Original Article

Preferred leadership styles among nursing students preparing for clinical leadership roles

Eko Prasetya Widianto[1], Erik Kusuma[1], Syaifuddin Kurnianto[1], Suhendra Agung Wibowo[1], Mareta Deka Paraswati[1]

[1]Diploma Nursing Program, Faculty of Nursing, Universitas Jember, Indonesia

Abstract:
Leadership style plays a crucial role in shaping the work climate, team motivation, and quality of nursing care. As future clinical leaders, nursing students need to recognize their preferred leadership styles early in their education. This study aims to describe the distribution of leadership style preferences among undergraduate nursing students. A quantitative descriptive study with a cross-sectional design was conducted involving 112 nursing students. Data were collected using a validated online questionnaire consisting of 15 items measuring five leadership dimensions. The instrument demonstrated good content validity (Content Validity Index = 0.93) and internal consistency reliability (Cronbach's Alpha = 0.87). Data were analyzed descriptively using frequencies, means, and standard deviations. The Kruskal-Wallis test was used for inferential analysis to examine score differences across dominant leadership groups. Most respondents (61.6%) exhibited a dominant preference for the democratic leadership style, followed by authoritarian (14.2%), laissez-faire (9%), transformational (9%), and transactional (6.2%). The highest mean total score was observed in the democratic dimension (M = 13.71; SD = 1.58), while the lowest was in laissez-faire (M = 10.59; SD = 2.86). Items such as "I will be a role model in discipline, service, and work ethics" (M = 4.68) and "I will motivate staff to work enthusiastically" (M = 4.65) received the highest agreement. The Kruskal-Wallis test revealed statistically significant differences in scores across all leadership dimensions based on dominant style ($\chi^2(4) \geq 9.86$; $p < 0.05$), confirming meaningful differentiation in leadership preferences. Nursing students predominantly prefer democratic and transformational leadership styles, characterized by teamwork, empowerment, role modeling, and open communication. These findings support the integration of evidence-based leadership training into the nursing curriculum to prepare competent, humanistic, and adaptive future clinical leaders.

Keywords:
nursing students, leadership style, democratic, transformational, clinical leadership

Corresponding Author:
Eko Prasetya Widianto
ekoprastw@unej.ac.id

INTRODUCTION

Leadership within healthcare settings plays a pivotal role in shaping organizational culture, influencing staff performance, and ensuring high-quality patient care (Jack et al., 2022). In nursing,

the head nurse serves as a frontline leader responsible for coordinating clinical operations, managing human resources, and fostering a supportive work environment (Nuryani et al., 2022). As such, their leadership style has a significant impact on team cohesion, job satisfaction, and patient safety outcomes (Maisyaroh et al., 2025). Given this critical function, it is essential that future nursing leaders develop self-awareness regarding their preferred leadership approaches early in their professional development.

Nursing students, particularly those in the diploma program, are being prepared for advanced roles, including clinical leadership positions such as ward head nurses (Nuryani et al., 2022). During their education, they begin to form perceptions and preferences about how leadership should be practiced. These emerging leadership tendencies can be influenced by clinical experiences, role models, and formal curricula (Maisyaroh et al., 2023). Therefore, understanding the leadership style preferences of nursing students provides valuable insight into the future landscape of nursing management in Indonesia.

Commonly recognized leadership styles include democratic, authoritarian, laissez-faire, transformational, and transactional (Jack et al., 2022). Democratic leaders emphasize participation and shared decision-making, while authoritarian leaders make decisions unilaterally. Laissez-faire leaders adopt a hands-off approach, whereas transformational leaders inspire and empower their teams through vision and personal example. Transactional leaders focus on structured tasks, rewards, and corrective actions based on performance (Gebreheat et al., 2023). Each style has distinct implications for team dynamics and organizational effectiveness.

In the Indonesian context, where hierarchical structures have traditionally influenced healthcare management, there is a growing shift toward more participative and empowering leadership models (Wardani et al., 2021; Widianto et al., 2022). However, little is known about how these shifts are reflected in the aspirations of future nursing leaders.

Several studies have explored leadership styles among practicing nurses and nurse managers. Research by Jack et al. (2022) found that transformational leadership was positively associated with job satisfaction and reduced burnout among hospital nurses. Similarly, a study in Java, Indonesia, revealed that democratic and transformational styles were perceived as most effective by nursing staff (Nuryani et al., 2022). In contrast, authoritarian and laissez-faire styles were linked to lower morale and higher turnover intentions.

However, most existing studies focus on incumbent nurse leaders rather than students preparing for leadership roles. A few recent studies have begun to examine leadership preferences among undergraduate nursing students. For instance, another study found that senior nursing students favored democratic and transformational styles over autocratic ones (Gebreheat et al., 2023). Another study reported similar trends, with students expressing a strong preference for leaders who act as mentors and motivators (Permana et al., 2024).

Despite these findings, a research gap remains regarding the leadership style preferences of Indonesian nursing students, particularly at the pre-licensure stage. Most local studies have focused on leadership competencies or challenges faced by current head nurses (Maisyaroh et al., 2025; Nuryani et al., 2022), but minimal attention has been paid to the formative preferences of future leaders. Furthermore, few studies have employed validated instruments to assess multiple leadership dimensions simultaneously or included psychometric evaluation of measurement tools.

This study addresses a critical gap in the literature by examining the leadership style preferences among Indonesian nursing students as they prepare for clinical leadership roles. Unlike previous studies that focus on practicing nurses, this research targets students at the point of professional formation, offering a proactive perspective on leadership development.

The significance of this study lies in three key contributions. First, it provides empirical evidence on the dominant leadership orientations among future head nurses in Indonesia, which can inform curriculum design and leadership training programs. Second, the study includes rigorous psychometric testing of the instrument, reporting content validity (CVI) and internal consistency (Cronbach's Alpha), thereby enhancing the reliability and applicability of the findings. Third, inferential analysis using the Kruskal-Wallis test enables a meaningful comparison across leadership style groups, thereby strengthening the scientific rigor of the descriptive data. By identifying prevailing preferences, particularly the dominance of democratic and transformational styles, this study offers actionable insights for educators and policymakers aiming to cultivate a new generation of empathetic, collaborative, and visionary nursing leaders in Indonesia.

METHOD

This study employed a quantitative descriptive research design with a cross-sectional approach to explore leadership style preferences among undergraduate nursing students as future clinical leaders. The study was conducted at the Diploma III Nursing Program, Faculty of Nursing, Universitas Jember, Pasuruan Campus, during September 2025.

The population consisted of all students enrolled in the final semester of the Diploma III Nursing Program, totaling 122 individuals. From this population, a sample of 112 respondents was selected using the consecutive sampling technique, which involved inviting every eligible student who met the inclusion criteria and was available during the data collection period. Inclusion criteria were: (1) currently enrolled in the final semester, (2) having completed clinical practicum rotations, and (3) willing to participate voluntarily.

The primary instrument used was a structured online questionnaire developed based on established leadership theories by Goleman in Nuryani et al. (2022) and Jack et al. (2022). The questionnaire consisted of 15 items distributed across five leadership dimensions: democratic (3 items), authoritarian (3 items), laissez-faire (3 items), transformational (3 items), and transactional (3 items). Each item was measured using a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Before administration, the instrument underwent content validity assessment by three expert validators in nursing management, resulting in a Content Validity Index (CVI) of 0.93, indicating high relevance and clarity of items.

Data collection was conducted through Google Forms, which were distributed via the official class WhatsApp groups after obtaining informed consent. The process followed the guidelines proposed by Polit and Beck in Wardani et al. (2021) for online survey research, ensuring confidentiality, anonymity, and voluntary participation. Respondents were given one week to complete the questionnaire, and two reminder messages were sent to encourage participation.

The collected data were analyzed using both descriptive and inferential statistics. Descriptive analysis included frequency distributions, percentages, means, and standard deviations to summarize the respondents' characteristics and leadership style preferences. For inferential analysis, the Kruskal-Wallis test was used to examine significant differences in leadership dimension scores across dominant leadership groups, as the data were not normally distributed (Shapiro-Wilk, $p < 0.05$). All statistical analyses were performed using IBM SPSS Statistics version 26.

Interpretation of the dominant leadership style for each respondent was based on the highest total score among the five dimensions. In cases where two or more dimensions had equal maximum scores, the respondent was classified under the dimension most frequently aligned with their individual item responses.

RESULT

The findings of this study present the leadership style preferences among 112 nursing students from the Diploma III Nursing Program, Faculty of Nursing, Universitas Jember, Pasuruan Campus. The analysis focuses on the distribution of dominant leadership styles, mean scores across the five leadership dimensions, and statistical differences between groups. Data are presented through descriptive statistics and supported by inferential analysis using the Kruskal-Wallis test due to non-normal distribution (Shapiro-Wilk, $p<0.05$).

Distribution of Dominant Leadership Styles

The most prevalent leadership style among respondents was democratic, chosen by 69 students (61.6%), followed by authoritarian (14.2%), laissez-faire (9%), transformational (9%), and transactional (6.2%). Two respondents showed equally high scores across multiple dimensions but were classified based on the highest total score. The following table summarizes the frequency and percentage distribution of the dominant leadership style.

Table 1. Distribution of Dominant Leadership Styles Among Nursing Students (N = 112)

Dominant Leadership	Frequency (N)	Percentages (%)
Democratic	69	61.6
Authoritarian	16	14.2
Laissez-Faire	10	9
Transformational	10	9
Transactional	7	6.2
Total	112	100.0

Mean Scores Across Leadership Dimensions

Descriptive analysis revealed that the democratic dimension had the highest mean total score (M = 13.71; SD = 1.58), followed by transformational (M = 12.47; SD = 2.56), transactional (M = 11.76; SD = 3.82), authoritarian (M = 10.76; SD = 3.47), and laissez-faire (M = 10.59; SD = 2.86).

These results indicate a strong inclination toward participative and inspirational leadership behaviors.

Table 2. Mean and Standard Deviation of Leadership Dimension Scores (N = 112)

Leadership Dimension	Mean (M)	Standard Deviation (SD)
Democratic	13.71	1.58
Transformational	12.47	2.56
Transactional	11.76	3.82
Authoritarian	10.76	3.47
Laissez-Faire	10.59	2.86

Inferential Analysis: Kruskal-Wallis Test

To examine whether there were significant differences in leadership dimension scores across the dominant leadership groups, the Kruskal-Wallis H test was conducted. Results showed statistically significant differences in all five dimensions. These findings confirm that respondents classified under a specific dominant style indeed scored significantly higher on that dimension, supporting the validity of the classification.

Table 3. Kruskal-Wallis Test Results for Leadership Dimension Scores by Dominant Style Group

Leadership Dimension	χ^2	DF	P -Value
Democratic	28.73	4	< 0.001
Authoritarian	22.15	4	< 0.001
Laissez-Faire	14.87	4	0.005
Transformational	12.04	4	0.017
Transactional	9.86	4	0.043

DISCUSSION

The findings of this study reveal that the democratic leadership style is the most dominant preference among Diploma III nursing students at the Faculty of Nursing Universitas Jember Pasuruan Campus, with nearly 61.6% of respondents identifying democratic leadership as their dominant style. This result aligns with global trends indicating a shift from hierarchical to participative models in healthcare leadership (Windarwati et al., 2021). However, what distinguishes this study is its focus on pre-licensure nursing students, capturing leadership preferences at a formative stage before clinical leadership roles are assumed, offering a proactive rather than reactive perspective on leadership development.

The high preference for democratic leadership is reflected not only in the dominance of this style but also in the consistently high mean score (M = 13.71) across all items related to team involvement, open communication, and valuing staff input. This suggests that future nurses value collaboration and inclusivity, which are critical for fostering psychological safety and interdisciplinary teamwork in complex healthcare environments (Maisyaroh et al., 2024). Notably, items such as "I

will give staff the opportunity to express their opinions before making decisions" and "I will appreciate staff input during meetings" received near-universal agreement, reinforcing the centrality of participative decision-making in their ideal leadership model.

Interestingly, while transformational leadership did not dominate numerically (9%), it achieved the second-highest mean score (M = 12.47), particularly in behaviors related to role modeling and motivation. This indicates that although students may not primarily classify themselves as transformational leaders, they strongly endorse key transformational qualities, such as being a moral example ("I will be a role model in discipline and ethics," M = 4.68) and inspiring others ("I will motivate staff to work enthusiastically," M = 4.65). These findings support Gebreheat et al. (2023), who found that transformational traits are highly valued even when not explicitly adopted as a full leadership style.

In contrast to some earlier studies in hierarchical organizational cultures (Permana et al., 2024), authoritarian leadership was preferred by only 14.2% of respondents and scored relatively low in overall mean (M = 10.76). This reflects a generational shift away from top-down control, especially among younger healthcare professionals who prioritize autonomy and mutual respect. A small group of respondents (n = 6) exhibited strong alignment with authoritarian tendencies, suggesting that situational beliefs or personal experiences (e.g., exposure to directive supervisors) may still influence individual preferences.

Another notable finding is the presence of laissez-faire leadership as the dominant style (9%). While this style is generally associated with poor team performance (Manewattanapong & Chatchamnai, 2023), Students expressed high agreement with statements like "I will allow staff to complete tasks freely based on creativity." This could reflect a desire to promote innovation and trust, albeit without sufficient emphasis on guidance or accountability, a potential blind spot that warrants educational intervention.

The statistically significant differences revealed by the Kruskal-Wallis test (p<0.05) across all leadership dimensions confirm that students' self-classification into dominant styles is meaningful and not merely random variation. This strengthens the validity of using multi-dimensional instruments to assess leadership preferences even in small samples.

This study contributes to the field of nursing and health sciences in three significant ways: 1) early Identification of Leadership Preferences: Unlike most prior research that focuses on practicing nurse managers (Wardani et al., 2021), this study captures leadership aspirations before professional practice, allowing educators to intervene early and shape leadership competencies proactively; 2)Psychometric Rigor in Local Context: The inclusion of content validity (CVI = 0.93) and internal consistency (Cronbach's Alpha = 0.87) enhances the credibility of the instrument in an Indonesian educational setting, providing a replicable model for future studies; and 3) Evidence for Curriculum Integration: By demonstrating a clear preference for democratic and transformational styles, this study provides empirical justification for integrating leadership modules into diploma-level nursing curricula, addressing a gap in current vocational education programs that often emphasize technical skills over managerial competencies (Widianto et al., 2023).

These contributions are particularly relevant in Indonesia, where frontline nursing leadership plays a crucial role in hospital accreditation, patient safety, and workforce retention. Preparing

students with evidence-based leadership knowledge can enhance both individual readiness and the overall quality of care across the system.

Several limitations should be acknowledged. First, the sample size is relatively small and limited to a single institution, which affects its generalizability. Second, the use of self-reported data may introduce social desirability bias, particularly given the high number of maximum scores, which may reflect idealized views rather than realistic behavioral intentions. Third, the cross-sectional design limits causal interpretation; longitudinal follow-up would be needed to observe how these preferences evolve with clinical experience.

Despite these limitations, the study offers valuable insights into the emerging leadership identity of future nurses, an essential foundation for building resilient, adaptive, and human-centered healthcare teams.

CONCLUSION

The study provides a clear understanding of the leadership style preferences among Diploma III nursing students who are being prepared for clinical leadership roles. The findings demonstrate that most students exhibit a strong inclination towards democratic and transformational leadership styles, characterized by values of participation, open communication, empowerment, and personal example. These preferences reflect a significant shift from traditional, hierarchical models of leadership towards more collaborative and inspirational approaches that prioritize team involvement and staff development. While a smaller proportion of students identified authoritarian, laissez-faire, or transactional styles as their dominant preference, the overall pattern indicates a progressive mindset among future nurses who envision themselves as facilitative and motivating leaders rather than directive or passive ones.

The key finding of this study is that democratic leadership was the most prevalent preference among respondents, supported by both frequency distribution and high mean scores across participative items. This directly answers the research question by confirming that nursing students at this institution predominantly favor a participative and inclusive approach to leadership. Their responses also reveal a strong endorsement of transformational behaviors, particularly role modeling and motivation, further reinforcing their orientation toward people-centered leadership. The statistical significance of the differences in scores across leadership dimensions validates the authenticity of these preferences and suggests that students can meaningfully differentiate between various leadership approaches.

Based on these findings, it is recommended that nursing education programs, particularly at the diploma level, incorporate structured leadership training into their curricula. Workshops and simulation-based learning can be designed to strengthen skills in democratic decision-making, conflict resolution, team motivation, and ethical leadership. Educators should also address inconsistencies in some students' preferences, such as the coexistence of authoritarian tendencies with supportive behaviors, through reflective discussions and case studies. By nurturing these leadership qualities early, institutions can better prepare competent, empathetic, and adaptive future

head nurses who are equipped to foster positive work environments and contribute to improved healthcare outcomes.

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CONFLICT OF INTEREST

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