

ORIGINAL RESEARCH

# The Role of Psychological Empowerment in Linking Paradoxical Leadership to Nurses' Workplace Thriving



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## Abstract

**Background:** Paradoxical leadership, characterized by balancing competing yet interrelated managerial demands, such as maintaining managerial control while simultaneously allowing nurses' professional autonomy, has emerged as a promising leadership approach in complex healthcare environments. However, empirical evidence regarding how paradoxical leadership relates to positive psychological outcomes, such as psychological empowerment and workplace thriving, remains limited in nursing research, particularly within Middle Eastern healthcare contexts.

**Purpose:** This study examined the association between paradoxical leadership and workplace thriving among nurses and explored the potential mediating role of psychological empowerment.

**Methods:** A cross-sectional correlational study was conducted using a convenience sample of 231 nursing staff from three tertiary hospitals. Data were collected through a web-based survey that included the Paradoxical Leadership Behavior Scale, Psychological Empowerment Scale, and Thriving at Work Scale, along with demographic information. Structural equation modeling using the partial least squares approach was applied to examine the hypothesized relationships.

**Results:** Nurses reported moderate levels of paradoxical leadership ( $M = 3.12$ ,  $SD = 0.44$ ), psychological empowerment ( $M = 4.37$ ,  $SD = 0.69$ ), and workplace thriving ( $M = 3.45$ ,  $SD = 0.45$ ). Paradoxical leadership was positively associated with psychological empowerment ( $\beta = 0.720$ ,  $p < .001$ ) and workplace thriving ( $\beta = 0.553$ ,  $p < .001$ ). Psychological empowerment was also positively associated with workplace thriving ( $\beta = 0.336$ ,  $p < .001$ ). Mediation analysis indicated a significant indirect association between paradoxical leadership and workplace thriving through psychological empowerment ( $\beta = 0.241$ ,  $p < .001$ ), suggesting a partial mediation pattern consistent with the proposed model.

**Conclusion:** Paradoxical leadership was positively associated with nurses' workplace thriving both directly and indirectly through psychological empowerment. These findings highlight the potential relevance of leadership practices that balance competing managerial demands in supporting nurses' positive work experiences. Leadership development initiatives that foster empowering leadership behaviors may help strengthen nurses' engagement and thriving within healthcare organizations.

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## 1. Introduction

Nursing is widely recognized as one of the most demanding professions within contemporary healthcare systems, where nurses navigate complex clinical environments and competing organizational demands, including workload pressures, patient safety standards, and adherence to regulatory and cultural expectations (Albalawi et al., 2020; AL-Dossary, 2022). Leadership plays a central role in shaping not only organizational performance but also nurses' motivation, well-being, and professional growth (Al Sabei et al., 2024; Epelde et al., 2025; Ibrahim et al.,

2023). With growing complexity in healthcare, traditional leadership approaches may be insufficient, prompting interest in adaptive models such as paradoxical leadership, which addresses competing demands (Desveaux, 2025; Stoller, 2020; Wong & Wheeler, 2023).

Paradoxical leadership involves balancing opposing yet interdependent behaviors, such as autonomy and control or closeness and distance, and has been widely supported in recent organizational and nursing research as a mechanism for managing complexity in modern healthcare systems (Elsehrawy et al., 2025; Meng et al., 2023). These behaviors are particularly relevant in healthcare, where leaders must ensure both operational efficiency and staff well-being (Atalla et al., 2025; Desveaux, 2025). A critical outcome of effective leadership is nurses' thriving at work, a psychological state encompassing vitality and learning, which is linked to higher engagement, improved performance, and better patient safety outcomes (Engström et al., 2025; Moloney et al., 2024; Van Bogaert et al., 2017).

Thriving is influenced by organizational conditions and leadership behaviors, with psychological empowerment serving as a key mechanism. Psychological empowerment reflects perceptions of meaning, competence, self-determination, and impact in one's work (Spreitzer, 1995). Empowered nurses demonstrate intrinsic motivation, resilience, and proactive engagement, which collectively foster workplace thriving (Cho et al., 2021; Saleh et al., 2022; Şenol Çelik et al., 2024). Despite theoretical support, empirical evidence examining psychological empowerment as a mediator between paradoxical leadership and thriving remains limited, particularly in the Saudi context.

Although recent studies have explored paradoxical leadership in nursing, gaps remain. Elsehrawy et al. (2025) identified thriving as a mediator for job performance, but did not examine the underlying psychological processes. Atalla et al. (2025) highlighted organizational learning and career maturity, but did not focus on daily motivational states like thriving. This reflects a broader lack of consensus on how paradoxical leadership translates into nurses' immediate psychological experiences.

In Saudi Arabia, where healthcare organizations are traditionally hierarchical, the impact of paradoxical leadership on nurses' psychological empowerment and thriving is especially underexplored. Ongoing healthcare reforms under Vision 2030 further amplify the need for leadership that can navigate competing demands (Suleiman & Ming, 2025). To our knowledge, no study has empirically tested the mediating role of psychological empowerment in the relationship between paradoxical leadership and workplace thriving among Saudi nurses. The present study addresses this gap by examining both the direct and indirect pathways linking paradoxical leadership to thriving at work, with psychological empowerment as a key mediator. By doing so, it advances understanding of nursing leadership and provides evidence-based insights to foster nurses' well-being and performance. Accordingly, this study aimed to examine the mediating role of psychological empowerment in the relationship between paradoxical leadership and workplace thriving among nurses in Saudi Arabia.

### *1.1 Theoretical framework*

This study is grounded in Self-Determination Theory (SDT) (Deci & Ryan, 2015), which posits that individuals experience optimal functioning and well-being when their basic psychological needs for autonomy, competence, and relatedness are fulfilled. SDT provides a relevant and parsimonious framework for explaining how leadership behaviors influence employees' internal motivation and psychological states. Within this framework, paradoxical leadership is particularly well suited to satisfy these fundamental needs. By integrating seemingly competing behaviors, such as maintaining both control and flexibility or balancing closeness and distance, paradoxical leaders create a work environment that supports autonomy through discretion, competence through guidance and structure, and relatedness through supportive interpersonal relationships. Such conditions are likely to foster positive psychological states among nurses. Consistent with SDT, the satisfaction of these needs is expected to enhance psychological empowerment, conceptualized as a multidimensional construct encompassing meaning, competence, autonomy, and impact (Spreitzer, 1995). These dimensions collectively reflect an individual's intrinsic motivation and active engagement with the work role. When nurses perceive their work as meaningful, feel competent in their abilities, experience autonomy in decision making, and recognize the impact of their contributions, they are more likely to demonstrate higher levels of vitality and learning, which are core components of workplace thriving.

Accordingly, psychological empowerment represents a key explanatory mechanism through which paradoxical leadership may promote workplace thriving. In addition, paradoxical leadership may exert a direct influence on thriving by fostering a supportive and balanced work environment that reduces role ambiguity and encourages constructive leader–member interactions. Overall, SDT offers a coherent theoretical lens for understanding how paradoxical leadership contributes to nurses' workplace thriving by linking leadership behaviors to underlying psychological processes.

### 1.2 Research hypotheses

Based on the theoretical framework and prior evidence, the study examines the following hypotheses:

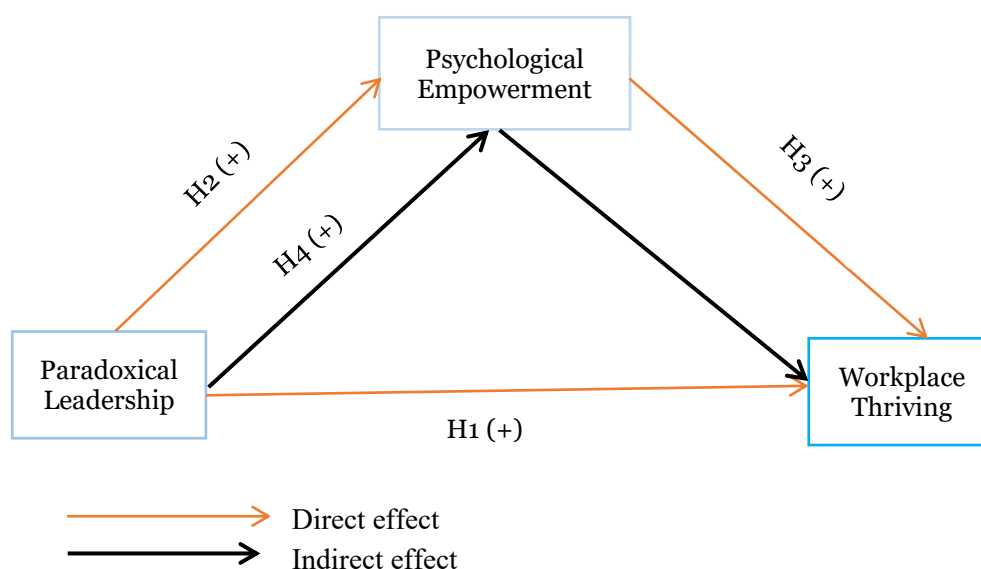
H1: Paradoxical leadership will be positively associated with workplace thriving.

H2: Paradoxical leadership will be positively associated with psychological empowerment.

H3: Psychological empowerment will be positively associated with workplace thriving.

H4: Psychological empowerment will mediate the relationship between paradoxical leadership and workplace thriving.

The conceptual framework of this study is developed from the proposed hypotheses and illustrated in Figure 1.



**Figure 1.** The conceptual model of the study

## 2. Methods

### 2.1. Research design

A cross-sectional, correlational design was employed to examine the associations among paradoxical leadership, psychological empowerment, and workplace thriving among nurses. This design was selected as an appropriate first step to identify and characterize theoretically grounded relationships among the study variables within the clinical setting, without manipulating variables or inferring causal effects. Accordingly, the mediation analysis was used to explore theory-consistent indirect associations rather than to test causal mechanisms. The study followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines to ensure methodological transparency and rigor.

### 2.2. Setting and samples

This study was conducted at three tertiary hospitals affiliated with the third Health Care Cluster in the Riyadh region of Saudi Arabia. These hospitals provide a broad spectrum of health care services and serve diverse patient populations. The sample size for this study was calculated using the online calculator for structural equation modeling (SEM) (Soper, 2024). This study includes 3 latent variables and 44 observed indicators. Considering an expected effect of 0.3, a power of 95, and a significance level of 0.05, 184 participants were needed. A convenience

sampling strategy was employed to recruit participants. The adequacy of the sample size was further evaluated using the inverse square root method and the minimum  $R^2$  method proposed by [Kock and Hadaya \(2018\)](#). Considering the maximum of two structural paths pointing at an endogenous construct and assuming a minimum expected path coefficient of 0.30, the inverse square root method indicated a minimum sample size of approximately 43 participants. Similarly, the minimum  $R^2$  method suggested a sample size of 52 cases, assuming an  $R^2$  of 0.25. The final sample size in this study substantially exceeded these thresholds, supporting the dataset's adequacy for PLS-SEM analysis. Of the 260 nursing staff invited to participate, 231 met the inclusion criteria, provided voluntary consent, and completed the survey, yielding a response rate of 88.8%. Sixteen nurses declined participation, and 13 did not meet the inclusion criteria. Eligibility criteria required participants to have at least one year of nursing experience and to be employed full-time. The other health care professions, part-time nurses, and nursing internship students were excluded from the study.

### *2.3. Measurement and data collection*

This study collected data using a demographic questionnaire and multiple standardized scales, including the Paradoxical Leadership Behavior Scale (PLBS), the Psychological Empowerment Scale (PES), and the Thriving at Work Scale (TAWS). The demographic questionnaire included participants' age, gender, marital status, education, and work experience.

Paradoxical leadership was measured using the PLBS developed by Zhang and colleagues ([Zhang et al., 2015](#)). The scale consists of 22 items grouped into five dimensions as follows: (1) combining self-centeredness with other-centeredness (5 items), (2) treating subordinates uniformly while allowing individualization (4 items), (3) maintaining distance while showing closeness (5 items), (4) enforcing work requirements while allowing flexibility (4 items), and (5) maintaining decision control while allowing autonomy (4 items). Participants rated each item on a 5-point Likert scale ranging from 1 (never) to 5 (always), with higher scores indicating stronger perceptions of paradoxical leadership. The PLBS demonstrated strong internal consistency reliability ( $\alpha > 0.84$  and  $0.86$  for each dimension), and exploratory and confirmatory factor analyses supported the five-factor structure. Evidence for convergent and discriminant validity was also established ([Zhang et al., 2015](#)).

Psychological empowerment was assessed using the PES developed by [Spreitzer \(1995\)](#). This scale consists of 12 items distributed across four dimensions (meaning, impact, self-determination, and competence); each dimension was measured with three items. Participants responded to each item using a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Higher scores indicated stronger perceptions of psychological empowerment. The PES has demonstrated strong internal consistency reliability (Cronbach's  $\alpha = 0.79-0.85$ ) and construct validity, with confirmatory factor analyses supporting its four-dimensional structure across multiple organizational contexts ([Spreitzer, 1995](#)).

Workplace thriving was measured using the TAWS developed by Porath and colleagues ([Porath et al., 2012](#)). The scale consists of 10 items covering two dimensions: vitality and learning, with five items in each dimension. Participants rated each item on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating higher levels of workplace thriving. The TAWS has demonstrated high internal consistency reliability (Cronbach's  $\alpha = 0.94$ ) and construct validity, with confirmatory factor analyses supporting the two-factor structure ([Porath et al., 2012](#)).

For all scales, item responses were averaged to calculate mean scores for each dimension and the overall scale. To provide an interpretable summary of participants' perceptions, mean scores were categorized into three levels based on the scale range. For the 5-point scales (PLBS and TAWS), scores from 1.00 to 2.33 were considered low, 2.34 to 3.66 moderate, and 3.67 to 5.00 high, while for the 7-point scale (PES), scores from 1.00 to 3.00 were considered low, 3.01 to 5.00 moderate, and 5.01 to 7.00 high. This approach facilitates comparisons across constructs and aids in the practical understanding of the intensity of paradoxical leadership, psychological empowerment, and workplace thriving in the study context.

The standardized scales used in this study were first translated from English into Arabic and then back-translated into English, following Beaton's guidelines, to ensure both linguistic accuracy and cultural appropriateness ([Beaton et al., 2000](#)). Content validity was subsequently evaluated by a panel of five experts comprising three professors of nursing administration and

two senior clinical nursing specialists with more than 10 years of professional experience. The experts assessed each item for essentiality, relevance, clarity, and cultural appropriateness. The Content Validity Ratio (CVR) was calculated following Lawshe's method (Lawshe, 1975). Given the panel size ( $N = 5$ ), all items achieved a CVR of 1.00, exceeding the recommended threshold of  $\geq 0.99$ . The Item-Level Content Validity Index (I-CVI) was also computed, with all items achieving values  $\geq 0.80$ , indicating acceptable item-level content validity. The Scale-Level Content Validity Index (S-CVI/Ave) values were 0.95 for the PLBS, 0.95 for the PES, and 0.96 for the TAWS, reflecting excellent overall content validity (Polit & Beck, 2006).

A pilot study was conducted with 15 clinical nurses to assess the clarity, relevance, and feasibility of the study instruments. Data obtained from the pilot sample were not included in the final analysis. The initial Cronbach's alpha coefficients were 0.68 for the PLBS, 0.86 for the PES, and 0.92 for the TAWS. Given the small pilot sample size, the reliability estimate for the PLBS should be interpreted with caution. Reliability was subsequently reassessed in the main study sample; all scales demonstrated acceptable internal consistency, exceeding recommended thresholds. Based on feedback from pilot participants and expert recommendations, the response format of the paradoxical leadership scale was revised from a seven-point to a five-point Likert scale to enhance clarity and reduce cognitive burden. This modification is supported by recent psychometric evidence suggesting that fewer response categories can maintain reliability while improving response quality (Ferrando et al., 2025; Sharma & Ruikar, 2025).

Data were collected between June and August 2025 using a structured online survey administered via Google Forms. The survey link was distributed through official institutional email channels, with a reminder sent two weeks after the invitation to enhance participation rates. Prior to participation, respondents were presented with an electronic informed consent form detailing the study purpose, procedures, voluntary nature of participation, confidentiality assurances, and the right to withdraw at any time without penalty. Participants indicated consent by selecting the "I agree" option; those who declined were automatically redirected to the survey.

To ensure both data integrity and participant anonymity, the survey was configured to restrict submissions to one response per individual using institutional login verification. This authentication process functioned solely as a gatekeeping mechanism to prevent duplicate entries and was not linked to survey responses. The option to collect email addresses was disabled, and no identifying information (e.g., names, email addresses, or institutional identifiers) was recorded at any stage of data collection. Consequently, all responses were fully anonymized, and no direct or indirect identifiers were included in the final dataset. Data access was restricted to the principal investigator, and data were stored on password-protected devices. No personally identifiable information was collected, retained, or analyzed.

#### *2.4. Data analysis*

Data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS version 4.1.1.2. PLS-SEM was preferred over CB-SEM because it is more suitable for predictive modeling, robust with smaller samples, does not assume multivariate normality, and efficiently handles complex models with higher-order constructs and mediating effects (Hair et al., 2022). Following established guidelines (Sarstedt et al., 2019), the disjoint two-stage approach was employed to model the reflective–reflective higher-order constructs (paradoxical leadership, psychological empowerment, and workplace thriving). The two-stage, disjoint approach was selected because it provides more accurate estimates of higher-order constructs, minimizes multicollinearity, and prevents inflated relationships.

In the first stage, the measurement models of the reflective lower-order constructs (LOCs) were assessed. Reliability and convergent validity were evaluated using indicator loadings, Cronbach's alpha, Composite Reliability (CR), and Average Variance Extracted (AVE). Thresholds of  $\geq 0.70$  for loadings and reliability and  $\geq 0.50$  for AVE were considered adequate. Discriminant validity was examined using cross-loadings, the Fornell–Larcker criterion, and the Heterotrait–Monotrait (HTMT) Ratio, with HTMT values  $< 0.85$  indicating discriminant validity. Collinearity among indicators was assessed through Variance Inflation Factors (VIFs), with values  $< 3.3$  considered acceptable (Fornell & Larcker, 1981; Hair et al., 2022).

In the second stage, latent variable scores of the LOCs were used as indicators of the reflective higher-order constructs (HOCs). Subsequently, the structural model was assessed using the PLS algorithm and PLS-Predict, including explained variance, model fit indices, predictive relevance,

reliability, and validity. Finally, path coefficients, indirect effects, and total effects were tested through bootstrapping with 5,000 subsamples (two-tailed,  $p < 0.05$ ). Descriptive statistics, including means and standard deviations, were computed for all study variables, while participants' demographic characteristics were summarized using SPSS version 27. In line with Becker et al. (2016), demographic variables were not incorporated as statistical controls, as doing so without a clear theoretical rationale may introduce spurious correlations and biased parameter estimates. Considering the present study's emphasis on the mediating role of psychological empowerment in the relationship between paradoxical leadership and workplace thriving. Demographic characteristics are therefore presented descriptively to enable readers to independently evaluate the generalizability of the findings.

### 2.5. Ethical considerations

Ethical approval for this study was obtained from the Institutional Ethical Research Committee at Shaqra University (Approval No: ERC\_SU\_S\_202500086) prior to data collection. The study was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki. All participants were informed about the purpose of the study, the voluntary nature of their involvement, and their right to withdraw at any stage without any consequences. An electronic informed consent form was provided at the beginning of the survey, and only individuals who gave their consent were able to proceed to the questionnaire. To ensure confidentiality, no personally identifying information was stored, and survey responses were recorded anonymously with access restricted to the research team.

## 3. Results

### 3.1. Characteristics of participants and descriptive statistics of the study variables

A total of 231 nursing staff were included in the study. Most participants were aged between 31 and 40 years (91.3%), with a mean age of 35.97 years ( $SD = 2.83$ ). More than half of participants were male (53.7%), while females accounted for 46.3% of the sample. Most respondents were married (96.5%), with only a small proportion reporting being single (2.2%) or divorced (1.3%). Regarding educational background, the majority held a technical nursing degree (92.2%), followed by bachelor's degrees (6.9%), and a very small number had postgraduate qualifications (0.9%). Regarding nursing positions, most participants were staff nurses (92.2%), with a smaller proportion of nurse managers (7.8%). Regarding professional experience, most participants had 6-10 years of experience (68.8%), with a mean of 8.01 years ( $SD = 3.73$ ) (Table 1).

**Table 1.** Demographic information of participants

| Characteristics                               | Frequency (f) | Percentage (%) |
|---|---------------|----------------|
| Age (years) (M = 35.97, SD = 2.83)            |               |                |
| 20-30   | 11            | 4.8            |
| 31-40   | 211           | 91.3           |
| >40   | 9             | 3.9            |
| Gender  |               |                |
| Female  | 107           | 46.3           |
| Male  | 124           | 53.7           |
| Marital status                                |               |                |
| Single  | 5             | 2.2            |
| Married                                       | 223           | 96.5           |
| Divorced                                      | 3             | 1.3            |
| Education                                     |               |                |
| Technical degree                              | 213           | 92.2           |
| Bachelor degree                               | 16            | 6.9            |
| Postgraduate studies                          | 2             | 0.9            |
| Nursing Position                              |               |                |
| Staff nurses                                  | 213           | 92.2           |
| Nurse managers                                | 18            | 7.8            |
| Work Experience (years) (M = 8.01, SD = 3.73) |               |                |
| 1-5   | 40            | 17.3           |
| 6-10  | 159           | 68.8           |
| >10   | 32            | 13.9           |

Paradoxical leadership was at a moderate level ( $M = 3.12$ ,  $SD = 0.44$ ), with subdimension means ranging from 2.99 to 3.21. Psychological empowerment was also at a moderate level ( $M = 4.37$ ,  $SD = 0.69$ ), with subdimension means ranging from 4.20 to 4.60. Workplace thriving demonstrated a moderate level ( $M = 3.45$ ,  $SD = 0.45$ ), with learning ( $M = 3.54$ ,  $SD = 0.53$ ) slightly higher than vitality ( $M = 3.36$ ,  $SD = 0.46$ ) (Table 2).

**Table 2.** Descriptive statistics of the study variables

| Variables | Minimum | Maximum | Mean | SD   |
|-----------|---------|---------|------|------|
| PL        | 2.4     | 4.7     | 3.12 | 0.44 |
| SO        | 2.0     | 5.0     | 3.13 | 0.55 |
| DC        | 2.0     | 5.0     | 3.08 | 0.57 |
| UI        | 1.8     | 5.0     | 3.21 | 0.55 |
| RF        | 1.8     | 4.8     | 2.99 | 0.54 |
| CA        | 1.8     | 5.0     | 3.14 | 0.61 |
| PE        | 2.9     | 7.0     | 4.37 | 0.69 |
| M         | 1.0     | 7.0     | 4.20 | 0.88 |
| SD        | 2.3     | 7.0     | 4.60 | 0.77 |
| C         | 2.3     | 7.0     | 4.28 | 0.92 |
| I         | 2.3     | 7.0     | 4.38 | 0.88 |
| WT        | 2.5     | 5.0     | 3.45 | 0.45 |
| L         | 3.0     | 5.0     | 3.54 | 0.53 |
| V         | 1.8     | 5.0     | 3.36 | 0.46 |

*Abbreviation.* PL=paradoxical Leadership; SO = Combining Self-Centeredness with Other-Centeredness; DC = Maintaining Both Distance and Closeness; UI = Treating Subordinates Uniformly While Allowing Individualization; RF = Enforcing Work Requirements While Allowing Flexibility; CA = Maintaining Decision Control While Allowing Autonomy; PE=Psychological Empowerment; M = Meaning; SD = Self-Determination; C = Competence; I = Impact; WT: Workplace Thriving; L = Learning; V = Vitality.

### 3.2. Assessment measurement model

To assess the measurement model of the reflective-reflective higher-order constructs (paradoxical leadership, psychological empowerment, and workplace thriving), the disjoint two-stage approach was applied. In the first stage, reflective lower-order constructs were evaluated for validity and reliability in accordance with the guidelines of Hair and his colleagues (Hair et al., 2019). This first assessment confirmed that the multidimensional constructs met the standards for convergent and discriminant validity, as well as internal consistency (Table 3; Supplementary Table S1). Following this assessment, the latent scores were subsequently used in the measurement model of reflective HOCs.

All reflective–reflective higher-order constructs (HOCs) demonstrate satisfactory reliability and convergent validity. For paradoxical leadership, the lower-order construct loadings ranged from 0.694 to 0.851, with VIFs between 1.474 and 2.192, Cronbach's alpha of 0.838, composite reliability of 0.885, and AVE of 0.609. Psychological empowerment exhibited loadings of meaning (0.806), self-determination (0.800), competence (0.796), and impact (0.787), VIFs ranging from 1.613 to 1.726,  $\alpha = 0.809$ ,  $CR = 0.874$ , and  $AVE = 0.635$ . Workplace thriving demonstrated loadings of learning (0.904) and vitality (0.911), a VIF of 1.719,  $\alpha = 0.786$ ,  $CR = 0.903$ , and  $AVE = 0.823$  (Table 4). These results collectively indicate that the constructs of paradoxical leadership, psychological empowerment, and workplace thriving possess acceptable reliability and convergent validity according to established guidelines (Hair et al., 2022).

The higher-order constructs in the model demonstrate satisfactory discriminant validity. Based on the HTMT criterion, all values are below the conservative threshold of 0.85, indicating that the constructs are conceptually distinct (Henseler et al., 2015). The Fornell–Larcker criterion further confirms this distinction, as the square root of AVE for each construct exceeds its correlations with the other constructs. Specifically, paradoxical leadership (0.780) is greater than its correlations with psychological empowerment (0.720) and workplace thriving (0.775); psychological empowerment (0.797) exceeds its correlations with paradoxical leadership (0.720)

**Table 3.** Measurement model of lower-order constructs

| Constructs | Loading     | VIFs        | α     | CR    | AVE   | SO    | DC    | UI    | RF    | CA    | M     | SD    | C     | I     | L     | V     |
|------------|-------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| SO         | 0.739–0.835 | 1.573–2.019 | 0.831 | 0.881 | 0.597 | 0.773 | 0.514 | 0.604 | 0.627 | 0.538 | 0.523 | 0.512 | 0.553 | 0.514 | 0.562 | 0.654 |
| DC         | 0.718–0.810 | 1.419–1.498 | 0.754 | 0.843 | 0.574 | 0.414 | 0.757 | 0.572 | 0.653 | 0.615 | 0.445 | 0.385 | 0.479 | 0.364 | 0.571 | 0.548 |
| UI         | 0.708–0.778 | 1.444–1.712 | 0.791 | 0.856 | 0.544 | 0.490 | 0.450 | 0.738 | 0.797 | 0.741 | 0.661 | 0.615 | 0.575 | 0.582 | 0.658 | 0.698 |
| RF         | 0.726–0.813 | 1.402–1.580 | 0.768 | 0.851 | 0.589 | 0.499 | 0.501 | 0.626 | 0.768 | 0.825 | 0.661 | 0.590 | 0.677 | 0.539 | 0.828 | 0.749 |
| CA         | 0.739–0.783 | 1.409–1.571 | 0.754 | 0.844 | 0.575 | 0.428 | 0.467 | 0.577 | 0.633 | 0.758 | 0.726 | 0.604 | 0.718 | 0.468 | 0.765 | 0.800 |
| M          | 0.734–0.872 | 1.363–1.755 | 0.756 | 0.859 | 0.672 | 0.423 | 0.354 | 0.529 | 0.516 | 0.550 | 0.820 | 0.709 | 0.693 | 0.609 | 0.691 | 0.745 |
| SD         | 0.825–0.852 | 1.632–1.787 | 0.791 | 0.878 | 0.705 | 0.415 | 0.304 | 0.484 | 0.463 | 0.468 | 0.549 | 0.840 | 0.624 | 0.676 | 0.565 | 0.651 |
| C          | 0.783–0.825 | 1.383–1.545 | 0.733 | 0.849 | 0.652 | 0.435 | 0.365 | 0.447 | 0.511 | 0.540 | 0.507 | 0.477 | 0.807 | 0.674 | 0.669 | 0.737 |
| I          | 0.862–0.869 | 1.832–2.015 | 0.834 | 0.900 | 0.750 | 0.428 | 0.300 | 0.476 | 0.438 | 0.379 | 0.474 | 0.547 | 0.531 | 0.866 | 0.535 | 0.625 |
| L          | 0.727–0.836 | 1.589–2.084 | 0.848 | 0.892 | 0.623 | 0.477 | 0.459 | 0.546 | 0.675 | 0.617 | 0.553 | 0.467 | 0.532 | 0.454 | 0.789 | 0.765 |
| V          | 0.732–0.796 | 1.544–1.870 | 0.831 | 0.881 | 0.597 | 0.547 | 0.445 | 0.567 | 0.601 | 0.639 | 0.587 | 0.528 | 0.579 | 0.524 | 0.647 | 0.773 |

*Abbreviation.* SO = Combining Self-Centeredness with Other-Centeredness; DC = Maintaining Both Distance and Closeness; UI = Treating Subordinates Uniformly While Allowin Individualization; RF = Enforcing Work Requirements While Allowing Flexibility; CA = Maintaining Decision Control While Allowing Autonomy; M = Meaning; SD = Self-Determination; = Competence; I = Impact; L = Learning; V = Vitality.

*Notes:* Green-highlighted cells on the diagonal represent the square root of the AVE for each construct (Fornell–Larcker), Values below Green-highlighted cells represent inter-construct correlations, Values above Green-highlighted cells represent Heterotrait–Monotrait Ratio

**Table 4.** The Measurement model of higher-order constructs

| Constructs | Loading     | VIFs        | α     | CR    | AVE   | PL    | PE    | WT    |
|------------|-------------|-------------|-------|-------|-------|-------|-------|-------|
| PL         | 0.694–0.851 | 1.474–2.192 | 0.838 | 0.885 | 0.609 | 0.780 | 0.763 | 0.825 |
| PE         | 0.787–0.806 | 1.613–1.726 | 0.809 | 0.874 | 0.635 | 0.720 | 0.797 | 0.814 |
| WT         | 0.904–0.911 | 1.719       | 0.786 | 0.903 | 0.823 | 0.775 | 0.734 | 0.907 |

*Abbreviation.* PL=paradoxical Leadership; PE=Psychological Empowerment; WT: Workplace Thriving.

*Notes:* Green-highlighted cells on the diagonal represent the square root of the AVE for each construct (Fornell–Larcker), Values below Green-highlighted cells represent inter-construct correlations, Values above Green-highlighted cells represent Heterotrait–Monotrait Ratio

and workplace thriving (0.734); and workplace thriving (0.907) surpasses its correlations with paradoxical leadership (0.775) and psychological empowerment (0.734). Collectively, these results indicate that paradoxical leadership, psychological empowerment, and workplace thriving are empirically distinct, and the measurement model achieves adequate discriminant validity. Furthermore, the cross-loadings of each lower-order construct on their corresponding higher-order constructs provide additional evidence of discriminant validity. Each indicator loaded most strongly on its intended construct, supporting the adequacy of the measurement model (Supplementary Table S2).

### 3.3. Assessment structural model

Table 5 illustrates the validation of the structural model, highlighting the explanatory power, effect sizes, and predictive relevance of the hypothesized relationships. Psychological empowerment has an  $R^2$  of 0.518, indicating that paradoxical leadership accounts for approximately 52.0% of the variance in psychological empowerment. Workplace thriving exhibits an  $R^2$  of 0.686, suggesting that paradoxical leadership and psychological empowerment together explain nearly 69.0% of its variance, reflecting a substantial proportion of explained variance.

The adjusted  $R^2$  values (0.516 for psychological empowerment and 0.683 for workplace thriving) are consistent with the unadjusted values, indicating stable and reliable model estimates. Effect size analysis ( $f^2$ ) shows that paradoxical leadership has a large effect on psychological empowerment ( $f^2 = 1.073$ ) and workplace thriving ( $f^2 = 0.470$ ), while psychological empowerment has a medium effect on workplace thriving ( $f^2 = 0.173$ ), confirming the practical significance of these paths (Cohen, 2013). Practically, this indicates that paradoxical leadership behaviors enhance nurses' psychological empowerment, which in turn meaningfully improves workplace thriving by promoting learning, vitality, and overall engagement. Thus, both the direct effect of paradoxical leadership and the indirect effect through empowerment have meaningful implications for fostering a motivated, empowered, and thriving nursing workforce. Predictive relevance assessed via  $Q^2$  values is satisfactory for both psychological empowerment ( $Q^2 = 0.507$ ) and workplace thriving ( $Q^2 = 0.626$ ) were derived from the formal PLS-Predict procedure in SmartPLS. These values indicate that the model demonstrates adequate out-of-sample predictive power, supporting the robustness of the structural model. All VIFs values are below critical thresholds, indicating that multicollinearity does not bias the estimates. Although global goodness-of-fit indices are not the primary evaluation criteria in PLS-SEM due to its prediction-oriented nature (Hair et al., 2019), approximate model fit measures were also examined. The SRMR value was 0.068, which falls below the recommended threshold of 0.08, indicating an acceptable level of model fit (Henseler et al., 2015). Additional discrepancy measures (d\_ ULS = 0.299; d\_ G = 0.156;  $\chi^2 = 213.889$ ) were also reported for descriptive purposes. The Normed Fit Index was 0.838, suggesting a moderate level of model fit; however, this value should be interpreted cautiously as global fit indices in PLS-SEM are considered supplementary indicators rather than definitive criteria for model adequacy (Hair et al., 2019).

**Table 5.** Summary of structural model assessment

| Constructs | $R^2$ | $R^2$<br>adjusted | $f^2$ | $Q^2$ | VIF   | Model fit |        |       |          |       |
|------------|-------|-------------------|-------|-------|-------|-----------|--------|-------|----------|-------|
|            |       |                   |       |       |       | SRMR      | d_ ULS | d_ G  | $\chi^2$ | NFI   |
| PL → PE    |       |                   | 1.073 |       | 1.000 | 0.068     | 0.299  | 0.156 | 213.889  | 0.838 |
| PL → WT    |       |                   | 0.470 |       | 2.073 |           |        |       |          |       |
| PE → WT    |       |                   | 0.173 |       | 2.072 |           |        |       |          |       |
| PE         | 0.518 | 0.516             |       | 0.507 |       |           |        |       |          |       |
| WT         | 0.686 | 0.683             |       | 0.626 |       |           |        |       |          |       |

Abbreviation. PL=Paradoxical Leadership; PE=Psychological Empowerment; WT: Workplace Thriving

### 3.4. Structural model analysis (Hypotheses testing)

Table 6 and Figure 2 show that paradoxical leadership is significantly positively associated with psychological empowerment ( $\beta = 0.720$ ,  $t = 15.548$ ,  $p < .001$ ) and workplace thriving ( $\beta = 0.553$ ,  $t = 8.279$ ,  $p < .001$ ). In addition, psychological empowerment is significantly correlated with workplace thriving ( $\beta = 0.336$ ,  $t = 4.927$ ,  $p < .001$ ). The indirect association between paradoxical leadership and workplace thriving through psychological empowerment is also

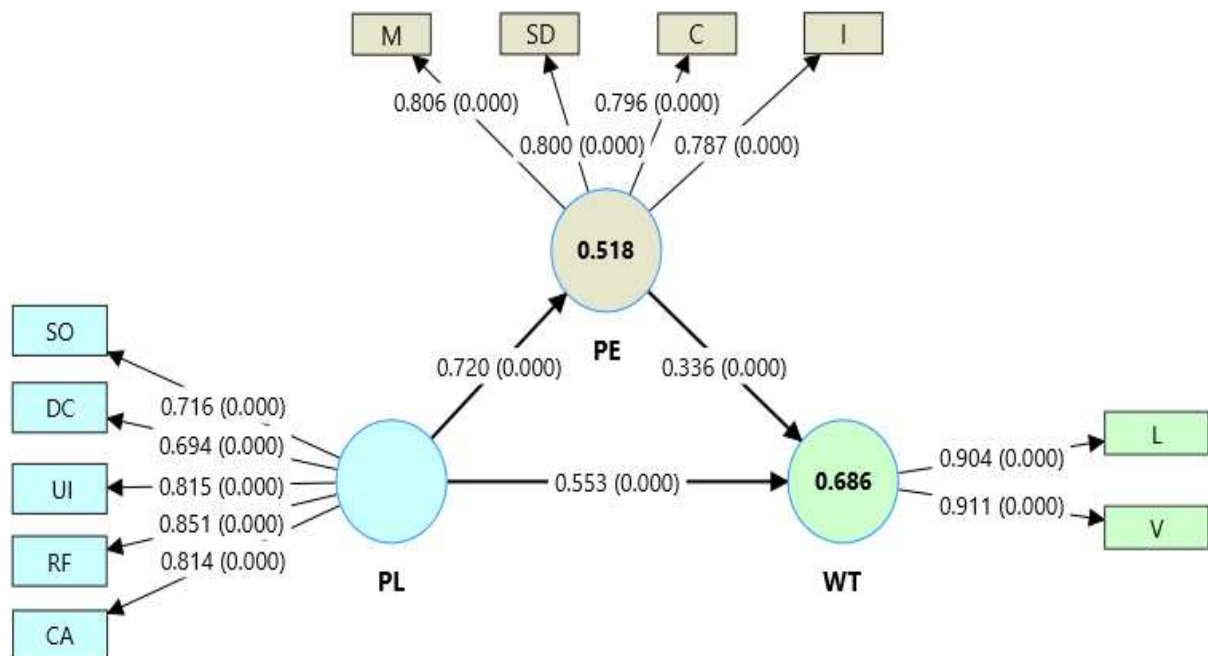
significant ( $\beta = 0.241, t = 4.464, p < .001$ ), suggesting a partial mediating relationship. The total association of paradoxical leadership with workplace thriving ( $\beta = 0.795, t = 21.248, p < .001$ ) reflects the combined influence of both direct and mediated pathways.

**Table 6.** Bootstrapped direct, indirect, and total effects among the study variables

| Coefficients Paths | $\beta$ | $t$    | $p$    | 95%CI |       |
|--------------------|---------|--------|--------|-------|-------|
|                    |         |        |        | Lower | Upper |
| PL -> PE           | 0.720   | 15.548 | < .001 | 0.618 | 0.798 |
| PL -> WT           | 0.553   | 8.279  | < .001 | 0.419 | 0.682 |
| PE -> WT           | 0.336   | 4.927  | < .001 | 0.201 | 0.466 |
| Indirect effect    |         |        |        |       |       |
| PL -> PE -> WT     | 0.241   | 4.464  | < .001 | 0.138 | 0.348 |
| Total effect       | 0.795   | 21.248 | < .001 | 0.711 | 0.858 |

Abbreviation. PL: Paradoxical Leadership; PE: Psychological Empowerment; WT: Workplace Thriving

In Figure 2, path coefficients and corresponding p-values are presented along the direct paths. Outer loadings and their associated t-values for each indicator are displayed in the model.



**Figure 2.** Structural model of the study

#### 4. Discussion

This study provides evidence that paradoxical leadership is positively associated with nurses' workplace thriving, partly through psychological empowerment. The findings suggest that leaders who balance structure with autonomy may create conditions that support both vitality and learning at work. In complex healthcare settings, such leadership may reduce role ambiguity and strengthen nurses' sense of competence, meaning, and impact. Through these psychological states, paradoxical leadership may help foster sustained professional engagement and thriving among nurses.

The present findings indicate that paradoxical leadership is positively associated with workplace thriving among nurses. Leaders who balance contradictory demands, such as enforcing organizational standards while promoting autonomy may create a climate that supports both energy and learning. By reducing role ambiguity and providing nurses with a sense of competence and meaningful contribution, such leadership practices appear to activate psychological processes that underlie thriving. These results resonate with previous studies emphasizing paradoxical leadership as a dynamic approach suited to complex healthcare environments (Desveaux, 2025;

Liu et al., 2020). For example, research conducted in Saudi Arabia found that paradoxical leadership was positively associated with nurses' thriving (Elsehrawy et al., 2025). Similarly, studies in Egypt suggest that leaders who effectively manage competing priorities help reduce ambiguity and strengthen nurses' engagement in professional development and organizational learning, ultimately contributing to thriving (Atalla et al., 2025). These findings highlight that paradoxical leadership acts as a key contextual job resource that fosters workplace thriving among nurses by balancing competing demands and reducing role ambiguity. In doing so, it enhances nurses' perceived competence, meaningfulness of work, and psychological energy. Overall, the results indicate that thriving is not only an individual attribute but is strongly shaped by leadership behaviors that support clarity, autonomy, and professional growth in complex healthcare environments.

The study also shows that paradoxical leadership is associated with higher levels of psychological empowerment, reflected in nurses' perceptions of meaning, competence, self-determination, and impact in their work roles. This aligns with Spreitzer's empowerment framework, which emphasizes leadership's role in shaping psychological states that support motivation, resilience, and engagement. Sent findings also indicate that paradoxical leadership is positively associated with psychological empowerment among nurses (Spreitzer, 1995). Empowering leadership behaviors have been linked to both enhanced psychological empowerment and increased workplace engagement in prior nursing research, with empowerment often acting as a partial mediator between leadership and positive outcomes (Hashemi et al., 2025). These findings suggest that paradoxical leaders not only influence observable work outcomes but also foster the internal psychological conditions that sustain motivation and active participation in the workplace.

The study further indicates that psychological empowerment is positively associated with workplace thriving. From a theoretical perspective, these findings are well explained by SDT, which posits that the satisfaction of basic psychological needs for autonomy, competence, and relatedness enhances intrinsic motivation and well-being (Deci & Ryan, 2015). Psychological empowerment reflects these needs by providing nurses with meaningful roles (autonomy and impact), opportunities to exercise competence, and engagement in purposeful work. When these needs are supported, nurses are more likely to experience vitality and continuous learning, the core components of workplace thriving. In nursing, a previous study conducted in China demonstrated that empowered nurses exercised greater job autonomy, which subsequently promoted their thriving (Zhuang et al., 2025). Moreover, empowerment has consistently been associated with reduced burnout, improved quality of patient care, higher job satisfaction, stronger retention, and enhanced overall quality of nursing work life (Al-Obiedat et al., 2024; Jaradat et al., 2024; Jin et al., 2024; Malak & Abu Safieh, 2022). Together, these findings reinforce the role of psychological empowerment as a key mechanism translating leadership behaviors into positive outcomes.

The mediation analysis further revealed that psychological empowerment partially mediates the relationship between paradoxical leadership and workplace thriving. The indirect effect accounted for approximately 30% of the total effect, indicating that although psychological empowerment is a significant mechanism, a substantial direct association of paradoxical leadership with thriving remains. This suggests that other factors, not assessed in the current study, may also contribute to thriving. For instance, organizational context, workload conditions, staffing adequacy, or job demands could potentially influence nurses' vitality, learning, and engagement. As these variables were not measured, they should be considered as possible contextual explanations rather than empirically demonstrated mechanisms. Future studies incorporating these organizational factors would provide a more comprehensive understanding of the processes underlying thriving in nursing settings. The study also acknowledges that demographic variables, years of experience, and unit type may influence these relationships and should be examined in future research to clarify their role.

To our knowledge, this study is among the first to empirically examine psychological empowerment as a mediating mechanism linking paradoxical leadership to workplace thriving in the Saudi nursing context. By focusing on paradoxical leadership, the study extends theory by showing that leaders' ability to balance competing demands is associated with higher levels of nurses' vitality and learning both directly and indirectly through psychological states related to meaning, competence, autonomy, and impact. Importantly, in the context of rapid healthcare

transformation and continuously evolving regulatory requirements in Saudi Arabia, paradoxical leadership may be particularly valuable for nurse managers. It enables them to simultaneously enforce compliance with new standards while maintaining flexibility, supporting staff autonomy, and sustaining workforce engagement during periods of organizational change. This adaptive leadership approach, therefore, helps nurses navigate regulatory complexity while maintaining psychological resources essential for thriving. Previous research has highlighted psychological empowerment as a mediator in the relationships between other leadership styles and nurse outcomes. For example, transformational leadership has been shown to enhance nurses' job performance and innovative behaviors through empowerment (Huang et al., 2025; Ibrahim et al., 2024; Masood & Afsar, 2017). These findings are consistent with Mehrad et al. (2022), who found that transformational and transactional leadership positively influence work engagement through perceived organizational support, while Candrawati et al. (2024) reported that spiritual leadership enhances caring behaviors via calling. Consistent with these studies, our findings demonstrate that paradoxical leadership fosters workplace thriving partly through psychological empowerment, underscoring that leadership effectiveness operates via internal psychological and contextual resources that promote engagement, meaning, and sustained professional well-being across diverse settings. Collectively, this evidence emphasizes that empowering leadership approaches enhance both individual and organizational outcomes and highlights the unique role of paradoxical leadership in navigating complex, competing demands in healthcare environments.

While these findings provide new insights, they must be interpreted cautiously. The cultural and organizational interpretations should be considered as contextual explanations rather than empirically verified conclusions, as variables such as cultural norms, power distance, and organizational climate were not directly measured. Saudi healthcare organizations traditionally operate within hierarchical structures characterized by centralized authority (Hofstede, 2011; The Culture Factor Group, 2024). Within such settings, autonomy may be experienced as supported discretion within organizational boundaries, rather than unrestricted independence. Paradoxical leadership may be particularly effective in this context, as it allows leaders to maintain necessary control while simultaneously supporting professional autonomy. Although speculative, these interpretations provide insight into the contextual relevance of paradoxical leadership and psychological empowerment in Saudi nursing practice. Within such settings, autonomy may be experienced as supported discretion within organizational boundaries, rather than unrestricted independence. Paradoxical leadership may be particularly effective in this context, as it allows leaders to maintain necessary control while simultaneously supporting professional autonomy. Although speculative, these interpretations provide insight into the contextual relevance of paradoxical leadership and psychological empowerment in Saudi nursing practice. As leadership practices in Saudi healthcare continue to evolve in response to national reform initiatives, including Vision 2030's emphasis on workforce empowerment and professional development, paradoxical leadership may be particularly effective in reconciling hierarchical authority with increasing expectations for empowerment. By simultaneously maintaining control and enabling participation, paradoxical leaders can foster psychological empowerment in culturally congruent ways, thereby promoting workplace thriving. This perspective underscores the importance of considering cultural norms, collectivism, and reform-driven organizational change when interpreting empowerment-based leadership mechanisms in nursing.

## **5. Implications and limitations**

The findings of this study have important implications for healthcare organizations and nurse managers. First, given that paradoxical leadership directly and indirectly enhances workplace thriving, leadership development programs should focus on cultivating paradoxical behaviors, such as balancing flexibility with control, addressing individual staff needs while maintaining uniform standards, and modeling adaptability in complex situations. Second, because psychological empowerment partially mediates this relationship, interventions that specifically foster empowerment, such as participatory decision-making, targeted skill development, and recognition of individual contributions, can effectively translate leadership behaviors into increased thriving. By implementing these strategies, organizations can promote nurses' competence, autonomy, and impact, which in turn may improve team performance, job satisfaction, and patient care outcomes.

However, this study has several limitations. First, the cross-sectional design precludes causal inference, and reliance on self-reported questionnaires may have introduced response and social desirability biases. Additionally, the use of self-report data raises the possibility of common method variance, although steps such as ensuring anonymity and voluntary participation were implemented to mitigate this risk. Second, the study employed convenience sampling within a single geographical region (Riyadh), with participants drawn from three tertiary hospitals under the same administrative system. This, combined with a relatively homogeneous sample (e.g., 91.3% within one age group, 96.5% married), may limit the generalizability of the findings to nurses in other regions or settings. Third, demographic variables such as marital status and educational level were not controlled and could act as potential confounding factors influencing the observed relationships. Moreover, although psychological empowerment was examined as the primary mediating mechanism, other organizational and contextual factors, including organizational culture, workload, staffing levels, and job demands, were not explored and may also influence workplace thriving. Future research should employ longitudinal, experimental, or mixed method designs to better establish causal relationships and examine how leadership and psychological processes evolve over time. Studies with more heterogeneous samples are recommended to assess whether these relationships generalize across diverse nurse populations. Cross-cultural comparative studies and qualitative research could further elucidate how paradoxical leadership and empowerment operate in different healthcare and cultural contexts.

Despite these limitations, the study has several notable strengths. Although previous research in Saudi Arabia has examined leadership and workplace thriving or the mediating role of psychological empowerment for other leadership styles, this study specifically investigates the mediating role of psychological empowerment in the context of paradoxical leadership, offering novel insights into this emerging leadership style within Saudi nursing. Additionally, the study employed validated instruments, and the sample size was adequate to support the reliability and robustness of the findings. These strengths underscore the study's theoretical and practical contributions to research on nursing leadership and employee well-being.

## **6. Conclusion**

The findings of this study suggest that paradoxical leadership may play a meaningful role in strengthening nursing management practices by fostering psychologically empowering work environments that promote workplace thriving. Rather than merely balancing competing demands at a managerial level, paradoxical leadership appears to equip nurse managers with a practical approach for navigating complex and rapidly changing healthcare settings, particularly by integrating control with autonomy and consistency with flexibility. Through this approach, nurses are more likely to experience enhanced psychological empowerment, which, in turn, supports their vitality, learning, and sustained engagement at work.

From a managerial perspective, these results highlight the importance of developing leadership capacities that enable nurse managers to effectively respond to organizational complexity while simultaneously supporting staff psychological resources. Embedding paradoxical leadership principles into leadership development programs may therefore help improve nurse well-being and strengthen workforce sustainability. However, given the cross-sectional design, causal inferences cannot be made, and future longitudinal and intervention studies are needed to confirm these relationships and their practical impact on nursing management outcomes.

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## **Author Contribution**

MAGA: Conceptualization, Study Design, Supervision, Funding Acquisition, Writing original Draft, Writing – Review & Editing. IAI: Data Collection, Formal Analysis, Validation, Project administration, Visualization, Methodology, Validation, Writing – Review & Editing. All authors have read and approved the final manuscript for submission.

### Conflicts of Interest

The authors declare no conflicts of interest.

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### Declaration of Use of AI in Scientific Writing

The authors confirm that no AI tools were used to develop the ideas, analysis, or conclusions of this study. ChatGPT (OpenAI, version 4) was used solely to assist in refining the language, correcting grammatical errors, and improving clarity. All content and interpretations are the work of the authors.

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