Voicing Stress

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Voicing Stress

Abstract
Stress in the workplace is commonplace and how employees choose to voice their stress can have an impact on their performance evaluations and their career progression. Employees must successfully navigate workplace dynamics when they choose to voice their stress to their managers. While there is significant research regarding stress and voice in the workplace, little exists about the intersection, voicing stress. This research provides new experimental data and insights to help explain how voicing stress impacts an employee’s performance evaluations. Distinguishing between the concepts of challenge stress, hindrance stress, supportive voice, and challenging voice, this study tests several hypotheses regarding the relationship between voicing stress and performance evaluations. Additionally, several predictions were made about what might mediate the relationship. The findings suggest that how an employee voices various kinds of stress has an impact on an employee's performance evaluations, perceived effectiveness, and potential for promotion.

Keywords
Management, Organizational Behavior, Stress, Voice, Challenge stress, Hindrance Stress, Challenging Voice, Supportive Voice

Disciplines
Business Administration, Management, and Operations | Business and Corporate Communications | Leadership Studies | Organizational Behavior and Theory | Strategic Management Policy

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VOICING STRESS

By

Deanna Taylor

An Undergraduate Thesis submitted in partial fulfillment of the requirements for the

JOSEPH WHARTON SCHOLARS

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# Table of Contents

I. ABSTRACT .................................................................................................................................................. 2
II. INTRODUCTION ........................................................................................................................................ 3
III. LITERATURE REVIEW ............................................................................................................................. 5
IV. RESEARCH QUESTION AND HYPOTHESES ....................................................................................... 10
V. SIGNIFICANCE ........................................................................................................................................... 12
VI. METHODOLOGY ...................................................................................................................................... 13
VII. RESULTS ................................................................................................................................................ 16
VIII. DISCUSSION ......................................................................................................................................... 31
IX. CONCLUSION .......................................................................................................................................... 34
X. REFERENCES ........................................................................................................................................... 36
XI. APPENDIX ............................................................................................................................................. 38
I. ABSTRACT

Stress in the workplace is commonplace and how employees choose to voice their stress can have an impact on their performance evaluations and their career progression. Employees must successfully navigate workplace dynamics when they choose to voice their stress to their managers. While there is significant research regarding stress and voice in the workplace, little exists about the intersection, voicing stress. This research provides new experimental data and insights to help explain how voicing stress impacts an employee’s performance evaluations. Distinguishing between the concepts of challenge stress, hindrance stress, supportive voice, and challenging voice, this study tests several hypotheses regarding the relationship between voicing stress and performance evaluations. Additionally, several predictions were made about what might mediate the relationship. The findings suggest that how an employee voices various kinds of stress has an impact on an employee’s performance evaluations, perceived effectiveness, and potential for promotion.
II. INTRODUCTION

Stress in the workplace is inevitable, and how we choose to cope with stress can have a great impact on ourselves, our teams, and our organizations. While stress is thought to have a negative impact on one’s mental health and work output, stress can also serve to propel us forward. In fact, workplace stress can motivate employees to work quicker, harder, and smarter to meet the demands of their jobs. Additionally, how we voice our stress can impact our own careers as well as the careers of those around us. On the one hand, employees are loath to seem as though they are complaining, and some co-workers and managers may look down upon voicing stress. On the other, communicating stress can help to relieve it and can lead to increased efforts and creative solutions to cope with stressful situations.

To understand stress in the workplace, we must understand the effects that stress has on employees themselves and on organizations as whole. Many researchers have focused on the topic of workplace stress and the impact that stress has on individual and team performance. The conventional understanding is that workplace stress is associated with distress, anxiety, and exhaustion, which can detract from an employee’s performance (Boswell, 2004). However, some research also suggests that stress can lead to positive performance, through increased motivation, exhilaration, and excitement (Mawritz, 2013). Additionally, to know more about the impacts of voicing stress, we must look to prior research on voice. Research generally considers voice to lead to new ideas, creativity, and innovation that can propel an organization forward. Voice can also reduce uncertainty, lead to feelings of control, and make employees feel valued. Yet, research finds a negative relationship between proactive voice and career progression (Bashshur, 2014). Not all managers take kindly to voice from their employees (Burris, 2012).
Through prior research on voice and stress, we find a cross between the two topics: voicing stress. Understanding the varying impacts of stress can be crucial to organizations, as it allows managers to find and maintain happier, more motivated, and better performing employees and teams. Understanding the impacts of voice and how the content, tone, and deliverer of voice impacts a response can be crucial for both employees and organizations. As such, determining the impact of voicing stress can help employees, managers, and organizations know more about the workplace and the world around them.

This research examines the intersection between stress and voice. It seeks to understand how employees are evaluated when they speak up while stressed. The analysis considers various ways of voicing stress at the time when employees are experiencing certain stressors. An experiment was conducted using a between-subject design to test hypotheses, and the resulting data was analyzed to answer the research question. While much research exists on stress and voice as separate topics, this research brings stress and voice together. By understanding the intersection of voice and stress, we can grasp the real-world implications of both.
III. LITERATURE REVIEW

Section 1: Stress

Researchers have categorized stress in two ways. First, workplace stresses causing distress are known as *hindrance-stresses*. These often include situations with excessive bureaucracy, red tape, or politics. In other words, these situations have constraints that inhibit an employee’s ability to complete his or her work. Self-reported hindrance-stress is negatively correlated with job satisfaction and positively correlated with turnover (Cavanaugh, 2000). Additionally, the presence of hindrance-stressors can lead to an employee coping by diverting energy away from proper functioning and can lead to psychological responses that hinder performance (Gilboa, 2013). Hindrance-stress promotes a cognitive-style of coping, which can include withdrawing from a situation, and leads to decreased learning performance. Increased exhaustion and decreased motivation to learn both partially mediate the relationship between hindrance-stress and learning performance (LePine, 2004). Furthermore, hindrance-stress is significantly and negatively related to felt change, an employee’s feelings that a situation has the potential for growth, mastery, or gain. Additionally, hindrance-stress leads to annoyance and anger, deterring from an employee’s loyalty (Boswell, 2004). Lastly, hindrance-stress also mediates the negative relationship between employee affect and work-unit conflict (Culbertson, 2009). The impacts of hindrance-stress on an employee’s motivation to learn, felt change, organizational loyalty, learning performance, exhaustion, turnover, and overall job satisfaction has been well-documented.

In contrast, workplace stress that causes eustress, the opposite of distress, is known as *challenge-stress*. These stressors make work rewarding and “well worth it,” and include situations with job overload, time pressures, and high levels of responsibility. Self-reported challenge-stress is positively related to job satisfaction and negatively correlated with turnover (Cavanaugh, 2000).
Challenge-stress leads to active problem-solving and behavioral coping, which includes increased effort to meet demands. Like hindrance-stress, challenge-stress is positively correlated with exhaustion, which negatively impacts learning performance. However, unlike hindrance-stress, challenge-stress is positively related to motivation to learn, offsetting its relationship with exhaustion and ultimately leading to a positive relationship between challenge-stress and learning performance (LePine, 2004). Furthermore, challenge-stress is significantly and positively related to felt change. Additionally, challenge-stress is interpreted as an opportunity for growth. The potential gains perceived when confronted with a challenge-stress enhance loyalty to an organization (Boswell, 2004). Challenge-stress is shown to have the opposite impacts as hindrance-stress on motivation to learn, felt change, organizational loyalty, learning performance, turnover, and overall job satisfaction.

The identification of stressors as hindrance- or challenge-related stressors in part accounts for the varying impacts of stress in organizations. Hindrance-stressors create negative responses, emotional coping mechanisms, and outcomes in organizations. Challenge-stressors create positive responses, emotional coping mechanisms, and outcomes.

**Section 2: Voice**

Traditionally, job dissatisfaction is met with one of four responses: exit, voice, loyalty, or neglect (Farrell, 1983). While exit and neglect represent passive responses, voice and loyalty are inherently active responses, and are thus constructive to organizations (Hon, 2013). Voice can lead to creativity and innovation, and can reduce uncertainty, increase feelings of control, and make employees feel valued. Despite these important impacts of voice, research has also found a negative relationship between proactive voice and career progression (Bashshur, 2014). Not all
managers take kindly to voice from their employees (Burris, 2012). Understanding the impacts of voice and how the content, tone, and deliverer of voice impacts a response can be crucial for both employees and organizations.

To understand the impacts of voice, researchers have categorized voice in two ways. *Challenging voice* involves speaking up to alter, modify, or destabilize the status quo and may be considered threatening or disruptive. *Supportive voice* is intended to stabilize or preserve the status quo. Generally, managers react differently to these kinds of voice. Consider employees who more frequently engage in challenging voice than in supportive voice as “challenging employees” and consider employees who more frequently engage in supportive voice than in challenging voice as “supportive employees.” Managers view challenging employees to be worse performers than supportive employees. Additionally, managers endorse the ideas of challenging employees less than they endorse the ideas of supportive employees (Burris, 2012).

Two concepts that mediate the relationship between voice and manager response are perception of loyalty and perception of threat. Managers view challenging employees as less loyal than supportive employees. The more employees are seen as loyal, the more managers endorse their ideas. Perception of loyalty has been shown to partially mediate the relationship between voice and performance evaluations. Research also finds that managers view challenging employees as more threatening than supportive employees. The more employees are seen as threatening, the less strongly managers endorse their ideas, and perception of threat has also been shown to partially mediate the relationship between voice and performance evaluations (Burris, 2012). Research suggests that employees who more frequently engage in supportive voice are given stronger performance evaluations than employees who more frequently engage in challenging voice, as mediated by perceptions of loyalty and threat.
It is important to note that manager self-efficacy impacts the voice to performance evaluation relationship. Managers are expected to be effective and influential. Managers who do not fulfill these expectations experience ego defensiveness. Thus, they find voice to be more threatening than do managers who do not experience ego defensiveness. Research finds that managers with low self-efficacy are less likely to solicit voice from employees and that employees are less likely to voice concerns to managers with low self-efficacy. Additionally, managers with low self-efficacy are less likely to positively rate employees who exercise voice and are less likely to implement employees’ suggestions (Fast, 2014). Other factors including tone, message, provider, and situation also mediate the relationship between voice and response (Jung, 2014).

The identification of voice as challenging or supportive allows researchers to understand the impacts of voice in organizations. Employees who frequently engage in supportive voice are considered more loyal and less threatening than employees who frequently engage in challenging voice, and thus managerial responses may be more rewarding towards these employees. Managerial self-efficacy moderates this relationship. Managers with high self-efficacy are less likely to feel ego defensiveness. Managers with low-self efficacy are more likely to experience ego defensiveness, and are thus likely to reward employees who frequently engage in supportive voice by giving them high performance ratings and by more frequently endorsing their ideas. Managers are likely to punish employees who more frequently engage in challenging voice by giving them low performance ratings and by less frequently endorsing their ideas.

**Section 3: Voicing Stress**

While a great deal of research has been done on stress and voice as separate topics, less is known about the interaction between stress and voice. Recent research by Yongsuhk Jung explored
this relationship by categorizing voice as having one of two underlying motivations, *prohibitive* or *promotive*, and one of two change orientations, *preservation* or *challenge*. Prohibitive voice expresses concern about existing practices that may harm an organization, while promotive voice expresses ways to improve existing work practices to benefit an organization. Preservation voice is voice to keep the status quo, while challenge voice is voice to change the status quo. Jung defines *constructive voice* as being challenging and promotive, while *destructive voice* is challenging and prohibitive. *Supportive voice* is preserving and promotive, and *defensive voice* is preserving and prohibitive (Jung, 2014).

While existing research begins to look at the content and nature of voice, additional research must be done to understand how employees are evaluated when they speak up while stressed. By building on prior research’s distinction between challenge- and hindrance-stress and supportive and challenging voice, and by utilizing the findings regarding constructive, destructive, supportive, and defensive voice, research can expand our understanding of stress and voice in organizations.
Research Question: How are employees evaluated when they speak up while stressed?

Based on prior research on challenge stress, hindrance stress, supportive voice, and challenging voice, several hypotheses have been formulated. Two basic hypotheses follow.

**Hypothesis 1a:** Employees who speak up about challenge stress are evaluated more positively than employees who speak up about hindrance stress.

**Hypothesis 1b:** Employees who engage in supportive voice are evaluated more positively than employees who engage in challenging voice.

Based on these two hypotheses and on prior research on stress and voice, 3 interrelated complex hypotheses have also been posed.

**Hypothesis 2a:** Employees who engage in supportive voice while experiencing a challenge stress will be evaluated more positively than employees who engage in challenging voice while experiencing a hindrance stress.

**Hypothesis 2b:** Employees who engage in challenging voice while experiencing a challenge stress and who engage in supportive voice while experiencing a hindrance stress will be evaluated more positively than employees who engage in challenging voice while experiencing hindrance stress.

**Hypothesis 2c:** Employees who engage in challenging voice while experiencing a challenge stress and who engage in supportive voice while experiencing a hindrance stress
will be evaluated more negatively than employees who engage in supportive voice while experiencing challenge stress.

While this research primarily seeks to answer the stated research question, it is also important to learn more about what mediates the various managerial responses. In the methodology, questions will also be posed to learn more about the mediators at work in each scenario.
V. SIGNIFICANCE

This research intends to add to existing literature on stress and voice. By answering the research question presented, it brings additional information to researchers focusing on these topics. Stress and voice researchers will likely be interested to read the findings of the paper. Additionally, researchers focusing on emotion regulation and interpersonal interactions may be intrigued to see the findings and to read into what mediates the managerial responses. Based on existing research, the hypotheses as listed above would likely conform to this audience’s expectations. Researchers in this field would expect to see several hypotheses comparing the various types of stress and voice.

Additionally, this research seeks to give information to organizations and employees who seek to understand managerial issues and how they may be tackled. Employers may value this research as it will help organizations understand how workplace stress and workplace voice impact performance, teamwork, and interpersonal relationships. Employees may seek out the results of this research paper to understand how voice can affect their relationships to their teams and bosses, and ultimately to their career trajectory.
VI. METHODOLOGY

Sample, Design, and Procedures

Building upon existing research on stress and voice, an experiment was conducted to test the research question and hypotheses. Participants were assigned roles as managers and each was given a scenario with between-subject voice and stress manipulation. The design of the experiment was inspired by existing research papers on stress by LePine, LePine, and Jackson and on voice by Burris. The scenarios that were used for each situation were built on the mentioned research papers. 360 full-time working employees over the age of 18 were sourced as participants for the study through Mechanical Turk. Results from participants who did not complete the survey or who did not pass the attention test were discarded, resulting in a remaining 292 responses, with 73 in each voice and stress combination. Of the participants whose data remained, approximately 45% of the participants were female and the median age was 35. About 78% of the participants reported having previous experience as a manager.

Each subject was first asked to complete a series of managerial tasks to get them in the mindset of being a manager. These tasks included setting an agenda for their weekly meeting and describing their managerial style. Then, each subject was given a basic scenario and a response scenario. The stresses described were based on stresses used in prior research by LePine, LePine, and Jackson, which can be found in Appendix A. The voice modification was informed by the voice used in prior research by Burris, which can be found in Appendix B. Scenarios for each condition are given in Appendix C. Once subjects read these scenarios, they were asked to rate their employee’s performance through various metrics. They were asked to give the employee a general performance evaluation and an evaluation of effectiveness, as well as an evaluation of how likely they would be to promote the employee. These questions provided the dependent variables
used to confirm or deny the hypotheses. Participants were then asked additional questions about their perceptions of the employee. Their perceptions of the employee’s loyalty to the organization, loyalty to the manager, threat to the manager, job fit, job dedication, motivation to learn, warmth, competence, and interpersonal skills were recorded. These questions served to consider the mechanisms connecting the stress and voice combination to the performance evaluations given. Demographic data was also recorded.

**Measures**

**Performance.** The primary question asked to measure performance was based on research by Burris. The question asked was, “How would you rate this person’s performance based on what you know?” This was rated by participants on a 7 point Likert scale (1 = “extremely unacceptable,” 7 = “extremely outstanding”).

**Effectiveness.** Measures of effectiveness were recoded and then averaged with measures of positional promotion and idea promotion to create a second measure of overall performance evaluation. The questions asked about effectiveness were, “What is your personal view of Jamie in terms of overall effectiveness?,” and “Overall to what extent do you feel Jamie has been effectively fulfilling roles and responsibilities?” Participants answered these questions on a 5 point Likert scale (1 = “not effective at all,” 5 = “extremely effective”).

**Positional promotion.** Questions regarding promotion were asked and responses averaged with measures of effectiveness and idea promotion to create a second measure of overall performance. Questions asked were based on prior research by Burris and included, “If a position were available, I would recommend this person for a promotion,” and “If this person was promoted and you were colleagues, I would expect them to perform in their new position.”
These questions were rated on a 7 point Likert scale (1 = “strongly disagree,” 7 = “strongly agree”).

Idea promotion. Questions regarding support of the employee’s ideas were asked, based on research from Burris and other researchers. Questions included, “How likely is it that you will take this person’s comments to your supervisor?” and “I think this person’s comments should be implemented.” Participants rated each of these questions on the appropriate scales, such as on a 7 point Likert scale (1 = “extremely unlikely,” 7 = “extremely likely”) for the first question and on a 7 point Likert scale (1 = “strongly disagree,” 7 = “strongly agree”) for the second question.

Mediators. To test what mediates the relationship between the scenarios and the performance evaluations, subjects were also asked to evaluate their employees on a series of other measures, including loyalty, threat, job dedication, and motivation to learn. Questions asked were based in prior research. Questions on perception of loyalty, for example, included, “this organization’s needs are important to this person” and “this person really looks out for what is important to this organization.” Questions on perception of threat include, “how likely is it that you will lose status in the organization if your superior heard this person’s comments?” and “How likely is it that your superior will question your ability to devise an effective plan if your superior heard this person’s comments?” Questions were also included to test perception of job fit, job dedication, motivation to learn, warmth, competence, and interpersonal skills.

For each of these measures, the responses to several questions were averaged to come up with a single response variable for each measure. The questions chosen followed the standards of existing literature in each case. The questions that were asked for each measure are listed Appendix D.
VII. RESULTS

Manipulation Check

Consistent with existing research, a manipulation check was included at the end of the study to ensure that participants understood the scenarios as intended. A two-way ANOVA \( F[1,292] = 100.4397, p < 0.0001 \) revealed that participants perceived a difference in challenging voice between scenarios. Participants given scenarios in which the employee engaged in challenging voice \( (\text{M} = 5.79, \text{SD} = 0.98) \) perceived the employee as significantly more challenging \( (d = 2.01, \text{SE} = 0.16, p < 0.0001) \) than participants given scenarios in which the employee engaged in supportive voice \( (\text{M} = 3.08, \text{SD} = 1.66) \). Additionally, a two-way ANOVA \( F[1,292] = 110.3406, p < 0.0001 \) revealed that participants perceived a difference in supportive voice between scenarios. Participants given scenarios in which the employee engaged in supportive voice \( (\text{M} = 5.45, \text{SD} = 1.38) \) perceived the employee as significantly more supportive \( (d = 2.11, \text{SE} = 0.16, p < 0.0001) \) than participants given scenarios in which the employee engaged in challenging voice \( (\text{M} = 2.59, \text{SD} = 1.34) \).

A two-way ANOVA \( F[1,292] = 10.4490, p < 0.0001 \) revealed that participants perceived a difference in challenge stress between scenarios. Participants given scenarios in which the employee experienced challenge stress \( (\text{M} = 6.16, \text{SD} = 0.90) \) perceived the employee as experiencing challenge stress significantly more \( (d = 0.59, \text{SE} = 0.11, p < 0.0001) \) than participants given scenarios in which the employee experienced hindrance stress \( (\text{M} = 5.59, \text{SD} = 1.05) \). Additionally, a two-way ANOVA \( F[1,292] = 92.5708, p < 0.0001 \) revealed that participants perceived a difference in hindrance stress between scenarios. Participants given scenarios in which the employee experienced hindrance stress \( (\text{M} = 5.58, \text{SD} = 1.11) \) perceived the employee as experiencing hindrance stress significantly more \( (d = 1.94, \text{SE} = 0.13, p < 0.0001) \).
than participants given scenarios in which the employee experienced challenge stress (M = 3.42, SD = 1.12). Figures for the manipulation check can be found in Appendix E.

Hypothesis Testing

The hypotheses seek to explain the impact of stress and voice on performance evaluations. To measure performance evaluations, the study included several questions in three different categories. First, questions were asked to measure overall performance. Second, questions were asked to measure overall perceived effectiveness. Finally, questions were posed to measure a managers’ likelihood of promoting an employee and their ideas. A between-subjects two-way ANOVA revealed that voice, stress, and their interaction had significant impacts on the performance evaluations of employees ($F[1, 292] = 14.4973, p < 0.0001$). Performance evaluations were given on a scale from 1 (“extremely unacceptable”) to 7 (“extremely outstanding”). This analysis can be found in Figure 1.

Figure 1: Two-way ANOVA analysis of performance evaluations on stress and voice
There was an interaction between stress and voice found in the two-way ANOVA presented in Figure 1. This suggests that when stress and voice are combined in an employee interaction, the impact on performance evaluations is more than just the additive impact of voice and stress independent of each other.

Hypothesis 1a predicted that employees who spoke up about challenge stress would be evaluated more positively than employees who spoke up about hindrance stress. Consistent with hypothesis 1a, there were significant differences between the performance evaluations for employees who spoke up about challenge stress ($M = 5.47, SD = 1.05$) and the performance evaluations for employees who spoke up about hindrance stress ($M = 4.88, SD = 1.04$), with higher performance evaluations given to employees who experienced challenge stress ($d = 0.58, SE = 0.12, p < 0.0001$). Hypothesis 1b predicted that employees who engaged in supportive voice would be evaluated more positively than employees who engaged in challenging voice. Consistent with hypothesis 1b, there were significant differences between the performance evaluations for employees who spoke up in a supportive way ($M = 5.34, SD = 1.10$) and the performance evaluations for employees who spoke up in a challenging way ($M = 5.01, SD = 1.05$), with higher performance evaluations given to employees who engaged in supportive voice ($d = 0.32, SE = 0.12, p = 0.0075$). This analysis can be found in Figure 2.

Hypothesis 2a predicted that employees who engaged in supportive voice while experiencing a challenge stress would be evaluated more positively than employees who engaged in challenging voice while experiencing a hindrance stress. Consistent with hypothesis 2a, there were significant differences between the performance evaluations for employees who engaged in supportive voice while experiencing challenge stress ($M = 5.84, SD = 0.91$) and the performance evaluations for employees who engaged in challenging voice while experiencing hindrance stress...
(M = 4.92, SD = 1.03), with higher performance evaluations given to employees who engaged in supportive voice while experiencing challenge stress (d = 0.90, SE = 0.17, p < 0.0001). This analysis can be found in Figure 2.

Hypothesis 2b predicted that employees who engaged in challenging voice while experiencing challenge stress and those who engaged in supportive voice while experiencing hindrance stress would be evaluated more positively than employees who engaged in challenging voice while experiencing hindrance stress. Analysis shows that employees who engaged in challenging voice while experiencing challenge stress (M = 5.11, SD = 1.07) were not evaluated more positively than employees who engaged in challenging voice while experiencing hindrance stress (M = 4.92, SD = 1.03) in a significant way (d = 0.19, SE = 0.17, p = 0.26). Additionally, analysis shows that employees who engaged in supportive voice while experiencing hindrance stress (M = 4.84, SD = 1.05) were not evaluated more positively than employed who engaged in challenging voice while experiencing hindrance stress (M = 4.92, SD = 1.03) in a significant way (d = 0.08, SE = 017, p = 0.63). Hypothesis 2b was not supported by the data. This analysis can be found in Figure 2.

Hypothesis 2c predicted that employees who engaged in challenging voice while experiencing challenge stress and those who engaged in supportive voice while experiencing hindrance stress would be evaluated more negatively than employees who engaged in supportive voice while experiencing challenge stress. Consistent with hypothesis 2c, there were significant differences between performance evaluations for employees who engaged in challenging voice while experiencing challenge stress (M = 5.11, SD = 1.07) and the performance evaluations for employees who engaged in supportive voice while experiencing challenge stress (M = 5.84, SD = 0.91), with higher performance evaluations given to employees who engaged in supportive voice
while experiencing challenge stress ($d = 0.71$, $SE = 0.17$, $p < 0.0001$). Also consistent with hypothesis 2c, there were significant differences between performance evaluations for employees who engaged in supportive voice while experiencing hindrance stress ($M = 4.84$, $SD = 1.05$) and the performance evaluations for employees who engaged in supportive voice while experiencing challenge stress ($M = 5.84$, $SD = 0.91$), with higher performance evaluations given to employees who engaged in supportive voice while experiencing challenge stress ($d = 0.98$, $SE = 0.17$, $p < 0.0001$). This analysis can be found in Figure 2.

Figure 2: Comparison test and Cohen's $d$ test of hypotheses 1a, 1b, 2a, 2b, and 2c of performance evaluations on stress and voice

The study also tested managers’ perception of the employee’s overall effectiveness, managers’ support of offering positional promotion to the employee, and managers’ support for
the employee’s ideas. Responses to these questions were averaged into a single combined variable for performance, to be tested in addition to the question regarding overall performance. A between-subjects two-way ANOVA revealed that voice, stress, and their interaction had significant impacts on this second combined measure of the performance evaluations of employees ($F[1, 292] = 10.1436, p < 0.0001$). Overall effectiveness was given on a scale from 1 (“extremely effective”) to 5 (“not effective at all”). Questions about managers’ support for promotion and support for ideas were answered on a scale from 1 (“Strongly disagree”) to 7 (“Strongly agree”). The analysis for the impact of stress, voice, and their interaction on this combined measure of overall performance can be found in Figure 3.

**Figure 3: Two-way ANOVA analysis of combined performance measure on stress and voice**

There was an interaction between stress and voice found in the two-way ANOVA presented in Figure 3. This suggests that when stress and voice are combined in an employee interaction,
the impact on the combined measure created for performance evaluation is more than just the additive impact of voice and stress independent of each other.

Hypothesis 1a predicted that employees who spoke up about challenge stress would be evaluated more positively than employees who spoke up about hindrance stress. Consistent with hypothesis 1a, there were significant differences between the combined measure for employees who spoke up about challenge stress ($M = 4.87$, $SD = 0.91$) and the combined measure for employees who spoke up about hindrance stress ($M = 4.39$, $SD = 0.99$), with higher combined measures of performance evaluations given to employees who experienced challenge stress ($d = 0.51$, $SE = 0.11$, $p < 0.0001$). Hypothesis 1b predicted that employees who engaged in supportive voice would be evaluated more positively than employees who engaged in challenging voice. Consistent with hypothesis 1b, there were significant differences between the combined measure for employees who spoke up in a supportive way ($M = 4.78$, $SD = 0.94$) and the combined measure for employees who spoke up in a challenging way ($M = 4.48$, $SD = 1.07$), with higher combined measures of performance evaluations given to employees who engaged in supportive voice ($d = 0.32$, $SE = 0.11$, $p = 0.0075$). This analysis can be found in Figure 4.

Hypothesis 2a predicted that employees who engaged in supportive voice while experiencing a challenge stress would be evaluated more positively than employees who engaged in challenging voice while experiencing a hindrance stress. Consistent with hypothesis 2a, there were significant differences between the combined measure for employees who engaged in supportive voice while experiencing challenge stress ($M = 5.13$, $SD = 0.74$) and the combined measure for employees who engaged in challenging voice while experiencing hindrance stress ($M = 4.35$, $SD = 1.00$), with higher combined measures of performance given to employees who
engaged in supportive voice while experiencing challenge stress \((d = 0.83, \ SE = 0.16, \ p < 0.0001)\). This analysis can be found in Figure 4.

Hypothesis 2b predicted that employees who engaged in challenging voice while experiencing a challenge stress and those who engaged in supportive voice while experiencing a hindrance stress would be evaluated more positively than employees who engaged in challenging voice while experiencing a hindrance stress. Analysis shows that employees who engaged in challenging voice while experiencing challenge stress \((M = 4.61, \ SD = 0.99)\) were not evaluated more positively than employees who engaged in challenging voice while experiencing hindrance stress \((M = 4.35, \ SD = 1.00)\) in a significant way \((d = 0.27, \ SE = 0.16, \ p = 0.10)\). Additionally, analysis shows that employees who engaged in supportive voice while experiencing hindrance stress \((M = 4.42, \ SD = 0.99)\) were not evaluated more positively than employed who engaged in challenging voice while experiencing hindrance stress \((M = 4.35, \ SD = 1.00)\) in a significant way \((d = 0.08, \ SE = 016, \ p = 0.64)\). Hypothesis 2b was not supported by the data. This analysis can be found in Figure 4.

Hypothesis 2c predicted that employees who engaged in challenging voice while experiencing challenge stress and those who engaged in supportive voice while experiencing a hindrance stress would be evaluated more negatively than employees who engaged in supportive voice while experiencing challenge stress. Consistent with hypothesis 2c, there were significant differences between the combined measure for employees who engaged in challenging voice while experiencing challenge stress \((M = 4.61, \ SD = 0.99)\) and the combined measure for employees who engaged in supportive voice while experiencing challenge stress \((M = 5.13, \ SD = 0.74)\), with higher combined measures of performance evaluations given to employees who engaged in supportive voice while experiencing challenge stress \((d = 0.55, \ SE = 0.16, \ p = 0.0009)\). Also
consistent with hypothesis 2c, there were significant differences between the combined measure for employees who engaged in supportive voice while experiencing hindrance stress (M = 4.42, SD = 0.99) and the combined measure for employees who engaged in supportive voice while experiencing challenge stress (M = 5.13, SD = 0.74), with higher performance evaluations given to employees who engaged in supportive voice while experiencing challenge stress (d = 0.75, SE = 0.16, p < 0.0001). This analysis can be found in Figure 4.

Figure 4: Comparison test and Cohen d test of hypotheses 1a, 1b, 2a, 2b, and 2c of the combined performance measure on stress and voice
Mediators

Questions were asked to test the impact of various mediators. For each mediator, the responses to several questions were combined to find a single response variable. Responses were recorded for the perception of an employee’s job dedication, ability to meet the demands of the job, connection to the values of the company, loyalty to the organization, loyalty to the manager, threat to the manager, competence, warmth, motivation to learn, and interpersonal skills. Between-subject two-way ANOVA tests were also performed on several potential mediators.

Between-subjects two-way ANOVA analyses were performed for each potential mediator and every ANOVA had statistically significant results. Three of the ANOVA results mirrored the performance measures in that they were seen to follow the distinctions listed in hypotheses 1a, 1b, 2a, and 2c but not 2b. These mechanisms were a managers’ perception of the employee’s dedication to the job, warmth, and motivation to learn.

**Job Dedication:** A between-subjects two-way ANOVA revealed that voice and stress had significant impacts on the perception of an employee’s job dedication ($F[1, 292] = 9.2443, p < 0.0001$). The interaction between voice and stress was not significant. Analysis for job dedication can be found in **Figure 5**.

**Warmth:** A between-subjects two-way ANOVA revealed that voice, stress, and their interaction had significant impacts on the perception of and employee’s warmth ($F[1, 292] = 10.0012, p < 0.0001$). Analysis for warmth can be found in **Figure 6**.

**Motivation to learn:** A between-subjects two-way ANOVA revealed that voice and stress had significant impacts on the perception of an employee’s motivation to learn ($F[1, 292] = 5.9750, p = 0.0006$). The interaction between voice and stress was not significant. This analysis can be found in **Figure 7**.
Figure 5: two-way ANOVA and paired Cohen d test for job dedication
Figure 6: two-way ANOVA and paired Cohen’s d test for warmth
Figure 7: two-way ANOVA and paired Cohen's d test for motivation to learn
The analyses for the other potential mechanisms also found significant results, although the differences found did not match the same hypotheses that the performance evaluations supported. Details about each analysis are provided below.

**Ability to meet job demands:** A between-subjects two-way ANOVA revealed that voice and stress had significant impacts on the perception of an employee’s ability to meet the demands of the job ($F[1, 292] = 9.3061, p < 0.0001$). The interaction between voice and stress was not significant. Analysis for ability to meet job demands can be found in Appendix F.

**Value fit:** A between-subjects two-way ANOVA revealed that stress and the interaction between voice and stress had significant impacts on the perception of the fit between an employee’s values and the company values ($F[1, 292] = 25.3176, p < 0.0001$). Voice was not significant. Analysis for fit between employee and company values can be found in Appendix G.

**Loyalty to the organization:** A between-subjects two-way ANOVA revealed that voice and stress had significant impacts on the perception of an employee’s loyalty to the organization ($F[1, 292] = 21.3785, p < 0.0001$). The interaction between voice and stress was not significant. Analysis for loyalty to the organization can be found in Appendix H.

**Loyalty to the manager:** A between-subjects two-way ANOVA revealed that voice and stress had significant impacts on the perception of an employee’s loyalty to the manager ($F[1, 292] = 10.4423, p < 0.0001$). The interaction between voice and stress was not significant. Analysis for loyalty to the manager can be found in Appendix I.

**Threat:** A between-subjects two-way ANOVA revealed that stress had significant impacts on the perception of an employee’s threat ($F[1, 292] = 7.9142, p < 0.0001$). Voice and the
interaction between stress and voice were not significant. Analysis for threat can be found in Appendix J.

**Competence:** A between-subjects two-way ANOVA revealed that voice, stress, and their interaction had significant impacts on the perception of an employee’s competence ($F[1, 292] = 6.8491, p = 0.0002$). Analysis for competence can be found in Appendix K.

**Interpersonal skills:** A between-subjects two-way ANOVA revealed that voice and stress had significant impacts on the perception of an employee’s interpersonal skills ($F[1, 292] = 12.6858, p < 0.0001$). The interaction between voice and stress was not significant. Analysis for interpersonal skills can be found in Appendix L.
VIII. DISCUSSION

The data was found to support hypotheses 1a, 1b, 2a, and 2c, but not hypothesis 2b. Hypothesis 1a predicted that employees who experienced challenge stress would be evaluated more positively than employees who experienced hindrance stress. Challenge stress is associated with making work rewarding and include situations with job overload, time pressures, or high levels of responsibility. It is also associated with increased efforts to meet the demands of a job, increased motivation to learn, and increased loyalty to the organization. On the other hand, hindrance stress is associated with difficulty in completing work and includes situations with bureaucracy and red tape. Hindrance stress is associated with decreased motivation to meet the demands of the job, decreased motivation to learn, and decreased loyalty to the organization. It is evident that managers perceived positive impacts of stress on employees who experienced challenge stress as compared to those who experienced hindrance stress.

Hypothesis 1b predicted that employees who engaged in supportive voice would be evaluated more positively than those who engaged in challenging voice. It is thought that managers perceive supportive employees as loyal and challenging employees as threatening. Evidently, managers thought more positively about employees who engaged in voice supporting their ideas than those who engaged in voice challenging their ideas.

In support of hypothesis 2a, managers gave higher performance evaluations to employees who engaged in supportive voice while experiencing challenge stress than to employees who engaged in challenging voice while experiencing hindrance stress. This follows from hypotheses 1a and 1b. The interaction in both performance evaluations and the combined measure of performance evaluation was significant, showing that stress and voice together had an impact on performance evaluation that was distinct from just the additive impact of voice and stress.
In support of hypothesis 2c, employees who engaged in supportive voice while experiencing challenge stress were evaluated more positively than employees who engaged in challenging voice while experiencing a challenge stress. The employees in each of these scenarios experienced the more positive and productive challenge stress. Yet, the difference in how these employees voiced stress was salient enough that managers gave different performance evaluations to each group of employees. Also in support of hypothesis 2c, employees who engaged in supportive voice while experiencing challenge stress were evaluated more positively than employees who engaged in supportive voice while experiencing hindrance stress. Here, although both employees spoke up in support of the manager’s plan, something that would likely make them seem loyal to the manager, the difference in the stress that they discussed with their manager was salient enough for their manager to give differing performance evaluations.

The data did not support hypothesis 2b. Employees who engaged in challenging voice while experiencing a challenge stress were not evaluated more positively than employees who engaged in challenging voice while experiencing a hindrance stress. Additionally, employees who engaged in supportive voice while experiencing a hindrance stress were not evaluated more positively than employees who engaged in challenging voice while experiencing a hindrance stress.

Comparing the results for hypotheses 2b and 2c, a difference in stress had a larger impact on performance evaluations for employees who engaged in supportive voice (2c) than it did on performance evaluations for employees who engaged in challenging voice (2b). Additionally, a difference in voice had a larger impact on performance evaluations for employees who experienced challenge stress (2c) than it did on performance evaluations for employees who experienced hindrance stress (2b). That there was an interaction between stress and voice shows that the
combination of the two factors has an impact that is significantly different from just the impact of stress or the impact of voice alone. However, comparing these scenarios, it seems like neither voice nor stress was consistently more salient in a manager’s consideration of performance. Instead, both voice and stress were more salient in a manager’s consideration of performance when managers compared a scenario in which both voice and stress were positive to a scenario in which one was positive and the other negative. In contrast, neither voice nor stress were particularly salient in a manager’s consideration of performance when managers considered a scenario in which both voice and stress were negative to a scenario in which one was positive and the other negative. Practically speaking, this is valuable insight for employees who are experiencing challenge stress or who have a tendency to engage in supportive voice.

Based on the data collected, the primary reasons that employees were given varying performance evaluations were their manager’s perception of their job dedication, warmth, and motivation to learn given their stress and their voice. However, there were also significant differences perceived between scenarios in an employee’s ability to meet job demands, fit with the company’s values, loyalty to the organization, loyalty to the manager, threat, competence, and interpersonal skills.
IX. CONCLUSION

This study provides evidence that employees receive varying performance evaluations based on nothing other than the type of stress the employee experienced and the kind of voice with which they expressed concerns. Additionally, there is an interaction between an employee’s voice and stress that significantly impacts subsequent performance evaluations. Participants in the study were given no information about the performance levels of the employee. Their interaction with the employee consisted only of one of two kinds of stress and one of two kinds of voice. The differing stresses and voice types presented were salient enough to managers that their performance evaluations of the employee and their intent to promote the employee changed between voice and stress types.

The study presents practical implications for employees. The collected data suggests that for those who are already experiencing challenge stress, the decision to voice stress in a supportive rather than challenging way can have a significant and positive impact on performance evaluations and career progression. It also suggests that for those who are already experiencing hindrance stress, the decision to voice stress in either a supportive or challenging way does not have a significant impact on performance evaluations and career progression. Given these results, employees may want to consider the positive impacts on their own career of being employed with a company in which the primary stress is challenge stress rather than hindrance stress. Additionally, the data suggests that for those who are predisposed to engage in supportive voice, the experience of challenge stress can have a significant and positive impact on performance evaluations and career progression. However, for those who generally engage in challenging voice, the experience of either challenge or hindrance stress does not have a significant impact on
performance evaluations and career progression. Given these results, employees may want to consider the positive impacts that supportive voice can have when expressing a stress.

Companies may find the data from this study intriguing when considering organizational issues. Voicing stress in the workplace can have an impact on workplace creativity, interpersonal relationships, and performance. Additionally, voicing stress in the workplace can have an impact on the perceptions of employees and the subsequent performance evaluations, regardless of the actual performance levels of employees. It is valuable for employers to keep these findings in mind when making compensation or promotion decisions that take performance evaluations into account, as the impact of voice and stress provide another bias through which managers may make evaluations.

Academics interested in the field of organizational behavior may be interested in incorporating these findings into their own research or building upon the findings in this study. Critically, future research must dig deeper into the mechanisms that allow voice and stress to be salient determinants of performance evaluations. Additionally, further research must be done on how manager efficacy impacts the results found in this study. Future researchers may want to separate managers based on their efficacy levels in order to study how manager efficacy might change the relationship between voice, stress, and performance evaluations.

The findings show that the type of stress that an employee experiences and the type of voice that an employee chooses to engage in can have an impact on their performance evaluations and career opportunities. Voicing stress has an impact: experiencing a stress that is considered positive, namely challenge stress, or voicing stress in a positive way, namely in a supportive way, leads to higher performance evaluations.
X. REFERENCES


Hon, Alice H.y., Wilco W.h. Chan, and Lin Lu. "Overcoming Work-related Stress and Promoting Employee Creativity in Hotel Industry: The Role of Task Feedback from


XI. APPENDIX

A. Stresses identified in LePine, LePine, and Jackson

Hindrance Stress Items
The amount of time spent on “busy work” for your classes.
The degree to which favoritism rather than performance affects final grades in your classes.
The inability to clearly understand what is expected of you in your classes.
The amount of hassles you need to go through to get projects/assignments done.
The degree to which your learning progression seems stalled

Challenge Stress Items
The number of projects/assignments in your classes.
The amount of time spent working on projects/assignments for your classes.
The difficulty of the work required in your classes.
The volume of coursework that must be completed in your classes.
The time pressures experienced for completing work required in your classes.

B. Voice scenarios used in Burris

Challenge voice
Several days before the new routes would start, during your weekly staff meeting with all of your bus drivers and maintenance crew members, Brandon, the chief maintenance scheduler, raised his hand and asked to raise a small concern with your new plan. Brandon proceeded to explain to everyone that he wasn’t sure your proposal would work because you had not allotted enough time for the daily bus maintenance and scheduled breaks (fueling, cleaning the bus, breaks for the drivers, etc.) and monthly maintenance (changing the oil, checking the brakes, engine tune-ups, etc.). Because of the lack of maintenance, he felt that the busses would begin to experience significant problems with increasing regularity in about a month with costs soaring within three months. He suggested that the time the busses need in the monthly maintenance would mean that at least one bus would be unavailable for several days per month, meaning that one of your routes would need to be shut down. He then recommended a new plan that called for more maintenance time and personnel. He ended by saying that if you take into account his proposed changes, he thought your plan would be a resounding success for the ABC area.

Supportive voice
Knowing you need your team strongly committed to your plan in order for it to succeed, you ask for thoughts on your plan. George volunteered his point of view. George said that he didn’t think there was a problem with your plan. After all, as you said, your plan made only slight adjustments to the current maintenance schedule. Your plan shaves off minimal amounts of time from each maintenance schedule, which should not seriously affect day-to-day operations. In addition, under the previous plan, he never encountered the maintenance problems that Brandon mentioned. George thought that scaling back the time for daily and monthly maintenance should not pose any serious problems for the busses that would lead to significant downtime.
C. Scenarios used in the study

Basic Scenario
In this study, you will assume the role of a manager at a clothing company called CloCo. You are the manager of a supply chain system that delivers clothing to stores around the country. You will be asked to perform a few managerial tasks. After completing these tasks, you will read a scenario involving a new project at your company.

Challenge x Challenging
You present your plan to your employees in this week's weekly meeting. Your employees seem engaged and they listen to you intently. When you finish explaining your ideas, several employees nod and comment. One employee, Jamie, the Chief Supply Scheduler, speaks up.

Jamie expresses concerns about the plan, noting that the project will not work because you had not allotted enough time for the refueling and maintaining of shipment vehicles. Additionally, storefronts will struggle to take on the additional shipments efficiently. Jamie explains that the new shipment process is likely to break down, as the vehicles will not be able to cover the expected distance in the allotted time. Thus, Jamie asks you to either withdraw your plan to reorganize the Northeast shipment process or to work together to create a less intensive plan.

After hearing Jamie's thoughts and comments from other employees, you end the weekly meeting and go back to your office. You consider all of the feedback that your employees gave you. Then, you move on to other tasks.

Later that day, Jamie asks to speak with you in private, and expresses that this job has been very stressful. Jamie has been very busy over the last few months, maintaining ongoing projects in the Southwest and the Pacific Northwest, in addition to taking on the new project in the Northeast. These efficiency projects are difficult and Jamie feels pressure to complete these important projects and time crunched to get this done in your expected timeframe.

Hindrance x Challenging
You present your plan to your employees in this week's weekly meeting. Your employees seem engaged and they listen to you intently. When you finish explaining your ideas, several employees nod and comment. One employee, Jamie, the Chief Supply Scheduler, speaks up.

Jamie expresses concerns about the plan, noting that the project will not work because you had not allotted enough time for the refueling and maintaining of shipment vehicles. Additionally, storefronts will struggle to take on the additional shipments efficiently. Jamie explains that the new shipment process is likely to break down, as the vehicles will not be able to cover the expected distance in the allotted time. Thus, Jamie asks you to either withdraw your plan to reorganize the Northeast shipment process or to work together to create a less intensive plan.

After hearing Jamie's thoughts and comments from other employees, you end the weekly meeting and go back to your office. You consider all of the feedback that your employees gave you. Then, you move on to other tasks.
Later that day, Jamie asks to speak with you in private, and expresses that this job has been very stressful. Jamie says that there are too many hurdles for one to jump through in order to get anything done, and expresses displeasure because the company has not made clear the performance metrics through which to measure success. Additionally, Jamie is dissatisfied with the working environment, expressing that the company's decisions are driven by politics rather than by performance. Jamie feels like recent work has not had an impact and laments the lack of job security at the company.

**Challenge x Supportive**

You present your plan to your employees in this week's weekly meeting. Your employees seem engaged and they listen to you intently. When you finish explaining your ideas, several employees nod and comment. One employee, Jamie, the Chief Supply Scheduler, speaks up.

Jamie thinks that the plan makes small but important changes to the shipment process and will ultimately allow for more efficient shipments. The plan shaves off time from the shipment process and will allow stores to be better stocked without significantly impacting day-to-day operations. Refueling and maintenance of the vehicles have been factored into the time allotted for shipment, and Jamie does not foresee any major issues with the new plan. Jamie is excited about the opportunity to deliver more clothing to more stores in a faster time, and is happy to get started on the project.

After hearing Jamie's thoughts and comments from other employees, you end the weekly meeting and go back to your office. You consider all of the feedback that your employees gave you. Then, you move on to other tasks.

Later that day, Jamie asks to speak with you in private, and expresses that this job has been very stressful. Jamie has been very busy over the last few months, maintaining ongoing projects in the Southwest and the Pacific Northwest, in addition to taking on the new project in the Northeast. These efficiency projects are difficult and Jamie feels pressure to complete these important projects and time crunched to get this done in your expected timeframe.

**Hindrance x Supportive**

You present your plan to your employees in this week's weekly meeting. Your employees seem engaged and they listen to you intently. When you finish explaining your ideas, several employees nod and comment. One, Jamie, the Chief Supply Scheduler, speaks up.

Jamie thinks that the plan makes small but important changes to the shipment process and will ultimately allow for more efficient shipments. The plan shaves off time from the shipment process and will allow stores to be better stocked without significantly impacting day-to-day operations. Refueling and maintenance of the vehicles have been factored into the time allotted for shipment, and Jamie does not foresee any major issues with the new plan. Jamie is excited about the opportunity to deliver more clothing to more stores in a faster time, and is happy to get started on the project.
After hearing Jamie's thoughts and comments from other employees, you end the weekly meeting and go back to your office. You consider all of the feedback that your employees gave you. Then, you move on to other tasks.

Later that day, Jamie asks to speak with you in private, and expresses that this job has been very stressful. Jamie says that there are too many hurdles for one to jump through in order to get anything done, and expresses displeasure because the company has not made clear the performance metrics through which to measure success. Additionally, Jamie is dissatisfied with the working environment, expressing that the company's decisions are driven by politics rather than by performance. Jamie feels like recent work has not had an impact and laments the lack of job security at the company.

**D. Questions asked for each dependent variable and mechanism**

**Performance**
Rate the overall performance level that you observe for Jamie.

**Effectiveness**
What is your personal view of Jamie in terms of overall effectiveness?
Overall to what extent do you feel Jamie has been effectively fulfilling roles and responsibilities?

**Positional promotion**
Jamie would be rated as superior to other members of this team.
If a position were available, I would recommend Jamie for a promotion.
If Jamie was promoted to be my colleague, I would expect Jamie to perform well in the new position.

**Idea promotion**
I think Jamie’s comments should be implemented.
I agree with Jamie's comments.
Jamie’s comments are valuable.

**Support of ideas**
How likely is it that you will take Jamie’s comments about the new shipment process and/or about CloCo to your supervisor?
How likely is it that you will support Jamie’s comments about the new shipment process and/or about CloCo when talking to your supervisor?

**Job dedication**
Jamie would put in extra hours to get work done on time.
Jamie would pay close attention to important details.
Jamie would work harder than necessary.
Jamie would ask for a challenging work assignment.
Jamie would exercise personal discipline and self-control.
Jamie would take the initiative to solve a work problem.
Jamie would persist in overcoming obstacles to complete a task. Jamie would tackle a difficult work assignment enthusiastically.

**Ability to meet job demands**
The match is very good between the demands of this job and Jamie's personal skills. Jamie’s training and skills match or exceed the skills needed to perform in the job. Jamie's abilities and education provide a good match with the demands of the job. Jamie does what is expected of them in this position.

**Value fit**
The things that Jamie values are similar to the things that CloCo values. Jamie's values match CloCo's values and culture. CloCo's values and culture provide a good fit with the things that Jamie values in life.

**Loyalty to the organization**
CloCo’s needs are important to Jamie. Jamie really looks out for what is important to this organization. Jamie is comfortable giving top management control over their future at this company. Jamie cares about the impacts of their actions on the company. Jamie has a sense of loyalty to CloCo.

**Loyalty to the manager**
My needs and opinions as a manager are important to Jamie. Jamie looks out for what is important to their manager. If Jamie disagreed with me, they would approach me directly. Jamie cares about the impacts of their actions on me as their manager. Jamie has a sense of loyalty to their manager.

**Threat**
How likely is it that you would lose status in the organization if your superior heard Jamie's comments? How likely is it that you would lose status in the organization because your inferiors heard Jamie's comments? How likely is it that your superior would question your ability to devise an effective plan if your superior heard Jamie's comments? How likely is Jamie to go over your head to discuss this problem with your superior?

**Competence**
Jamie is competent. Jamie is efficient in performing their job. Jamie is intelligent. Jamie is able to apply knowledge to workplace problems. Jamie is knowledgable regarding CloCo's operations. Jamie is a reliable source of information.
Warmth
Jamie is fair.
Jamie is understanding.
Jamie is sincere.
Jamie is helpful.
Jamie is honest.

Motivation to learn
In general, Jamie exerts the effort necessary to learn what this job demands.
Jamie tries to learn and develop as much as possible in this job.
Jamie is motivated to learn the skills needed for this job.

Interpersonal skills
Jamie is good at making most people feel comfortable and at ease.
It is easy for Jamie to develop a good rapport with most people.
Jamie is able to communicate easily and effectively with others.
Jamie is likable.

E. Manipulation check ANOVA and Cohen test results

Below are four manipulation check measures. First, a manipulation check was performed to test for challenging voice. As described, participants who were faced with employees who engaged in challenging voice perceived their employee’s voice as such. Next, a manipulation check was performed to test for supportive voice. As described, participants who were faced with employees who engaged in supportive voice perceived their employee’s voice as such. Additionally, a manipulation check was performed to test for challenge stress. As described, participants whose employees experienced challenge stress perceived their employees as being faced with such stresses. Finally, a manipulation check was performed to test for hindrance stress. As described, participants whose employees experienced hindrance stress perceived their employees as being faced with such stresses. The ANOVA and Cohen test results for each of these four manipulation checks are below.
Manipulation check – Challenging voice
Manipulation check – Supportive voice

![Graph and table data]

Response Result 18
Whole Model
Actual by Predicted Plot

Residual by Predicted Plot

Summary of Fit
- R^2 = 0.53475
- R^2 Adj = 0.52994
- Root Mean Square Error = 1.35578
- Mean of Response = 4.02054
- Observations (or Sum Wgts) = 292

Analysis of Variance
- Source
- DF
- Sum of Squares
- Mean Square
- F Ratio
- Prob > F
  - Model = 3
  - Error = 288
  - C. Total = 291

Parameter Estimates
- Term
- Estimate
- Std Error
- t Ratio
- Prob > t
  - Intercept
  - Stress 18 (Challenging)
  - Voice 18 (Challenging)
  - Stress 18 (Challenging) * Voice 18 (Challenging)

Effect Tests
- Source
- df
- Sum of Squares
- F Ratio
- Prob > F
  - Stress 18
  - Voice 18
  - Stress 18 * Voice 18

Least Squares Means Table
- Level
- Mean
- Std Error
- Mean
- Level
- Mean
- Std Error
- Mean
- Level
- Mean
- Std Error
- Mean
- Level
- Mean
- Std Error
- Mean

Leverage Plot
- Stress 18
- Voice 18
- Stress 18 * Voice 18

Leverage Plot
- Least Squares Means Plot
- Least Squares Means Table
- Least Squares Means Plot
- Least Squares Means Table
- Least Squares Means Plot
- Least Squares Means Table

ANOVA Table
- Y
- Effect
- Level
- Level
- Difference
- Std Error
- Lower CL
- Upper CL
- p-Value
- t Ratio
- Cohens d (Gower Bound)
- Cohens d (Gower Bound)
- t-Value
- p-Value

45
Manipulation check – Challenge stress

Summary of Fit
- Model
  - Stress 19
  - Voice 19
  - Stress 19*Voice 19
- Error
  - Mean of Response: 5.87429
- Observations (or Sum Wgts): 292

Analysis of Variance
- Source: Model, Stress 19, Voice 19, Stress 19*Voice 19
- Sum of Squares: Model 29.82486, Stress 19 0.04186, Voice 19 0.05708, Stress 19*Voice 19 0.00347
- Mean Square: Model 0.95144, Stress 19 0.00020, Voice 19 0.00020, Stress 19*Voice 19 0.00020
- F Ratio: Model 10.44903, Stress 19 5.00000, Voice 19 2.52000, Stress 19*Voice 19 1.02300
- Prob > F: Model <.0001, Stress 19 <.0001, Voice 19 <.0001, Stress 19*Voice 19 <.0001

Parameter Estimates
- Intercept: Estimate 5.87442, Std Error 0.05708, 1 Ratio: 102.912
- Stress 19: Estimate 0.28538, Std Error 0.00347, 1 Ratio: 83.410
- Voice 19: Estimate -0.14383, Std Error 0.00347, 1 Ratio: 32.873
- Stress 19*Voice 19: Estimate 0.02283, Std Error 0.00347, 1 Ratio: 6.658

Effect Tests
- Source: Stress 19, Voice 19, Stress 19*Voice 19
- Sum of Squares: Stress 19 23.78344, Voice 19 6.04196, Stress 19*Voice 19 0.00152

Least Squares Means Table
- Levels: Challenge, Supportive
- Least Squares Means Plot
Manipulation check – Hindrance stress
F. Ability to meet job demands ANOVA and Cohen test results
G. Value fit ANOVA and Cohen test results
H. Loyalty to the organization ANOVA and Cohen test results
1. Loyalty to the manager ANOVA and Cohen test results
J. Threat ANOVA and Cohen test results
K. Competence ANOVA and Cohen test results

Effect Summary

Parameter Estimates

Effect Tests

Least Squares Means Table

Least Squares Means Table

Least Squares Means Table

Least Squares Means Table
L. Interpersonal skills ANOVA and Cohen test results