ENGAGED EMPLOYEES SPEAK UP WHEN TEAM PERFORMANCE SUFFERS

by

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ABSTRACT OF THE THESIS

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The present study examined the effects of team context and trust in leadership on employee voice behavior. I proposed that employees' perceived team support and trust in leadership would influence voice behavior, as mediated by employee engagement. Team performance was expected to negatively moderate the relationship between engagement and voice, such that engaged individual team members were more likely to speak up when team performance was perceived as low. These predictions were supported by findings obtained from 502 employees and 61 team leaders from a public organization. The research and practical implications of the results are noted.

Acknowledgement and Dedication

There are a number of people I must acknowledge for this thesis. First, I would like to extend my sincere appreciation and warmest gratitude to my thesis committee: Professor Patrick McKay, my thesis advisor, for his many suggestions and revisions without which this thesis would not have been possible; Professor Susan Jackson, Jean Phillips, and Douglas Kruse for their commitment to my thesis committee and their invaluable advice in every progress of my thesis.

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Last but not the least, I dedicate this thesis to my parents and my wife without whom I would not be where I am today. Thank you for your love, support, and encouragement. I love you more than words can express!

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INTRODUCTION

The structure of work in organizations continues to change at a radical and accelerated pace to allow them to remain competitive in a changing environment (LePine, 2003). Faced with constantly evolving internal and external environments, more and more firms utilize teams as a means of better leveraging human capital in the pursuit of organizational goals (Kozlowski & Bell, 2003). Prior research has demonstrated the prevalence of teams as Devine, Clayton, Philips, Dunford, and Melner (1999) found that 48% of the respondents in a random sample of U.S. organizations used some kind of team.

Voice behavior, defined as discretionary behavior emphasizing constructive change-oriented communication intended to improve the status quo (LePine & Van Dyne, 1998, 2001), is critical for team effectiveness (Howard, 1995; Jelinek & Schoonhoven, 1993). Via voice behavior, employees can provide beneficial and valuable suggestions which might help teams adapt to dynamic work environments quickly (Whiting, Podsakoff, & Pierce, 2008). Contrarily, the lack of voice might compromise decision making and adaptive processes (Morrison & Milliken, 2000). Due to the importance of voice behavior, recently, more attention has been given to its antecedents. Several investigations have attempted to explore what kinds of individuals are more likely to voice and the conditions under which personnel will be triggered to speak up (e.g., Burris, Detert, & Chiaburu, 2008; Detert & Burris, 2007; LePine & Van Dyne, 1998, 2001; Tangirala & Ramanujam, 2008a, 2008b; Van Dyne, Kamdar, & Joireman, 2008; Whiting et al., 2008). While these studies offer useful insights into employee voice, there are several gaps in information regarding the antecedents of voice behavior in teams.

First, even though individual differences (e.g., personality and demographic variables) and attitudes have been identified as important predictors of voice behavior, further research is still needed to explore how contextual factors may affect employees' willingness to speak up (Detert & Burris, 2007). Especially, very few studies have investigated the mechanisms through which individuals' perceptions of team context can influence their voice behavior (Choi, 2007). Without the empirical information about the impact of work contextual factors, managerial researchers and practitioners may lack the insights necessary to enhance voice behavior through specific practices.

Another limitation of the voice literature is that the antecedents on voice behavior have been explored solely at either the individual level or the higher level (e.g., group, team, or unit level), ignoring the possibility of cross-level interactions on voice behavior (Tangirala & Ramanujam, 2008a). Many researchers have acknowledged that individual attitudes and behaviors are inherently influenced by unit- or organizational-level factors as opposed to emerging at a single level (Klein, Dansereau, & Hall, 1994; Kozlowski & Klein, 2000; Rousseau, 1985). In this case, voice behavior might be a function of aggregate-level characteristics beyond individual-level considerations. Consequently, neither factors at the individual level nor those at the higher level can forecast voice behavior comprehensively, while considering influences across-level may delineate more clearly the way voice behavior occurs in teams and organizations. The few studies that have explored multilevel correlates of voice indicate that group climates moderate individual-level work attitude–employee voice relationships (Morrison, Wheeler-Smith, & Kamdar, 2009; Tangirala & Ramanujam, 2008a); however, the effects of other team

contextual factors on individual-level, predictive relations with voice behavior remain untested, thus limiting our understanding of voice behavior in teams.

Regarding these issues, by examining voice behavior in a team context, the current investigation offers two unique contributions. First, I assess the influence of employees' perceived team support and trust in leadership on voice behavior. The choice of these two variables was based upon consideration that both team coworkers and team leaders are important factors in establishing individuals' work environments in teams (Ferris et al., 2009). To my knowledge, no study has investigated the impact of both team coworkers and leadership on voice behavior simultaneously. Moreover, I also examine employee engagement as an important work state (Kahn, 1990) linking perceived team support and trust in leadership and voice behavior. Engagement might be a useful construct to help understand the mechanism through which team members and team leaders affect an individual's subsequent voice behavior.

Second, the present effort reinforces recent cross-level studies (Morrison et al., 2009; Tangirala & Ramanujam, 2008a) by examining how team performance (i.e., team adaptivity and proactivity: Griffin, Neal, & Parker, 2007) may moderate the relationship between employee engagement and voice behavior at the individual level. Team performance provides performance feedback to all team members, and thus, may be an important characteristic that directs individual input in work (Chen & Kanfer, 2006; Chen, Kanfer, DeShon, Mathieu, & Kozlowski, 2009; Chen, Kirkman, Kanfer, Allen, & Rosen, 2007). Therefore, I consider team performance as a potential moderator of the individual-level engagement–voice relationship. Figure 1 depicts the conceptual bases of this study.

THEORETICAL BACKGROUND AND HYPOTHESES

As an important component of organizational citizenship behaviors (OCB), voice behavior is a type of extra-role behavior that is not required by formal job description (Organ, Podsakoff, & MacKenzie, 2006). During the current investigation, I adopt LePine and Van Dyne's (1998) definition, thus conceptualizing voice behavior as constructive change-oriented communication intended to improve the status quo of teams. Moreover, the object of voice behavior here is the whole team but not supervisor, as emphasized in some previous research (e.g., Burris et al., 2008; Detert & Burris, 2007). Within teams, members need to share ideas, knowledge, and insights to perform well individually, and obtain team goals together. For this reason, considering voice toward the whole team rather than solely the supervisor will be more appropriate in a team context.

In addition, I consider perceived team support and trust in leadership as two critical predictors of voice behavior at the individual level because employees' perceptions of teams and their leaders might influence their voice behavior (Choi, 2007; Deter & Burris, 2007; Van Dyne et al., 2008). Specifically, I anticipate that both variables will lead to voice behavior via employee engagement, which emphasizes employees' investment of themselves in tasks (Kahn, 1990). Furthermore, according to team research (e.g. Rousseau, 1985), team context might offer members some cues to engage in voice behavior. I conceptualize team performance as the extent of how well teams adapt to changing environments and improve upon a team's status quo. In turn, I expect team performance to moderate the positive relationship between employee engagement and voice behavior. Before considering the moderating role of team

performance, I first develop theory to explain the proposed relations among perceived team support, trust in leadership, and employee engagement, and subsequent voice behavior.

Perceived Team Support

Perceived team support is the extent to which employees perceive that a team values their contribution and cares about their well-being (Bishop, Scott, & Burroughs, 2000). It is similar to perceived organizational support (POS) (Eisenberger, Huntington, Hutchison, & Sowa, 1986) except that the team, versus the organization, serves as the referent of perceived support which is relevant in a team-based context (Bishop, Scott, Goldsby, & Cropanzano, 2005). Prior research has distinguished perceived team support from POS (Bishop et al. 2000; Bishop et al., 2005; Self, Holt, & Schaninger, 2005).

Social exchange theory (Blau, 1964) provides a useful framework for expecting positive effects of perceived team support on voice behavior. Social exchange theory proposes that employees perceive influential organizational members (e.g., supervisors and coworkers) as personifications of the organization. The nature of treatment received from these individuals represents workers' views of the organization's intent toward them. For instance, if coworkers (or supervisors) show great concern for employees' well-being, correspondingly, workers will infer the team or the organization is supportive of them. Furthermore, based upon the norm of reciprocity (Gouldner, 1960), employees will feel obligated to reciprocate this favorable treatment through enhanced positive attitudes and work behaviors. A number of studies support these predictions for POS, showing that it is positively related to work attitudes, performance, and OCBs, and negatively associated with absenteeism, turnover intentions, and actual turnover

(Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades, 2001; Rhoades & Eisenberger, 2002). Additional work shows that these POS–outcome associations are mediated by felt obligation (Eisenberger et al., 2001). Similarly, burgeoning work on perceived team support demonstrates its beneficial effects on team commitment (Bishop et al., 2005), OCBs (Organ et al., 2006), and job performance (Bishop et al. 2000) as well.

Extending social exchange theory logic to perceived team support, I expect employees who believe that teams value their contribution and care about their well-being will be more apt to perform on the behalf of teams and to psychologically commit to them (Wayne, Shore, & Liden, 1997). Consequently, these characteristics provide a team environment wherein workers provide suggestions to improve the team, feel more secure in provide critical feedback to the team, and perceive that the team would be open to any suggestions raised (Hofmann & Morgeson, 1999; Morrison & Milliken, 2000). Based on these reasons, I propose that:

Hypothesis 1. Perceived team support will be positively related to employee voice behavior.

Trust in Leadership

Moreover, I propose that trust in leadership will be related with employee voice behavior. For this investigation, the referent of the trust belief is the direct leader of the team given her/his importance among subordinates (Dirks & Ferrin, 2002). Trust in leadership is further conceptualized as workers' acceptance of vulnerability to their direct leaders based upon positive expectations of leaders' intentions and/or behaviors (Mayer, Davis, & Schoorman, 1995; Rousseau, Sitkin, Burt, & Camerer, 1998). Such trust indicates the emotional relationships between workers and team leaders in which

employees express genuine care and concern for the welfare of team leaders, and believe that these sentiments are reciprocated (McAllister, 1995).

Based on social exchange theory (Blau, 1964), there is likely a reciprocal relationship between trust in leadership and voice behavior. Analogous to findings for POS research, perceived supervisor support work indicates that workers generally feel compelled to reciprocate pleasant treatment from supervisors through improved work attitudes and behaviors. Specifically, when employees perceived their supervisors as supportive, they expressed more favorable work attitudes and reduced absenteeism and turnover (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002). Accordingly, workers who trust their leaders might reciprocate leaders' support via being vigilant to the changing work environment of the teams and exerting voice behavior toward work-related issues (Wayne et al., 1997). By contrast, if personnel have a low level of trust in leaders, they will be more apt to suppress information which might benefit the teams, because they might be concerned about the risk and meaningfulness of speaking up (Colquitt, Scott, & LePine, 2007; Costigan, Insinga, Berman, Ilter, Kranas, & Kureshov, 2006; Detert & Burris, 2007; Edmondson, 2003). Therefore, I propose that:

Hypothesis 2. Employees' trust in leadership will be positively related to

employee voice behavior.

The Mediating Effects of Employee Engagement

Organizational scholars have pointed out a need for further exploration of the mechanisms through which employees' team perceptions (Bishop et al., 2005) and trust in leadership (Dirks & Ferrin, 2001, 2002) relate to worker attitudes and behaviors. Responding to this call, I explore the mediating role of employee engagement in the

perceived team support–voice behavior and trust in leadership–voice behavior relationships.

Employee engagement serves as the focal mediator due to its important implications for worker cognitive and emotional states at work. Employee engagement refers to a positive work state indicating the extent to which employees express their "preferred self" in their work (Kahn, 1990). Unlike work attitudes such as organizational commitment or identification, which emphasize average levels of psychological attachment to organizations over time, employee engagement focuses on workers' psychological presence at work during task performance (Kahn, 1992). Workers can have relatively permanent attachment to organizations, but their engagement in specific tasks may vary. Personnel's willingness to challenge the status quo depends on their investment in specific tasks (Blau & Boal, 1987; Burris et al., 2008), so employee engagement could serve as a pivotal mediator in this study.

Three psychological conditions have been suggested to lead to employee engagement, namely, meaningfulness, safety, and availability (Kahn, 1990). Meaningfulness deals with employees' cognitive reasoning of the value of their efforts at work. Safety pertains to individuals' sense of being protected from having negative consequences to the self by devoting to work. Availability refers to the perception of the accessibility of physical, psychological, and emotional resources necessary for work. In short, engaged personnel find their work meaningful, feel it is psychologically safe to invest themselves in their work, and believe they have the requisite resources to perform their jobs.

Both perceived team support and trust in leadership can induce employee engagement by fostering these three conditions. First, perceived team support conveys that individual members' contributions are valued by their teams (Bishop et al., 2000), which indicates the congruence between the employees' behaviors and those expected by this teams, thus precipitating feelings of meaningfulness. In terms of trust in leadership, when employees perceive their leaders care about their thoughts and well-being, they may feel valued (Dirks & Ferrin, 2002; Eisenberger et al., 2002; Rhoades & Eisenberger, 2002), and hence, express more willingness to invest themselves to their work roles (Kahn, 1992).

Second, perceived team support and trust in leadership could perpetuate greater psychological safety in teams, which in turn, may bolster employee engagement. High levels of team support renders individuals more likely to take risks and less likely to be concerned about punishment resulting from negative outcomes, because they believe team members would support each other during adversity (Edmondson, 1999; May, Gilson, & Harter, 2004). Similarly, supportive and trustworthy team leaders can also foster perceptions of safety (Edmondson, 1999) since such leaders are viewed as being concerned for employee well-being (Eisenberger et al., 2002). In contrast, distrustful, unsupportive leaders should lead to defensiveness among team members, thus leading to wariness and reluctance to take risks or expose their real selves in work (Colquitt et al., 2007; May et al., 2004).

Third, availability may be related to perceived team support and trust in leadership for two principal reasons. On the one hand, supportive team contexts and trustworthy team leaders can provide psychological and emotional support for employees

because the teams and team leaders care about focal employees' well-being (Kinnunen, Feldt, & Makikangas, 2008). On the other hand, both coworkers and team leaders can provide instrumental support for employees in performing their work. Consequently, research has elucidated the positive relationships between perceived support from organizations and leaders and employee engagement (e.g., Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; May et al., 2004; Rich, LePine, & Crawford, 2010; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009), thereby suggesting the potential effects of perceived team support and trust in leadership on employee engagement.

Based on the reasoning provided above, I expect employee engagement to mediate the positive relations between perceived team support and trust in leadership with employee voice behavior.

Hypothesis 3a. Employee engagement will mediate the positive relationship between perceived team support and employee voice behavior.

Hypothesis 3b. Employee engagement will mediate the positive relationship between trust in leadership and employee voice behavior.

The Moderating Effects of Team Performance

Although employee engagement is suggested here as a mediator of the relationship between perceived team support and trust in leadership and employees' voice behavior, it does not account for the potential effect of team context on the engagement–voice behavior relationship. Given the uncertainty teams face in dynamic environments, I conceptualize team performance as team leaders' ratings of team adaptivity and team proactivity (Griffin, Neal, & Parker, 2007). Team adaptivity pertains to the extent to which the team copes with or responds to external changes. For example, marketing

teams must adjust their strategies to clients' demands, while R & D teams must learn new skills and technology to develop new products. Both instances can be viewed as examples of team adaptivity. Team proactivity reflects the extent to which the team engages in change-oriented activities to improve the team's situation, or the way the team works. For example, team members might offer advice and suggestions to improve team effectiveness. Both team adaptivity and proactivity can be viewed as the indicators of the whole team's performance in adapting to changes and improving the team.

I draw upon self-regulation theory (Carver & Scheier, 1981) to postulate the moderating effect of team performance on the employee engagement–voice behavior relationship. According to self-regulation theory, people behave in pursuit of goals and continuously monitor whether goals have been achieved. When a behavioral goal is salient, self-regulation stresses a comparison between the goals and existing state, which in turn, leads to motivation to bring existing state in line with goals (Carver & Scheier, 1981). Based on this rationale, personnel are assumed to adjust their efforts in response to perceived progress toward achieving their desired performance level (Yeo & Neal, 2008). If goals have yet been realized, an individual will increase their efforts to reduce the discrepancy between current and desired levels of performance. In contrast, if goals have been achieved, people are proposed to reduce their effort further (Carver & Scheier, 1998).

Consistent with the above reasoning, engaged employees' efforts to improve teams' situation may vary based on the discrepancy between the current and the desired levels of teams' performance. When a team is not able to adapt to external changes, engaged team members, relative to their counterparts with low levels of engagement, may

be more proactive in offering advice and suggestions to improve team performance. This is likely because engaged personnel, given their higher cognitive and emotional "presence" at work, should be more invested in their work, concern that should extend to team performance. By comparison, less engaged workers will likely possess a more apathetic outlook on their work, and probably, that of their team. Accordingly, I expect such individuals to exhibit less voice aimed toward improving team functioning. Conversely, when a team performs well, engagement should not distinguish employees in their propensities to offer constructive comments and feedback to improve team functioning since the team is already performing proficiently. From this reasoning, I propose the following moderating effects of team performance on the engagement–voice behavior relationship:

> *Hypothesis 4. Team performance will moderate the positive employee engagement–voice behavior relationship, such that it will be more strongly positive when team performance is low and weaker when team performance is high.*

METHODS

Participants and Procedures

Study data were collected in a Chinese public sector firm that provides service for personnel working abroad. I analyzed data from the organization's annual survey of employees' attitudes collected at the end of each year. The survey measured workers' opinions in response to an organizational restructuring. Five hundred sixty employees and 73 team leaders from 73 teams were invited to participate in the survey. All team

members worked together in service businesses such as the export of labor services, offering training to international labor, and so on.

Two sets of questionnaires were used: one for employees and the other for team leaders. All respondents agreed to complete the survey via an intra-organization website and responses to the survey were anonymous. I did not collect identifying information from participants, however, they were asked to provide their team functional names which were used to link employees' responses with those of team leaders. Respondents understood that their leaders had no opportunity to access their individual responses to the survey.

After eliminating personnel and leaders with missing data and deleting teams with fewer than three members in order to adequately test the cross-level hypothesis (Klein, Conn, Smith, & Sorra, 2001), I obtained a final sample consisting of 502 leader-member dyads (i.e. 502 employees and 61 team leaders). Effective response rates were 89.64% and 83.56% for employees and team leaders, respectively. The 61 teams ranged in size from 3 to 20 members (M=8.23; SD=3.84), most employees were male (63.1%) and had completed bachelor's degrees or above (96.8%). On average, they were 32.80 years old, had 9.37 years of tenure in the organization, and 3.57 years of tenure in their teams. Of the team leaders, 78.7% were male with average age of 40.78 years. Almost all team leaders (98.4%) attained bachelor's degrees or above. In addition, using Pearce and Gregersen's (1991) 5-item scale of task interdependence (6-point Likert-type scale with high scores meaning high levels of task interdependence), I found that the mean of employee perceived task interdependence of the 61 teams was 4.34 with the average

interrater agreement (r_{wg}) of 0.78 (James, 1982); thus, workers in the sample performed in teams rather than individually (Sundstrom, De Meuse, & Futrell, 1990).

Measures

Employees were asked to evaluate perceived team support, trust in leadership, employee engagement, and voice behavior, while team leaders rated overall team performance. All measures were translated by two bilingual translators using translation-back translation procedures (Brislin, 1980), and the translated surveys were reviewed and checked by upper-level leaders fluent in both English and Chinese. Each measure was scored on a 6-point Likert response scale (1 = strongly disagree to 6 = strongly agree) with high scores representing greater standing on the variable of interest.

Voice behavior. Employee voice behavior, the dependent variable of the study, was measured using three items from Van Dyne and LePine's (1998) six-item scale. Given limits on survey length, three items with the highest factor loading in Van Dyne and LePine (1998) were administered. These included "I develop and make recommendations concerning issues that affect this team", "I speak up and encourage others in this team to get involved in issues that affect the team", and "I speak up in this team with ideas for new projects or changes in procedures". The use of three items reflecting only verbal behavior was consistent with the previous research in voice literature (e.g., Detert & Burris, 2007). (α =.86).

Perceived team support. Participants rated the level of support they perceived from the team by using the eight-item shortened version POS scale originally developed by Eisenberger et al.'s (1986). The scale was revised such that the word *team* was substituted for the word *organization*. Example items were "My team strongly considers

my goals and values", and "Help is available from my team when I have a problem"

(α =.83).

Trust in leadership. The degree to which respondents trusted their team leaders

was assessed with the five-item scale developed by McAllister (1995). Example items

were "I can talk freely to my team leader about difficulties I am having at work and know

that (s)he will want to listen", and "We would both feel a sense of loss if one of us was

transferred and we could no longer work together" (α =.92).

Employee engagement. Employee engagement was measured with the Gallup Q^{12}

12-item engagement scale developed by the Gallup Organization (1993-1998). Example

items were "I know what is expected of me at work", and "At work, I have the

opportunity to do what I do best every day" (α =.88).

Team performance. Team leaders rated overall team performance with Griffin et

al.'s (2007) three items each from the team adaptivity and team proactivity scales.

Example items were "Team members deal effectively with changes affecting the team",

and "Team members improve the way your team does things" (α =.91).

Control Variables

I employed several statistical control variables in this study to minimize their

confounding effects on study results. First, I controlled employee age, gender,

organizational tenure, and team tenure at the individual level because previous research

suggests that these demographic variables' might relate to team perceptions and/or voice

behavior (e.g., Detert & Burris, 2007; LePine & Van Dyne, 1998). Age was measured in

years. Gender was measured as a dummy variable (*0 = male, 1 = female*). Organizational

tenure and team tenure were measured in months. Second, several studies (e.g., Burris et

al., 2008; Morrison et al., 2009; Rusbult, Farrell, Rogers, & Mainous, 1988; Tangirala &

Ramanujam, 2008b) have found that individual attitudes can influence employee voice,

so I controlled affective commitment ($\alpha = .90$; measured by six items from Allen &

Meyer, 1990) and job satisfaction ($\alpha = .85$; measured by three items from Brayfield &

Rothe, 1951).

Moreover, team size was controlled at the team level as past research

demonstrates negative relationships between team size and team member attitudes and

behaviors (e.g., Asch, 1956) and voice behavior (LePine & Van Dyne, 1998).

Analyses

Given the multilevel nature of our investigation, the data were analyzed using

hierarchical linear modeling (HLM; Raudenbush & Bryk, 2002). HLM is a statistical

procedure developed for hierarchically nested data structures, such as employees (Level-

1) nested within teams (Level-2). According to the recommendations of Hofman and

Gavin (1998), I grand-mean centered the continuous variables at Level-1 and utilized

unfixed Level-1 slopes and intercepts unfixed across Level-2 units in all models. In

addition, when testing the moderating effects of team performance, I used group-mean

centering for Level-1 continuous predictors and included their group means in the Level-

2 intercept model, to ensure that the results for the cross-level interactions were not

spurious (Hofmann, Griffin, & Gavin, 2000).

In addition, full maximum likelihood estimation was used to test study

hypotheses. In this case, similar to examining R^2 change in ordinary least squares

regression or chi-square differences in structural equation modeling, deviance tests were

performed to assess relative improvements in model fit between various hypothesized

models (Raudenbush & Bryk, 2002). I performed HLM analyses of voice behavior in a step-wise fashion entering statistical controls in Step 1, followed by perceived team support and trust in leadership (Step 2), employee engagement (Step 3), team performance (Step 4), and the engagement $\times$ team performance cross-level interaction in the final step.

RESULTS

Means, standard deviations, and intercorrelations of variables at the individual level are presented in Table 1. Because of the high correlations between individual-level variables, I employed LISREL 8.71 (Jöreskog & Sörbom, 2004) to conduct confirmatory factor analyses (CFA) to validate the six-factor structure of individual-level survey measures. Chi-square (χ^2), the comparative factor index (*CFI*), root mean squared error of approximation (*RMSEA*), and standardized root mean square residual (*SRMR*) statistics were used to assess the fit of the measurement model. As shown in Table 2, the CFA results generally showed the acceptable fit of the six-factor model (χ^2 (614) = 2732.75, *p* < .001, *CFI* = .96, *RMSEA* = .08, *SRMR* = .06; *n* = 502), and confirmed its superior fit compared to five potential competing models. Thus, the six survey scales appear to measure distinct constructs.

I also tested the construct validity of team performance measured at the team level. A one-factor model combining the team proactivity and team adaptivity subscales (χ^2 (9) = 17.62, *p* < .01, *CFI* = .96, *RMSEA* = .08, *SRMR* = .06; *n* = 61) fitted the data similarly well as a two-factor model separating the two constructs (χ^2 (8) = 16.99, *p* < .01, *CFI* = .97, *RMSEA* = .08, *SRMR* = .06; *n* = 61). The change in χ^2 was non-significant ($\Delta\chi^2$

(1) = 0.63, *ns*), which supported a one-factor model of team performance in the study

(Kline, 2005).

Before testing hypotheses, I performed a one-way ANOVA with random effects

to estimate the within-group and between-group variability in voice behavior. The results

indicated significant between-team variability in voice behavior, $\tau_{00} = .05$, χ^2 (60, $n = 61$)

$= 106.16$, $p < 0.001$, intraclass correlation coefficient (*ICC*) $= .08$, thus supporting the use

of HLM in analyses. Turning to Hypotheses 1 and 2, results reported in Table 3 show that

several control variables were significantly related to voice behavior. Specifically,

employees who reported longer organizational tenure ($\gamma_{30} = .03$, $p < .01$) and higher job

satisfaction ($\gamma_{50} = .35$, $p < .01$) and commitment ($\gamma_{60} = .26$, $p < .01$) were more likely to

exercise voice. Entering perceived team support and trust in leadership in the Level-1

model (i.e., Model 3 in Table 3) significantly improved the model fit (χ^2 (19) $= 95.41$, $p <$

.01), and both perceived team support ($\gamma_{70} = .12$, $p < .01$) and trust in leadership ($\gamma_{80} =$

.16, $p < .05$) significantly predicted voice behavior. These findings demonstrate that

individual team members who perceived greater team support and were more trusting of

their team leaders expressed greater voice behavior; therefore, Hypotheses 1 and 2 were

strongly supported.

Regarding the Hypothesis 3a and 3b, I followed Baron and Kenny's (1986)

suggestions to assess the mediation effects of employee engagement. Mediation is

supported when four conditions simultaneously are met. There must be significant

relationships between the (1) independent variable (IV) and dependent variable (DV), (2)

IV and mediator, (3) mediator and DV, and finally, (4) complete mediation is evident

when the relationship between the IV and DV is attenuated to non-significance after

controlling for the mediator. When the effect of the independent variable is attenuated but still significant, then partial mediation is operative.

As presented in Table 3, personnel who expressed high perceived team support ($\gamma_{70} = .32$, $p < .01$) and leader trust ($\gamma_{80} = .21$, $p < .01$) also reported higher engagement in their work (see Model 1 in Table 3). Given the prior support for Hypotheses 1 and 2, the first two conditions for the mediation test were met. I added employee engagement into the model (Model 4 in Table 3) to test the third and fourth conditions of mediation. The results indicated that employee engagement was significantly related to voice behavior beyond the effects of perceived team support and trust in leadership ($\gamma_{90} = .31$, $p < .01$). More importantly, the relationship between perceived team support and voice behavior was attenuated to non-significant ($\gamma_{70} = .08$, ns), whereas trust in leadership displayed a slightly weakened, yet significant association with voice behavior ($\gamma_{80} = .13$, $p < .05$), after controlling for employee engagement. The findings reflect that employee engagement fully (partially) mediated the influence of perceived team support (trust in leadership) on voice behavior.

Because the proposed mediation effects were examined at Level-1 and the direct, indirect, and total effects were set random, I further assessed the significance of the indirect effects using of Bauer, Preacher, and Gil's (2006) "moderated lower-level mediation" approach. This method allows researchers to analyze multiple mediator effects simultaneously, as well as determine the relative effects of each mediating variable on an IV–DV relationship of interest. Furthermore, the approach utilizes Monte Carlo simulation techniques wherein mediation analyses are performed via multiple re-

samples from the data (i.e., a minimum of 1,000 iterations) to ensure the robustness of derived mediation results.

The findings of these analyses showed that the estimated random indirect effect of perceived team support on voice behavior was 0.06 ($SE = 0.03$; Monte Carlo confidence interval = 0.00, 0.12; $\alpha = .05$), which accounted for 48% of the total effect of perceived team support on voice behavior (Estimated total effect = 0.13; $SE = 0.05$; Monte Carlo confidence interval = 0.03, 0.23; $\alpha = .05$). Similarly, the random indirect effect of trust in leadership also was significant such that estimated indirect effect was 0.06 ($SE = 0.03$; Monte Carlo confidence interval = 0.00, 0.12; $\alpha = .05$), accounting for 35% of its total effect on voice behavior (Estimated total effect = 0.16; $SE = 0.06$; Monte Carlo confidence interval = 0.04, 0.28; $\alpha = .05$). Moreover, a deviance test suggested that addition of employee engagement made significant contribution to model fit, χ^2 (8, $N = 502$) = 44.73, $p < .001$. In sum, these findings offer full support for Hypothesis 3a and partial support for Hypothesis 3b.

Finally, analyses performed to assess Hypothesis 4 showed that team performance failed to predict voice behavior, as further indicated by a non-significant increment in model fit; however, Model 6 in Table 3 indicates that team performance moderated the positive relationship between employee engagement and voice behavior ($\gamma_{91} = -.15$, $p < .01$), and the addition of the cross-level interaction term significantly improved model fit (χ^2 (1) = 3.94, $p < .05$).

To delineate the nature of the observed moderating effects, I plotted the employee engagement–voice behavior relationship at one standard deviation above and below the mean for team performance (Cohen, Cohen, West, & Aiken, 2003). As depicted in Figure

2, when team performance was low, the positive relationship between employee

engagement and voice behavior became stronger ($\rho = .42$, $p < .01$). By contrast, under

conditions of high team performance, the slope of this relationship became flatter ($\rho = $

$.22$, $p < .01$), and also, the difference between the two slopes was significant ($p < .01$). In

sum, Hypothesis 4 was supported.

DISCUSSION

The present study introduced and tested a multilevel model of employee voice

behavior in teams. Based upon social exchange and engagement theories, I proposed that

workers who perceived more support from teams and reported greater trust in their

immediate team leaders would be more engaged in their work, thus prompting them to

exercise greater voice behavior. Extending self-regulation theory (Carver & Scheier,

1981) to a team performance context, I expected team performance to moderate the

employee engagement–voice behavior relationship. Under conditions of unmet team

performance standards, I predicted that highly engaged personnel would exhibit greater

voice than their relatively disengaged counterparts, owing to their strong cognitive and

emotional investments in team effectiveness. By contrast, such effects were not expected

in high-functioning teams. Study results offered generally strong support for these

predictions, which have a number of research and practical implications, as elaborated

upon in the following sections.

Research Implications

This study makes several contributions to the extant voice literature. Principally,

the study delineated the effects of perceived team support and trust in leadership on voice

behavior, and explored employee engagement as a mediating mechanism of these effects.

Research has demonstrated that individual characteristics and attitudes can predict

workers' voice behavior (e.g., LePine & Van Dyne, 1998, 2001), but relative few studies

have examined how voice behavior emerges in the team context (Detert & Burris, 2007).

In contrast, the present investigation uncovered perceived team support and trust in

leadership as two important predictors of voice behavior in teams. Accordingly, these

findings underscore the ramifications of supportive team environments for fostering team

members to provide discretionary, constructive suggestions for team performance

improvement. Moreover, I hope the preliminary results prompt subsequent researchers to

devote more attention to contextual predictors for individual voice behavior such as

dyadic relationships with leaders, social networks, and person-organization value

congruence.

Moreover, employee engagement was specified as a vital mediating mechanism

linking perceived team support and trust in leadership to voice behavior, after controlling

for relevant statistical controls. Employee engagement emphasizes workers' present work

state during task performance, and thus, should be more closely related to work-related

behavior such as voice (Blau & Boal, 1987). Accordingly, the finding that engagement

mediated the relationships between perceived team support and trust in leadership

provide insights into the "black box" of *why* these variables predict voice. Specifically,

supportive team members and trustworthy leaders provide a psychologically safer team

context wherein team members can contribute constructive criticisms and feedback aimed

at improving team performance. By contrast, a psychologically noxious team context

might breed defensiveness and apathy, thus prompting teammates to place lower stake in

team outcomes, thereby perpetuating lower team performance. These are useful insights

for the team literature and I am hopeful that additional work is directed toward

uncovering other potential mediators (e.g., organizational identification, team climate) of

perceived team support and trust in leadership on voice behavior.

Second, this investigation sheds light on an alternative explanation for why

employees might be more likely to speak up. Prior research has focused upon the

perceived safety and utility of employees' beliefs that speaking up is important for teams

or organizational effectiveness (e.g., Burris et al., 2008; Detert & Burris, 2007; Morrison

et al., 2009; Tangirala & Ramanujam, 2008a); however, my study demonstrated that the

team performance context affects team members' propensities to exercise voice, such that

engaged employees expressed greater voice behavior than their less engaged colleagues

under conditions of poor team performance. This is a key finding which shows that

engaged personnel hold greater stake for team success, and therefore, they respond in

kind when they perceived their teams as performing sub-optimally. Less engaged,

apathetic team members, by contrast, display little investment in team performance

regardless of the level of team effectiveness. Future research is necessary to further

elucidate the boundary conditions under which engagement and team performance

interact to relate to voice behavior. For instance, how low must team performance sink to

encourage increased voice behavior among engaged workers? Are certain types of

personnel more responsive to performance (e.g., those who are highly conscientious)?

Hopefully, subsequent work will provide answers to these questions.

Finally, the study findings reinforce the idea that individual voice behavior is a

function of both individual-level and team-level factors (Morrison et al., 2009; Tangirala

& Ramanujam, 2008a). Specifically beyond individual-level considerations, individual

team members might view team performance as an indicator of when they should exercise voice behavior. This is consistent with the idea that team performance contexts prompt individuals to adjust their intentions and performance of work behaviors geared toward improving individual and team effectiveness (Chen & Kanfer, 2006), logic yet to be examined in voice research. Regarding the cross-level interactions on voice behavior, future research should explore additional team contextual factors such as team climate (e.g., Chen, Lam, & Zhong, 2007) and team-member exchange (e.g., Kamdar & Van Dyne, 2007) and their potential moderating effects on antecedent–voice behavior relationships.

Practical Implications

Several practical implications also follow from our study findings. Notably, this study demonstrated that employee engagement is an important predictor of voice behavior, especially when team performance suffers. Accordingly, the study highlights two tactics by which to foster employee engagement. First, practicing managers need to establish a supporting and caring environment in which team members' contributions are valued. On the one hand, in order to make workers feel supported by their team, team leaders should not only provide emotional encouragement to team members, but also share insights for solving work-related problems. On the other hand, I suggest that team leaders cultivate a caring and supporting climate within the team so that team members find it psychological safe, meaningful, and beneficial to be engaged in their work. For example, team leaders can encourage mutual cooperation among team members and motivate them to help each other during tough times via certain team-based human

resource practices (e.g., team-based compensation; Kirkman & Rosen, 1999) and/or perpetuating a team climate for knowledge sharing (e.g., Collins & Smith, 2006).

An additional implication extends from the finding that leaders can engage their personnel by building trusting relationship with them. Suggestions for facilitating trust in leadership can be drawn from trust and leadership literature (Chua, Ingram, & Morris, 2008; Dirks & Ferrin, 2002). Simply put, team leaders can establish trusting relationships with team members by helping them at work. For example, subordinates tend to trust their leaders more when they are responsive to and understanding of work-related problems and provide expert coaching and career guidance to ameliorate task difficulties. Furthermore, team leaders can engender subordinate trust by treating them with fairness, dignity, and respect, and showing interest in their subordinates' opinions and suggestions.

Finally, the significant, cross-level employee engagement $\times$ team performance interaction suggests that managers should be cognizant of team members' responsiveness to team performance levels. Under conditions of high performance, teams may become complacent thus precipitating lower levels of voice behavior. In such instances, managers need to call team members' attention to staying vigilant to potential adversities in the future. Perhaps, managers could solicit team members' input into long-term planning as a means to provoke voice behavior. More importantly, by providing a supportive team context, managers can bolster team member engagement, which in turn, will increase their responsiveness to team performance; therefore, when team performance is low, a highly-engaged team will exercise greater voice behavior aimed toward improving team performance.

Limitations

The present findings should be interpreted in light of several study limitations. First, the data were collected from a public organization from China, thus, it is equivocal whether the findings generalize to other firm and country contexts. To address this concern, I encourage additional research that explores our predictions in other organizations and nations. Moreover, because all teams were from the same organization, between-group variance in employee voice behavior was small. This relative lack of between-group variance probably resulted in the non-significant main effects of team performance on voice behavior. More importantly, these features of the study design rendered our statistical analyses quite conservative, which bolsters confidence in the robustness of our observed significant cross-level interaction effects. Further multi-organizational investigation of the effects of team context on voice behavior would be informative.

Second, owing to the cross-sectional research, the causal implications of our model are limited. The results cannot rule out the possibility that those who are willing to speak up in teams might feel more engagement in work roles, and in turn, perceived greater team support and trust in leadership. While, the theoretical rationales for the hypotheses seem more reasonable, future longitudinal work is necessary to specify the causal paths of proposed relationships.

Finally, even though team performance measures were completed by team leaders, common method bias is a concern as all individual-level variables were rated by employees. This issue is mitigated somewhat by the CFA results which showed that respondents distinguished between the measured constructs (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Also, recent work has noted that common method bias might be less

problematic when examining interaction effects (Quigley, Tekleab, & Tesluk, 2007). In addition, the research design guaranteed participants' anonymity which might have alleviated the incidence of various response biases (Podsakoff et al., 2003).

CONCLUSION

The present study found that both perceived team support and trust in leadership were positively related to voice behavior as mediated by employee engagement. Team members who reported greater team support and more trust in their team leaders express higher engagement in their work than those who indicated lower support and trust. Team performance moderated the employee engagement–voice behavior relationship, such that it was more strongly positive when team performance was low rather than high. These findings suggest that both individual factors and team context are important to understand employee voice behavior

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TABLE 1

Means, Standard Deviations and Correlations for Individual-Level Variable [a]

Variable	Mean	s.d.	1	2	3	4	5	6	7	8	9	10
1. Age	32.80	6.64	--									
2. Gender [b]	0.37	0.48	-0.08	--								
3. Organization Tenure	9.37	6.75	0.90	-0.12	--							
4. Team Tenure	3.57	3.92	0.39	-0.07	0.42	--						
5. Job Satisfaction	4.34	0.87	0.03	-0.03	0.03	-0.01	(.90)					
6. Affective Commitment	4.54	0.80	0.03	0.00	0.02	0.02	0.62	(.85)				
7. Perceived Team Support	4.08	0.64	-0.13	0.03	-0.12	-0.13	0.56	0.47	(.83)			
8. Trust in Leadership	4.45	0.88	-0.15	-0.04	-0.11	-0.12	0.49	0.42	0.57	(.92)		
9. Engagement	4.29	0.63	-0.15	-0.03	-0.14	-0.14	0.66	0.61	0.67	0.66	(.88)	
10. Voice Behavior	4.37	0.79	0.11	-0.09	0.13	0.01	0.37	0.36	0.27	0.33	0.42	(.86)

[a] $n = 502$. All correlations larger than .09 are significant at $p < .05$ (two-tailed test); all larger than .12 are significant at $p < .01$.
Values in parentheses are reliability coefficients.
[b] 0 = male, 1= female

TABLE 2

Results of Confirmatory Factor Analyses

Model	Description	χ^2	df	χ^2/df	CFI	RMSEA	SRMR	$\Delta\chi^2$ from Model 1	Δdf
Model 1	Hypothesized 6-factor model [a]	2732.75	614	4.45	0.96	0.08	0.06		
Model 2	5-factor model [b]	3281.82	619	5.30	0.95	0.09	0.08	549.07 ***	5
Model 3	4-factor model [c]	5097.75	623	8.18	0.93	0.12	0.09	2365.00***	9
Model 4	3-factor model [d]	5368.90	626	8.58	0.93	0.12	0.09	2636.15***	12
Model 5	2-factor model [e]	8640.43	628	13.76	0.90	0.16	0.10	5907.68***	14
Model 6	1-factor model	8616.48	629	13.70	0.90	0.16	0.10	5883.73***	15

$n = 502$

*** $p < .001$

[a] Affective commitment, job satisfaction, perceived team support, trust in leadership, engagement, voice behavior

[b] Affective commitment and job satisfaction as one factor, perceived team support, trust in leadership, engagement, voice behavior

[c] Affective commitment and job satisfaction as one factor, perceived team support and trust in leadership as one factor, engagement, voice behavior

[d] Affective commitment and job satisfaction as one factor, perceived team support, trust in leadership, and engagement as one factor, voice behavior

[e] Affective commitment, job satisfaction, perceived team support, and trust in leadership as one factor, engagement and voice behavior as one factor

TABLE 3

Results of Hierarchical Linear Modeling (HLM) Analyses Predicting Engagement and Voice Behavior

Predictor Variables	Dependent Variables					
	Engagement			Voice		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Level-1						
Age, γ_{10}	-0.01	-0.02	-0.00	0.00	0.00	0.01
Gender, γ_{20}	-0.04	-0.07	-0.05	-0.03	-0.03	-0.04
Organization tenure, γ_{30}	0.00	0.03**	0.03*	0.02	0.02	0.02
Team tenure, γ_{40}	-0.01*	0.00	0.01	0.02*	0.02*	0.02*
Job satisfaction, γ_{50}	0.17**	0.35**	0.25**	0.19*	0.20*	0.20*
Affective commitment, γ_{60}	0.22**	0.26**	0.19**	0.03	0.03	0.04
Perceived team support, γ_{70}	0.32**		0.12**	0.08	0.08	0.08
Trust in leadership, γ_{80}	0.21**		0.16*	0.13*	0.12*	0.12*
Engagement, γ_{90}				0.31**	0.31**	0.32**
Level-2						
Team size, γ_{01}		0.01	0.01	-0.01	-0.01	-0.01
Team performance, γ_{02}					-0.03	-0.01
Cross-level interaction						
Engagement*Team performance, γ_{91}						-0.15**
Deviance		1040.97	945.56	917.52	917.28	913.33
Decrease in deviance (Δ *df*)			95.41 (19)**	28.03(11)**	0.24 (1)	3.94 (1)*

Level-1 $n = 502$; Level-2 $n = 61$. Entries are estimates of the fixed effects with robust standard errors.
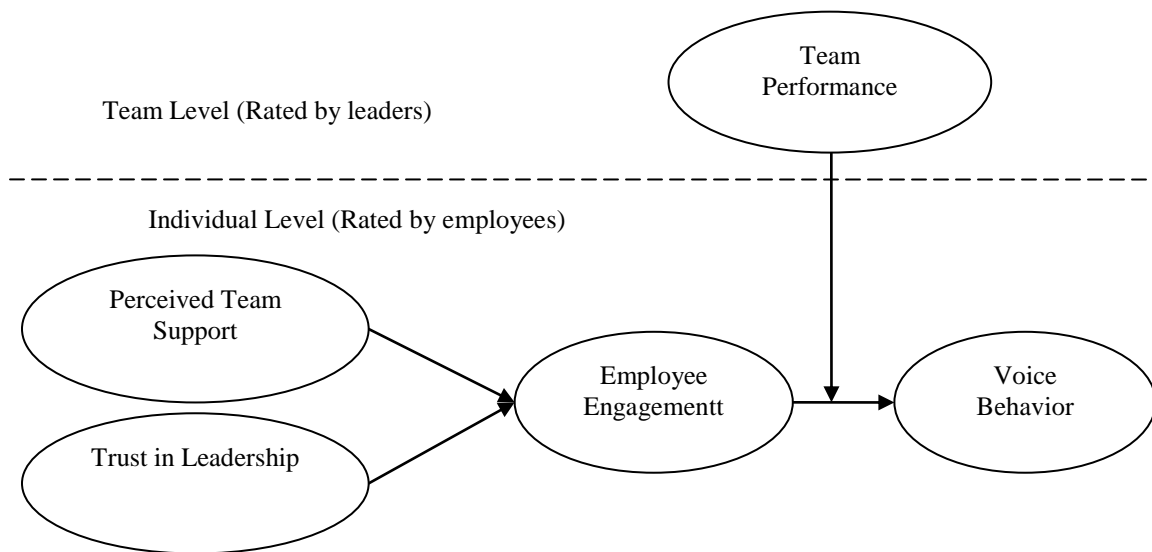* $p < .05$ ** $p < .01$

FIGURE 1

Cross-Level Moderated Mediation Effects on Voice Behavior

FIGURE 2

Moderating Effects of Team Performance on Employee Engagement-Voice

Behavior Relationship