e.g., Guzzo & Dickson, 1996; Kozlowski & Klein, 2000). Emerging evidence suggests that team members are likely to experience different levels of abusive supervision from the common team leader (Duffy et al., 2006; Farh & Chen, 2014; Mitchell et al., 2015; Peng et al., 2014), and team members are able to sense others' experiences of supervisory abuse due to extensive interpersonal interactions in teams (Mitchell et al., 2012, 2015). Surprisingly, current theory and research are relatively silent to the social contextual effect of teams on abusive supervision over time. In other words, it is unclear that how the average changes abusive supervision in teams as a whole, and more importantly, how differing levels of changes among team members' experienced abusive supervision affect both individual- and team-level work outcomes.

From an empirical perspective, most of the studies have only considered the implications of aggregated mean level or shared perceptions of abusive supervision in teams on the focal subordinate or team outcomes. While there is a growing recognition that theoretical models may be underspecified and results are often conflicting if only the average level of individual characteristics is incorporated (e.g., Dineen et al., 2007; Kirkman & Shapiro, 2005), to date, few studies have examined other forms of team-level abusive supervision (i.e., trajectory or dispersion, see Ogunfowora, 2013 for one

exception), let alone simultaneously examining them in team contexts. Ogunfowora (2013) took one step forward in this direction, and examined the consequences of dispersion of abusive supervision (referring to abusive supervision variability in the paper though) in teams on employee attitudes and behaviors. Results indicate that higher dispersion or greater disagreement about abusive supervision in teams is associated with more adverse group outcomes (e.g., higher frequency of unit members' counterproductive behaviors). Although informative, this conclusion holds presumably for all mean levels of abusive supervision (e.g., low to high). An unresolved question, thus, is what work outcomes would be expected when mean, trajectory, and dispersion levels of abusive supervision within a team over time are simultaneously taken into account.

Relatedly, a possible reason for this lack of integration is the fact that most team-level studies are based on a direct consensus approach to aggregation, whereby minimum standards of within-group agreement must be met for aggregation (e.g., Fath & Chen, 2014; Gonzalez-Roma, Peiro, & Tordera, 2002; Kozlowski & Klein, 2000; Mitchell et al., 2015; Peng et al., 2014; Piesemuth et al., 2014). Although informative, these studies ignore potential effects of dispersion or "climate strength" by minimizing within-team variation in experienced abusive supervision (Chan, 1998). Scholars in multilevel research have repeatedly argued that direct consensus models have hidden the substantive importance of dispersion in predicting work outcomes (e.g., Bliese & Halverson, 1998; Chan, 1998; Kirkman & Shapiro, 2005). Put simply, the omission of other potential useful functional forms of team-level changes (i.e., team-level abusive supervision trajectory, dispersion of abusive supervision trajectory in teams) in abusive supervision

may underestimate the pervasive influence of abusive supervision in the larger team system.

In view of these theoretical and empirical limitations, the objective of this essay is to delineate and test a dynamic multilevel model of abusive supervision in teams by conceptualizing team (i.e., team member interactions) as an important social contextual factor of abusive supervision. In the following sections, I conceptualize team as a social context via combinations of the mean, trajectory and the dispersion that have been found to jointly influence individual behaviors in other domains (e.g., Chen et al., 2011; Liao, Liu, & Loi, 2010; Liu et al., 2012). I adopt functional homology as a guiding perspective (Chen, Mathieu, & Bliese, 2004) and focus on how homology or similarity in the functional relationship between abusive supervision and subordinates' work outcomes across levels is likely to manifest (Dineen et al., 2007). Specifically, I assess the function of abusive supervision in predicting work outcomes at and across individual and team level of analysis when average, trajectory, and dispersion of abusive supervision are all taken into account (Morgeson & Hofmann, 1999). I feature team-level abusive supervision trajectory and dispersion of team-level abusive supervision trajectory as additional inputs beyond the individual mean level and trajectory to both individual- and team-level work outcomes.

First, I introduce the concept of *individual-level abusive supervision trajectory* to explore the relationships between the trend of abusive supervision (i.e., whether a subordinate's experienced abusive supervision is increasing or decreasing over time) and subordinates' work outcomes. Building on Gestalt characteristics theory (Ariely & Carmon, 2000) and sense-making theory (Louis, 1980; Shipp & Jansen, 2011; Weick,

1995), I explain the unique effect of abusive supervision trajectory on subordinates' work outcomes while controlling for the static level of abusive supervision. Specifically, I propose that experiencing an increase in abusive supervision is likely to lead to a decrease in subordinate's task performance, OCBs, but an increase in supervisor-directed deviance.

Second, I examine the effect of team context on individual- and team-level work outcomes. I introduce the concept of *team-level abusive supervision trajectory*, which captures the average trend of experienced abusive supervision among team members. Building upon pioneering research on the social influence and social information environments within which abusive supervision and team member interactions occur, I argue that team members' experienced abusive supervision trajectories provide impetus for information processing, make social information processing more or less difficult for focal subordinates, as well as influence the consequences on both individual- and team-level work outcomes. Specifically, I examine the joint influence of team- and individual-level abusive supervision trajectories on individual work outcomes as well as the effect of team-level abusive supervision trajectory on team-level work outcomes.

Third, I explore the contingent effect of dispersion of team-level abusive supervision trajectory on the multilevel relationships between abusive supervision trajectory and subordinates' work outcomes. A growing multilevel research literature demonstrates that *mean* and the *dispersion* of variables represent distinct structural and functional properties of organizational phenomena (e.g., Dineen et al., 2007). As a result, researchers suggest that both should be examined simultaneously when developing multilevel models to increase the models' predictive validity and utility (Kirkman &

Shapiro, 2005; Liao et al., 2010). To further understanding of the cross-level interface between team context and team members, I draw on Chan's (1998) dispersion composition model and Harrison and Klein's (2007) separation index to advance a new team-level construct, *dispersion of abusive supervision trajectory*, which reflects the extent to which individuals in a team differ in their experienced abusive supervision trajectories. Specifically, I examine how dispersion of team-level abusive supervision trajectory interacts with individual-level and team-level abusive supervision trajectories to affect individual work outcomes. I also examine the interactive effect of team-level abusive supervision trajectory and dispersion on the work outcomes at the team level (see Figure 5 for the proposed model).

Insert Figure 5 about here

In sum, this study seeks to contribute to the abusive supervision literature in three ways. First, I advance the current theorizing of team-level abusive supervision by arguing that abusive supervision is not necessary a shared perception among team members. In doing so, I explore how differing levels of team members' experiences of abusive supervision over time (i.e., trajectory) jointly affect both individual- and team-level responses to supervisory abuse. Second, I shed light on the multilevel nature of abuse in teams by demonstrating that both individual- and team-level experiences of abusive supervision are important determinants in affecting individual- and team-level outcomes. Third, I identify unique functional forms of change in team members' perceived abusive supervision over time, and introduce team-level abusive supervision trajectory and dispersion of team-level abusive supervision trajectory, and examine their unique contributions to our understanding of abusive supervision, particularly in team contexts.

THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

The Substantive Meaning and Effect of Individual-Level Abusive Supervision

Trajectory

Subordinates' cognitive appraisals and affective experiences to work-related situations or events evolve over time (Chen et al., 2011; Hausknecht, Sturman, & Roberson, 2011; Weiss & Cropanzano, 1996), which may give rise to changes in their behavioral reactions. In this essay, I first introduce the concept of *individual-level abusive supervision trajectory*, reflecting the trend of individual experience of abusive supervision over time. Drawing on Gestalt characteristic theory (Ariely & Carmon, 2000), subordinates do not simply rely on the mean or average intensity of their abused experiences to evaluate and summarize their distinct abused experiences; rather, they utilize defining salient "features" to assess their overall abused experiences as well as to inform their future behavioral responses. Among those salient features, the trend or trajectory in experiences has received considerable attention especially in management literature (e.g., Ariely & Carmon, 2000; Chen et al., 2011; Hausknecht et al., 2011; Kammeyer-Mueller, Wanberg, Rubenstein, & Song, 2013; Liu et al., 2012). As noted in Reb & Cropanzano's (2007: 492) study on dynamic performance: "One Gestalt characteristic that has been repeatedly shown to affect summary evaluations is the trend of an extended profile." For example, Hausknecht and colleagues (2011) examined justice trajectories and demonstrated that improving (declining) justice perceptions over time cultivate more (less) favorable employee attitudes (e.g., job satisfaction, organizational commitment). Other studies examined job satisfaction trajectories and showed that it contributed to both turnover intention and actual turnover behavior above

and beyond the mean level (Chen et al., 2011; Liu et al., 2012). In line with this theory and these informative studies, I theorize that subordinates' work outcomes are not only predicted by the mean levels of abusive supervision but also by its change over time, that is, abusive supervision trajectory.

To better understand how these changes influence subordinates' work outcomes, I integrate insights from prospect theory (Kahneman & Tversky, 1984) and sense-making theory (Louis, 1980; Weick, 1995). Prospect theory (Kahneman & Tversky, 1984) suggests that the more a gain or loss is from a subordinate's frame of reference (e.g., initial experienced level of abusive supervision), the more salient the change will be to the subordinate (Kahneman & Tversky, 1984). In other words, subordinates may differ in how they evaluate their overall experience of abusive supervision and ultimately, their overall quality of relationships with their supervisors depending on such frame of reference as what they consider to be appropriate levels or qualities of supervisor—subordinate interactions. In addition, prospect theory also suggests that compared to gains, losses receive more attention from and generate more influences on individuals. Specifically, different subordinates may attach different subjective meanings to the same absolute level of abusive supervision at a given point in time, depending on whether their experienced abusive supervision has increased or decreased up to that point. Building on this, I expect that abusive supervision trajectory is particularly likely to influence subordinates' work outcomes, because increases or decreases in abusive supervision experiences at work are more salient to subordinates, with experiencing increases in abusive supervision as the most salient.

In addition, abusive supervision trajectory is likely to trigger and contribute to subordinates' sense-making process (Louis, 1980; Weick, 1995). According to sense-making theory (Louis, 1980; Weick, 1995), because subordinates have a strong need to make sense of events and experiences at work, they will likely compare current experience of abusive supervision with prior experiences to create expectations about the future, which in turn, will affect subordinates' work outcomes, such as the increases or decreases in their levels of task performance, OCBs, and supervisor-directed deviance. Therefore, consistent with Gestalt characteristics theory (Ariely & Carmon, 2000) and prospect theory (Kahneman & Tversky, 1984), subordinates are likely to engage in dynamic sense-making process by using salient summary features of their abused experience over time (i.e., abusive supervision trajectory) to describe the past and project the future, which in turn, uniquely shape their work outcomes that previous static view or mean level will probably fail to capture.

Moreover, social comparison research has commonly found that an undesirable discrepancy between prior and current experiences creates negative psychological responses such as stress and discomfort (Buunk & Gibbons, 2007; Goodman & Haisley, 2007; Greenberg, Ashton-James, & Ashkanasy, 2007). As a result, individuals are motivated to reduce or eliminate the undesirable discrepancy through behavioral changes (Festinger, 1957). Accordingly, in the context of experiencing an increase in abusive supervision, the abused subordinate may be motivated to decrease task performance, withhold OCBs, and increase supervisor-directed deviance to retaliate against supervisors with a hope of preventing a further increased abuse. In contrast, in the presence of a decrease in experience of abusive supervision, the abused subordinate will tend to react

positively in terms of these work outcomes (Ariely & Carmon, 2000), such as increased levels of task performance and OCBs, and decreased level of the supervisor-directed deviance, in order to maintain or further increase the quality of supervisor-subordinate relationship.

To further illustrate the effect of abusive supervision trajectory on subordinates' work outcomes, consider subordinate *Jack*'s experienced abusive supervision increases from two to four and subordinate *Jill*'s experienced abusive supervision decreases from seven to five on a seven-point scale. The traditional static view, which bases subordinates' future work outcomes predictions on the average level of abusive supervision over time, would predict subordinate *Jill*, with an average experience of abusive supervision score of six, to be more likely to behave negatively than subordinate *Jack*, whose average experience of abusive supervision score is three. Nevertheless, in line with the dynamic perspective, these two subordinates experience totally contradictory directions of abusive supervision trajectories. Consequently, subordinate *Jack*, with a two-point increase in the experience of abusive supervision, may be more prone to behave negatively than *Jill*, who experienced a two-point decrease in the experience of abusive supervision. This example illustrates how static and dynamic views to the abusive supervision—subordinates' work outcomes relationship may produce different predictions about subordinates' work outcomes and should be explored simultaneously in abusive supervision research. Therefore, I propose:

Hypothesis 1a: With the average level of abusive supervision during a given period held constant, an individual's abusive supervision trajectory is negatively related to subordinate's task performance: Greater decrement (increment) in abusive supervision is associated with greater increment (decrement) in subordinate's task performance;

Hypothesis 1b: With the average level of abusive supervision during a given period held constant, an individual's abusive supervision trajectory is negatively related to subordinate's OCBs: Greater decrement (increment) in abusive supervision is associated with greater increment (decrement) in subordinate's OCBs;

Hypothesis 1c: With the average level of abusive supervision during a given period held constant, an individual's abusive supervision trajectory is positively related to subordinate's supervisor-directed deviance: Greater decrement (increment) in abusive supervision is associated with greater decrement (increment) in subordinate's supervisor-directed deviance.

Conceptualizing of Team as a Social Contextual Factor of Abusive Supervision

As noted above, the majority of extant research has framed abusive supervision as an individual-level phenomenon while generally failing to capture the social-contextual underpinnings of the relationship between abusive supervision and subordinates' work outcomes (Martinko et al., 2013; Tepper, 2007). According to Mowday and Sutton (1993: 198), social context is defined as "stimuli and phenomena that surround and thus exist in the environment external to the individual, most often at a different level of analyses." In line with this definition, Johns (2006: 386) suggested that the social context plays a critical role in "affect[ing] the occurrence and meaning of organizational behavior as well as functional relationships between variables." Building on this line of reasoning, previous management studies demonstrated that the social context not only influences individuals' organizational behavior but also shapes the conditions under which the functional relationships at individual level materialize to high levels of analysis (e.g., Bamberger & Biron, 2007; Dineen et al., 2007; Duffy et al., 2012; Liu et al., 2012; Wallace, Paulson, Lord, & Bond, 2005). In this essay, I thus conceptualize team as an important social contextual factor of abusive supervision.

It is critical to examine the potential social contextual influences of teams on abusive supervision for two interrelated theoretical and practical reasons. First, the extant team literature (e.g., Bliese & Halverson, 1998; Salancik & Pfeffer, 1978) suggested that workplace interactions (i.e., interactions among team members) play a substantial role in the development of individuals' attitudes and behaviors. More importantly, as noted in recent reviews (Martinko et al., 2013; Tepper, 2007), abusive supervision has social and normative roots. Indeed, scholars argue that abusive supervision, as a costly organizational phenomenon, may be perceived, evaluated, and responded by members of a work-unit (i.e., team) and thus, may be closely tied to social and normative expectations particular to teams (Martinko et al., 2013; Tepper, 2007). Therefore, it is possible that team member interactions will influence understanding of and responses to abusive supervision for both individual team members and the team as a whole.

Second, the question of whether typical individual level findings are representative of corresponding higher level relationships has received an increasing attention among multilevel researchers (e.g., Chen et al., 2004; Kozlowski & Klein, 2000; Morgeson & Hofmann, 1999). Previous theoretical (Lindsley, Brass, & Thomas, 1995) and empirical (Kirkman & Rosen, 1999; Liu et al., 2012) work examined likely similarities in the function of constructs such as job satisfaction, empowerment, efficacy, and affective evaluations across levels of analysis. Indeed, emerging evidence demonstrates considerable amounts of variance in abusive supervision between teams (e.g., Farh & Chen, 2014; Hannah et al., 2013; Priesemuth et al., 2014). However, because majority of abusive supervision research has been conducted at individual level under a static paradigm, it is unclear whether findings obtained at the individual level

would be expected to materialize at higher levels of analysis, such as the team level, under a dynamic paradigm. In order to provide a comprehensive understanding of abusive supervision and to derive effective managerial recommendations, theories and research on abusive supervision should take team member interactions over time that represent distinct dynamic social-contextual features into account.

The Substantive Meaning and Effect of Team-Level Abusive Supervision Trajectory on Individual-Level Outcomes

According to sense-making theory and relevant research (Liu et al., 2012; Louis, 1980; Shipp & Jansen, 2011; Weick, 1995), people simultaneously use two sense-making mechanisms to understand and respond to changes in their work experiences: one is extrospection which means to observe experiences outside of the self, and another is introspection which indicates observing experiences within the self. In line with this, I argue that both the change (or trend) of a focal subordinate's own experiences of abusive supervision and the experiences of other team members will likely shape the focal subordinate's responses to abusive supervision. Specifically, I introduce the concept of *team-level abusive supervision trajectory*, which I argue will provide important informational cues to a focal subordinate beyond his or her own abusive supervision trajectory for interpreting his or her subsequent work outcomes.

In a team context where all team members are supervised by a common team leader, when team members are experiencing decreasing abusive supervision over time which indicates improving relationships with the team leader, they are more likely to respond in a positive way such as improving their levels of task performance and engaging in more OCBs, and decreasing their levels of supervisor-directed deviance.

Under this situation, a focal subordinate is likely to observe other team members' experienced decreased abusive supervision and their corresponding behavioral reactions (Mitchell et al., 2012, 2015; Peng et al., 2014). As a result, it is reasonable and much easier for the focal subordinate to infer that the team leader is making some positive changes and good things are happening in the team, and thus interpret the team-level change in abusive supervision as a positive cue for his or her work outcomes. Conversely, experiencing increasing abusive supervision among team members will likely lead them to engage in lower levels of task performance and OCBs, but higher level of supervisor-directed deviance, because they have increasingly negative expectations about their future interactions with their team leader. Such team members' behaviors will also provide social cues to the focal subordinate for making relevant decisions regarding his or her following work outcomes.

In order to further elaborate on the contextual effect of team-level abusive supervision trajectory on a focal subordinate's work outcomes, going above and beyond individual abusive supervision trajectory, I provide the following example. When both subordinate *Peter* from team A and subordinate *Julie* from team B experience the same level of abusive supervision decrease over a given period of time, the current static mono-level view of abusive supervision, which considers the change in a subordinate's own experience of abusive supervision only, would predict that they are equally likely to behave in terms of task performance, OCBs, and supervisor-directed deviance. Yet after taking team context and team members' interactions into account, if team A encounters an overall abusive supervision increase (on average, the members of team A are experiencing more abuse), but team B enjoys an overall abusive supervision decrease (on

average, members are experiencing less abuse), subordinate *Peter*'s sense-making based on social interactions with team members in team A would highlight social cues for more adverse work-related outcomes. In contrast, subordinate *Julie*'s team members in team B would provide social cues for more positive work outcomes. Consequently, it suggests that although subordinate *Peter* and *Julie* experience the same individual abusive supervision trajectory, the different contextual influences in their respective teams will cause subordinate *Julie* to be more likely to behave in positive ways than subordinate *Peter*. This example highlights the possibility that a dynamic multilevel perspective may generate different predictions about outcomes than a static mono-level perspective because contextual influence (i.e., team member interactions) may affect individual sense-making process and behavioral tendencies.

In support of my above argument, empirical work demonstrates that coworkers' experience of abusive supervision substantially shape and reinforce a focal individual's view of abusive supervision and abusive supervisor (Mitchell et al., 2012, 2015; Peng et al., 2014). For example, Peng and colleagues (2014) found that no matter one experiences abusive supervision vicariously or as a victim, when a leader exhibits a higher level of abusive supervision toward peers, the focal individual is less likely to perceive the common leader as an individual who can meet team members' expectations for a favorable long-term social exchange and supervisor-subordinate relationships. In addition, social influence studies also confirm that people frequently adjust their attitudes and behaviors to conform to social expectations or norms in a collective setting (Cialdini, 2009; Cialdini & Goldstein, 2004). In other words, subordinates tend to conform to the

average trend of abusive supervision among team members even though their individual experiences might be different. Building on this, I therefore propose that:

Hypothesis 2a: With the average levels of an individual and team's abusive supervision as well as the individual's abusive supervision trajectory in a given time period held constant, team-level abusive supervision trajectory is negatively related to subordinate's task performance change: Greater decrement (increment) in team-level abusive supervision is associated with greater increment (decrement) in subordinate's task performance;

Hypothesis 2b: With the average levels of an individual and team's abusive supervision as well as the individual's abusive supervision trajectory in a given time period held constant, team-level abusive supervision trajectory is negatively related to subordinate's OCBs change: Greater decrement (increment) in team-level abusive supervision is associated with greater increment (decrement) in subordinate's OCBs;

Hypothesis 2c: With the average levels of an individual and team's abusive supervision as well as the individual's abusive supervision trajectory in a given time period held constant, team-level abusive supervision trajectory is positively related to subordinate's supervisor-directed deviance change: Greater decrement (increment) in team-level abusive supervision is associated with greater decrement (increment) in subordinate's supervisor-directed deviance.

The Effect of Team-Level Abusive Supervision Trajectory on Team-Level Outcomes

Recent multilevel research suggests that comparisons of the similarity in the functional relationship between constructs at the individual and team levels (i.e., the functional homology of constructs) has significantly contributed to parsimony and consistency in building and developing multilevel theory and research (e.g., Chen et al., 2004). For instance, Liu and colleagues' (2012) research on turnover found that unit level job satisfaction trajectory is significantly related to voluntary turnover rate in a unit. Kirkman and Rosen (1999) also demonstrated that empowerment is significantly related to effectiveness at the team level. In addition, I argue that conceptually, these subordinates' work outcomes (i.e., task performance, OCBs, and supervisor-directed deviance) vary at the team level, which is particularly possible when examining outcomes

of leadership, because a leader's influence tends to produce shared responses among subordinates (e.g., Christian, Christian, Garza, & Ellis, 2012). Although team members may experience different levels of exposure to abusive supervision, they tend to converge in their affect, attitudes, and behaviors (Duffy, Shaw, & Stark, 2000), as they interact and make sense of social and environmental information as a group (Salancik & Pfeffer, 1978). Based on this functional homology perspective on organizational constructs, I propose that team-level abusive supervision trajectory will also affect team-level work outcomes.

According to sense-making theory and research (Folger & Cropanzano, 2001; Louis, 1980; Weick, 1995), people tend to interpret their changing situations according to summary salient cues that reflect perceptions and appraisals of the social context and then use those cues to decide how to respond. Of direct relevance to the context of abusive supervision, I expect that as more team members generally perceive a positive change in their experience of abusive supervision over time, the prevalent social cues within the team will be more likely to reinforce the advantages of doing good among team members (i.e., increase levels of task performance and OCBs while decreasing level of supervisor-directed deviance) in order to enjoy the benefits associated with improving supervisor-subordinate relationships. Conversely, when a team experiences an overall increase in abusive supervision, team members' sense-making and social interactions will lead them to believe that the team leader is becoming less reliable and less trustworthy over time, and it is unlikely to expect a positive change in supervisor-subordinate relationships to occur in the future.

Despite there is no research explicitly examining the link between team-level abusive supervision trajectory and team-level work outcomes, existing theoretical and empirical work provides evidence that individual-level effects of abusive supervision on subordinate outcomes may be materialized at a higher team level (i.e., individual-level and team-level abusive supervision have functional similarities). Priesemuth and colleagues's (2014) study on abusive supervision climate, for example, demonstrated significant group-level associations between team-level abusive supervision (here, in terms of abusive supervision climate) and team-level outcomes (e.g., group cooperation, group OCBs, and group performance). On the basis of the above theoretical arguments and empirical findings, I thus expect that a functional homology exists in the relationship between abusive supervision trajectory and outcomes across individual- and team-level of analysis.

Hypothesis 3a: With the average level of a team's abusive supervision during a given time period held constant, team-level abusive supervision trajectory is negatively related to the overall task performance in a team: Greater decrement (increment) in team-level abusive supervision is associated with greater increment (decrement) in a team's overall task performance;

Hypothesis 3b: With the average level of a team's abusive supervision during a given time period held constant, team-level abusive supervision trajectory is negatively related to the overall OCBs in a team: Greater decrement (increment) in team-level abusive supervision is associated with greater increment (decrement) in a team's overall OCBs;

Hypothesis 3c: With the average level of a team's abusive supervision during a given time period held constant, team-level abusive supervision trajectory is positively related to the overall supervisor-directed deviance in a team: Greater decrement (increment) in team-level abusive supervision is associated with greater increment (decrement) in a team's overall supervisor-directed deviance.

The Substantive Meaning of Dispersion of Team-Level Abusive Supervision

Trajectory

The extent to which a subordinate's social environment (e.g., changes in abusive supervision in his/her team) affects the individual's action may depend on not only the average level of a particular social cue (i.e., the degree of abusive supervision change in the team) but also the agreement (i.e., the uniformity or distribution of changes in abusive supervision among team members). According to Chan's (1998) typology of collective constructs, *dispersion*, referring to the assessment of within-team variance, is a salient team property describing the extent to which team members diverge on a phenomenon. For example, Dineen and colleagues' (2007) study demonstrated the joint influence of mean level and dispersion of job satisfaction when predicting employees' levels of absenteeism in a team. Building on this line of reasoning, organizational climate literature showed that climate level (i.e., the average level of organization members' climate perceptions) and climate strength (i.e., the degree of within-organization consensus of organization members' climate perceptions) jointly affect individual and organizational outcomes (e.g., González-Romá et al., 2002).

Bringing dispersion into abusive supervision research, I introduce the concept of *dispersion of team-level abusive supervision trajectory* (i.e., within-team variance in team members' experiences of abusive supervision trajectory), and argue that it can serve as another crucial social-contextual cue about abusive supervision that bears on the individual-, team-, and cross-level relationships between abusive supervision and individual team member and team's work outcomes. This conceptualization derives from emerging evidence suggesting that abusive supervisors tend to be selective about the targets of their abuse (Harris, Harvey, & Kacmar, 2011; Tepper et al., 2011; Tepper et al., 2006). Tepper and colleagues (2006) found, for instance, that supervisors were more

abusive toward subordinates who were high versus low on negative affectivity. Tepper et al. (2011) also showed that supervisors were more likely to be abusive toward subordinates who are dissimilar to them on deep-level characteristics, or subordinates who have higher level of relational conflicts with them, or subordinates who are low performers. Harris et al. (2011) have also found that supervisors tend to be abusive only toward subordinates with whom they have poor quality relationships with (i.e., low quality leader–member exchange). In short, the evidence to date strongly indicates that it is unlikely that supervisors equally abuse all of their subordinates. Building on this, team members are also likely to differ from each other in the trajectory of their experienced abusive supervision over time. In other words, every team member may experience an increase, or a decrease, or a relatively same level in supervisory abuse over time.

The Effect of Dispersion of Team-Level Abusive Supervision Trajectory on Individual-Level Outcomes

In a team characterized by a uniform abusive supervision trajectory among team members (i.e., low dispersion of abusive supervision trajectory), a focal subordinate is expected to be able to easily sense the norms or climate of the team and be certain about his or her situation compared to those of team members (Folger & Cropanzano, 1998). Specifically, in the presence of a uniform increase in the aggregate abusive supervision in a team (i.e., growth in team-level abusive supervision coupled with low dispersion of within-team abusive supervision trajectory), a focal subordinate will be clearly aware that his or her team members have experienced an increase in their abusive supervision and that the norm in the team is likely to be lowering task performance, withholding OCBs, and increasing supervisor-directed deviance. Mitchell and colleagues' (2012, 2015)

research on third parties' reactions to the abusive supervision of coworkers demonstrates that coworkers' experience of abusive supervision affects the focal employee's work outcomes (i.e., coworker support, coworker exclusion, and supervisor-directed deviance), no matter the focal employee experiences abuse or not. In addition, both the social influence and organizational justice literatures demonstrate the power of uniform contextual cues. In other words, if team members provide clear and consistent cues, the focal individual may underemphasize his or her own evaluation, even if that is contradictory to that of team members, in order to conform to the majority (Asch, 1966) and to maintain assurance of social support (Folger & Cropanzano, 1998). Accordingly, I expect that the potential influence of a focal subordinate's decrease in abusive supervision on his or her work outcomes may be attenuated when team members are unanimously encountering an increase in abusive supervision over time.

Conversely, in the presence of a uniform abusive supervision decrease in a team (i.e., decline in team-level abusive supervision coupled with low dispersion of within-team abusive supervision trajectory), the general social cues will indicate that team members are increasingly satisfied with their relationships with the team leader over time. As a result, team members are less likely to participate in supervisor-directed deviant behaviors, but rather are more likely to put more effort on task performance and OCBs. Consistent with this, a focal subordinate's own decline in abusive supervision is expected to have the strongest positive influence on his or her deviance (strongest negative influence on task performance and OCBs) when team members' abusive supervision declines uniformly over time as well.

In addition, a large amount of variability in the distribution of team members' abusive supervision trajectories (i.e., high abusive supervision trajectory dispersion) may generate conflicting social cues regarding team members' changing appraisals about their relationships with their team leader. Classic social influence research reveals that once unanimity is broken, social influence declines significantly (e.g., Asch, 1966; Sherif & Sherif, 1967). Variance in team members' changes in abused experiences may result in inconclusive social comparisons (Folger & Cropanzano, 1998). Therefore, a focal subordinate is less likely to get a clear sense of the status of his or her own interaction with the team leader relative to other team members' which, in turn, is less sure about how to perform in terms of task performance, OCBs, and supervisor-directed deviance. In short, a strong agreement among team members about abusive supervision trajectories encourages stronger group norms and, thus, a stronger influence on individual member work outcomes. Hence, I propose that:

Hypothesis 4a: A team's abusive supervision trajectory and its dispersion interact with an individual's abusive supervision trajectory in such a way that an increase in the individual's abusive supervision is most likely to decrease task performance, when the team experiences a uniform abusive supervision increase;

Hypothesis 4b: A team's abusive supervision trajectory and its dispersion interact with an individual's abusive supervision trajectory in such a way that an increase in the individual's abusive supervision is most likely to decrease OCBs, when the team experiences a uniform abusive supervision increase;

Hypothesis 4c: A team's abusive supervision trajectory and its dispersion interact with an individual's abusive supervision trajectory in such a way that an increase in the individual's abusive supervision is most likely to increase supervisor-directed deviance, when the team experiences a uniform abusive supervision increase.

The Effect of Dispersion of Team-Level Abusive Supervision Trajectory on Team-Level Outcomes

Drawing insights from Chan's (1998) typology of collective constructs and Chen and his colleagues' (2004) functional homology view of constructs across levels, I further argue that at team level, the functioning of constructs may similarly depend on the degree of dispersion in measurements of the constructs among team members. This within-team dispersion of abusive supervision trajectory indicates ambiguity in subordinates' social context and makes their interpretation of social context less conclusive (Kruglanski & Mayseless, 1990). Therefore, with increased dispersion of abusive supervision trajectory, team members will find it difficult to obtain clear-cut cues from their team to help them form a convergent perception of the team's overall level of abusive supervision. Under this situation, social norms in the team will be less clear (Feldman, 1984), and the observed behavioral responses of team members (i.e., task performance, OCBs, and supervisor-directed deviance) will be likely to vary. As a result, the influence of the social environment on team members will diminish, and they will be less likely to respond to the team-level abusive supervision trajectory. Conversely, in the presence of within-team consensus of abusive supervision trajectory (i.e., low dispersion), the social context will likely convey consistent straightforward messages to individual subordinates for doing good or doing bad over time. As such, within-team abusive supervision trajectory will have a stronger influence on the team-level outcomes when the dispersion is lower.

In addition, organizational climate strength research provides evidence supporting my theorizing. For example, González-Romá and colleagues (2002) demonstrated that team climate strength (within-team convergent view of climate) significantly strengthens the effects of team's climate level on aggregate work satisfaction and organizational

commitment. Following a similar reasoning, Colquitt, Noe, and Jackson (2002) found that the team's procedural justice climate strength plays an important role influencing the effects of a team's procedural justice climate level on team performance and team absenteeism. Furthermore, the within-team dispersion research on attitudes also provides a consistent pattern of evidence for my argument. For example, Harrison, Price, Gavin, and Florey (2002) found that lower levels of satisfaction dispersion are associated with greater cohesiveness. Teams with lower dispersion on associated characteristics are also found to have greater social integration, an increased level of in-group identity, and reduced fragmentation (e.g., Boone & Van Witteloostuijn, 2005; Brewer & Brown, 1998; Harrison et al., 2002). Building on this, thus, I propose that:

Hypothesis 5a: Dispersion of abusive supervision trajectory within a team moderates the negative relationship between within-in team abusive supervision trajectory and team-level task performance; this negative relationship is stronger when the dispersion of abusive supervision trajectory is lower;

Hypothesis 5b: Dispersion of abusive supervision trajectory within a team moderates the negative relationship between within-in team abusive supervision trajectory and team-level OCBs; this negative relationship is stronger when the dispersion of abusive supervision trajectory is lower;

Hypothesis 5c: Dispersion of abusive supervision trajectory within a team moderates the positive relationship between within-in team abusive supervision trajectory and team-level supervisor-directed deviance; this negative relationship is stronger when the dispersion of abusive supervision trajectory is lower.

METHODS

Sample and Procedure

Participants were recruited from a large Chinese e-commerce company that provides sales services via web portals. The target sample includes a total of 186 sales teams with 1,395 employees (each team has one common supervisor). In order to determine the appropriate time intervals for measuring abusive supervision, I conducted a

comprehensive literature review of studies of abusive supervision, interviewed the vice president and HR manager, employees, and examined archival data from the company (i.e., their performance evaluation reports, internal newsletters). Extant organizational studies have measured abusive supervision over a wide range of intervals, varying from one week (Lian et al., 2012, 2014) to several months (Tepper et al., 2011). Moreover, the choice of measurement time points regarding abusive supervision should also take organizational context into account. My interviews and examination of archives indicated that two weeks will be a viable time frame for experiencing possible changes in abusive supervision, as well as employees' work-related performance because the company conducts evaluations every two weeks.

I first contacted the senior management and introduced my study, and they expressed their willingness to participate in this study. I then informed employees across ranks and positions via email and invited them to sign up individually for the study. The email described the study as an examination of the relations among leadership behaviors, supervisor-subordinate interactions, and employees' work outcomes in the workplace. Individuals who indicated an interest in participating were instructed to go to a sign-up page on the study's website, where participants viewed the informed consent form. This also assured them that they could withdraw from the study at any time without penalty. Once individuals signed up for the study, I sent detailed instructions on how and when to participate. The data collection lasted two months, two weeks apart, and included 4 stages. In every stage, I invited participants to complete a survey regarding abusive supervision and their OCBs and deviance. Information regarding participants' task performance (i.e., sales) were retrieved from company's record at every stage.

In stage 1, I invited all 1,395 employees in the 186 sales teams and received responses from 1,297 employees in 186 teams, a response rate of 93 percent. Two weeks later, in stage 2, I asked the 1,297 employees to complete the survey again and received 1,143 responses in 186 teams, for a response rate of 88 percent. Another two weeks later, in stage 3, I asked the 1,143 responding employees to complete the survey a third time, and got 1,099 responses from 186 teams, representing a response rate of 96 percent. After another two weeks, in stage 4, I asked the responding 1,099 employees to complete the final survey; 832 employees from 186 teams returned the survey, representing a response rate of 76 percent. In summary, the overall response rates are 60 percent for respondents (of the original 1,395 respondents) and 100 percent for the teams (of the original 196). I did not find any significant difference between respondents and non-respondents in terms of demographic variables (age, gender, and tenure), therefore, nonresponse bias should not be a concern. After completion of data collection, I offered one feedback report about the study results to the senior management and offered \$20 (about 120 Yuan) as an incentive for individual participation.

In the final sample of 832 employees from 186 teams, there was an average number of 5 people in each team who responded ($S.D. = 4.3$), an average tenure of 3.74 years ($S.D. = 1.52$), and an average age of 33.6 years ($S.D. = 11.7$). Among respondents, 513 were female (62%).

Measures

Following the translation-back-translation procedures outlined by Brislin (1980), surveys were provided in Chinese, the native language of the participants.

Abusive supervision. Tepper's (2000) 15-item scale were used to measure abusive supervision. Each team member reported how often their team leader used the behaviors described in each item on a five-point scale (1 = *I cannot remember him/her ever using this behavior with me*, to 5 = *He/she uses this behavior very often with me*). Sample items include "(supervisor) tells me my thoughts and feelings are stupid" and "(supervisor) puts me down in front of others."

Individual-level abusive supervision trajectory. In line with Bliese and Ployhart (2002), previous studies have used the slope estimate to describe temporal changes in workplace attitude and behavior. Examples include Chen's (2005) study on newcomers performance change, Chen and colleagues' (2011) and Liu and colleagues (2012) examination of job satisfaction change. Accordingly, I operationalized each individual's experience of abusive supervision change over stage 1 to 4 as the slope estimate drawn from hierarchical linear models.

Team-level abusive supervision trajectory. Following the same approach, I calculated this variable as the slope estimate of each team's average abusive supervision trajectory over stage 1 to 4.

Dispersion of team-level abusive supervision trajectory. Based on Chan's (1998) dispersion composition model, I operationalized dispersion of team-level abusive supervision trajectory using the within-team standard deviation in the individual team member abusive supervision trajectory scores, which reflects the extent to which team members differ in their experience of abusive supervision trajectory over stage 1 to stage 4.

Task performance. Task performance was measured by output, which was

defined and operationalized as the amount of sales each individual gained over the past two weeks. The average score is used to represent the task performance at team level. I retrieved this information from the archival data.

OCBs. Participants were asked to report the extent to which they engaged in OCBs directed at their supervisor over the past two weeks, using 8-item scale developed by Burton et al (2014). A sample item is: “I listened to my supervisor when he/she has to get something off his/her chest.” The average score is used to represent the level of OCBs at team level.

Supervisor-directed deviance. Supervisor-directed deviance was measured with Mitchell and Ambrose’s (2007) 10-item scale. Participants indicated the frequency with which they engaged in each behavior over past two weeks on a 7-point Likert scale (from 1 = *never*, to 7 = *daily*). A sample item is: “I swore at my supervisor.” The average score was used to represent the level of deviance at team level.

Control variables. Negative affectivity has been linked to both abusive supervision (e.g., Tepper et al., 2006; Zellar et al., 2002) and antisocial behaviors (Duffy et al., 2012). Thus, in order to eliminate negative affectivity as a confounding effect in the relationship between abusive supervision and subordinate work outcomes, I included subordinate negative affectivity as a control variable. Negative affectivity was measured using the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). Participants reported their general feelings in terms of ten negative adjectives (e.g., irritable, ashamed, and upset) on a five-point scale (1 = *usually do not feel this way*, to 5 = *usually feel this way*).

Analytical Strategy

Given the multilevel nature of my model, the data collected to test my model includes nesting that violates assumptions of independence of observations required for ordinary least squares regression analyses. Accordingly, I conducted analyses in multilevel format. The data consists of 2 levels. The lower level (Level 1) comprises individual team members' experiences of abusive supervision and their work outcomes (i.e., task performance, OCBs, and supervisor-directed deviance), which are nested in teams (Level 2), consisting of team-level abusive supervision trajectory, dispersion of team-level abusive supervision trajectory, and team-level work outcomes. To avoid spurious cross-level interactive effects, I used the group-mean-centering approach to partition the cross-level from between-team interactions, and used the grand-mean-centering approach in all other analyses (Hofmann & Gavin, 1998).

Results

Table 8 and 9 present descriptive statistics and correlations for the variables at the individual and team levels, respectively.

Insert Table 8 and 9 about here

Hypothesis 1 suggests that individual abusive supervision trajectory is negatively related to individual task performance and OCBs, but positively related to deviance. As shown by Model 1 from Table 10, Table 11, and Table 12, individual abusive supervision trajectory significantly related to individual task performance ($\gamma = -.21, p < .01$), OCBs ($\gamma = -.18, p < .01$), and deviance ($\gamma = .24, p < .01$), respectively, thereby supporting Hypothesis 1. As employees experience more abusive supervision over time, greater decrease in task performance and OCBs, as well as greater increase in deviance occurs.

Insert Table 10, 11, and 12 about here

Hypothesis 2 indicates that team-level abusive supervision trajectory is negatively associated with individual task performance and OCBs, but positively associated with deviance. As shown by Model 2 from Table 10, Table 11, and Table 12, team-level abusive supervision trajectory significantly related to individual task performance ($\gamma = -.26, p < .01$), OCBs ($\gamma = -.22, p < .01$), and deviance ($\gamma = .29, p < .01$), respectively, thereby supporting Hypothesis 2. When the overall experience of abusive supervision in a given team increases over time, employees who are working in that team are more likely to reduce their task performance and OCBs, but increase deviant behaviors.

Hypothesis 3 predicts that team-level abusive supervision trajectory is also significantly related to team-level outcomes. Results of Model 2 in Table 13, Table 14, and Table 15 indicate that team-level abusive supervision trajectory was significantly associated with the overall task performance ($\gamma = -.14, p < .01$), OCBs ($\gamma = -.13, p < .01$), and deviance ($\gamma = .15, p < .01$), respectively, in the team. Therefore, Hypothesis 3 was supported. Teams with increases in abusive supervision subsequently had lower task performance and OCBs, but higher deviance.

Insert Table 13, 14, and 15 about here

Hypothesis 4 describes a multilevel three-way interactive effect of team-level abusive supervision trajectory, abusive supervision trajectory dispersion, and individual abusive supervision trajectory on individual work performance. As shown in Model 3 of Table 10, Table 11, and Table 12, the three-way interaction terms were significant ($\gamma = .33, p < .05$ on task performance; $\gamma = .28, p < .05$ on OCBs; and $\gamma = .35, p < .05$ on

deviance), supporting Hypothesis 4. See Figure 6 for additional evidence. As predicted, an increase in a team member's experience of abusive supervision appeared to have the strongest effects on individual task performance, OCBs, and deviance, in the presence of a uniform increase in team-level abusive supervision.

Insert Figure 6 about here

Hypothesis 5 describes an interactive effect of team-level abusive supervision trajectory and its dispersion on team-level outcomes. The results of Model 3 in Table 13, Table 14, and Table 15 suggest that all interaction terms were significant ($\gamma = .32, p < .05$ on task performance; $\gamma = .28, p < .05$ on OCBs; and $\gamma = .36, p < .05$ on deviance). To further probe these findings, I conducted simple slope tests and plotted these significant interactive effects. As indicated by Figure 7, the strength of the relationships between team-level abusive supervision trajectory and team-level outcomes are stronger when there are less dispersion in abusive supervision trajectory. Therefore, Hypothesis 5 was supported.

Insert Figure 7 about here

GENERAL DISCUSSION

In this study, I develop and analyze a model of the individual-, team-, and cross-level relationships between abusive supervision trajectory and work-related outcomes. The results indicate that, going beyond static (average) individual and team levels of abusive supervision measured at four time points, team-level and individual-level abusive supervision trajectories have unique influences on individual outcomes. Further, team-level abusive supervision trajectory has a significant effect on the team-level outcomes

after team-level static (average) abusive supervision has been controlled for. Multilevel data substantiate the integrative three-way interaction model, which highlights that team-level abusive supervision trajectory and its dispersion can suppress the positive or negative momentum of an individual's experience of abusive supervision trajectory.

This study answers recent calls for integrating temporal elements into abusive supervision research (Martinko et al., 2013; Tepper, 2007; Tepper et al., 2017). In this study, I offer theoretical rationales for why abusive supervision trajectory both at individual and team level should account for additional variance in performance-related outcomes at both the individual and team levels above and beyond static measures of abusive supervision. Second, I adopt a multilevel perspective on abusive supervision to truly understand the consequences of abusive supervision. Findings highlight the value and need for multi-source information regarding abusive supervision across levels to be taken into account when examining consequences of abusive supervision at the workplace. Furthermore, results pertaining to the unique effect of dispersion in abusive supervision trajectory in teams point to the importance of investigating the dispersion in experiences of abusive supervision in teams. Average level, trajectory, and dispersion are likely independent social cues that team members use to make their behavioral decisions when encountering supervisory abuse.

This study has its own limitations that offer avenues for future research. For example, little is known about how individual differences affect employees' evaluations of abusive supervision over time. Individuals' temporal focus (Shipp, Edwards, & Lambert, 2009) may affect interpretation and reactions to multisource information regarding abusive supervision. Present-focused individuals may be less swayed by

fluctuations in abusive supervision change over time, whereas future-focused individuals may be most responsive to abusive supervision trajectories. In addition, it would be a meaningful extension of this study to explore what possible events or factors that prompted increases or decreases in abusive supervision trajectory in teams.

Departing from the dominant paradigm in abusive supervision research, which is use of a static, individual-level, between-person research design, this study attests to the value of a dynamic multilevel perspective on abusive supervision. I hope the unique theoretical implications of this study will stimulate additional research that takes into account the critical roles of social context and temporal aspects to better understand the momentum and complexity of abusive supervision and its consequences at the workplace.

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TABLE 1 Variance Components of Null Models for Daily Variables in Essay 1

Variable	Within-individual variance	Between-individual variance	% variability within individual
Abusive supervision	.39**	.25**	61%
Uncertainty	.51**	.40**	56%
Resource depletion	.26**	.28**	48%
Anxiety	.65**	.38**	63%
Task performance	.12**	.17**	41%
Organizational citizenship behaviors	.38**	.44**	46%
Counterproductive work behaviors	.21**	.16**	57%

Note. Percentage of variability within individual was computed by dividing the within-individual variance by the total (within-individual + between-individual) variance. ** $p < .01$.

TABLE 2 Descriptive Statistics and Correlations among Study Variables in Essay 1

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. Anger	1.46	0.79										
2. Fear	1.38	0.84	.40**									
3. Stress	1.35	0.81	.17	.14								
4. AS (mean)	1.51	0.39	.61**	.53**	.41**							
5. AS variability	0.38	0.61	.22*	.26*	.23*	-.36**						
6. Uncertainty	1.97	0.66	.14	.11	.33**	.44**	.34**					
7. Resource depletion	1.86	0.89	.11	.13	.24*	.38**	.31**	.35**				
8. Anxiety	1.93	1.04	.24*	.25*	.22*	.26*	.29*	.31**	.15			
9. Task performance	96.32	13.63	-.16	-.13	-.13	-.28*	-.24*	-.25*	-.27*	-.13		
10. OCBs	2.79	0.85	-.08	.10	-.09	-.35**	-.27*	-.29*	-.24*	-.21*	.09	
11. CWBs	1.40	0.32	.25*	.24*	.16	.47**	.30**	.26*	.28*	.26*	-.07	-.18*

Note. *N* = 188 supervisor-subordinate dyads. Between-person correlations (aggregated for experience-sampled variables) are reported. AS = abusive supervision; OCBs = organizational citizenship behaviors; and CWBs = counterproductive work behaviors. **p* < .05, ***p* < .01.

TABLE 3 Multilevel Path Analysis Results in Essay 1

	Uncertainty		Resource depletion			Anxiety		
	M 1	M 2	M 3	M 4	M 5	M 6	M 7	M 8
<i>Controls</i>								
anger	.13 (.08)	.13 (.11)	.08 (.05)	.08 (.04)	.05 (.06)	.15 (.08)	.15 (.06)	.13 (.08)
fear	.09 (.07)	.10 (.08)	.09 (.08)	.06 (.08)	.06 (.03)	.14 (.10)	.13 (.11)	.13 (.07)
stress	.18* (.14)	.14 (.12)	.17* (.11)	.15* (.13)	.13 (.09)	.19* (.13)	.15 (.10)	.13 (.09)
AS (mean)	.23** (.17)	.19* (.16)	.26** (.14)	.24** (.18)	.17* (.14)	.22* (.14)	.18* (.12)	.14 (.11)
<i>Main Effects</i>								
ASV		.46** (.18)		.26** (.15)	.23** (.16)		.25** (.17)	.20* (.15)
Uncertainty					.37** (.18)			.31** (.19)
R^2	.31**	.35**	.28**	.31**	.33**	.24**	.26**	.29**
ΔR^2		.04**		.03**	.03**		.02**	.03**

Note. $N = 188$ supervisor-subordinate dyads. AS = abusive supervision; ASV = abusive supervision variability; M = model. Standard errors are reported in parentheses. The model was estimated simultaneously. Standardized estimates are reported. * $p < .05$, ** $p < .01$.

TABLE 3 Multilevel Path Analysis Results in Essay 1 (Continued)

	Task performance					OCBs					CWBs				
	M 1	M 2	M 3	M 4	M 5	M 6	M 7	M 8	M 9	M 10	M 11	M 12	M 13	M 14	M 15
<i>Controls</i>															
anger	-.11 (.05)	-.11 (.03)	-.11 (.02)	-.09 (.03)	-.09 (.04)	-.05 (.04)	-.05 (.03)	-.04 (.03)	-.04 (.01)	-.02 (.03)	.14* (.09)	.13* (.06)	.13* (.04)	.11 (.04)	.11 (.05)
fear	-.05 (.02)	-.06 (.02)	-.06 (.04)	-.05 (.01)	-.05 (.02)	.06 (.03)	.04 (.03)	.05 (.04)	.05 (.02)	.04 (.02)	.11 (.04)	.11 (.06)	.10 (.08)	.09 (.08)	.07 (.02)
stress	-.04 (.04)	-.04 (.04)	-.02 (.03)	-.03 (.03)	-.02 (.03)	-.07 (.06)	-.06 (.02)	-.06 (.05)	-.05 (.07)	-.05 (.02)	.08 (.05)	.04 (.06)	.04 (.03)	.05 (.02)	.04 (.03)
AS (mean)	-.21* (.12)	-.19* (.10)	-.17 (.08)	-.16 (.11)	-.16 (.13)	-.20* (.15)	-.18* (.11)	-.16 (.12)	-.15 (.10)	-.14 (.09)	.22** (.14)	.18* (.13)	.17 (.10)	.14 (.13)	.15 (.07)
<i>Main Effects</i>															
ASV		-.22* (.14)	-.15* (.13)	-.13 (.06)	-.12 (.09)		-.23* (.17)	-.18* (.17)	-.14 (.11)	-.12 (.06)		.25** (.13)	.18* (.06)	.17 (.09)	.16 (.08)
Uncertainty			-.16* (.11)	-.12 (.09)	-.11 (.04)		-.22* (.14)	-.15 (.09)	-.15 (.11)				.23* (.11)	.18 (.13)	.14 (.09)
RD				-.18** (.10)					-.15* (.11)					.22** (.13)	
Anxiety					-.13* (.09)					-.17** (.13)					.20** (.15)
<i>R</i> ²	.25**	.27**	.30**	.33**	.32**	.27**	.30**	.34**	.36**	.38**	.31**	.34**	.37**	.40**	.40**
ΔR^2		.02*	.03**	.03**	.02**		.03*	.04**	.02**	.04**		.03*	.03**	.03**	.03**

Note. $N = 188$ supervisor-subordinate dyads. AS = abusive supervision; ASV = abusive supervision variability; RD = resource depletion; M = model. Standard errors are reported in parentheses. Model was estimated simultaneously. Standardized estimates are reported. * $p < .05$, ** $p < .01$.

TABLE 4 Indirect Effects Results in Essay 1

<i>Indirect Effects</i>	Estimate	LLCI	ULCI
AS variability → uncertainty → resource depletion	.17**	.079	.214
AS variability → uncertainty → resource depletion → task performance	-.03*	-.077	-.005
AS variability → uncertainty → resource depletion → OCBs	-.03*	-.053	-.001
AS variability → uncertainty → resource depletion → CWBs	.04*	.018	.091
AS variability → uncertainty → anxiety	.14**	.086	.193
AS variability → uncertainty → anxiety → task performance	-.02*	-.034	-.008
AS variability → uncertainty → anxiety → OCBs	-.03*	-.051	-.010
AS variability → uncertainty → anxiety → CWBs	.03*	.013	.072

Note. $N = 188$ supervisor-subordinate dyads. AS = abusive supervision; OCBs = organizational citizenship behaviors; CWBs = counterproductive work behaviors. LLCI = lower level of the 95% confidence interval. ULCI = upper level of the 95% confidence interval. * $p < .05$, ** $p < .01$.

TABLE 5 Fitness of Measurement Models to Test Measurement Invariance in Essay 2

Model	$\chi^2(df)$	CFI	TLI	RMSEA	SRMR	Δ CFI	Δ RMSEA	Δ SRMR
AS								
Free loading	378.54**(121)	.946	.949	.055	.064	--	--	--
Loadings invariant	389.31**(130)	.947	.951	.059	.066	.001	.004	.002
Job Perf								
Free loading	354.23**(121)	.932	.901	.067	.077	--	--	--
Loadings invariant	367.55**(130)	.932	.909	.061	.079	.000	-.006	.002
OCB								
Free loading	334.23**(121)	.997	.964	.052	.053	--	--	--
Loadings invariant	345.77**(130)	.996	.971	.054	.056	-.001	.002	.003
Deviance								
Free loading	314.97**(121)	.992	.943	.033	.058	--	--	--
Loadings invariant	329.76**(130)	.993	.957	.027	.061	.001	-.006	.003
Injury M								
Free loading	313.43*(121)	.967	.974	.046	.045	--	--	--
Loadings invariant	322.73(130)	.967	.989	.048	.046	.000	.002	.001
Perf Pro M								
Free loading	297.54*(121)	.924	.983	.062	.036	--	--	--
Loadings invariant	303.41(130)	.925	.990	.061	.039	.001	-.001	.003
ProSo M								
Free loading	285.32**(121)	.967	.945	.075	.046	--	--	--
Loadings invariant	299.42*(130)	.968	.951	.072	.048	.002	-.003	.002
Self M								
Free loading	274.52**(121)	.946	.934	.052	.051	--	--	--
Loadings invariant	291.32*(130)	.948	.944	.056	.055	.002	.004	.004
Eight-factor Model								
Free loading	4367.87**(423)	.910	.910	.041	.063	--	--	--
Loadings invariant	4396.23**(447)	.910	.910	.041	.064	.000	.000	.001

Note. N = 512. AS = abusive supervision, Perf = performance, M = motive, Pro = promotion, ProSo = pro-social. * $p < .05$, ** $p < .01$. CFI = comparative fit index; TLI = Tucker–Lewis index; RMSEA = root-mean-square error of approximation; SRMR = standardized root-mean-square residual.

TABLE 6 Descriptive Statistics and Correlations among Key Variables in Essay 2

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1.AS-t1	1.35	.54																			
2.AS-t2	1.30	.63	.64																		
3.AS-t3	1.41	.45	.73	.59																	
4.AS-t4	1.54	.64	.63	.61	.52																
5.AS-t5	1.76	.74	.56	.63	.51	.56															
6. Perf-t1	3.58	.53	-.05	-.08	-.05	-.11	-.08														
7.Perf-t2	3.65	.56	-.11	-.14	-.11	-.09	-.05	.55													
8.Perf-t3	3.67	.67	-.07	-.04	-.16	-.12	-.11	.54	.52												
9.Perf-t4	3.55	.56	-.10	-.11	-.09	-.18	-.09	.57	.55	.56											
10.Perf-t5	3.52	.61	-.21	-.18	-.14	-.09	-.16	.46	.49	.48	.50										
11.OCB-t1	2.11	.68	-.25	-.11	-.09	-.08	-.06	.23	.19	.13	.11	.09									
12.OCB-t2	1.86	.53	-.14	-.25	-.16	-.13	-.11	.22	.26	.11	.13	.08	.63								
13.OCB-t3	1.94	.56	-.27	-.23	-.27	-.16	-.12	.19	.11	.25	.12	.11	.62	.59							
14.OCB-t4	2.23	.62	-.29	-.27	-.24	-.27	-.16	.15	.14	.14	.24	.10	.58	.57	.62						
15.OCB-t5	2.13	.76	-.19	-.13	-.17	-.21	-.24	.21	.16	.11	.21	.16	.59	.55	.61	.56					
16. Dev-t1	1.33	.57	.22	.21	.14	.12	.09	-.10	-.11	-.11	-.07	-.05	-.26	-.21	-.22	-.18	-.11				
17.Dev-t2	1.45	.43	.27	.24	.15	.17	.11	-.03	-.19	-.14	-.11	-.02	-.21	-.29	-.19	-.21	-.14	.58			
18.Dev-t3	1.21	.63	.31	.22	.21	.15	.10	.02	-.13	-.20	-.16	-.05	-.22	-.17	-.31	-.22	-.13	.61	.61		
19.Dev-t4	1.53	.44	.29	.28	.17	.22	.15	-.06	-.15	-.17	-.19	-.12	-.19	.18	-.19	-.34	-.26	.67	.56	.60	
20.Dev-t5	1.89	.45	.31	.32	.25	.24	.21	-.07	-.05	-.11	-.04	-.09	-.21	-.23	-.24	-.31	-.33	.55	.62	.64	.65
21.InM-t1	2.35	.75	.22	.24	.21	.16	.14	-.36	-.21	-.17	-.13	-.11	-.24	-.20	-.18	-.15	-.11	.45	.36	.32	.24
22.InM-t2	2.43	.73	.24	.26	.17	.14	.17	-.31	-.32	-.19	-.13	-.13	-.17	-.26	-.19	-.14	-.14	.42	.42	.27	.21
23.InM-t3	2.21	.68	.28	.21	.27	.18	.15	-.34	-.20	-.26	-.15	-.12	-.13	-.19	-.25	-.16	-.18	.35	.31	.35	.25
24.InM-t4	2.78	.71	.31	.25	.19	.23	.16	-.31	-.24	-.21	-.21	-.17	-.17	-.17	-.16	-.21	-.20	.31	.29	.27	.31
25.InM-t5	3.01	.66	.28	.21	.21	.15	.21	-.32	-.26	-.19	-.18	-.22	-.15	-.19	-.17	-.19	-.26	.40	.26	.26	.25
26.ProM-t1	3.11	.49	.04	.01	.03	.01	.03	.26	.21	.21	.19	.15	.25	.21	.16	.14	.11	-.21	-.15	-.13	-.11
27.ProM-t2	3.02	.45	.06	.12	.02	.04	.02	.23	.29	.21	.18	.16	.21	.26	.15	.16	.12	-.16	-.23	-.14	-.12
28.ProM-t3	3.12	.46	.02	.05	.09	.05	.06	.21	.22	.24	.20	.19	.20	.22	.24	.17	.16	-.11	-.12	-.25	-.17
29.ProM-t4	2.98	.44	.10	.02	.02	.11	.10	.25	.24	.19	.23	.21	.23	.23	.15	.25	.21	-.09	-.14	-.13	-.21

30.ProM-t5	2.56	.46	.05	.06	.06	.04	.12	.19	.23	.18	.18	.25	.21	.19	.11	.20	.27	-.10	-.16	-.16	-.15
31.PSM-t1	5.52	.47	.12	.11	.13	.11	.09	.14	.12	.11	.12	.14	.14	.09	.06	.04	.07	-.11	-.14	-.13	-.10
32.PSM-t2	4.78	.44	.17	.21	.14	.16	.10	.11	.17	.14	.13	.11	.09	.16	.11	.06	.03	-.08	-.19	-.14	-.15
33.PSM-t3	5.21	.38	.13	.13	.25	.16	.15	.13	.13	.19	.16	.09	.11	.04	.15	.04	.06	-.09	-.08	-.21	-.11
34.PSM-t4	5.24	.56	.19	.12	.15	.23	.16	.10	.14	.09	.22	.21	.08	.11	.07	.11	.09	-.04	-.05	-.16	-.21
35.PSM-t5	5.56	.54	.21	.16	.17	.14	.23	.13	.11	.10	.17	.25	.10	.10	.05	.07	.13	-.05	-.07	-.11	-.19
36.SSM-t1	3.21	.61	.32	.25	.19	.16	.14	-.21	-.11	-.10	-.09	-.05	-.12	-.11	-.09	-.06	-.03	.13	.09	.05	.03
37.SSM-t2	2.79	.56	.35	.27	.15	.12	.11	-.19	-.23	-.14	-.08	-.09	-.09	-.12	-.14	-.04	-.06	.09	.11	.04	.06
38.SSM-t3	3.58	.60	.27	.22	.23	.15	.13	-.14	-.17	-.21	-.11	-.11	-.06	-.09	-.11	-.10	-.09	.04	.06	.12	.07
39.SSM-t4	3.67	.58	.21	.21	.18	.23	.16	-.11	-.13	-.16	-.14	-.12	-.11	-.05	-.09	-.16	-.12	.06	.04	.09	.13
40.SSM-t5	3.52	.57	.35	.19	.15	.19	.24	-.16	-.15	-.19	-.06	-.23	-.08	-.08	-.10	-.11	-.14	.05	.05	.07	.09

TABLE 6 Descriptive Statistics and Correlations among Key Variables in Essay 2 (continued)

	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
21.InM-t1	.23																			
22.InM-t2	.24	.62																		
23.InM-t3	.21	.58	.57																	
24.InM-t4	.25	.57	.61	.59																
25.InM-t5	.28	.55	.60	.58	.55															
26.ProM-t1	-.17	-.18	-.14	-.11	-.10	-.12														
27.ProM-t2	-.15	-.11	-.15	-.08	-.10	-.09	.65													
28.ProM-t3	-.18	-.13	-.09	-.14	-.13	-.08	.68	.52												
29.ProM-t4	-.13	-.15	-.11	-.11	-.17	-.07	.56	.50	.56											
30.ProM-t5	-.22	-.13	-.12	-.10	-.12	-.15	.67	.57	.61	.63										
31.PSM-t1	-.11	-.14	-.09	-.06	-.05	-.04	.13	.10	.11	.10	.09									
32.PSM-t2	-.14	-.11	-.13	-.07	-.10	-.08	.11	.14	.12	.13	.07	.57								
33.PSM-t3	-.13	-.09	-.06	-.12	-.09	-.05	.09	.08	.15	.07	.06	.57	.54							
34.PSM-t4	-.16	-.08	-.04	-.04	-.14	-.11	.10	.05	.09	.14	.10	.54	.55	.52						
35.PSM-t5	-.21	-.09	-.03	-.06	-.11	-.13	.11	.06	.10	.06	.11	.58	.59	.58	.60					
36.SSM-t1	.05	.11	.06	.11	.10	.08	-.12	-.08	-.06	-.06	-.02	-.02	-.01	.03	-.01	-.02				
37.SSM-t2	.05	.08	.12	.10	.09	.05	-.09	-.13	-.09	-.08	-.05	-.01	-.05	.02	-.01	-.01	.56			
38.SSM-t3	.07	.06	.06	.15	.11	.09	-.07	-.05	-.13	-.11	-.09	.00	-.03	.01	.01	.02	.58	.47		
39.SSM-t4	.06	.09	.07	.09	.16	.04	-.10	-.06	-.04	-.14	-.04	-.02	-.01	-.02	.00	.03	.53	.51	.44	
40.SSM-t5	.10	.06	.03	.07	.08	.13	-.07	-.06	-.05	-.08	-.12	-.01	.02	-.01	.03	.01	.60	.49	.47	.51

Note. N= 512. AS=abusive supervision, Perf = performance, Dev=deviance, InM = attributed injury initiation motive, ProM = attributed performance promotion promotion, PSM = pro-social motive, SSM=self-serving motive. t1, t2, t3, t4, t5 = Time1, Time2, Time3, Time4, and Time5. All correlations are significant at $p < .05$.

TABLE 7 Fitness and Parameter Estimates for Bivariate LCS Models with Abusive Supervision and Subordinate's Work Outcomes in Essay 3

Bivariate LCS model	Model fit indices				Parameter estimates (<i>SE</i>)			
	$\chi^2(df)$	CFI	TLI	RMSEA	Lagged effect of work outcomes, γ_1	Lagged effect of abusive supervision, γ_2	Mean of Slope 2, linear trajectory for work outcomes	Mean of Intercept 2, starting point for work outcomes
Performance, Model 1	1788.61(418)	.91	.91	.056	-.08*(.05)	-.16**(.05)	-.21(.34)	-2.57**(.21)
OCBs, Model 2	1123.47(418)	.92	.92	.049	-.09*(.03)	-.15**(.04)	-.17(.57)	-3.11**(.19)
Deviance, Model 3	992.34(418)	.92	.92	.056	.11**(.05)	.31**(.08)	.56*(.25)	3.13**(.16)

Note. OCBs = organizational citizenship behaviors. * $p < .05$, ** $p < .01$.

TABLE 8 Descriptive Statistics and Correlations of Level 1 (Individual-Level) Variables in Essay 3

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1.Age	33.64	11.71							
2.Gender	0.62	0.55	.05						
3.Tenure	3.74	1.52	.38**	.06					
4.Abusive supervision (mean)	1.67	0.98	.09	.02	.07				
5.Abusive supervision trajectory	0.08	0.25	.06	.00	.02	-.06			
6.Task performance (sales)	5.95	1.37	.11	.05	.13*	-.26**	-.14*		
7.OCBs	3.26	1.04	.08	.12	.06	-.16*	-.13*	.08	
8.Deviance	1.57	0.81	-.04	-.08	-.04	.33**	.20**	.02	.03

Note. N = 832 individuals. Average levels across stage 1 to 4 are reported for variable 4, 5, 6, 7, and 8. The unit for task performance is dollars in thousands. Female = 1, Male = 0. * $p < .05$, ** $p < .01$.

TABLE 9 Descriptive Statistics and Correlations of Level 2 (Team-Level) Variables in Essay 3

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1.Age	31.56	10.83								
2.Gender	0.58	0.34	.07							
3.Tenure	3.18	0.99	.25**	.05						
4.Abusive supervision (mean)	1.54	1.02	.06	-.03	.05					
5.Abusive supervision trajectory	0.05	0.23	.04	.03	.02	-.05				
6.Abusive supervision trajectory dispersion	0.04	0.17	.03	-.02	.06	.04	.03			
7.Task performance (sales)	4.93	1.05	.13	.04	.11	-.23**	-.12*	-.08		
8.OCBs	3.01	0.87	.03	.09	.06	-.13	-.10	-.04	.06	
9.Deviance	1.22	0.52	-.09	-.11	-.07	.28**	.17*	.09	.03	.02

Note. N = 186 teams. Average levels across stage 1 to 4 are reported for variable 4, 5, 6, 7, and 8. The unit for task performance is dollars in thousands. Female = 1, Male = 0. * $p < .05$, ** $p < .01$.

TABLE 10 Multilevel Modeling Results on Individual Outcomes in Essay 3—Task Performance

Variables	Model 1	Model 2	Model 3
<i>Intercept</i>	-1.13*	-1.08*	-1.02*
	(.42)	(.41)	(.39)
<i>Level 1 variables</i>			
Average levels of abusive supervision	-.19*	-.15	-.16
	(.05)	(.08)	(.04)
Individual abusive supervision trajectory	-.21**	-.18*	-.17
	(.07)	(.05)	(.06)
<i>Level 2 variables</i>			
Team average levels of abusive supervision		-.17*	-.15
		(.03)	(.10)
Team-level abusive supervision trajectory		-.26**	-.21**
		(.15)	(.13)
Abusive supervision trajectory dispersion			-.14
			(.18)
Team-level abusive supervision trajectory X Abusive supervision trajectory dispersion			-.13
			(.06)
<i>Cross-level interactions</i>			
Individual abusive supervision trajectory X Team-level abusive supervision trajectory			-.08
			(.12)
Individual abusive supervision trajectory X Abusive supervision trajectory dispersion			.21*
			(.15)
Individual abusive supervision trajectory X Team-level abusive supervision trajectory X Abusive supervision trajectory dispersion			.33*
			(.17)
<i>R</i> ²	.15	.23	.35

Note. N = 1,395 individuals at level 1; n = 186 teams at level 2. Standard errors are noted in parentheses where applicable. I also ran analyses with gender, age, tenure, and negative affectivity at both individual and team levels as controls and found none of them was significant. Therefore, the final analyses omit these control variables to maximize statistical power (Becker, 2005). * $p < .05$, ** $p < .01$.

TABLE 11 Multilevel Modeling Results on Individual Outcomes in Essay 3—OCBs

Variables	Model 1	Model 2	Model 3
<i>Intercept</i>	-1.08*	-.99*	-.87*
	(.23)	(.22)	(.16)
<i>Level 1 variables</i>			
Average levels of abusive supervision	-.16*	-.12	-.14
	(.07)	(.04)	(.06)
Individual abusive supervision trajectory	-.18**	-.16*	-.13
	(.09)	(.06)	(.05)
<i>Level 2 variables</i>			
Team average levels of abusive supervision		-.14	-.16
		(.08)	(.11)
Team-level abusive supervision trajectory		-.22**	-.19*
		(.14)	(.08)
Abusive supervision trajectory dispersion			-.10
			(.08)
Team-level abusive supervision trajectory X Abusive supervision trajectory dispersion			-.12
			(.03)
<i>Cross-level interactions</i>			
Individual abusive supervision trajectory X Team-level abusive supervision trajectory			-.04
			(.02)
Individual abusive supervision trajectory X Abusive supervision trajectory dispersion			.17*
			(.12)
Individual abusive supervision trajectory X Team-level abusive supervision trajectory X Abusive supervision trajectory dispersion			.28*
			(.13)
<i>R</i> ²	.11	.22	.29

Note. N = 1,395 individuals at level 1; n = 186 teams at level 2. Standard errors are noted in parentheses where applicable. I also ran analyses with gender, age, tenure, and negative affectivity at both individual and team levels as controls and found none of them was significant. Therefore, the final analyses omit these control variables to maximize statistical power (Becker, 2005). * $p < .05$, ** $p < .01$.

TABLE 12 Multilevel Modeling Results on Individual Outcomes in Essay 3—Deviance

Variables	Model 1	Model 2	Model 3
<i>Intercept</i>	1.25* (.38)	1.17* (.32)	1.07* (.25)
<i>Level 1 variables</i>			
Average levels of abusive supervision	.21** (.13)	.18 (.11)	.18 (.10)
Individual abusive supervision trajectory	.24** (.15)	.21* (.14)	.19 (.11)
<i>Level 2 variables</i>			
Team average levels of abusive supervision		.18* (.08)	.16 (.11)
Team-level abusive supervision trajectory		.29** (.12)	.23* (.14)
Abusive supervision trajectory dispersion			.16 (.07)
Team-level abusive supervision trajectory X Abusive supervision trajectory dispersion			.15 (.07)
<i>Cross-level interactions</i>			
Individual abusive supervision trajectory X Team-level abusive supervision trajectory			.11 (.08)
Individual abusive supervision trajectory X Abusive supervision trajectory dispersion			.23* (.14)
Individual abusive supervision trajectory X Team-level abusive supervision trajectory X Abusive supervision trajectory dispersion			.35* (.19)
<i>R</i> ²	.12	.24	.38

Note. N = 1,395 individuals at level 1; n = 186 teams at level 2. Standard errors are noted in parentheses where applicable. I also ran analyses with gender, age, tenure, and negative affectivity at both individual and team levels as controls and found none of them was significant. Therefore, the final analyses omit these control variables to maximize statistical power (Becker, 2005). * $p < .05$, ** $p < .01$.

TABLE 13 Multilevel Modeling Results on Team Outcomes in Essay 3—Task Performance

Variables	Model 1	Model 2	Model 3
<i>Intercept</i>	-.34** (.11)	-.27** (.12)	-.27** (.08)
<i>Independent variables</i>			
Team average levels of abusive supervision	-.13** (.09)	-.12** (.06)	-.10* (.05)
Team-level abusive supervision trajectory		-.14** (.08)	-.12* (.04)
Abusive supervision trajectory dispersion			-.05 (.02)
<i>Interaction variables</i>			
Team-level abusive supervision trajectory X Abusive supervision trajectory dispersion			.32* (.14)
R^2	.08	.17	.25
F	2.43*	2.52*	2.63**
ΔR^2		.09**	.08**

Note. N = 1,395 individuals at level 1; n = 186 teams at level 2. Standard errors are noted in parentheses where applicable. I also ran analyses with gender, age, tenure, and negative affectivity at both individual and team levels as controls and found none of them was significant. Therefore, the final analyses omit these control variables to maximize statistical power (Becker, 2005). * $p < .05$, ** $p < .01$.

TABLE 14 Multilevel Modeling Results on Team Outcomes in Essay 3—OCBs

Variables	Model 1	Model 2	Model 3
<i>Intercept</i>	-.25** (.06)	-.21* (.07)	-.20* (.03)
<i>Independent variables</i>			
Team average levels of abusive supervision	-.11* (.03)	-.11* (.04)	-.10 (.04)
Team-level abusive supervision trajectory		-.13** (.05)	-.11 (.03)
Abusive supervision trajectory dispersion			-.04 (.02)
<i>Interaction variables</i>			
Team-level abusive supervision trajectory X Abusive supervision trajectory dispersion			.28* (.10)
R^2	.06	.14	.23
F	2.21*	2.34*	2.40**
ΔR^2		.08**	.09**

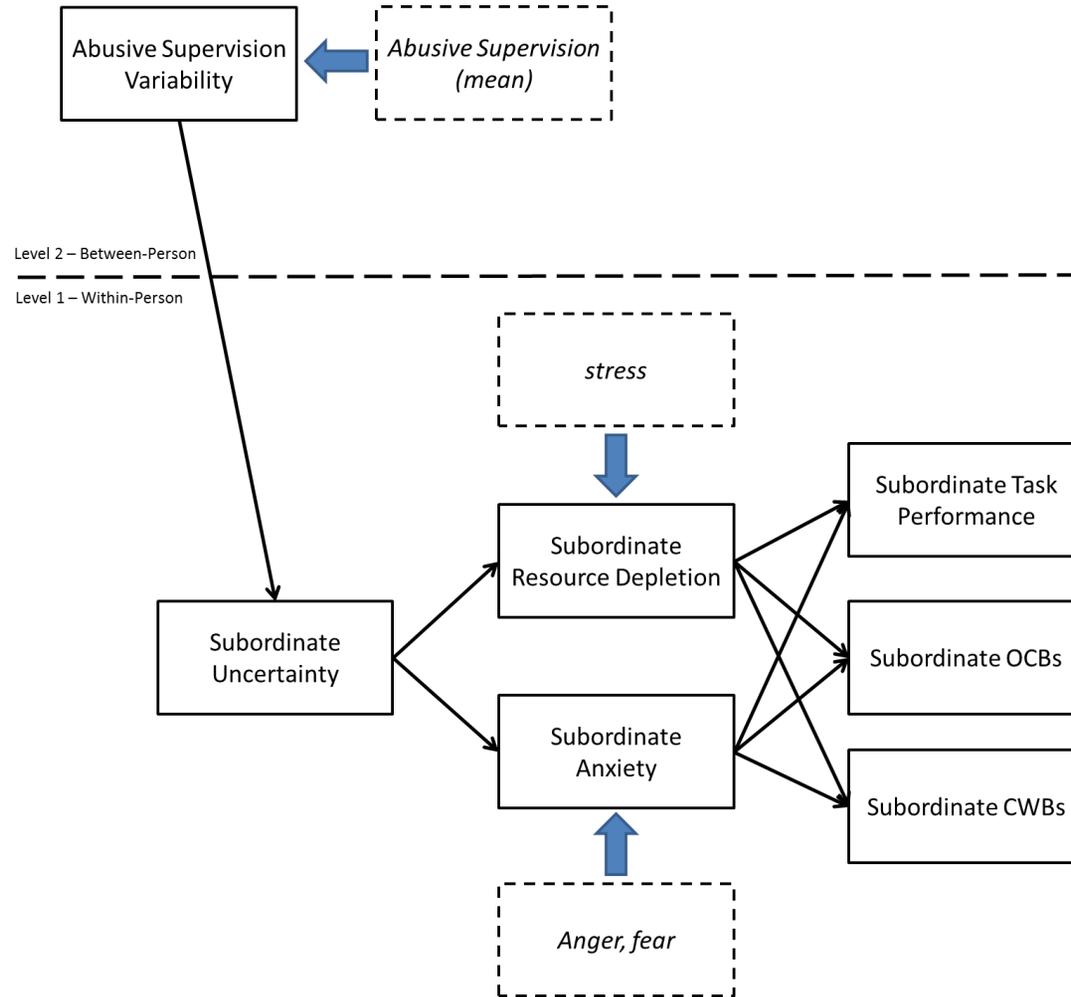
Note. N = 1,395 individuals at level 1; n = 186 teams at level 2. Standard errors are noted in parentheses where applicable. I also ran analyses with gender, age, tenure, and negative affectivity at both individual and team levels as controls and found none of them was significant. Therefore, the final analyses omit these control variables to maximize statistical power (Becker, 2005). * $p < .05$, ** $p < .01$.

TABLE 15 Multilevel Modeling Results on Team Outcomes in Essay 3—Deviance

Variables	Model 1	Model 2	Model 3
<i>Intercept</i>	.45** (.21)	.41** (.19)	.37** (.18)
<i>Independent variables</i>			
Team average levels of abusive supervision	.17** (.12)	.16** (.08)	.14* (.06)
Team-level abusive supervision trajectory		.15** (.05)	.12 (.03)
Abusive supervision trajectory dispersion			.07 (.04)
<i>Interaction variables</i>			
Team-level abusive supervision trajectory X Abusive supervision trajectory dispersion			.36* (.18)
R^2	.09	.15	.24
F	2.47*	2.58*	2.66**
ΔR^2		.06**	.09**

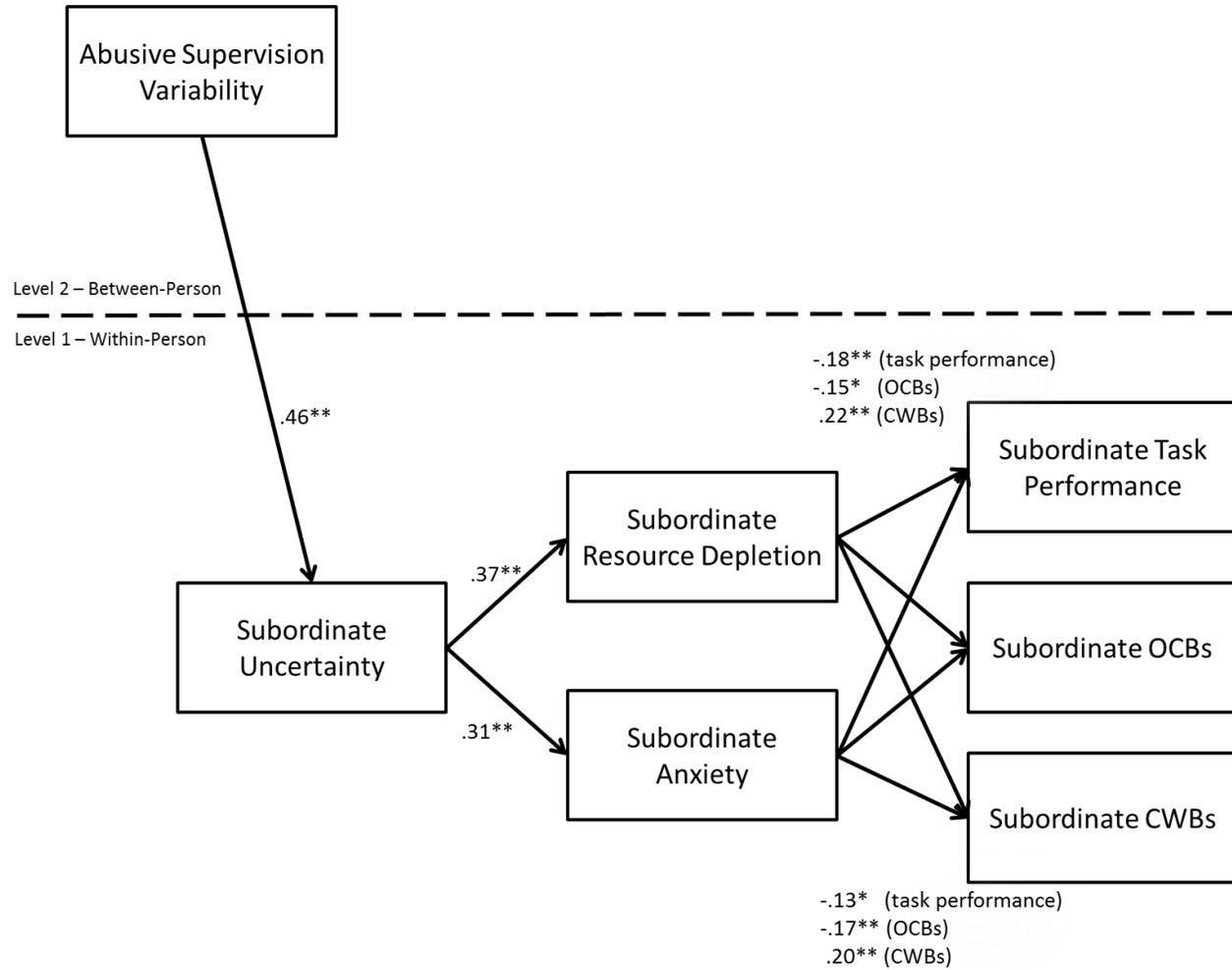
Note. N = 1,395 individuals at level 1; n = 186 teams at level 2. Standard errors are noted in parentheses where applicable. I also ran analyses with gender, age, tenure, and negative affectivity at both individual and team levels as controls and found none of them was significant. Therefore, the final analyses omit these control variables to maximize statistical power (Becker, 2005). * $p < .05$, ** $p < .01$.

FIGURE 1 Theoretical Model in Essay 1



Note. Dashed borders indicate control variables.

FIGURE 2 Theoretical Model with Multilevel Path Analyses Results in Essay 1



Note. $N = 188$ supervisor-subordinate dyads. Control variables are not shown for ease of presentation. $*p < .05$, $** p < .01$.

FIGURE 3 Theoretical Model in Essay 2

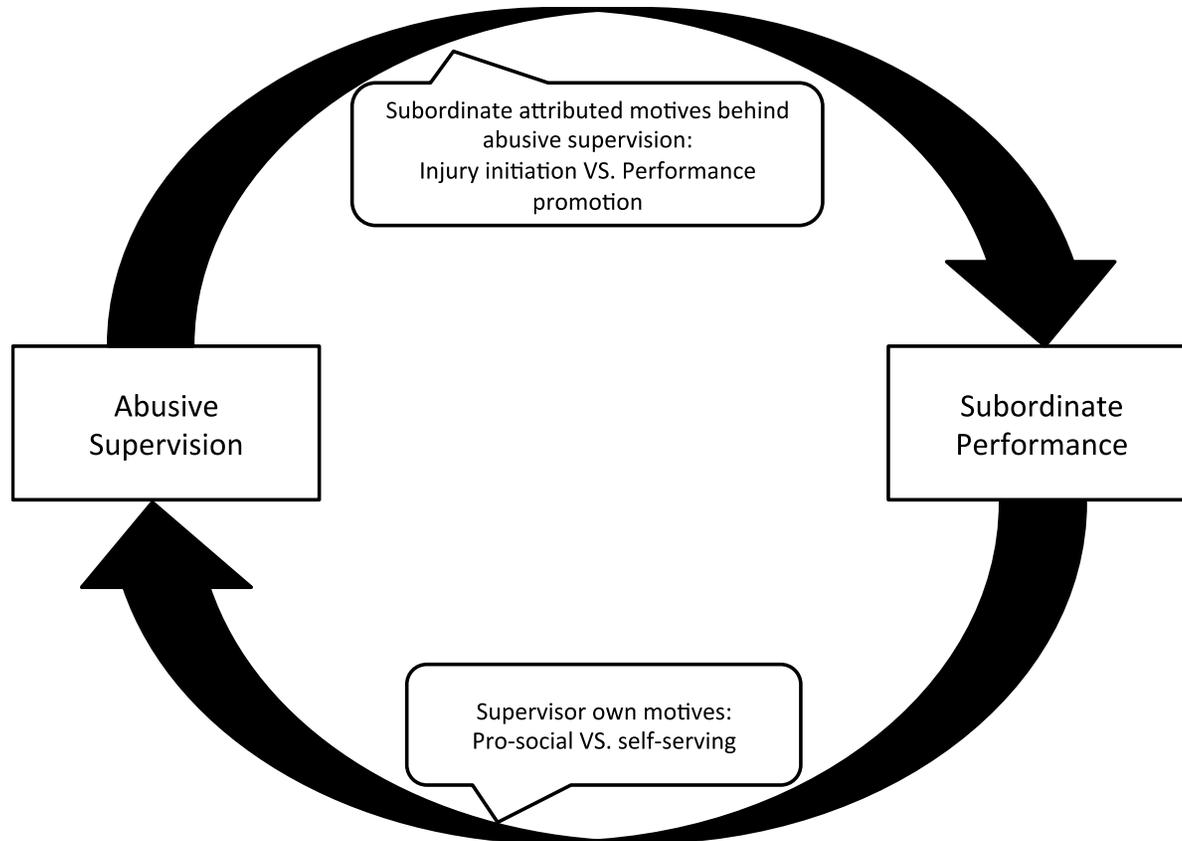
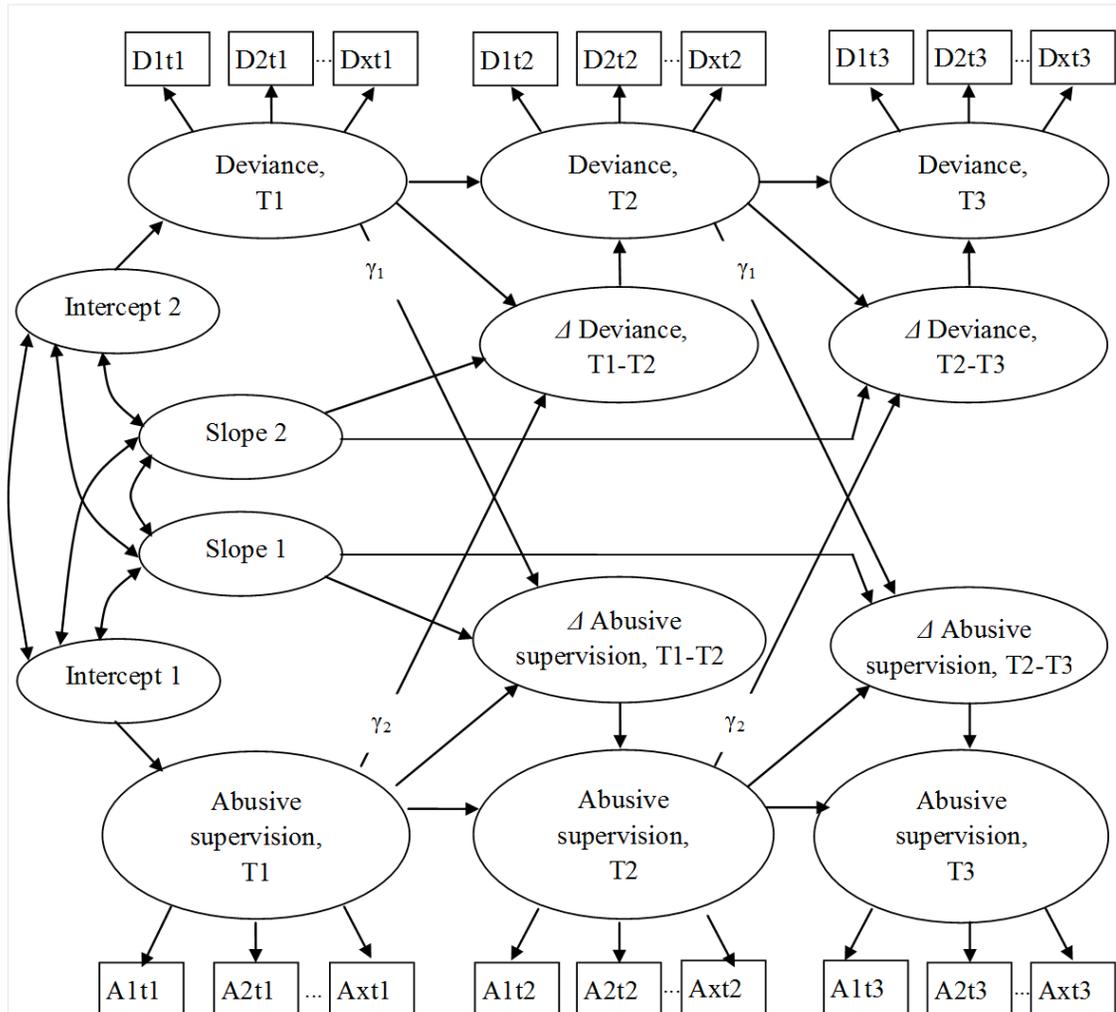


FIGURE 4 Bivariate LCS Model for Abusive Supervision and Deviance in Essay 2



Note. Adapted from Ferrer & McArdle (2010, p. 151), Li et al (2014, p.8) and McArdle (2009, p. 596). This is a simplified representation of a bivariate latent change score model across three occasions. Paths from a variable at Time n to the same variable at Time $n + 1$ are fixed to 1, the same for the paths from a latent change variable from Time n to the same construct at Time $n + 1$. See McArdle (2001, 2009) and Li et al (2014) for more details. T1, T2, and T3 = Time 1, Time 2, and Time 3. A1t1, A2t1, Axt1 = item parcels for abusive supervision at Time 1; A1t2, A2t2, Axt2 = item parcels for abusive supervision at Time 2; A1t3, A2t3, Axt3 = item parcels for abusive supervision at Time 3; D1t1, D2t1, Dxt1 = item parcels for Deviance at Time 1; D1t2, D2t2, Dxt2 = item parcels for Deviance at Time 2; D1t3, D2t3, Dxt3 = item parcels for Deviance at Time 3.

FIGURE 5 Theoretical Model in Essay 3

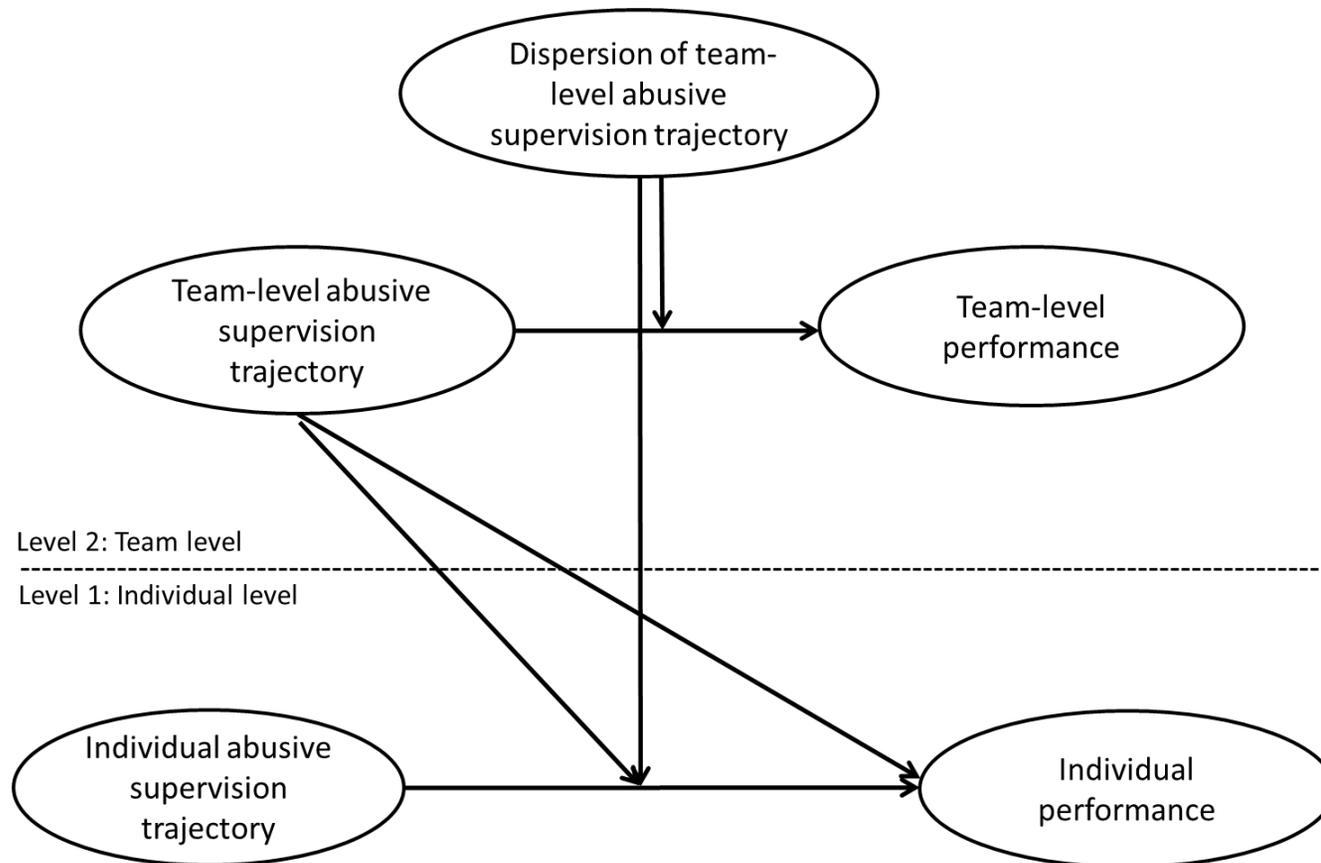


FIGURE 6a Three-Way Interactive Effect on Individual Outcomes in Essay 3—Task Performance

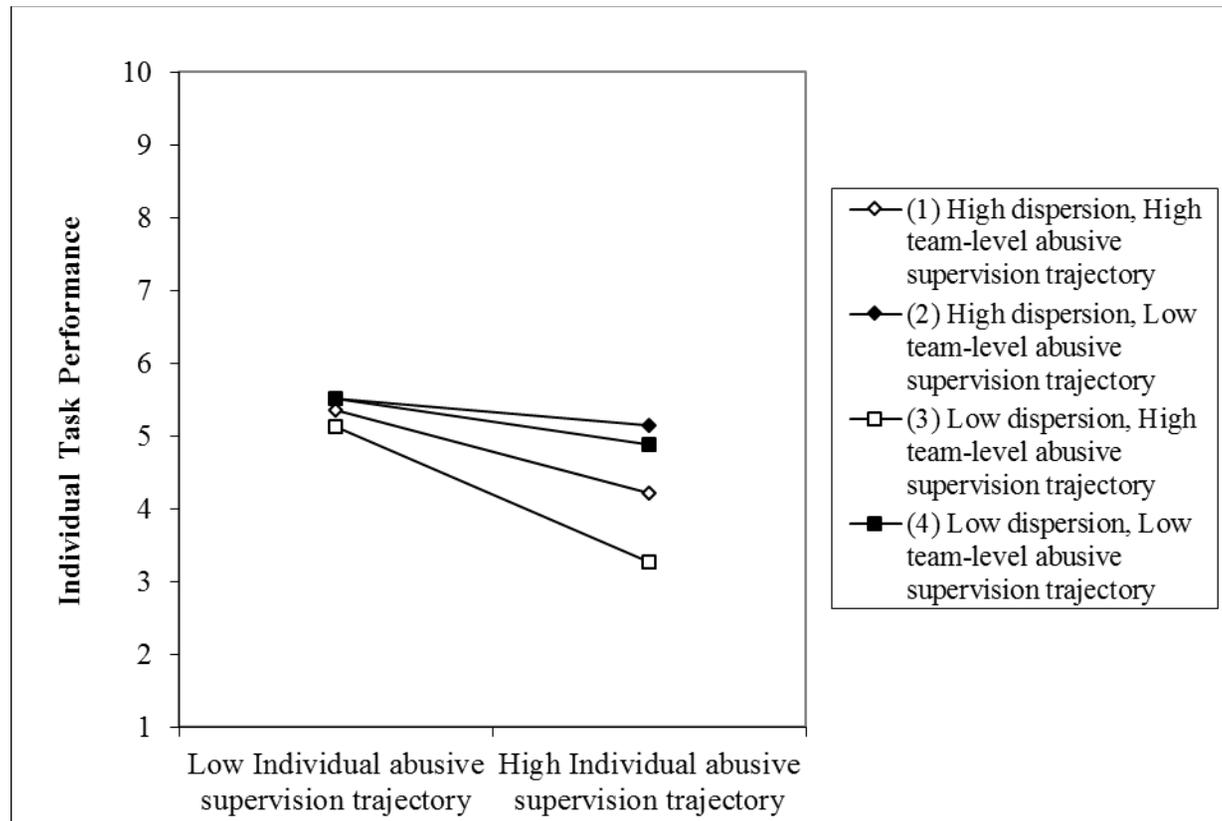


FIGURE 6b Three-Way Interactive Effect on Individual Outcomes in Essay 3—OCBs

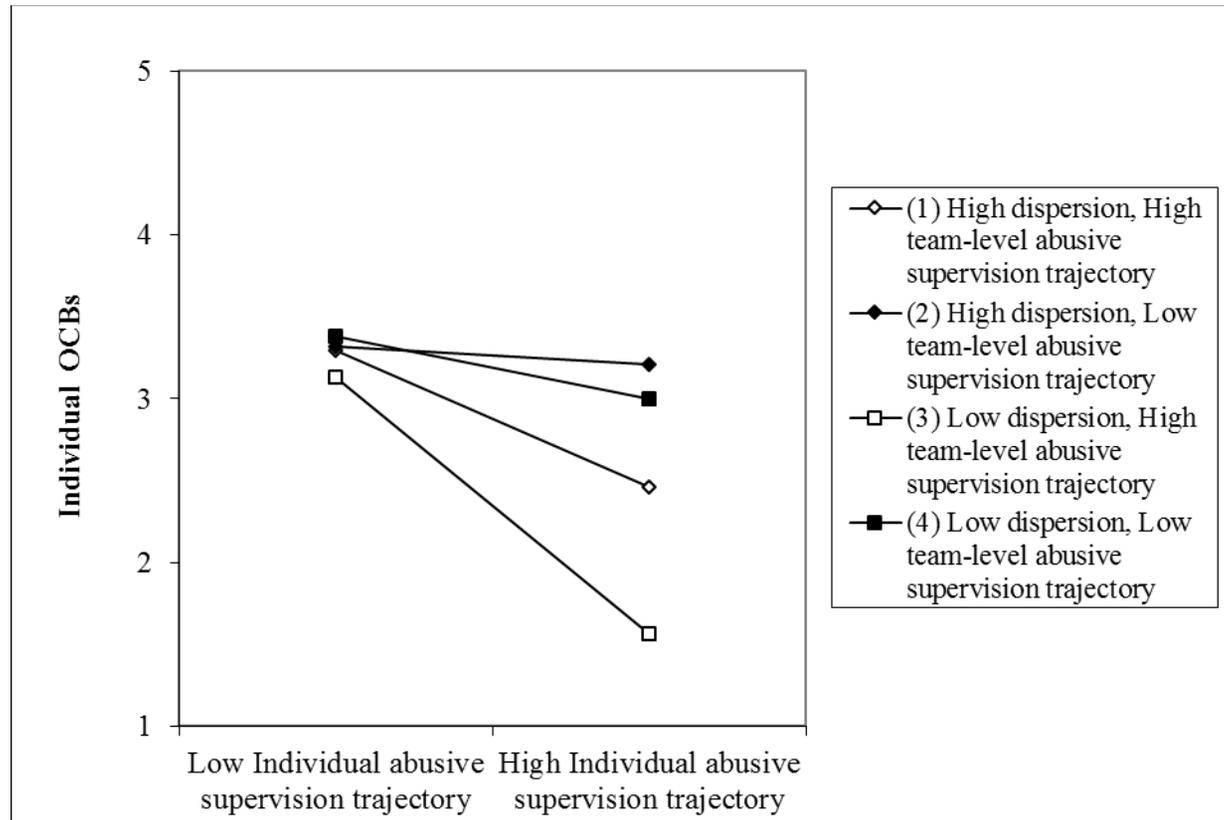


FIGURE 6c Three-Way Interactive Effect on Individual Outcomes in Essay 3—Deviance

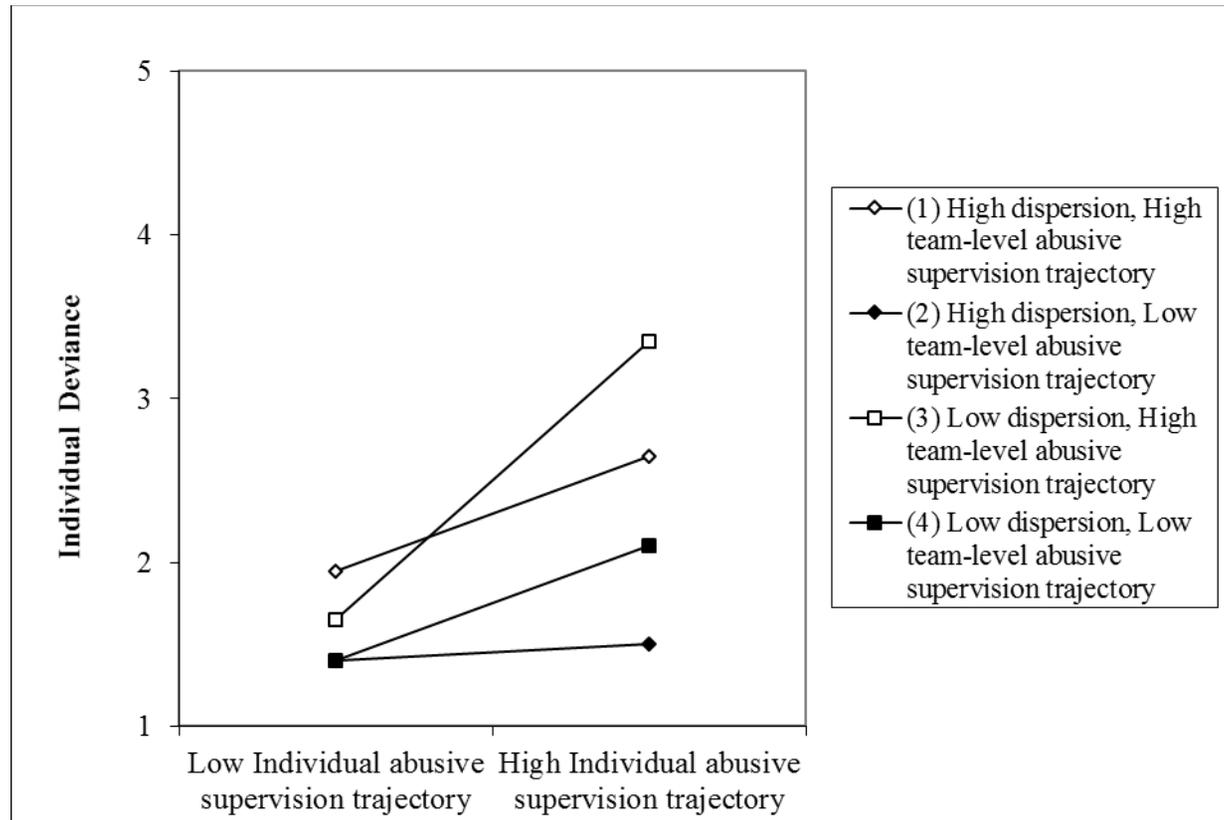


FIGURE 7a Interactive Effect on Individual Outcomes in Essay 3—Task Performance

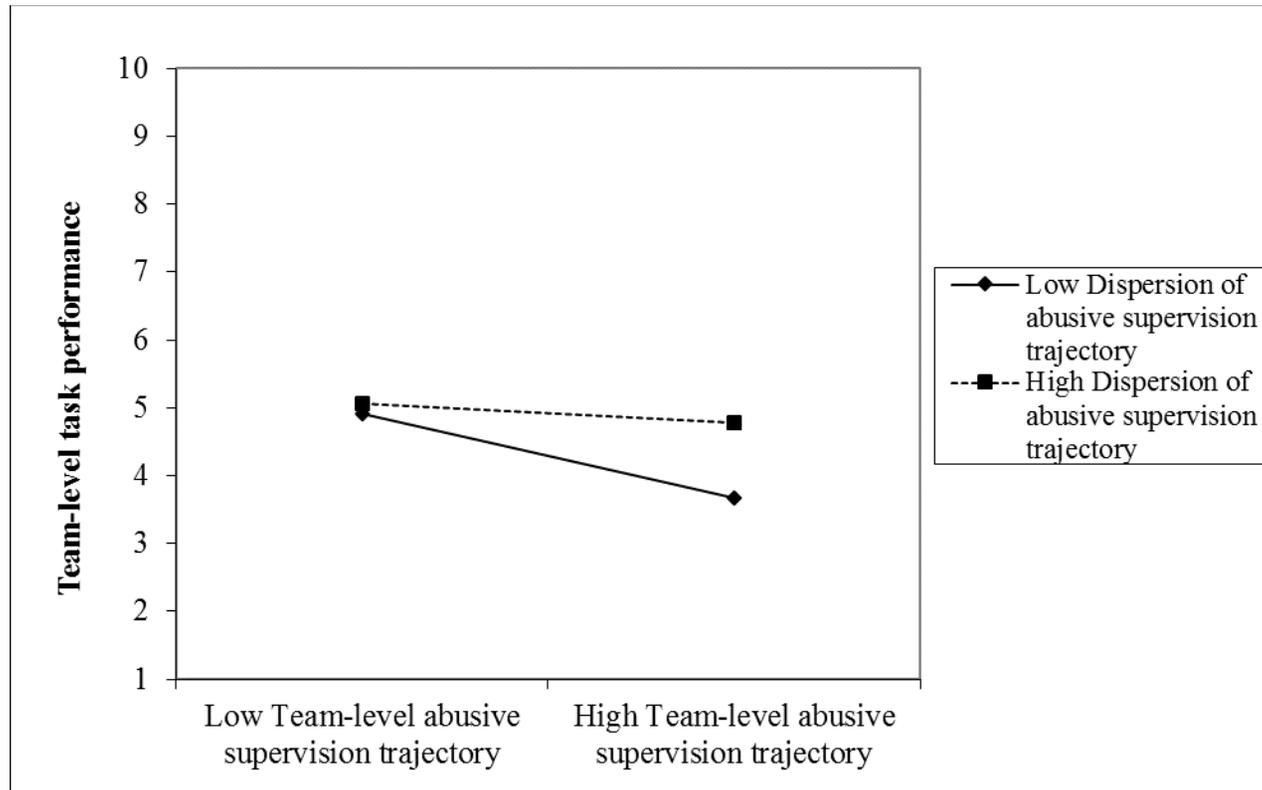


FIGURE 7b Interactive Effect on Individual Outcomes in Essay 3—OCBs

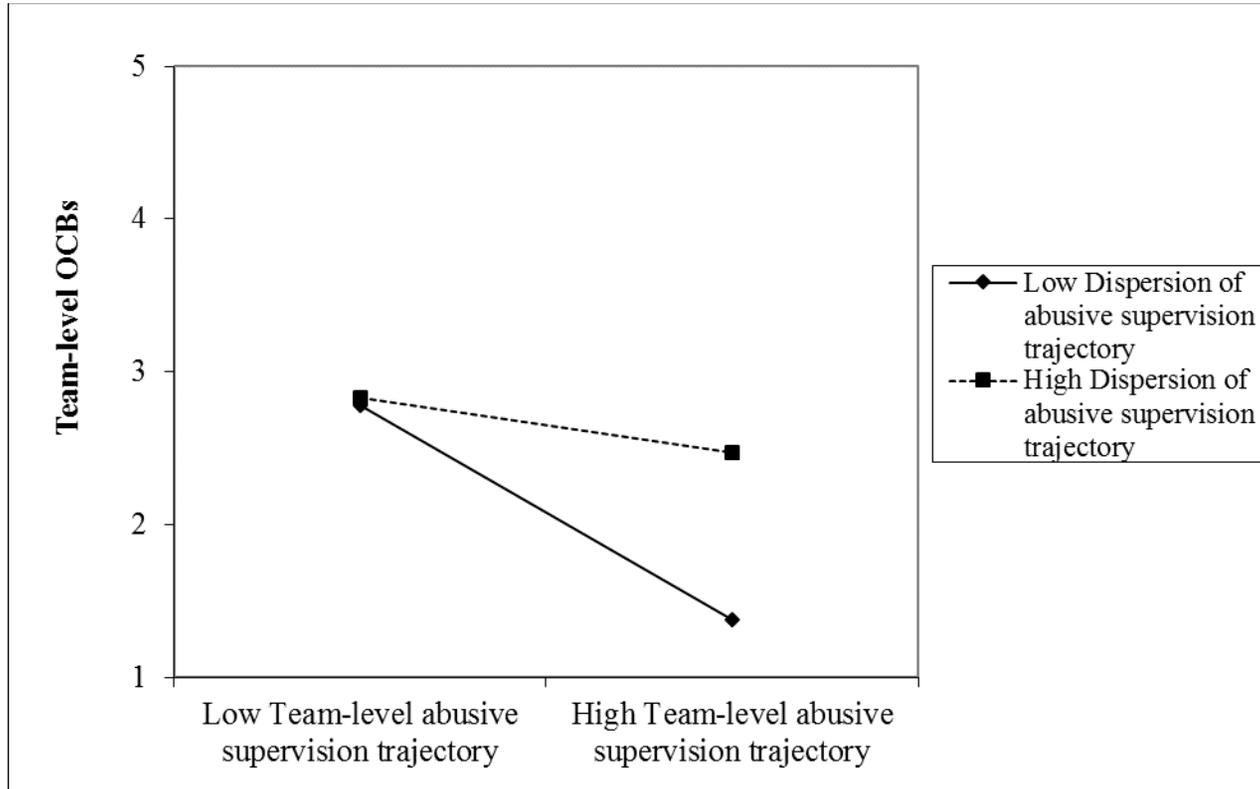


FIGURE 7c Interactive Effect on Individual Outcomes in Essay 3—Deviance

