An Investigation of the Mediating Effect of Leader Group Prototypicality on the Relationship Between Authentic Leadership and Psychological Ownership

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Abstract: Taiwan's nursing leaders rarely receive formal training for leadership in academic research and practice. This study examined nursing faculty members’ perceptions of nursing directors’ leadership and nurses’ self-psychological ownership levels to understand how perceptions of leadership styles related to psychological ownership in Taiwan. According to the social identity Theory, leadership group prototypicality have an important effect in employee’s group identity, and work attitude. In this article, we explore the mechanism between authentic leadership and psychological ownership to understand how leadership group prototypicality works. The purpose of this study was to investigate the relationship between authentic leadership and psychological ownership. Furthermore, leader group prototypicality was considered as a mediating factor between authentic leadership and psychological ownership. This study specifically focused on the hospital industry, involving a study sample of paired nurses and nurse leaders from six hospitals in Southern Taiwan. A purposeful sampling method was adopted, and 343 nurses’ data and 33 unit leaders’ data were collected. This study used HLM methods to test the hypotheses. The crucial findings of this study revealed a significant association between authentic leadership and psychological ownership via mediators, leader group prototypicality. The tested model provides empirical evidence about the pattern of authentic leadership in health care workplace, thus confirming the presence of authentic leadership in organizations.

Keywords: Authentic Leadership, Leader Group Prototypicality, Psychological Ownership, Nursing Leadership

1. Introduction

Leadership is an essential element in ensuring organizational sustainability [1] in today’s business environment. Moreover, it is increasingly evident that enterprises in the twenty-first century need a new type of leader [2]. That is to say, positive leadership is a natural and extended discussion in positive workplace relationships, as it is a way which leaders can promote positive employee relationships via modeling and the emotional contagion effect [3-5]. In recent years, the issue of authentic leadership has generated increased interest in both practical and academic domains [6-8]. Authentic leadership is a popular leadership construct that stimulates considerable scholarly interest and has received substantial attention from practitioners [9]. Kouzes and Posner [10] found the most important component of effective leadership to be that leaders treat their employees authentically. In particular, when members perceive their leaders to be authentic, open, and truthful and involve nurses in decision-making, they respond positively to their work, reporting higher levels of work engagement and
greater trust in management [11]. Sustained and authentic leadership will be required since employees and others will be watching to see if leader’s actions and behaviors are consistent with the purpose and the values that is espoused [12]. As mentioned, authentic leaders positively and continuously influence employees through their genuine words and actions. However, for authentic leadership to have this effect, it is important that the authentic actions of the leaders are perceived as such – authentic – by the employees [5]. There are empirical studies that have shown that team with a high prototypicality of leader may have a higher positive emotions [13, 14]. Such as Hogg [15] proposes that leader group prototypicality means leaders have common property of the team he belongs to. Some research demonstrates that leader group prototypicality has a positive impact on cognitive and affective of employees.

Although most researchers have acknowledged that leadership is an interaction process within groups [16], the social-cognitive processes associated with psychologically belonging to a group has not really been elaborated [17]. In management literature, scholars [18] have addressed the roles of formal organizational ownership and psychological ownership [19]. The idea of ownership has stimulated organizational behavior scholars to comprehensively understand the benefits of psychological ownership. For example, recent focus has primarily been placed on what constitutes employee ownership and the outcomes that such ownership may produce [20]. Such as, if employee can agree with leader’s value, behavior characteristic and decision making style, they may view what leaders say and do as their own views, then become more recognized with organization and leadership [21].

On the basis of previous relevant research, this study verified the arguments, offering testable hypotheses that are consistent with theoretical model. Therefore, this paper examines the relationships among authentic leadership, leader group prototypicality, personal psychological ownership. As known in the literature, Nursing leadership has been shown to critically influence the quality of nursing work environments [22] and, to some extent, patient outcomes [23]. Because it integrated and extended previous research to identify new relationships among the variables, this study has considerable theoretical implications for future researchers. Additionally, the findings of this study may assist hospitals in understanding whether authentic leadership behaviors can enhance individual and organizational outcomes, that could reduce costs and increase healthcare quality.

Above all, we can consider that authentic leadership closely relates to the personal psychological ownership of employees. But the mechanism of how authentic leadership influence on personal psychological ownership is not clear. Therefore, in this study, we examine the relationship between authentic leadership and personal psychological ownership, and the mediating effect of leader group prototypicality.

## 2. Literature Review and Hypotheses

Over the past decade, the analysis of leadership has drawn considerable attention from practitioners in both social psychology and the organizational and management sciences. This is unsurprising, considering that leadership is a natural and basic element of social groups [24]. In a series of studies, Kernis and Goldman [25] found that when four components comprising authenticity were combined (awareness, unbiased processing, authentic behavior, and relational orientation), the resulting composite variable was positively related to measures of psychological well-being. Since previous studies have suggested that leaders can shape followers’ identity, the theoretical work on authentic leadership has described such leaders as having followers who increasingly identify with the leader and who feel more psychologically empowered to accept greater ownership for their work [26, 27]. Recent literature has also suggested that authentic leadership may positively affect employee attitudes and behaviors [8]. For example, Ilies et al. [27] maintained that authentic leaders are likely to exert a positive influence on followers’ behaviors because such leaders support followers’ self-determination.

Followers’ perceptions of authentic leadership are positively related to their positive psychological capital, a higher-order construct comprising self-efficacy, hope, optimism, and resilience [28]. Self-efficacy is a first-order construct of psychological ownership. The other three first-order constructs, namely, belongingness, self-identity, and accountability, are likely to manifest in organizations that are caring and inclusive and promote trust and positive psychological capital. Therefore, authentic leadership can be reasonably expected to be positively related to psychological ownership. Therefore, the following hypothesis was proposed.

**Hypothesis 1:** Authentic leadership positively affects personal psychological ownership.

In recent years, the social identity perspective has provided a social cognitive framework for social psychologists to re-examine leadership as a group process [29]. Research has been conducted on the relationship between various leadership behaviors and identification, as well as on the potential mediating effect of followers’ identification with the leader affecting leadership outcomes [30, 31].

In addition, research on the SIT of leadership [15, 17] has reconnected leadership to the social psychology of influence [32]. While the old psychology of leadership tends to focus on the leader as an individual, with the process centered on the “self,” the new psychology of leadership is centered on the group [33]. A previous study indicated one factor that has received attention, particularly for its promotion of team members’ identification with leadership [34]. When group members consider the leader to be a prototypical member of the group, they will support such a leader and consider him or her to be effective [35]. Therefore, we proposed the following hypothesis.

**Hypothesis 2:** Authentic leadership positively affects leader group prototypicality.

Pierce and Jussila [36] stated that the need for a social
identity may play a critical motivational role underpinning the emergence of psychological ownership at the group-level. Complementing personal identity, social identity theories [37] are based on the premise that people perceive themselves as members of groups. Individuals prefer to be associated with groups with positive images, because such an association will enhance a person’s social identity, personal identity, and self-concept [38].

Social identity theorists noted that group prototypicality might be at least as critical as is possessing characteristics widely associated with a particular type of leader [39]. Many studies [40] have supported the basic prediction that group members under group prototypical leaders more strongly identify with their group than do those under nonprototypical leaders. Leaders are believed to activate the collective aspect of followers’ self-concepts, to the extent that such a leader is perceived to be group-prototypical (i.e., embodies the group identity to the members); such a leader derives influence from the implicit perception that he or she represents the group [15] [17, 41, 24]. Moreover, the SIT maintains that when people appreciate their organizations’ values, which resonate personally, a high status or organizational respect symbolized, enabling such people to increase their organizational commitment because their social identity is enhanced [42]. Therefore, this paper proposes the following hypotheses.

Hypothesis 3: Leader group prototypicality positively affects personal psychological ownership.

Hypothesis 4: Leader group prototypicality mediates the relationship between authentic leadership and personal psychological ownership.

3. Method
3.1. The Conceptual Model

This study investigated the relationships between authentic leadership, leader group prototypicality, and personal psychological ownership. The variable groups discussed in this paper can be divided into two levels: the individual level, comprising personal psychological ownership, and the team level, namely, authentic leadership and leader group prototypicality. Figure 1 depicts the research model of this study.

![Figure 1. Conceptual Research Framework.](image)

3.2. Sample and Procedures

The data for testing the hypotheses were gathered in a cross-team and cross-organizational sample. The selected research participants were required to satisfy a specific set of criteria. Purposive sampling identified 33 administrative nurse leaders who are currently serving as chairs of hospital nursing units. Survey questionnaires were administered during working hours to 600 nurses at six hospitals (including teaching and nonteaching hospitals) located in Southern Taiwan.

The study sample comprised nurse–supervisor pairs from selected hospitals. In each pair, both leader and follower reported their perceptions of authentic leadership, and neither could see the other’s responses. The followers additionally answered questions about perceptive variables (e.g., authentic leadership, leader group prototypicality, and psychological ownership).

Participants were informed that no information would be traceable to an individual employee and guaranteed anonymity. Participants were also informed that the investigation focused on factors affecting leadership and personal perception. Following deletion of missing data, a final sample of 342 nurses and 33 matched leader–member responses was obtained.

4. Result

4.1. Analysis with Subordinates’ Rating Data

The following data of authentic leadership was obtained from subordinates ratings. Thus, each nurse leader received an aggregated (mean) authentic leadership score across subordinates.

Model 1

Effect of Authentic Leadership, Leader Group Prototypicality on Psychological Ownership

Authentic leadership and leader group prototypicality were team level variables to test the cross-hierarchical regression effects on the individual level variable of psychological ownership.
ownership. The equations are as follow:

Equation 1
Level 1: Psychological Ownership = β_0j + r_ij
Level 2: β_0j = γ_00 + γ_01*(Authentic Leadership) + μ_0j

Table 1. The total effect of Authentic Leadership on Psychological Ownership.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>S.E.</th>
<th>t ratio</th>
<th>df</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept1, β_0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept2</td>
<td>4.580</td>
<td>0.269</td>
<td>17.025</td>
<td>31</td>
<td>0.000</td>
</tr>
<tr>
<td>Authentic Leadership perception</td>
<td>0.151</td>
<td>0.049</td>
<td>3.063</td>
<td>31</td>
<td>0.005</td>
</tr>
</tbody>
</table>

Equation 2
Level 1: Psychological Ownership = β_0j + r_ij
Level 2: β_0j = γ_00 + γ_01*(Authentic Leadership Perception) + γ_01*(Leader Group Prototypicality) + μ_0j

Table 2. The effect of Authentic Leadership, Leader Group Prototypicality on Psychological Ownership.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>S.E.</th>
<th>t ratio</th>
<th>df</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept 1, β_0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept 2</td>
<td>3.733</td>
<td>0.309</td>
<td>12.043</td>
<td>30</td>
<td>0.000</td>
</tr>
<tr>
<td>Authentic Leadership perception</td>
<td>0.065</td>
<td>0.050</td>
<td>1.301</td>
<td>30</td>
<td>0.203</td>
</tr>
<tr>
<td>Leader Group Prototypicality</td>
<td>0.245</td>
<td>0.064</td>
<td>3.777</td>
<td>30</td>
<td>0.001</td>
</tr>
</tbody>
</table>

As shown in Table 1, the total effect of authentic leadership (γ = 0.151, p < 0.01) had a significant relationship with psychological ownership. Therefore, Hypothesis 1 was supported. Moreover, as shown in Table 2, leader group prototypicality (γ = 0.245, p < 0.01) had a significant relationship with psychological ownership. Therefore, Hypothesis 3 was supported.

4.2. The Mediation Effects Results

The mediation effect of psychological ownership was examined using the Sobel test. Hypothesis 4 proposes that leader group prototypicality mediates the relationship between authentic leadership and psychological ownership (See Figure 2).

The results from Model 2 in Table 3 indicate that authentic leadership was significantly related to leader group prototypicality (β = 0.354, p < 0.05). The results from Model 1 in Table 2 reveal that leader group prototypicality had a significant positive relationship with psychological ownership (γ = 0.245, t = 3.777, p < 0.01). According to the results of the Sobel test in Table 4, leader group prototypicality indirectly affected the relationship between authentic leadership perception and psychological ownership. Therefore, Hypothesis 4 was supported.
positively related to subordinate staff nurses’ psychological ownership; however, in the current study, we between authentic leadership and psychological ownership.

Prototypicality. The findings of this study help to fill a gap in regard to authentic leadership, leader group prototypicality, and psychological ownership. This is the first study to examine the relationships among research variables in a Taiwan context and in the hospital industry. The results of this study, which was conducted using a sample of leaders and staff nurses in Southern Taiwan, revealed that the perceived authentic leadership characteristics of nurse leaders may be positively related to subordinate staff nurses’ psychological ownership. In particular, we determined that caring and considerate nursing leadership that involves modeling and promoting ownership values was also positively related to the leader group prototypicality among subordinate nurses.

Overall, these findings suggest that by focusing on improving the authentic leadership characteristics of nurse leaders and the interpersonal relationships between nurse leaders and subordinate nurses, healthcare providers can retain experienced nurses and maintain adequate nursing staff, thereby guaranteeing quality patient care and safety. Furthermore, this study could help hospitals plan and manage healthcare services. The findings of this study could further help HRM, healthcare administrators and managers and other healthcare professionals in comprehending the relevant nurses’ issues.

### 5. Discussion

The results supported a model linking authentic leadership to intention to leave through the sequential mediation effects of leader group prototypicality and psychological ownership among experienced nurses. This was the first study to investigate the mediating role of leader group prototypicality in the influence of authentic leadership behavior on organizational commitment. A cross-level model analysis of staff nurses’ psychological ownership revealed that groups differed significantly. Variations were identified in the levels of ownership among nurses from different groups. This result confirms the accuracy of the cross-level analysis used in this study. The results are discussed in the following.

Following a literature review, we investigated the mediation effect of leader group prototypicality on the relationship between authentic leadership and psychological ownership. Relevant research on the social identity leadership theory has revealed that effective leadership perceptions are increasingly dependent on group prototypicality. Previous studies have demonstrated the influence of authentic leadership on psychological ownership; however, in the current study, we identified leader group prototypicality as a key variable in the relationship between these two constructs.

The study results reveal that followers’ perceptions of authentic leadership influence the feeling of psychological ownership. The results also support the generalizability of the effects of psychological ownership in a stressful nursing environment context and indicate an antecedent to psychological ownership, namely, authentic leadership and prototypicality. The findings of this study help to fill a research gap about the concept and phenomenon that leader group prototypicality mediate the relationship between authentic leadership and psychological ownership.

### 6. Conclusion

In conclusion, the results of this study provide a new insight on the perceptions of nurses’ from public and private hospitals in regard to authentic leadership, leader group prototypicality, and psychological ownership. This is the first study to examine the relationships among research variables in a Taiwan context and in the hospital industry. The results of this study, which was conducted using a sample of leaders and staff nurses in Southern Taiwan, revealed that the perceived authentic leadership characteristics of nurse leaders may be positively related to subordinate staff nurses’ psychological ownership. Relevant research on the social identity leadership theory has confirmed the accuracy of the cross-level analysis used in this study. The results are discussed in the following.

The study results reveal that followers’ perceptions of authentic leadership influence the feeling of psychological ownership. The results also support the generalizability of the effects of psychological ownership in a stressful nursing environment context and indicate an antecedent to psychological ownership, namely, authentic leadership and prototypicality. The findings of this study help to fill a research gap about the concept and phenomenon that leader group prototypicality mediate the relationship between authentic leadership and psychological ownership.

### References


