



A Social Exchange Perspective of Abusive Supervision and Knowledge Sharing: Investigating the Moderating Effects of Psychological Contract Fulfillment and Self-Enhancement Motive

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Abstract

Given the importance of knowledge management in this competitive environment, the purpose of the present study is to fill the gap in contemporary literatures of knowledge sharing behavior and abusive supervision by observing the main effect, mechanism, and moderators. Based on social exchange perspective, we propose a theoretical model that links abusive supervision to employee knowledge sharing as mediated by leader-member exchange (LMX) with conditional processes. Employing a sample of 184 supervisor-subordinate dyads, we carried out a survey in large listed companies in South Korea. To test our hypotheses, we conducted multiple regression analyses and used bootstrapping procedures. Our results suggest that LMX mediates the abusive supervision and knowledge sharing relationship. Most significantly, findings show that this mediated relationship is contingent on the level of psychological contract fulfillment and self-enhancement motive. One of the most critical implications of our work is that negative influence of hostile behaviors of supervisors on knowledge sharing via LMX may actually be attenuated by perceptions of employees formed both from the organization (i.e., psychological contract fulfillment) and from oneself (i.e., self-enhancement motive). Moreover, it also provides practical insights for both the management practitioner and the organization. Extending from earlier studies, this research enriches our understanding of organizational behavior research by demonstrating an overall complete picture of a moderated-mediation model between abusive supervision and knowledge sharing by uncovering a mediator explaining the mechanism and moderators buffering the negative effect of abusive supervision.

Keywords Knowledge sharing · Abusive supervision · Leader-member exchange · Psychological contract · Self-enhancement motive

Introduction

Organizational knowledge is recognized as an invaluable resource to a firm's competitive advantage in this dynamic society (Grant, 1996; Spender & Grant, 1996). Companies expend great effort on ensuring effective knowledge management to encourage individuals to share their knowledge (Quigley, Tesluk, Locke, & Bartol, 2007). However, since each person shares his or her knowledge, it is important to identify factors that influence knowledge sharing at the individual level. Despite the growing significance of sharing knowledge between individuals, it is not easy to stimulate employees to share their knowledge in the competitive workplace, because this behavior is not mandatory in most organizations (Cabrera, & Cabrera, 2005; Kim, Han, Son, & Yun, 2017). Moreover, knowledge is a critical asset for each

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individual in the workplace (French & Raven, 1959); therefore, employees may feel risks in sharing their valuable knowledge with others. Given its voluntary nature, employees are likely to engage in knowledge sharing when they receive benefits or feel obligated towards a supervisor or organization (Kim et al., 2017). On the other hand, employees may choose not to exhibit knowledge sharing behavior when they receive negative treatment from major actors in the workplace. From this perspective, this research examines knowledge sharing predictors, particularly leader behavior with its mechanism and moderators based on a social exchange framework.

The importance of leader behavior has been emphasized because of its critical role in organizational efficiency and goal achievement and in employee engagement (Dierdorff, Rubin, & Morgeson, 2009). Since the behavior of a leader could be a significant factor affecting the level of support or resources, much of the leadership research on knowledge sharing focuses on effective leader behaviors (e.g., Srivastava, Bartol, & Locke, 2006). However, the influence of leaders on employees is not always positive (Tepper, 2000, 2007). Leaders are often regarded as key decision-makers and have unique responsibilities in the organization. As such, their destructive behaviors are likely to reduce employees' job-related performance. Recently, scholars have been concerned about abusive supervision, a widespread phenomenon in today's organizational context (Tepper, 2007). Abusive supervision, which refers to "subordinates' perceptions of the extent to which supervisors engage in the sustained display of hostile verbal and nonverbal behaviors, excluding physical contact" (Tepper, 2000, p. 178), is considered an important factor representing "the dark side of leadership." Previous studies significantly and negatively related abusive supervision to employees' attitudes and behaviors (Tepper, 2007). For example, abusive supervision tends to decrease followers' job satisfaction, psychological well-being, and performance outcomes (Martinko, Harvey, Brees, & Mackey, 2013). Based on these observations, we assume that abusive supervision, a common type of destructive leadership, may act as a key barrier to employees' knowledge sharing behavior. However, the relationship between abusive supervision and knowledge sharing has not been investigated much.

Considering that employees may perceive high risks in sharing their knowledge, leaders' abusive behavior is harmful to employees' knowledge sharing behaviors. As such, abused employees may not automatically share their knowledge with others. Knowledge sharing is usually regarded as voluntary behavior despite the benefits to the team and organization (Kim, Kim, & Yun, 2015). Therefore, employees may perceive that they have more flexibility to behave (Judge, LePine, & Rich, 2006), easily withdrawing such action than mandatory behaviors. Given the importance of sharing knowledge in this knowledge-based society, it is necessary to determine when employees may decide not to share their

knowledge to deepen our understanding of employees' knowledge sharing behavior. Prior research noted that the impact of negative events is much stronger than that of positive ones (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). Thus, this research contributes to the literature by investigating abusive supervision as an obstacle to employee knowledge sharing.

Examining a mediating mechanism is meaningful in advancing our understanding of the relationship between abusive supervision and knowledge sharing. This study explores leader-member exchange (LMX), which is rooted in social exchange theory, as a mediating mechanism in the relationship between abusive supervision and knowledge sharing. LMX has been widely used as a mediator in the relationship between leader behaviors and outcomes (e.g., Newman, Schwarz, Cooper, & Sendjaya, 2015). Many researchers have investigated individual attitudes or emotional and relational factors as mediators of the link between abusive supervision and outcomes (e.g., Tepper, 2000; Xu, Huang, Lam, & Miao, 2012). Among various possible mediators, we selected a relational factor, namely LMX, since it may best represent the relationship between a supervisor and subordinate and explains why abused employees exhibit negative attitudes and behaviors within a social exchange framework. Since high-quality LMX relationships are likely to develop mutual trust and respect (Graen & Uhl-Bien, 1995), these employees are likely to engage beyond mandatory tasks. In contrast, employees with low-quality LMX relationships are likely to perceive low trust and obligation (Graen & Uhl-Bien, 1995), leading to a low level of voluntary tasks. Drawing on insights from social exchange theory (Blau, 1964), we suggest that abused employees are likely to reduce their knowledge sharing behaviors, since they may not build high-quality LMX relationships based on negative reciprocity consequent to abusive supervision.

Although leader behavior is a factor needed to alter the quality of exchange relationships or the behaviors of employees in the workplace, the influence of such behavior could be changed through situational or personal factors in organizational settings (Chiaburu, Lorinkova, & Van Dyne, 2013). Numerous previous studies adopted an interactionist perspective to examine situational and personal factors that may change the effect of leader behavior on outcomes (e.g., Garcia, Wang, Lu, Kiazad, & Restubog, 2015; Harvey, Stoner, Hochwarter, & Kacmar, 2007; Kacmar, Bachrach, Harris, & Zivnuska, 2011; Tepper, Duffy, & Shaw, 2001). The present study adopts an interactional perspective and considers as moderators one's perceptions towards the organization and oneself. Specifically, we selected psychological contract fulfillment for the purposes of this study, which is defined as "individual beliefs shaped by the organization regarding the terms of an exchange agreement between individuals and their organization" (Rousseau, 1995, p. 9). Psychological contract

theory (Rousseau, 1995; Robinson & Morrison, 2000) suggests that employees form certain perceptions of mutual obligations between themselves and their organizations. Zhao, Wayne, Glibkowski, and Bravo (2007) viewed this construct as a critical lens through which to understand the quality of the exchange relationship between an employer and employee. As such, psychological contract fulfillment can be regarded as a relevant situational factor explaining the exchange relationship between an employer and employee based on the exchange relationship (Zhao et al., 2007). Moreover, the organizational variable is suitable in mitigating the negative effect of abusive supervision (Kim et al., 2015). Despite the usefulness of situational factors that buffer the negative effect of abusive supervision on outcomes, few studies examine situational factors as moderators. Aryee, Sun, Chen, and Debrah (2008) investigated the work unit structure as a moderator in the relationship between abusive supervision and contextual performance dimensions of interpersonal facilitation and job dedication. Thus, since employees with high psychological contract fulfillment develop an implicit obligation to reciprocate the organization with stronger affective bonds (Blau, 1964), we predict that the negative effect of abusive supervision on LMX could weaken if focal employees perceive their psychological contract as fulfilled.

In addition, as a personal factor, we selected as an individual moderator the self-enhancement motive, which represents the positive aspect of impression management, since the negative impact of abusive supervision varies depending on individual characteristics (c.f., Tepper et al., 2001). In the workplace, employees engaged in impression management attempt to improve the image they portray to others including supervisors (Bolino, Kacmar, Turnley, & Gilstrap, 2008). Although abusive supervision tends to ruin the quality of LMX, not all abused employees engage in low-quality LMX relationships. In particular, individuals with a certain motive may adjust their feelings (Grant & Mayer, 2009), thereby reducing the harmful effects of abusive supervision on LMX. Recognizing the critical role of personal factors, previous studies indicated that individuals may or may not cope with stressful situations such as abusive supervision depending on their abilities, motivations, or characteristics (Chi & Liang, 2013). Scholars explained that emotional contagion, negative reciprocity beliefs, and emotional intelligence may serve as key moderators in the relationship between abusive supervision and outcomes (Chi & Liang, 2013; Frieder, Hochwarter, & DeOrtentiis, 2015; Nandkeolyar, Shaffer, Li, Ekkirala, & Bagger, 2014; Mitchell & Ambrose, 2007). For example, Hu (2012) demonstrated that emotionally intelligent employees are likely to mitigate the negative effect of abusive supervision on the emotional labor burden. Here, it is meaningful to inspect the self-enhancement motive as a moderator because employees are likely to respond to abusive supervision in different ways depending on their level of this motive. Since

these employees focus on enhancing their impression on others, they are less likely to build a low-quality LMX relationship with their abusive supervisor. Thus, we argue that the self-enhancement motive could be a critical personal factor that alleviates the negative effect of abusive supervision on LMX.

Notably, aside from providing a broader view of the mechanism through which abusive supervision negatively impacts knowledge sharing, the final goal of our study is to investigate an expansive view of the organizational and individual aspects within which abusive supervision occurs. We demonstrate a moderated-mediation framework of the abusive supervision–knowledge sharing relationship through LMX by suggesting aspects of individuals' perceptions within the organization as two moderating variables. One is the notion of the organization (i.e., psychological contract fulfillment), and the other is the notion of oneself (i.e., self-enhancement motive). We predict that these two moderators dynamically interact with abusive supervision to predict and alter the degrees of LMX and knowledge sharing behavior.

In summary, the current study offers four research purposes based on social exchange theory. First, this research intends to enhance understanding of knowledge sharing by examining abusive supervision as a predictor. Second, the research proposes LMX as a mediating mechanism in the relationship between abusive supervision and knowledge sharing. Third, this study suggests psychological contract fulfillment and the self-enhancement motive as moderators that could mitigate the detrimental impact of abusive supervision on LMX. Last, we aim to explore a complete picture of a moderated-mediation model between abusive supervision and knowledge sharing through LMX by examining psychological contract fulfillment and the self-enhancement motive.

Theoretical Background and Hypotheses

Knowledge Sharing and Abusive Supervision

Bartol and Srivastava (2002) defined knowledge sharing as individuals sharing relevant information, ideas, suggestions, and expertise with others across the organization. Given the discretionary nature of knowledge sharing behaviors, focal employees may have autonomy in determining whether to donate their knowledge depending on how others serve them. With growing interest in and the importance of knowledge, earlier literature mostly investigated the positive relation between constructive leader behaviors and knowledge sharing (Srivastava et al., 2006). For example, scholars examined management support, transformational leadership, and empowering leadership as key predictors of knowledge sharing behaviors (e.g., Bryant, 2003; Srivastava et al., 2006). However, recent research recognizes the detrimental impact

of malicious leader behaviors such as abusive supervision on followers and the organization as a whole (Tepper, 2007). Thus, this research examines the significant role of abusive supervision as a determinant of employee knowledge sharing.

Abusive supervision is a low base-rate phenomenon in organizations; however, researchers have paid much attention to the concept over the past 20 years. Previous studies noted that while abusive supervision does not frequently occur, its damage to the organization is devastating (e.g., Tepper, Moss, Lockhart, & Carr, 2007; Harris, Kacmar, & Zivnuska, 2007). Workplace supervisors have unique roles and responsibilities in the organization (Carroll & Gillen, 1987; Dierdorff et al., 2009); therefore, abusive supervision is likely to bring about negative attitudes and behaviors (Tepper, 2000). For example, for attitudes, abusive supervision is linked to decreased job satisfaction (Tepper, 2000), low self-efficacy (Duffy, Ganster, & Pagon, 2002), and poor organizational commitment (Duffy et al., 2002; Tepper, 2000). Furthermore, it is negatively related to various emotional and psychological outcomes such as emotional exhaustion (Grandey, Kern, & Frone, 2007), psychological distress (Tepper, 2000), and other negative affectivities (Martinko et al., 2013; Chan & McAllister, 2014). Extant research connected abusive supervision with pernicious employee behaviors such as workplace deviance (Mitchell & Ambrose, 2007; Duffy et al., 2002) and decreased performance—both job performance (Harris et al., 2007) and organizational citizenship behaviors (OCB) (Zellars, Tepper, & Duffy, 2002). Aligned to previous research, this study explains the negative relationship between abusive supervision and employee knowledge sharing behavior by applying social exchange theory.

Based on the norm of reciprocity (Blau, 1964; Cropanzano & Mitchell, 2005), when one behaves in a friendly manner towards others, one may expect to receive the return of favorable treatment (Gouldner, 1960). However, negative reciprocity may exist, wherein hostile action is repaid with adverse treatment (Cropanzano & Mitchell, 2005). When subordinates are abused by their leaders, they cannot expect trust or support from their supervisors, which is likely to result in unfriendly behaviors or responses as per the norm of negative reciprocity (Tepper, 2000). However, the nature of supervisor-subordinate relationships, which may involve power distance and hierarchy, means that employees do not usually engage in unfavorable behaviors towards their supervisors. Rather, they may passively take revenge on their leaders. Given that work-related knowledge sharing might benefit both the organization and its representatives, employees who feel exploited by their supervisors will respond antagonistically and therefore refrain from sharing their knowledge with others. Moreover, although engaging in knowledge sharing may be not directly targeted at supervisors, but targeted at coworkers and at the organization, abused employees may decide not to share their knowledge as negative reciprocity (Kim et al., 2015). It is because

employees may easily withdraw such voluntary behavior. Hence, we predict the following:

Hypothesis 1. Abusive supervision is negatively related to knowledge sharing.

The Mediating Effect of Leader-Member Exchange

LMX describes the quality of an exchange relationship that develops between supervisors and employees (Graen, 1976; Graen & Scandura, 1987). According to the LMX theory, supervisors and subordinates develop their relationships through certain expectations (Graen & Cashman, 1975). These expectations include trust, competence (Liden & Graen, 1980), and mutual influence (Yukl, 1981). Since employees experiencing abusive supervision perceive negative treatment from their supervisor, they may be reluctant to provide valuable support and less willing to frequently interact with their abusive supervisor. As such, the abusive supervisor is likely to build a low-quality relationship with employees who exhibit low levels of interaction and support (c.f., Nahrgang, Morgeson, & Ilies, 2009). Prior studies reported that a low-quality relationship is an exchange in accordance with the employment contract, whereas a high-quality LMX relationship is likely to form when there is mutual trust and respect, which is beyond the employment contract (Graen & Uhl-Bien, 1995). Therefore, employees with higher LMX relationships tend to work more than the requirements stipulate and perform voluntary tasks (Graen & Uhl-Bien, 1995). In contrast, abused employees who develop low-quality LMX relationships do not engage in voluntary tasks such as knowledge sharing.

The principle of social exchange theory (Blau, 1964) proposes that in a binary relationship, if something is given, there is a silent promise to return it equivalently (Gouldner, 1960; Perugini & Gallucci, 2001). Based on social exchange theory, we expect that abused employees are likely to generate poor social exchange relationships with leaders, because they feel they receive or expect to receive a lack of trust or support from their supervisors. Numerous previous studies related abusive supervision to unfavorable attitudinal and psychological outcomes such as interpersonal conflicts, emotional exhaustion, and emotional distress (Duffy et al., 2002; Grandey et al., 2007; Tepper, 2000). In this way, the exchange relationship between hostile supervisors and employees is non-supportive and disrespectful (Uhl-Bien, Graen, & Scandura, 2000), which results in a low-quality relationship.

Previous studies positively related LMX to task performance and OCB (Ilies, Nahrgang, & Morgeson, 2007; Wang, Law, Hackett, Wang, & Chen, 2005). Moreover, a recent review by Wang and Noe (2010) suggested LMX as a potential factor in predicting knowledge sharing behaviors. In the context of high LMX, employees who perceive trust and support

from their leaders are likely to reciprocate by engaging in favorable behaviors such as knowledge sharing. However, in lower quality LMX relationships, employees are likely to feel a low obligation to perform beyond in-role performance (Wang et al., 2005). Ultimately, we expect that LMX mediates the negative relationship between abusive supervision and employee knowledge sharing. Abused employees are likely to develop low-quality LMX relationships, which leads them to expend less effort on knowledge sharing, because of reactive behavior based on the norm of reciprocity according to social exchange theory. Thus, we predict the following:

Hypothesis 2. LMX mediates the relationship between abusive supervision and knowledge sharing.

The Moderating Effects of Psychological Contract Fulfillment

In a work situation, employees engage in social exchange with both individuals and the organization (Eisenberger, Huntington, Hutchison, & Sowa, 1986; Wayne, Shore, & Liden, 1997; Masterson, Lewis, Goldman, & Taylor, 2000). Employees often interact and exchange their resources with their organizations (Eisenberger et al., 1986; Masterson et al., 2000). Psychological contract fulfillment can be regarded as one's perception of the organization, since it refers to the employee perception that the organization has equitably fulfilled its terms of the contract (Rousseau, 1990, 1995). Depending on how an organization supports employees through valuable resources or fair treatment, they perceive either a breach or fulfillment of their psychological contracts. The extant literature relates perceptions of psychological contract fulfillment to various favorable organizational outcomes such as in-role or extra-role performance and organizational commitment (Turnley, Bolino, Lester, & Bloodgood, 2003). In applying social exchange theory to the employee–organization relationship, psychological contract theory assumes that employees tend to view the organization as an exchange partner and feel reciprocal obligations (Rousseau, 1995). Thus, we expect that the psychological contract can be an important organizational factor that mitigates the negative effect of abusive supervision on LMX and knowledge sharing via LMX based on social exchange theory.

Workplace supervisors serve dual functions in the LMX relationship. For example, they are interpersonal exchange partners for employees and symbolic archetypes of the organization in the employee–organization relationship (Henderson, Wayne, Shore, Bommer, & Tetrick, 2008). From this viewpoint, focal employees who are satisfied with their organization, because they perceive high psychological contract fulfillment, may feel obligated towards it. Since a leader often represents the organization, employees with high psychological contract fulfillment may decide to reciprocate

their obligations by maintaining high-quality LMX relationships. Although employees under abusive supervision may not expect to receive positive treatment or support from their supervisor (Tepper, 2000), they are likely to feel obligated to maintain a quality relationship with their supervisors when they perceive high psychological contract fulfillment. This belief includes focal employees' perceptions of the incentives (e.g., pay, recognition) agreed on with their organizations. When a psychological contract is fulfilled, employees feel increased responsibilities towards the organization (Turnley et al., 2003), which may have been depreciated by abusive supervision. In this context, the quality of the exchange relationships of an employee and supervisor is less likely to be harmed, even when supervisors exhibit abusive supervision. Moreover, employees may decide to maintain the quality of LMX to remain in the organization, where they perceive high psychological contract fulfillment.

On the other hand, if a psychological contract is violated, negative feelings towards supervisors, which are already developed through abusive supervision, escalate. Much research on the breach of the psychological contract has demonstrated its strong impact on negative cognitions or attitudes (Conway & Briner, 2005; Zhao et al., 2007). As a result, employees are likely to decrease or withdraw their efforts to build high-quality relationships with their supervisors, which may further ruin the LMX relationship.

Hypothesis 3. Psychological contract fulfillment moderates the negative relationship between abusive supervision and LMX quality, such that the negative relationship is likely to be weakened when psychological contract fulfillment is high rather than when it is low.

More important, we propose that psychological contract fulfillment moderates the relationship between abusive supervision and knowledge sharing via LMX. We argue that LMX serves as the mechanism through which abusive supervision affects knowledge sharing. Incorporating this notion with Hypothesis 3, namely that psychological contract fulfillment moderates the effect of abusive supervision on LMX, we developed a moderated mediation model, which is represented in Fig. 1. As a factor pertaining to one's perspective towards the organization, psychological contract fulfillment may act as a buffering factor that alleviates the negative effect of abusive supervision on knowledge sharing via LMX. Since employees who perceive high psychological contract fulfillment may feel obligated towards the organization, they may decide to engage in knowledge sharing by building a high-quality LMX relationship as reciprocity, since knowledge sharing is an effective way to promote organizational effectiveness. Therefore, we contend that the negative relationship between abusive supervision and knowledge sharing via LMX lessens when an employee has a high level of psychological contract fulfillment. In sum, we hypothesize the following:

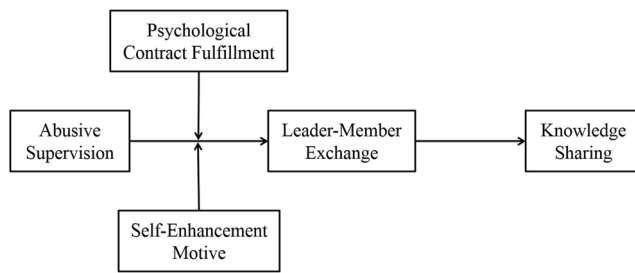


Fig. 1 Research framework

Hypothesis 4. Psychological contract fulfillment moderates the strength of the mediated relationship between abusive supervision and knowledge sharing via LMX such that the mediated relationship is likely to be weakened when psychological contract fulfillment is high than when it is low.

The Moderating Effects of Self-Enhancement Motive

Academics and scholars have a great interest in examining the motives underlying human behaviors and attitudes using various approaches (e.g., Bettman, 1979; Hull, 1943). Along with exchange relationships, motivation has been identified as a critical factor in the decision-making process, as it affects the direction of behavior and attitudes (Bettman, 1979). Although abusive supervision tends to ruin the quality of LMX, not all abused employees engage in low-quality LMX relationships. In particular, individuals with certain motives may reduce the harmful effect of abusive supervision on LMX. For example, employees with a high self-enhancement motive may maintain high-quality relationships with their leaders, even under abusive supervision, because of their motivation to achieve a positive self-image. Thus, this study suggests that an individual's self-enhancement motive, an aspect of impression management, is a buffering factor that reduces the negative influence of abusive supervision on knowledge sharing.

Employees engaged in impression management focus on improving the image they portray to others (Bolino et al., 2008). Self-enhancement is the desire or observed reality of seeing oneself in the most positive light (Pfeffer & Fong, 2005). Employees with a high self-enhancement motive are more sensitive to others' perceptions of them, and their level of motivation to adapt behaviors is higher to make a good impression on others (Yun, Takeuchi, & Liu, 2007). Even when facing abusive leaders, employees with a high self-enhancement motive are less likely to be unfriendly to leaders, given their powerful position. Rather, they strive to build a better relationship with hostile leaders to maintain the positive image they portray to significant others including leaders. As such, the core premise of LMX theory implies that leaders differentiate the treatment of subordinates in the same group (Liden & Graen, 1980). Generally, leaders value employees who belong to the "in-group," characterized by high trust,

interaction, support, and rewards (Dienesch & Liden, 1986). We argue that individuals with a high self-enhancement motive exhibit positive attitudes towards their supervisors to enhance their image.

In contrast, those with a low self-enhancement motive are less sensitive to external factors. These employees exhibit a lower self-enhancement motive and are less concerned about the image they portray to others including their leaders. Therefore, when they experience a leader's destructive behavior, they are likely to demonstrate negative attitudes and behaviors, similar to how leaders behave towards them. These employees do not make efforts to improve relationships with their abusive supervisors. In summary, employees with a high self-enhancement motive are likely to expend their efforts on maintaining high-quality LMX relationships with their supervisors, even under abusive supervision, to maintain their positive image.

Hypothesis 5. Self-enhancement motive moderates the negative relationship between abusive supervision and LMX quality, such that the relationship is likely to be weakened when self-enhancement motive is high rather than when it is low.

Similar to psychological contract fulfillment, we developed a moderated mediation model. When employees have a high self-enhancement motive, they likely engage in knowledge sharing via LMX, even under abusive supervision, since it is important to enhance their image as perceived by significant others. Given the importance of knowledge sharing in enhancing organizational effectiveness, employees who have much concern for other people's evaluation may choose to maintain high-quality LMX, which leads to high level of knowledge sharing. Thus, we propose that the negative effect of abusive supervision on knowledge sharing via LMX lessens when an employee has a high self-enhancement motive. Therefore, we predict the following:

Hypothesis 6. Self-enhancement motive moderates the strength of the mediated relationship between abusive supervision and knowledge sharing via LMX such that the mediated relationship is likely to be weakened when self-enhancement motive is high than when it is low.

Methods

Participants and Procedures

The study was conducted in large companies located in South Korea. The industries of these firms were various including financial services, consulting, IT service, and manufacturing companies. Most participants in this study held positions in the management or research sectors, in which the exchange of information and knowledge is needed to improve their tasks.

Separately sealed questionnaire packets for full-time employees and their direct managers were prepared and distributed to 216 subordinate-supervisor dyads. To select subordinates, we provided specific guidelines on how to select a subordinate to constitute the pair to ensure objectivity. Moreover, in the survey packets distributed to participants, we included a cover letter emphasizing that no individual subject would be identified and that the results of this study would only be used for educational and academic purposes. After completion, participants were required to enclose the survey in the envelope provided and seal it on their own to ensure the confidentiality of their responses.

From 216 subordinate-supervisor dyadic samples, 184 pairs were returned, giving a response rate of 85%. After matching the results of employee surveys with those of managerial surveys, the final sample dyads used in the current analysis included 175 pairs. A few responses could not be involved in the research because the responses were incomplete. We also removed some samples that only one answered the survey between the two (i.e., subordinate and supervisor). Of the subordinates, 75.43% were male, and the average age of employees was 36.59 (SD = 6.58). The most frequently reported employee's level of education (72%) was a bachelor degree.

Measures

All items used in the present study were originally developed in English. The questionnaires were translated into Korean using conventional method of back translation (Brislin, 1980). Two Korean bilingual academics individually translated the measures into Korean and back translated them again separately to ensure semantic equivalence. All variables were measured with established measures. The focal employees were requested to assess their supervisors' abusive behaviors, LMX, their own self-enhancement motives, and psychological contract fulfillment. To reduce the issues for common method bias, immediate supervisors evaluated their employees' levels of knowledge sharing. All items were measured on a seven-point Likert-type scale ranging from "strongly disagree" to "strongly agree." The specific measures are described below, along with the results of calculation of Cronbach's alpha coefficients.

Knowledge Sharing Knowledge sharing level of focal employees was measured using seven items from the Srivastava et al. (2006) study. The sample item states "This employee shares his/her special knowledge and expertise with others." Cronbach's alpha for the scale was .95.

Abusive Supervision We measured subordinates' perceptions of abusive supervisory behaviors using the 15-item scale developed by Tepper (2000). The sample items of abusive

supervision deliver "My immediate supervisor ridicules me" and "tells my thoughts or feelings are stupid." Cronbach's alpha for the scale was .98.

LMX The most widely used LMX measure—LMX-7 scale—developed by Graen and Uhl-Bien (1995) was adapted to measure the exchange relationship between supervisors and subordinates. The sample item says "I have enough confidence in my supervisor to defend and justify my decisions when I am not present to do so." Cronbach's alpha for the scale was .93.

Psychological Contract Fulfillment Psychological contract fulfillment was measured using a measure developed by Robinson and Morrison (2000). This five-item measure captures an employee's psychological contract fulfillment perception towards the organization. The items asked participants to rate the extent to which they agreed or disagreed with statements such as "I feel that my organization has come through in fulfilling the promises made to me when I was hired" and "so far my organization has done an excellent job of fulfilling its promises to me." Cronbach's alpha for the scale was .93.

Self-Enhancement Motive Six items developed by Yun et al. (2007) were used to measure self-enhancement motive of employees. The sample item reads "I try to modify my behaviors to give good images to others." Cronbach's alpha for the scale was .91.

Control Variables As suggested by previous studies (e.g., Xu et al., 2012; Zellars et al., 2002), age, gender, and education level could be related to our independent and dependent variables. Thus, we controlled for in this research. Age was measured in years. Gender was assessed as a dichotomous variable, coded as 0 for male and 1 for female. We measured education on a scale that ranged from "1 = high school" to "4 = master's degree or higher." However, similar results were obtained when we conducted the analyses without controlling for those variables.

Analytical Procedures

We conducted confirmatory factor analyses (CFAs) to ensure construct validity among variables. We included all five variables (i.e., abusive supervision, leader-member exchange, psychological contract fulfillment, self-enhancement motive, knowledge sharing) in our research model to estimate the overall model fit. Specifically, we examined the values of chi-square (χ^2), Comparative Fit Index (CFI), Tucker-Lewis index (TLI), and the Root Mean Square Error of Approximation (RMSEA) to assess the overall model fit. We then compared our hypothesized five-factor model to a series of competing models.

To test our hypotheses, we conducted regression analyses for the main effect and the moderation effects and used PROCESS for testing the indirect effects. First of all, to test the main effect of abusive supervision on knowledge sharing, we used hierarchical multiple regression method. In step 1, we included control variables in order to diminish the spurious effects. Demographic information of employees—age, gender, and education level—was controlled. In step 2, we inserted abusive supervision to test its main effect on employee knowledge sharing behavior (i.e., Hypothesis 1).

To test the mediation hypothesis (i.e., Hypothesis 2), we employed SPSS PROCESS developed by Preacher and Hayes (2004) in order to test indirect effect of abusive supervision on knowledge sharing via LMX by using the bootstrapping procedure (across 1000 samples). This PROCESS promotes an estimation of indirect effect with a bootstrap approach by presenting confidence intervals.

Moderation effects of both psychological contract fulfillment (i.e., Hypothesis 3) and self-enhancement motive (i.e., Hypothesis 5) were evaluated with moderated regression analysis. Hierarchical regression is the most common method to test moderation models (Leung & Zhou, 2008). Before performing the regression analysis, we mean-centered all independent and moderating variables (i.e., abusive supervision, psychological contract fulfillment, and self-enhancement motive) in order to prevent potential multicollinearity problems (Aiken & West, 1991). For the regression, we included covariates in step 1, abusive supervision in step 2, and psychological contract fulfillment and self-enhancement motive were put together in step 3. Lastly, we entered two interaction terms, the multiplication terms of mean-centered variables—one is the multiplication term of abusive supervision and psychological contract fulfillment and another one is the multiplication term of abusive supervision and self-enhancement motive—in step 4. To support hypotheses, it requires statistically significant increasing values in the variance explained (R^2) with the addition of interaction terms and predicted patterns of consistent with our hypotheses.

Finally, the moderated-mediation effects were tested by again using SPSS PROCESS developed by Preacher, Rucker, and Hayes (2007). Following the Preacher et al. (2007) recommendation, we set each of high and low levels of psychological contract fulfillment (i.e., Hypothesis 4) and self-enhancement motive (i.e., Hypothesis 6) as one standard deviation above and below the mean score of each psychological contract fulfillment and self-enhancement motive. PROCESS provides regions of significance of the bootstrap estimates of the conditional indirect effects, as well as bootstrap estimates based on bias-corrected and accelerated confidence intervals to test hypotheses. We have also entered our control variables (i.e., age, gender, and education) in the moderated mediation analyses tested by SPSS PROCESS.

Results

The hypothesized measurement model consisted of five variables: abusive supervision, leader-member exchange, psychological contract fulfillment, self-enhancement motive, and knowledge sharing. As exhibited in Table 1, when the hypothesized model is compared with a series of competing models, our five-factor model indicated the best fit of all. The values on the fit indices showed that the five-factor CFA model provided a good fit for the data ($\chi^2 = 847.538$, CFI = .929, TLI = .918, and RMSEA = .071). This result offered a significant improvement in chi-square over a series of competing models.

The correlations and descriptive statistics including means and standard deviations are provided in Table 2. High reliabilities of Cronbach's alpha coefficients were observed through all variables ranging from .91 or higher. Independent and moderating variables were mean-centered to prevent potential multicollinearity problem (Aiken & West, 1991).

Hypothesis 1 proposed that abusive supervision is negatively related to knowledge sharing. As shown in Table 3, the result of the regression analysis signifies that abusive supervision was significantly and negatively related to knowledge sharing. This supported Hypothesis 1 (Model 2; $b = -.20$, $p \leq .01$).

Test of Mediation

Hypothesis 2 suggested that LMX mediates the relationship between abusive supervision and knowledge sharing. We employed bootstrap method to test the indirect mediation effect by using SPSS PROCESS template model 4. As shown in Table 4, the indirect effect of abusive supervision on knowledge sharing via LMX was negative ($-.11$) and bootstrapped 95% CI around the indirect effect did not include zero ($-.22$, $-.05$). Hence, the bootstrapping method using PROCESS well supported Hypothesis 2.

Test of Moderation

Hypothesis 3 predicted an interaction effect of psychological contract fulfillment and abusive supervision on LMX. The results shown in Table 5 demonstrated that the interaction term of psychological contract fulfillment and abusive supervision on LMX was significant (Model 4; $b = .12$, $p \leq .05$), supporting Hypothesis 3. We plotted the results adapting Aiken and West's (1991) method of ± 1 standard deviation. As presented in Fig. 2, the negative relationship between abusive supervision and LMX was weakened when psychological contract fulfillment is high. The simple slope test displayed that the negative relationship between abusive supervision and LMX is significant both when an employee's psychological contract fulfillment is high ($b = -.33$, $t = -3.60$, $p = .00$).

Table 1 Confirmatory factor analysis results

Model	Description	χ^2	DF	CFI	TLI	RMSEA	$\Delta\chi^2$	ΔDF
Hypothesized model	Five-factor model ^a	847.538	454	.929	.918	.071		
Model 1	Four-factor model ^b	1722.530	458	.773	.738	.126	874.992	4.00
Model 2	Three-factor model ^c	2223.323	461	.684	.638	.148	500.793	3.00
Model 3	Two-factor model ^d	3081.551	463	.530	.464	.180	858.228	2.00
Model 4	One-factor model ^e	4206.172	464	.328	.235	.215	1124.621	1.00

CFI Comparative Fit Index, TLI Tucker-Lewis Index, RMSEA Root Mean Square Error of Approximation

^a Five factors: abusive supervision; leader-member exchange; psychological contract fulfillment self-enhancement motive; knowledge sharing

^b Four factors: abusive supervision; leader-member exchange; psychological contract fulfillment and self-enhancement motive combined; knowledge sharing

^c Three factors: abusive supervision and leader-member exchange combined; psychological contract fulfillment and self-enhancement motive combined; knowledge sharing

^d Two factors: abusive supervision, leader-member exchange, psychological contract fulfillment, and self-enhancement motive combined; knowledge sharing

^e One factor: abusive supervision, leader-member exchange, psychological contract fulfillment, self-enhancement motive, and knowledge sharing combined

and when an employee’s psychological contract fulfillment is low ($b = -.57, t = -6.37, p = .00$). Therefore, Hypothesis 3 received support.

Hypothesis 5 proposed an interaction effect of self-enhancement motive and abusive supervision on LMX. The results shown in Table 5 demonstrated that the interaction term of self-enhancement motive and abusive supervision on LMX was significant (Model 4; $b = .21, p \leq .05$). We plotted the results using Aiken and West’s (1991) procedure of ± 1 standard deviation. As shown in Fig. 3, the negative relationship between abusive supervision and LMX was weakened when self-enhancement motive is high. The simple slope test exhibited that the negative relationship between abusive supervision and LMX is significant both when an employee’s self-enhancement motive is high ($b = -.24, t = -2.30, p = .02$) and when an employee’s self-enhancement motive is low

($b = -.66, t = -5.39, p = .00$). Accordingly, Hypothesis 5 was also supported.

Test of Moderated Mediation

To examine the conditional indirect effect of abusive supervision on knowledge sharing (through LMX) with psychological contract fulfillment, which is Hypothesis 4, we used SPSS PROCESS developed by Preacher and his colleagues (2007). Following Preacher and his colleagues’ (2007) recommendation, we set high and low level of psychological contract fulfillment as one standard deviation above and below the mean score of psychological contract fulfillment. As hypothesized, the indirect effect of abusive supervision on knowledge sharing via LMX was conditional to the level of psychological contract fulfillment. As stated in Table 6, the indirect effect was weaker

Table 2 Means, standard deviations, and correlations

	Mean	SD	1	2	3	4	5	6	7	8
1. Age ^a	36.59	6.58								
2. Gender ^a	.25	.43	-.27***							
3. Education ^a	3.13	.55	.09	-.19**						
4. Abusive supervision ^a	1.65	.89	-.08	-.04	.03	(.98)				
5. Leader-member exchange ^a	5.25	.96	.22**	-.17*	.19**	-.43***	(.93)			
6. Psychological contract fulfillment ^a	4.64	1.20	.00	-.16*	-.17*	-.12	.32***	(.93)		
7. Self-enhancement motive ^a	5.12	.91	.12	-.12	.10	.02	.14	.11	(.91)	
8. Knowledge sharing ^b	5.18	.97	.07	.07	-.01	-.20**	.26***	.09	-.05	(.95)

$N = 175$. Reliabilities are on the diagonal in parentheses. Age was measured in years. For gender, 0 = male, 1 = female. Education was measured on a scale that ranged from 1 (high school) to 4 (master’s degree or higher)

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed)

^a Self-rated

^b Supervisor-rated

Table 3 Regression results for main effect

	Knowledge sharing ^b	
	Model 1	Model 2
Step 1. Control variables		
Age	.02	.01
Gender	.22	.19
Education	– .00	.01
Step 2. Main effect		
Abusive supervision ^a		– .20**
Overall <i>F</i>	.83	2.21
<i>R</i> ²	.01	.05
ΔF		6.26**
ΔR^2		.04

N = 175

p* ≤ .05; *p* ≤ .01; ****p* ≤ .001 (two-tailed)

^a Self-rated

^b Supervisor-rated

and not significant at the high level of psychological contract fulfillment ($-.06, p = .07$) but was stronger and significant at the low level of psychological contract fulfillment ($-.15, p = .01$), with a bootstrapped 95% CI around the indirect effect not containing zero ($-.28, -.06$). Thus, it can be understood that the negative indirect impact of abusive supervision on knowledge sharing was weakened at the high level of psychological contract fulfillment, supporting Hypothesis 4.

For Hypothesis 6, which also predicts the conditional indirect effect of abusive supervision on knowledge sharing (through LMX) with self-enhancement motive, we examined using the same method—SPSS PROCESS—with Hypothesis 4. As hypothesized, the indirect effect of abusive supervision on knowledge sharing via LMX was conditional to the level of psychological contract fulfillment. As stated in Table 6, the indirect effect tested by PROCESS was weaker and not significant at the high level of self-enhancement motive ($-.06, p = .10$) but was stronger and significant at the low level of self-enhancement motive ($-.18, p = .01$), with a bootstrapped 95% CI around the

Table 4 Results of bootstrap for indirect effect through leader-member exchange

Dependent variable	Bias-corrected confidence intervals			
	Indirect effect	SE (boot)	Lower CI	Upper CI
Knowledge sharing	– .11	.04	– .22	– .05

N = 175. Confidence interval does not include zero. Thus, indirect effect is indeed significantly different from zero at *p* < .05 (two-tailed). Control variables: employee's age, gender, education. Number of samples used for indirect effect confidence intervals = 1000

indirect effect not containing zero ($-.35, -.07$). Therefore, Hypothesis 6 was supported that the negative indirect effect of abusive supervision on knowledge sharing was weakened at the high level of self-enhancement motive.

Discussion

Building on the social exchange perspective, the purpose of this study was to expand our understanding in the contemporary literature on knowledge sharing behavior and abusive supervision by observing the main effects, mechanisms, and moderators thereof. Extending earlier work, the current study broadened the research focus by exploring a moderated mediation model. We suggest that LMX fully mediates the negative relationship between abusive supervision and knowledge sharing. Moreover, our findings demonstrated how psychological contract fulfillment and the self-enhancement motive buffer the negative effect of abusive supervision on LMX. Most important, we found that the mediated relationship between abusive supervision and knowledge sharing via LMX is contingent on the level of one's perception of the organization (i.e., psychological contract fulfillment) and of the individual (i.e., self-enhancement motive). Specifically, our findings showed that when psychological contract fulfillment and self-enhancement motive are high rather than low, the mediated negative relationship is weakened. Our results provide compelling implications to both theory and managerial practices.

Theoretical Implications

Our study supplements the theoretical discussion by providing three major theoretical implications. First, the current study contributes to the existing knowledge sharing literature by examining a leader factor as a critical predictor of knowledge sharing behavior. Numerous previous studies examined the antecedents that enhance knowledge sharing such as workplace atmosphere, organizational justice, and trust (Wang & Noe, 2010). Moreover, previous research indicated the positive effect of constructive leader behaviors on knowledge sharing (e.g., Bryant, 2003; Srivastava et al., 2006). However, research examining leaders' destructive behaviors as predictors of employee knowledge sharing is lacking. To fill the gap in the literature, our results contribute to knowledge sharing by investigating abusive supervision as a barrier.

In addition, our research adopted social exchange theory to explain the knowledge sharing process. Previous research positively related the norm of reciprocity to individuals' knowledge sharing behaviors (Chiu, Hsu, & Wang, 2006). Considering knowledge as a valuable resource for each individual, social exchange theory is a useful framework for understanding when individuals may or may not share their

Table 5 Multiple regression results

	Leader-member exchange ^a					
	Model 1	Model 2	Model 3	Model 4a	Model 4b	Model 4
Step 1. Control variables						
Age	.03**	.02	.02**	.02*	.02**	.02**
Gender	-.22	-.28	-.13	-.12	-.13	-.09
Education	.27**	.28**	.37***	.34**	.37***	-.33**
Step 2. Main effect						
Abusive supervision ^a		-.46***	-.43***	-.43***	-.43***	-.45***
Step 3. Moderators						
Psychological contract fulfillment (PCF) ^a			.23***	.25***	.26***	.24***
Self-enhancement motive (SEM) ^a			.08	.08	.11	.10
Step 4. Interaction effects						
Abusive supervision × PCF				.15**		.12*
Abusive supervision × SEM					.25**	.21*
Overall <i>F</i>	5.17**	15.49***	15.27***	14.34***	14.61***	13.47***
<i>R</i> ²	.08	.27	.35	.38	.38	.39
Δ <i>F</i>		42.68***	11.13***	6.03**	7.27**	5.58**
Δ <i>R</i> ²		.18	.09	.02	.03	.04

N = 175. ^a Self-rated. ^b Supervisor-rated. * *p* ≤ .05; ** *p* ≤ .01; *** *p* ≤ .001 (two-tailed)

Model 4a and Model 4b present the results of each moderator separately, reporting the R-squared change by comparing these models to Model 3 (the controls + predictors only models). Model 4 presents the results of two moderators simultaneously, reporting the R-squared change by comparing this to Model 3

valuable knowledge (Cabrera & Cabrera, 2005). Based on the norm of reciprocity (Gouldner, 1960), social exchange theory (Blau, 1964) implies that employees may exhibit positive attitudes and behaviors when they receive positive treatment. In contrast, employees may react negatively based on the norm of negative reciprocity. As such, our research demonstrated that abused employees are likely to reduce the level of knowledge sharing as negative reciprocity after receiving negative treatment from their abusive supervisors. In future research, it

would be meaningful to identify other factors that may prevent employees from sharing their knowledge.

Second, our investigation extends and complements the abusive supervision literature by examining knowledge sharing as an outcome of abusive supervision. Past research investigated the negative effects of abusive supervision on employee attitudes, behaviors, and job-related performance. For example, abusive supervision decreases job satisfaction, organizational commitment, task performance, and organizational

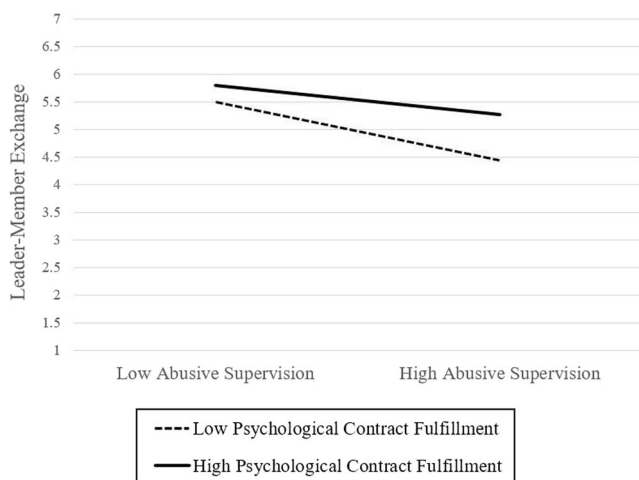


Fig. 2 Interaction of abusive supervision and psychological contract fulfillment on leader-member exchange

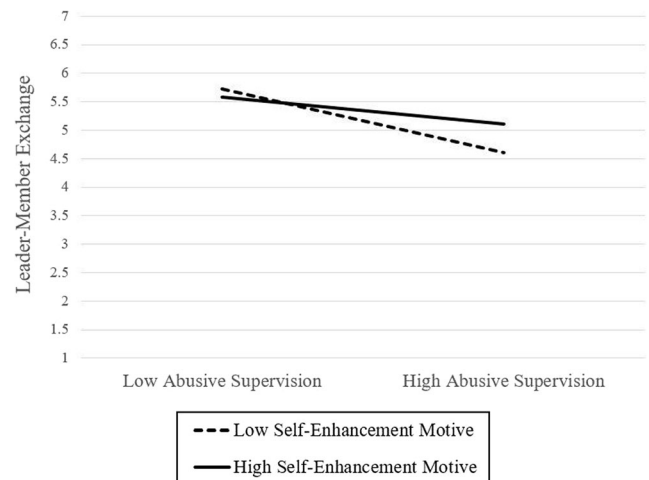


Fig. 3 Interaction of abusive supervision and self-enhancement motive on leader-member exchange

Table 6 Moderated mediation results for knowledge sharing across the level of psychological contract fulfillment and self-enhancement motive

Moderator	Level	Knowledge sharing ^b					95% bias-corrected CI	
		Conditional indirect effect	SE	z	p	Lower	Upper	
Psychological contract fulfillment ^a	Low	-.15	.05	-2.84	.01	-.28	-.06	
	High	-.06	.03	-1.83	.07	-.16	-.02	
Self-enhancement motive ^a	Low	-.18	.07	-2.66	.01	-.35	-.07	
	High	-.06	.04	-1.67	.10	-.17	-.01	

N = 175. Control variables: age, gender, education. Bootstrap sample size = 1000

^a Self-rated

^b Supervisor-rated

citizenship behavior (Harris et al., 2007; Martinko et al., 2013; Tepper, 2000; Zellars et al., 2002). As a significant outcome in the knowledge-based economy, our research demonstrated the negative influence of abusive supervision on knowledge sharing. Furthermore, this research investigated the mediating role of LMX in the relationship between abusive supervision and knowledge sharing. Previous research demonstrated how subordinates' justice perceptions mediate relationships between abusive supervision and job satisfaction, life satisfaction, organizational commitment, and work-family conflict (Tepper, 2000). Another study indicated that affective commitment mediates the relationship between abusive supervision and organization deviance (Tepper, Henle, Lambert, Giacalone, & Duffy, 2008). In addition, emotional exhaustion has been explored as a mediator between abusive supervision and interpersonal facilitation relationships (Aryee et al., 2008). As a relational factor, our research explored LMX and examined how it mediates the relationship between abusive supervision and knowledge sharing. Future research might investigate other relational factors as mediators in the relationship between abusive supervision and outcomes.

Importantly, our results demonstrated how organizational and individual factors may mitigate the pernicious effects of abusive supervision on knowledge sharing. Specifically, this study showed that the negative impacts of abusive supervision on knowledge sharing via LMX are attenuated if the psychological contract is fulfilled or if the self-enhancement motive is high. In future studies, it would be interesting to examine how psychological contract fulfillment or the self-enhancement motive minimizes the negative effects of abusive supervision on other outcomes such as task performance or citizenship behaviors. Moreover, identifying other buffering factors that reduce the negative impacts of abusive supervision on outcomes is worthwhile.

Last, the findings of this study add to our existing knowledge on LMX. Drawing on the social exchange perspective, our results confirmed LMX as an underlying mechanism linking abusive supervision and knowledge sharing. A recent

meta-analytic study on LMX found that the quality of LMX can be determined not only by individual factors such as personalities (i.e., extraversion and agreeableness) or affectivity but also by leader behaviors (i.e., transformational leadership and contingent rewarding behaviors) (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012). In addition, numerous earlier studies have shown that LMX is mostly connected with positive attitudinal and performance-related variables of focal employees. For example, higher overall satisfaction (e.g., Graen, Novak, & Sommerkamp, 1982), stronger organizational commitment (e.g., Nystrom, 1990), and higher performance ratings (e.g., Liden, Wayne, & Stilwell, 1993) were examined with employees who perceived high-quality LMX. LMX scholars proposed LMX as a mediator in the relationship between leader behavior and employee outcomes (e.g., Wang et al., 2005; Chan & Mak, 2012). For example, Chan and Mak (2012) recently showed that LMX mediates benevolent leadership and employee task performance as well as OCB. Wang et al. (2005) also found that LMX mediates the relationship between transformational leadership and both employee task performance and OCB. Similarly, we extended previous research to present LMX as a critical mediator of the relationship between abusive supervision and employee knowledge sharing.

Moreover, our research has shown that the interaction between abusive supervision and organizational (i.e., psychological contract fulfillment) or personal factors (i.e., self-enhancement motive) may change the quality of LMX. Our research demonstrated that the negative influence of abusive supervision on LMX is likely to weaken when both psychological contract fulfillment the self-enhancement motive are high. Future research should examine other organizational and personal factors that may influence the quality of LMX.

Managerial Implications

This research also provides practical insights for both the management practitioner and the organization. Although many

companies have introduced policies and procedures to inspire employees to share their knowledge through, for example, the development of a knowledge sharing culture or knowledge management practices, these policies may not work effectively when there is abusive supervision (Bock, Kankanhalli, & Sharma, 2006). The present study reveals that abusive leader behaviors can stop employees from sharing their valuable knowledge. Understanding the harmful consequences of abusive supervision, a number of organizations should be aware of the importance of the damaging influence of supervisors on outcomes, which can discourage employees from building quality relationships with supervisors and sharing knowledge in the workplace. However, abusive supervision is not easily detected or properly managed (Tepper et al., 2007). Therefore, it is necessary to identify factors that contribute to abusive leader behaviors. Organizations should closely monitor occurrences of abusive supervision to understand the main causes. In addition, establishing an organizational culture that rewards good leaders and punishes destructive behaviors is required. Leadership training programs could be helpful in preventing such abusive behaviors. Our results have shown how psychological contract fulfillment may buffer the negative influence of abusive supervision on knowledge sharing through LMX relationships. As our research indicated, psychological contract fulfillment can be a practical solution to decrease the unfavorable effects of abusive supervision on LMX and knowledge sharing via LMX.

Limitations and Conclusion

The present study is subject to limitations. First, we used a cross-sectional design, meaning we cannot infer causality. Future research may implement longitudinal research or an experimental design to strengthen our findings. Second, there might be a potential risk of common method bias. We tried to minimize this matter by collecting data from two different sample sources, namely employees and their supervisors. For example, we applied supervisors' data on knowledge sharing, while subordinates observed a supervisor's abusive supervision to increase objectivity. Moreover, common method bias is less likely to be a problem for this study because it exhibits significant interaction effects (Evans, 1985). However, it is possible that subordinates would have rated abusive supervision and LMX being aware that their supervisor is also taking the survey. Recognizing this issue, we made every effort to maintain the anonymity of participants' responses and to keep the confidentiality. Nevertheless, future research should consider this issue and take various approaches to measure these variables to enhance objectivity. Third, employee knowledge sharing was rated by their immediate supervisor to increase objectivity in this study. Since knowledge sharing could be viewed as one of important

prosocial behaviors in this knowledge-based society (Kim et al., 2017), we believe that self-rating of knowledge sharing might bring an inflation issue. Nonetheless, a better approach could be employed to assess and to collect knowledge sharing data from various sources including supervisors, coworkers, and the self in future research. Since knowledge sharing tends to be implicit and subtle, it might be meaningful to compare how multiple sources of knowledge sharing influence the results in different ways. Lastly, it is worthwhile conducting research in another context to enhance the generalizability of our findings. Our research was conducted in South Korea, the culture of which is characterized by high power distance and a hierarchical structure. In future research, it is necessary to replicate our results in different contexts.

Despite some limitations, this research enriches our understanding of knowledge sharing by examining abusive supervision as a predictor and LMX as a mediating mechanism of the abusive supervision–knowledge sharing relationship. Furthermore, the present study provides empirical evidence that psychological contract fulfillment and the employee self-enhancement motive may mitigate the negative impact of abusive supervision on LMX and knowledge sharing via LMX. Recognizing the importance of knowledge sharing, our research provides insights into how employees share their knowledge with others.

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