Confidence is the plant of slow growth: a moderated mediation model for predicting voice behavior among power distance orientation and team-based self-esteem in Taiwanese nurses

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Background: According to the social identity theory and Chinese cultural influences, power distance orientation may play an important role in this relationship, and thus the examined model investigates the mediating role of team-based self-esteem relations between voice behavior and team trust.

Purpose: This study explores how voice behavior in the nursing workplace correlates to changes in team-based self-esteem and trust. We also examine the power distance orientation level in this process to test for any moderated mediation in these linkages.

Patients and methods: Employing convenient sampling of 247 registered nurses from a medical center in northern Taiwan. Nurses received envelopes including self-report questionnaires from the researchers, which were immediately sealed after interviews.

Results: Structural equation modeling indicates all model fits are acceptable, suggesting that team-based self-esteem has partial mediation between team trust and voice behavior. Power distance orientation also moderates the indirect effect of team trust upon self-esteem, such that the relationship is stronger among those who have a high power distance orientation.

Conclusion: This study highlights the usefulness of continued research into how nurses display promoting behavior through team-based self-esteem with a distinct level of power distance orientation under differing sources of team trust from peers, managers, and organizations, as well as how nurses, especially fresh graduates and those who underwent a job transfer, shape their social identity through psychological factors in the sense-making process.

Keywords: nurses, power distance orientation, team trust, team-based self-esteem, voice behavior

Introduction

Voice refers to the expression of a constructive challenge intended to improve a situation. Through such a promotive behavior, employees can propose innovative suggestions for change and adjusting the original procedure even when others oppose them. In general, voice behavior can be promotive, in which employees express a new idea or method for how to do things better, and prohibitive, in which they prevent existing or imbedding incidents, practices, and behaviors that are harmful to the group. In a work setting, voice behavior represents the motivation to express work-related issues, ideas, information, and opinions.
Theoretical background and hypotheses
The literature has conceptualized and operationalized the social identity theory in a wide variety of ways. There is a consensus about its overarching focus, which is how individuals make sense of themselves and other people in a social environment, such as an organization or company.\textsuperscript{16,17,18} The more individuals feel like members in such a group, the more likely for them to exhibit an attitude and behavior of belonging to that group.\textsuperscript{19} In a hospital, the professional identity of health care professionals may lead to breaking the trust between different departments, whether intra-group or inter-group, if it is stronger than organizational identity.\textsuperscript{20} This crack of trust causes competition, inter- or intra-group polarization, lower job satisfaction, or difficulties at improving patient care.\textsuperscript{21}

To prove nurses’ organizational identity, voice behavior as a powerful predictor of belonging had been reported in a workplace with a high degree of teamwork demand.\textsuperscript{22} Voice behavior as a “seed corn” challenges the status quo with constructive suggestions or opinions for one’s own benefits, even in a dissenting situation.\textsuperscript{23,24} However, its potential importance, which has been verified as being related to teamwork and job performance,\textsuperscript{9,25} in the closed nursing profession has so far received little empirical attention.

Team trust and voice behavior
Team trust refers to “positive expectations about the intent and behaviors between among individual, other members and organization.”\textsuperscript{26} Greenwood and Van Buren III\textsuperscript{27} also suggested that trust in an organization should contain three components: predictability, benevolence, and integrity. Team trust explains the essence of employee engagement, including environment, perception, and the interactive process between individuals and organization.\textsuperscript{28} This is important to the nursing profession, because trust is crucial in the confidence of internal perceptions and external expectations about colleagues’ abilities and behaviors, which can increase nurses’ working state and promote teamwork.\textsuperscript{26,29} Thus, we suggest that experiencing a more trustful environment with co-workers, supervisors, or even organizations tends to improve individuals’ voice behavior and propose the following.

Hypothesis 1: Team trust is positively related to voice behavior.

Team-based self-esteem as a mediator
Having a social identity satisfies individuals’ simultaneous needs for inclusion and differentiation. In other words, people need to simultaneously fill the need to belong to a
The above content means that the relationship between employees and organization is a give-and-take process between each other. Employees accept something (e.g., organizational support) from the company and internalize what they feel or perceive that can be integrated or fused into self-esteem. Similarly, employees with a satisfying self-esteem show a low level of turnover intention.

Self-esteem is “a term that reflects a person’s overall evaluation or appraisal of her or his own worth” (p. 21). According to the social identity theory, organizational-based self-esteem comprises one side of the identification process between individuals and an organization that allows employees to feel their contribution as being valued and can perceive satisfaction from their job. In contrast, employees who have a low level of team-based self-esteem are expected to have less motivation to perform voice behavior. This is why our research argues that team-based self-esteem mediates between team trust and voice behavior though the interaction of the giving process and proposes the following.

Hypothesis 2: Team-based self-esteem mediates the relationship between team trust and voice behavior.

Power distance orientation as a moderated mediator

We further propose that higher power distance orientation will strengthen the positive impact of team trust on voice behavior via team-based self-esteem. Power distance reflects that authority in institutions and organizations is distributed unequally, especially in the relationship between employees and their supervisor in a Chinese culture, which is collectivistic. Moreover, power distance orientation emphasizes a personal tendency to highlight capability, individual differences, hierarchical gap, a low-level relationship, and team support. We expect that power distance orientation moderates the relationship between team trust and team-based self-esteem (stage 1) as well as moderates the relationship between team-based self-esteem and voice behavior (stage 2).

Team trust leads individuals to perform organizational citizenship behavior, to generate more positive behaviors and fewer deviant behaviors and to recognize the impact of these behaviors on others. Having high power distance orientation is particularly important, because team trust sensitizes individuals to team affirmation and provides a sense of belonging. Those who have a high level of power distance orientation find it difficult to develop close relationships with their leaders. Moreover, team trust more greatly affects their responses in such areas as satisfaction, a desire to stay with the team, as well as their team-based self-esteem. Taken together, we argue that team trust is associated with higher levels of team-based self-esteem when power distance orientation is high (stage 1). Consistent with what we predict about the relationship between team trust and team-based self-esteem, we also suggest a direct effect of team-based self-esteem on voice behavior. The social identity theory suggests that employees desire to maintain any identity that they highly value—that is to say, employees are motivated to present voice behavior if they want to maintain their self-esteem within the organization. Therefore, we argue that the relationship between team-based self-esteem and voice behavior is stronger under high levels of power distance orientation than under low levels (stage 2).

To complete our theoretical model, we further predict that team-based self-esteem mediates the relationship between the interactive effect of team trust and power distance orientation on voice behavior. We suggest that power distance orientation moderates the indirect effect of team trust on voice behavior through team-based self-esteem. In other words, we expect that the indirect effect of team trust on voice behavior via team-based self-esteem will be stronger when power distance orientation is high versus when it is low.

Hypothesis 3: Power distance orientation moderates the indirect effect of team trust on voice behavior via team-based self-esteem, such that the indirect effect is stronger among nurses who tend to exhibit higher power distance orientation and weaker or even non-existent among those who display lower power distance orientation.

Methods

Participants and procedures

This study is conducted under IRB Protocol #201806ES024 at National Taiwan University (Project Title: “Why do nurses leave? Moderated mediation model of career adaptability explores what medical institution can do to retain them?”). Before data collection, written informed consent was obtained from the participants, who took part in the study voluntarily. All employees who participated were ensured that their responses would be anonymous and confidential. In total, 258 Taiwanese registered nurses working in anesthesiology (41%), acute wards (25%), operating room (23%), and other
departments were recruited via convenient sampling from a medical center in northern Taiwan. Nurses received envelopes including self-report questionnaires from the researchers, which were immediately sealed after interviews.

In the final sample (n=247; total response rate of 96%), the nurses were mostly female (96%), unmarried (58%), and university graduates (72%), with an average age of 35.57 years (standard deviation=9.37). On average, respondents reported having over 6 years of experience as a nurse, and they had also been in their current job beyond 6 years. Table 1 lists the descriptive statistics of these sociological variables.

**Measures**

The Chinese versions of scales were established for all measures following the commonly used translation–back-translation procedure. All measures have the same response scale, ranging from 1 (strongly disagree) to 6 (strongly agree). The measures presented in the following sections are the focus of this study’s research question and its associated analyses.

**Team-based self-esteem**

The Organizational-based Self-esteem Scale was assessed via a ten-item form of measurement developed by Pierce, Gardner, Cummings, and Dunham. The sample items include “I am important around here” and “There is faith in me around here.” Cronbach’s alpha for the scale is 0.91.

**Team trust**

The Team Trust Scale was assessed with a 12-item form of measurement developed by McAllister. One item is reversed scored in the analysis to indicate low scores equal high trust. The sample items include “Management can be trusted to make sensible decisions for the firm’s future” and “I can trust the people I work with to lend me a hand if I need it.” Cronbach’s alpha for the scale is 0.93.

**Voice behavior**

The Voice Behavior Scale was assessed with a six-item form of measurement developed by Linn and LePine. The sample items include “I develop and make recommendations to my supervisor concerning issues that affect my work” and “I keep well informed about issues at work where my opinion can be useful.” Cronbach’s alpha for the scale is 0.92.

**Power orientation distance**

The Power Orientation Distance Scale was assessed with a six-item form of measurement developed by Dorfman and Howell. The sample items include “Managers should make most decisions without consulting subordinates” and “Managers should avoid off-the-job social contacts with employees.” Cronbach’s alpha for the scale is 0.81.

**Data analyses**

To test confirmatory factor analysis on our hypothesized measurement model with four factors (ie, team-based self-esteem, team trust, voice behavior, and power orientation distance), we use structural equation modeling (SEM) and bootstrap in Mplus 8.0 to assess the direct, indirect, and moderating effects, because SEM is found to be superior to regression analysis. Factor loadings mean the correlation between an observed indicator and a target latent variable (eg, the relationship among a sample item like

<table>
<thead>
<tr>
<th>Table 1 Descriptive statistic of sociological variables</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>35.57</td>
<td>9.37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>236</td>
<td>95.9%</td>
<td>10</td>
<td>4.1%</td>
</tr>
<tr>
<td>Male</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unmarried</td>
<td>141</td>
<td>57.6%</td>
<td>104</td>
<td>42.4%</td>
</tr>
<tr>
<td>Married</td>
<td>104</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school and associate degree</td>
<td>62</td>
<td>25.2%</td>
<td></td>
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</tr>
<tr>
<td>Bachelor’s degree</td>
<td>177</td>
<td>72.0%</td>
<td>7</td>
<td>2.8%</td>
</tr>
<tr>
<td>Master’s degree or higher</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower than 1 year</td>
<td>6</td>
<td>2.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1–2 year</td>
<td>23</td>
<td>9.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3–4 year</td>
<td>30</td>
<td>12.1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5–6 year</td>
<td>31</td>
<td>12.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher than 6 year</td>
<td>157</td>
<td>63.6%</td>
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<tr>
<td>Current tenure</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Lower than 1 year</td>
<td>32</td>
<td>13.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1–2 year</td>
<td>54</td>
<td>21.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3–4 year</td>
<td>33</td>
<td>13.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5–6 year</td>
<td>17</td>
<td>6.9%</td>
<td></td>
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<tr>
<td>Higher than 6 year</td>
<td>111</td>
<td>44.9%</td>
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</tr>
<tr>
<td>Unit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anesthesiology</td>
<td>100</td>
<td>40.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute ward and intensive unit</td>
<td>62</td>
<td>25.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operation room</td>
<td>57</td>
<td>23.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>27</td>
<td>11.0%</td>
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</table>
“Management can be trusted to make sensible decisions for the firm’s future” to the independent variable of “Team Trust”). Generally, factor loadings should be higher than 0.4 and can be used to estimate reliability, validity, model fit, and other coefficients in SEM. Following the procedures recommended by Fornell and Larcker, we take composite reliability to assess internal consistency reliability and the average of variance extracted to evaluate convergent validity. A commonly acceptable value for composite reliability is 0.7 or more, and for the average of variance extracted it is 0.5 or more. To support discriminant validity between each latent variable, the square root of the average of variance extracted estimates should be greater than the square of the correlations. In addition, Preacher and Hayes suggested that bootstrap results for indirect effects of independent variable on dependent variable through proposed mediator and accompanying percentile and bias-corrected 95% confidence intervals, and the estimate of an indirect effect is significantly by containing zero.

Results
Measurement model
Table 2 presents convergent validity, discriminant validity, and intercorrelations from the study. The four psychological variables (team trust, team-based self-esteem, voice behavior, and power distance orientation) are all significant to each other (all p<0.05), except for power distance orientation with team-based self-esteem (r=0.12, p=0.07). The range for the average of variance extracted estimates of psychological variables is between 0.52 and 0.72, providing support to convergent validity. The square root of the average of variance extracted estimates (voice behavior=0.85, team-based self-esteem=0.82, team trust=0.79, power distance orientation=0.72) is greater than the square of the correlations between voice behavior and team-based self-esteem (r²=0.54), between voice behavior and team trust (r²=0.59), between voice behavior and power distance orientation (r²=0.18), between team-based self-esteem and team trust (r²=0.48), between team-based self-esteem and power distance orientation (r²=0.11), and between team trust and power distance orientation (r²=0.16), providing support for discriminant validity of these measures. The range of standardized factor loadings for the indicators onto the latent variables is between 0.69 and 0.95, and all values are p<0.01. These results show that the four variables are distinct from each other.

Structural model
The moderated mediation SEM includes an additional interaction term to the measurement model, power distance orientation×team trust, and results in an acceptable fit to the data: χ² (147)=819.08 (p<0.01), χ²/df=2.79, CFI=0.88, TLI=0.87, RMSEA=0.08, SRMR=0.08, GFI=0.90, AGFI=0.79, and NFI 0.83.

Following the recommendations of Grace and Bollen, Table 3 presents the unstandardized regression coefficients. In support of Hypotheses 1 and 2, the results show that voice behavior is associated with team trust (β=0.66, p<0.01, CI [0.350, 0.994], with bias-correct CI [0.252, 0.624]); and the indirect effect of voice behavior on team trust via team-based self-esteem is significant (β=0.25, p<0.01, CI [0.106, 0.476], with bias-correct CI [0.079, 0.305]). In support of Hypothesis 3, the results show that power distance orientation moderates the indirect effect of the relationship in stage 1 (β=0.33, p=0.04), but not in stage 2 (β=0.03, p=0.73) – that is, as shown in Figure 2, the relationship between team-based self-esteem and team trust is stronger under high levels of power distance than under low levels.

Discussion
Theoretical and practical implications
The present study makes two contributions to the literature about what psychological mechanism works in the relationship between team trust and voice behavior. First,
team-based self-esteem provides nurses with a mental resource for exchanging or expressing voice behavior to peers, managers, and organizations. Greenwald and Banaji\(^60\) pointed out some proofs of the features about self-esteem like automatic, intuitive process, unconscious, implicit, and affective. In other words, employees, especially nurses, take note of either a friendly or aggressive attitude or behavior from other colleagues and provide feedback to them through self-esteem.\(^61\)

In the process of shaping self-esteem, social identity plays an important role to weaken the negative effect of peers or a manager’s aggressive attitude and behaviors, workplace phenomenon, and even organizational culture.\(^62\)

Second, when employees experience either positive or negative feelings about job context and personal role in the workplace, motivation appears and various cognitive strategies, such as imitation, personal experience, self-regulation, and self-efficacy, push employees to adjust their behavior or belief toward fitting into their job environment.\(^63,64\) As such, because of the features of neglected interpersonal trust, attentive status difference, and focusing on self, nurses with vigorous power distance orientation can better confront cognitive dissonance in a profession that requires teamwork.\(^65,66\) While nurses must regulate their mentalities to suit the working ambience, the role of power distance orientation as moderator between social/interpersonal support (eg, perceived organization support, leader–member exchange) and work outcomes (eg, job performance, voice) is uncertain, due to past studies presenting differing results.\(^67,68\) We suggest that the path of power distance orientation must be clarified in future research due to its significance in Chinese culture.

Third, in a previous article, we neglect the effect from guanxi in the Taiwanese samples. Guanxi, known as a trust-based interpersonal relationship, takes on a traditional Chinese role and values trust, favors, dependence, and adaptation.\(^69,70\) Role-based guanxi, one of the guanxi’s rules, means that a relationship is built upon different positions or levels of power, such as supervisor and subordinate.\(^15,71\) In other words, when Taiwanese nurses have a higher level of power distance orientation, they may get more team-based identity from team trust. Nurses who have a higher level of power distance orientation are also more willing to depend on senior staff than nurses who have lower levels of power distance orientation. Dependence increases the whole quality of the group relationship, especially in a teamwork profession.\(^72\)

Finally, the current study also extends the team trust literature into the domain of predicting voice behavior in

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**Table 3** Mediation of indirect effect of team-based self-esteem between voice behavior on team trust, and moderated mediation of power distance orientation

<table>
<thead>
<tr>
<th></th>
<th>Point estimates</th>
<th>Product of coefficients</th>
<th>P-value</th>
<th>Bootstrapping</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SE</td>
<td>Z</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mediation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>total</td>
<td>0.907</td>
<td>0.153</td>
<td>5.94</td>
<td>0.00</td>
</tr>
<tr>
<td>indirect effect</td>
<td>0.249</td>
<td>0.091</td>
<td>2.72</td>
<td>0.01</td>
</tr>
<tr>
<td>direct effect</td>
<td>0.658</td>
<td>0.165</td>
<td>3.99</td>
<td>0.00</td>
</tr>
<tr>
<td>moderated mediation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PDO×TT</td>
<td>0.326</td>
<td>0.156</td>
<td>2.09</td>
<td>0.04</td>
</tr>
<tr>
<td>PDO×TBSE</td>
<td>0.028</td>
<td>0.148</td>
<td>0.35</td>
<td>0.73</td>
</tr>
</tbody>
</table>

**Abbreviations:** PDO, power distance orientation; TT, team trust; TBSE, team-based self-esteem; SE, standard error; BC, bias-corrected; Indirect effect, the mediation of team-based self-esteem between voice behavior and team trust; Direct effect, the direct relationship between voice behavior and team trust; Total, the total effect among indirect and direct effects; PDO×TT, the interaction among power distance orientation and team trust; PDO×TBSE, the interaction among power distance orientation and team-based self-esteem.
more nuanced ways. Previous research has largely focused on the simple positive or negative association between team trust and voice behavior. Our results not only provide evidence of when team trust may translate into more voice behavior, but also show in certain situations (e.g., higher power distance orientation) that team trust can be translated into more voice behavior via team-based self-esteem. Specifically, the results of our studies indicate that when power distance orientation is high, the indirect effect of team trust on voice behavior via team-based self-esteem is stronger. As such, we contribute to the literature by highlighting the complexity of this relationship.

In summary, this study suggests that managers can increase promoting behavior, such as voice behavior, to facilitate healthy team development by promoting nurses’ team identification. To grow this identification, managers can provide experience that focuses on the team and profession, like regular social gatherings and professional training sessions, emphasizing on the cooperative context of the job and building a reasonable reciprocity institution or rules on the job. Particularly, elevating team trust may be a greater influence factor of team-based self-esteem than a personal factor, such as personality trait and professional ability in such a cooperation-needed medical profession. We further find that power distance orientation, which may be sculpted from an ethnic culture of collectivism, career culture, and family, does not impair the identical process of team-based self-esteem on trust, but rather strengthens it. Overall, we infer that personal tendency and ability are not far more important than team factors in Chinese samples, such as team trust and social identity, and suggest that the variable of guanxi should be controlled in future research.

Limitations
This study has several limitations. First, we use a cross-sectional design to examine the relationship among research variables herein. Because the process of identification may be dynamic, we cannot certainly discriminate that power distance orientation is a personality trait or a state affected through the environment and must explore the change effect of the present model over time, especially in the sample of nurses who are fresh graduates or underwent a job transfer. Second, we use convenience sampling to collect participants from just one medical center in northern Taiwan. The results may not represent all Taiwanese nurses, but rather perhaps just those in that medical center. In light of this, future researchers should replicate this study with different groups using hierarchical linear modeling to clearly understand the relationship between these psychological variables. Third, the simplified model provides a clear, obvious, and evident construct, which makes it easier to conduct the research, but restricts further cognition with the present model, such that team trust can be composed of affect-based trust and cognition-based trust from peers, managers, and organizations. Fourth, we conduct this study in Taiwan, and because of its national health insurance system, medical personnel may present a cultural effect—for example, working values, professional identity, management styles, etc. Finally, by neglecting the guanxi literature in this article, the effect of power distance orientation is still unclear. Moreover, the interaction between power distance orientation and guanxi can be considered in Chinese samples through future studies.

Conclusion
Our results indicate when nurses increase their own team-based self-esteem that a predictor perceives more team trust, which improves their motivation or confidence to engage in voice behavior that could be risky behavior in their group. This association is stronger when the nurses have higher power distance orientation. Our study thus highlights the usefulness of continued research into how nurses display promoting behavior through team-based self-esteem with a distinct level of power distance orientation under differing sources of team trust from peers, managers, and organizations, as well as how nurses, especially fresh graduates and those who underwent a job transfer, shape their social identity through psychological factors in the sense-making process.

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Disclosure
The authors report no conflicts of interest in this work.
References