

Investigation of Nursing Students' Perceptions of Leadership and Individual Innovativeness

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ARTICLE INFO	ABSTRACT
<p>Article Type: Research Article</p> <p>Keywords: Leadership Self-Perception, Individual Innovativeness, Nursing Management.</p> <p>Corresponding Author(s) ¹ Fadime Ulupınar ² Şeyda Karasu</p> <p>E-mail: ¹ fadime.ulupinar@erzurum.edu.tr ² seyda.kelle@erzurum.edu.tr</p> <p>Article Application Date: 26.10.2024</p> <p>Article Acceptance Date: 07.11.2024</p>	<p><i>This study aimed to explore the relationship between leadership self-perception and individual innovativeness among nursing students while examining the impact of demographic factors on these competencies. A sample of 250 nursing students was selected from a university's Faculty of Health Sciences, and data were collected using the Leadership Self-Perception Scale (LSPS) and the Individual Innovativeness Scale (IIS). The findings revealed a significant positive correlation between leadership self-perception and individual innovativeness, suggesting that students who perceive themselves as stronger leaders are also more inclined towards innovative behaviors. The study also identified differences in leadership perception and innovativeness based on specific demographic factors such as grade level and income status. Senior students exhibited higher levels of leadership and innovativeness, indicating that experience and exposure to diverse challenges may contribute to the development of these competencies. Additionally, students from higher income backgrounds demonstrated a greater openness to change and innovation, highlighting the influence of socioeconomic factors on these attributes. These findings underscore the importance of leadership development and innovativeness in the field of nursing management. Nursing leaders must adopt effective leadership strategies and encourage innovative thinking to enhance the quality of nursing services and drive improvements within healthcare systems. Therefore, future research should focus on identifying the most effective strategies for fostering leadership and innovation in nursing management practices. Addressing these areas will contribute to cultivating stronger leaders and innovative solutions within an evolving healthcare environment.</i></p>

1. INTRODUCTION

The healthcare sector is experiencing significant changes, propelled by technological advancements, evolving disease patterns, and shifting demographics (Hernon et al., 2023; Ulupinar & Erden, 2024). These developments require nurses to adapt their competencies to effectively meet their professional responsibilities (Alshammari & Alenezi, 2023; Labrague et al., 2023). As frontline responders, nurses face a range of challenges that go beyond traditional patient care, encompassing policy-making, ensuring patient safety, and promoting interdisciplinary collaboration (Calder et al., 2022; Ibraheem et al., 2020). In this complex environment, leadership emerges as a critical skill for nurses at all levels (Cowden et al., 2011). Effective leadership is not merely about managing care; it also involves advocating for policy changes and innovating within their practices to enhance health outcomes (Duygulu & Kublay, 2011; Won & Cho, 2013). Consequently, there is a broad agreement on the need to integrate leadership skills into nursing education, equipping practitioners to adeptly handle the challenges of modern healthcare settings.

Self-leadership marks a significant evolution in leadership concepts within healthcare, emphasizing an individual's ability to self-regulate and direct their actions effectively (Al-Dossary, 2022; Wei et al., 2020). This skill is especially crucial in nursing, where practitioners often work in dynamic environments that demand rapid decision-making and adaptability (Raso et al., 2020; Sabbah et al., 2020). Self-leadership enhances nurses' performance through strategies that promote self-awareness, self-motivation, and self-direction (Farid et al., 2021; McKenna & Jeske, 2021). Such intrinsic motivation not only increases job satisfaction but also boosts productivity and reduces turnover rates (Alshammari & Alenezi, 2023; Wei et al., 2020). Additionally, in a profession where innovation is key to advancing patient care and operational efficiencies, individual innovativeness is invaluable (Huai et al., 2024; Ulupinar & Toygar, 2020). It empowers nurses to develop and implement new practices that significantly improve healthcare delivery (Goellner et al., 2022). By fostering a mindset open to change and challenges, nurses can make substantial contributions to both personal and organizational success (McKenna & Jeske, 2021; Won & Cho, 2013). Therefore, incorporating self-leadership and innovativeness in nursing education equips practitioners to not only adapt but also excel and lead in the ever-changing healthcare landscape.

Integrating leadership and individual innovativeness into nursing education is crucial for preparing nurses to navigate the complexities of today's healthcare environment (Marchiori et al., 2022; Ulupinar et al., 2024). These programs need to expand beyond basic clinical skills to include training that develops critical thinking, decision-making, and innovative problem-solving abilities (Abubakre et al., 2022; Atasoy et al., 2023). By incorporating leadership competencies into the curriculum, educational institutions enable nursing students to take initiative, effectively manage complex healthcare situations, and lead within their teams (Aslan & Ulupinar, 2020; Han et al., 2020). Promoting a culture of innovativeness equips future nurses to challenge traditional practices and introduce novel solutions that improve patient care and operational efficiency (Sarıköse & Türkmen, 2020). Despite the necessity, many current educational models remain narrowly focused on immediate clinical competencies and do not fully address these broader skills (Joseph et al., 2024). Closing this gap requires a deliberate effort to revise existing curricula to incorporate comprehensive modules on leadership theories, self-management techniques, and innovative processes. This enriched educational approach is essential for developing nursing professionals who are not only clinically adept but also skilled in leadership and innovation, ready to meet the demands of modern healthcare (Aryuwat et al., 2023; Chen et al., 2020).

This study aims to investigate nursing students' perceptions of leadership and individual innovativeness, specifically exploring the relationship between these critical competencies. The importance of this study lies in its potential to uncover educational deficiencies and opportunities for curriculum enhancement to more effectively prepare nursing students for the challenges of contemporary healthcare settings. The primary goal is to evaluate how these perceptions influence their preparedness for professional roles that require not only clinical proficiency but also adaptive leadership and innovative problem-solving skills. Through this inquiry, the study seeks not only to address an essential academic question but also to significantly impact the education of future healthcare leaders, ensuring they are equipped to thrive in the dynamic healthcare environment.

2. METHOD

2.1. Research Design

This study employed a quantitative, cross-sectional survey design to investigate the perceptions of leadership and individual innovativeness among nursing students. Conducted within the Nursing Department of the Faculty of Health Sciences at a university, the study utilized a structured questionnaire to systematically collect data from a representative sample of 250 nursing students. Data collection instruments included the validated Leadership Self-Perception Scale and the Individual Innovativeness Scale, which are designed to accurately assess the constructs of interest. The quantitative nature of this study allowed for the application of statistical methods to analyze the data, including descriptive statistics to provide an overview of the sample characteristics and inferential statistics, such as correlation analyses, to explore relationships between variables and assess the impact of demographic factors on the study outcomes.

2.2. Participants

The study encompassed a sample of 250 nursing students, who participated voluntarily out of an approximate total of 300 students. Based on the power analysis conducted using G*Power software, the sample size of 250 nursing students was determined to be adequate for achieving a statistical power of approximately 99%. This ensures robustness in detecting the true effect of the relationship between perceptions of leadership and individual innovativeness among the participants. The chosen effect size was 0.3, with an alpha error probability set at 0.01, confirming that the study is well-equipped to reveal significant findings within the predefined parameters of the research design.

2.3. Data Collection Process

The data collection process for this study was conducted with nursing students who provided written or verbal consent. Participants completed a series of assessments, including the "Personal Information Form," "Leadership Self-Perception Scale," and "Individual Innovativeness Scale," in face-to-face sessions that each lasted approximately 10 minutes.

Personal Information Form: This form consisted of 8 questions designed to gather basic demographic and personal background information from the participants.

Leadership Self-Perception Scale: Developed by Özbek and Kızılyallı in 2017, this scale comprises 20 items distributed across four dimensions: Participative Leader (6 items), Confident Leader (4 items), Principled Leader (6 items), and Resolute Leader (4 items). The scale has demonstrated high reliability, with a Cronbach's Alpha of 0.91 for the overall scale and values ranging from 0.70 to 0.82 for the individual dimensions (Özbek & Kızılyallı, 2017).

Individual Innovativeness Scale: Developed by Hurt et al. (1977) and validated in Turkish by Kılıçer and Odabaşı (2010), this scale includes 20 items across four sub-dimensions: Resistance to Change, Opinion Leadership, Openness to Experience, and Risk Taking (Kılıçer & Odabaşı, 2010; Thomas Hurt & Ward Teigen, 1977). Each item is scored on a 5-point Likert scale ranging from "Strongly Agree" to "Strongly Disagree." The scale evaluates innovativeness by summing the scores from positive items, subtracting those from negative items, and adjusting with a fixed coefficient found through empirical research. Innovativeness levels are categorized based on the total score, ranging from "Innovative" for scores above 80, to "Traditionalist" for scores below 46. The scale has shown good internal consistency, with a Cronbach's Alpha of 0.84 for the overall scale in this study.

The scales were administered in their standardized format, and permissions were obtained from the original authors for their use. The reliability and validity of the scales ensure that the data collected will provide robust insights into the leadership and innovativeness perceptions among nursing students.

2.4. Data Analysis

The data collected from this study were comprehensively analyzed using IBM SPSS Statistics software (version 26.0) to ensure accurate interpretation of the findings. The analysis employed descriptive statistics, including means, frequencies, and percentage distributions, to provide a clear overview of the demographic data and the primary variables of interest—leadership perception and individual innovativeness. Initially, the analysis involved calculating means and standard deviations for all continuous variables. This step helped summarize the central tendency and dispersion of

the data, providing foundational insights into the sample characteristics. To explore the relationship between nursing students' perceptions of leadership and their levels of individual innovativeness, Pearson's correlation coefficient was used, providing a measure of the strength and direction of association between these two variables. For comparing scores across different sociodemographic groups, independent samples t-tests were utilized for two groups, and one-way ANOVA was applied for more than two groups. These tests determined significant differences between groups, aiding in the identification of demographic factors that might influence the main variables of interest. The significance level for all statistical tests was set at $p \leq 0.05$, establishing the threshold for determining statistically significant outcomes.

3. RESULTS

LSPS scores showed a significant difference across grade levels ($F=3.963$, $p=0.009$). The mean LSPS scores were 73.71 ± 8.30 for 1st-grade students, 70.38 ± 8.89 for 2nd-grade students, 75.80 ± 10.80 for 3rd-grade students, and 75.43 ± 11.72 for 4th-grade students. Similarly, IIS scores also showed a significant difference across grades ($F=3.156$, $p=0.025$). LSPS scores showed a significant difference based on income status ($F=5.006$, $p=0.007$). The mean LSPS scores were 76.95 ± 7.79 for students with income lower than expenses, 72.63 ± 10.26 for those with income equal to expenses, and 78.05 ± 12.20 for those with income higher than expenses. However, there were no significant differences in IIS scores based on income status ($p=0.632$). High School Type, Gender, Status of Receiving Leadership and Innovation Training: There were no significant differences in LSPS and IIS scores based on high school type, gender, or the status of receiving leadership and innovation training.

There was a significant difference in total LSPS scores among the different levels of individual innovativeness ($F=37.51$, $p<0.0001$). The post-hoc tests revealed significant differences between the following groups: Innovative and Questioner (1-3), Innovative and Skeptic (1-4), Innovative and Traditionalist (1-5), Pioneer and Skeptic (2-4), and Pioneer and Traditionalist (2-5). A significant difference was found among the innovativeness categories in the Participative sub-dimension of LSPS ($F=26.13$, $p<0.0001$). Post-hoc comparisons indicated significant differences between the following groups: Innovative and Questioner (1-3), Innovative and Skeptic (1-4), Innovative and Traditionalist (1-5), Pioneer and Skeptic (2-4), and Pioneer and Traditionalist (2-5). There was a significant difference in the Confident sub-dimension scores of LSPS across innovativeness categories ($F=17.22$, $p<0.0001$). Post-hoc tests showed significant differences between the following groups: Innovative and Questioner (1-3), Innovative and Skeptic (1-4), Innovative and Traditionalist (1-5), Pioneer and Skeptic (2-4), and Pioneer and Traditionalist (2-5). The scores for the Principled sub-dimension of LSPS varied significantly across innovativeness categories ($F=28.12$, $p<0.0001$). Post-hoc tests revealed significant differences between the following groups: Innovative and Skeptic (1-4), and Pioneer and Skeptic (2-4). A significant difference was found in the Resolute sub-dimension of LSPS among the different levels of individual innovativeness ($F=19.88$, $p<0.0001$). Post-hoc comparisons indicated significant differences between the following groups: Innovative and Questioner (1-3), Innovative and Skeptic (1-4), Innovative and Traditionalist (1-5), Pioneer and Skeptic (2-4), and Pioneer and Traditionalist (2-5).

Table 1. Comparison of Participants' Sociodemographic Characteristics and Scores from the Scales (n= 250)

Descriptive Characteristics	n	%	LSPS	Statistic	p	IIS	Statistic	p
			Mean±SD			Mean±SD		
Gender								
Female	180	72	74.58±9.67	t=2.039	p=0.43	62.13±6.94	t=0.336	p=0.737
Male	70	28	71.67±11.24			61.81±6.81		
Class/Grade								
1st Grade	59	23.6	73.71±8.30	F=3.963	p=0.009	63.33±6.64	F=3.156	p=0.025
2nd Grade	67	26.8	70.38±8.89			59.97±5.89		
3rd Grade	62	24.8	75.80±10.80			62.95±9.97		
4th Grade	62	24.8	75.43±11.72			62.16±7.66		

High School								
Anatolian High School	189	75.6	73.76±10.29	F=1.204	p=0.310	62.01±6.82	F=0.721	p=0.579
Vocational High School	10	4	69.50±11.90			60.80±9.29		
Health Vocational High School	10	4	79.10±8.33			62.00±5.88		
Science High School	22	8.8	72.72±9.63			61.00±5.40		
Religious Vocational High School	19	7.6	74.47±9.52			64.31±8.30		
Income Status								
Income Lower than Expenses	43	17.2	76.95±7.79	F=5.006	p=0.007	62.27±7.47	F=0.459	p=0.632
Income Equal to Expenses	189	75.6	72.63±10.26			61.86±6.74		
Income Higher than Expenses	18	7.2	78.05±12.20			63.44±7.30		
Status of Receiving Training Related to Leadership								
Yes	15	6	73.13±12.59	t=-0.203	p=0.841	63.20±8.04	t=0.577	p=0.572
No	235	94	73.80±10.06			61.97±6.83		
Status of Receiving Training Related to Innovation								
Yes	32	12.8	72.28±10.97	t=-0.829	p=0.412	60.75±5.47	t=-1.379	p=0.174
No	218	87.2	73.98±10.09			62.23±7.07		
LSPS: Leadership Self-Perception Scale, IIS: Individual Innovativeness Scale, n: number, %: percentages, *= p value, SD: Standard Deviation,								

Table 2. Analysis of Leadership Self-Perception Scores by Innovativeness Categories Among Participants (n= 250)

		N	Mean	SD	F	p	Post Hoc Tests
LSPS Total	Innovative (1)	4	90.75	1.26	37.51	<0.0001	1-3
	Pioneer (2)	33	83.55	6.92			1-4
	Questioner (3)	161	74.62	8.27			1-5
	Skeptic (4)	50	63.40	8.56			2-4
	Traditionalist (5)	2	69.00	1.41			2-5
LSPS Sub-Dimension 1 (Participative)	Innovative (1)	4	26.75	0.96	26.13	<0.0001	3-4
	Pioneer (2)	33	25.06	2.93			1-3
	Questioner (3)	161	22.41	2.78			1-4
	Skeptic (4)	50	19.08	3.09			1-5
	Traditionalist (5)	2	21.50	0.71			2-4
LSPS Sub-Dimension 2 (Confident)	Innovative (1)	4	17.25	1.50	17.22	<0.0001	2-5
	Pioneer (2)	33	15.85	2.00			1-3
	Questioner (3)	161	13.82	2.36			1-4
	Skeptic (4)	50	12.14	1.82			1-5
	Traditionalist (5)	2	11.50	0.71			2-4

LSPS Sub-Dimension 3 (Principled)	Innovative (1)	4	28.25	2.36	28.12	<0.0001	1-4 2-4
	Pioneer (2)	33	26.30	2.57			
	Questioner (3)	161	24.11	3.12			
	Skeptic (4)	50	19.84	3.38			
	Traditionalist (5)	2	24.00	1.41			
LSPS Sub-Dimension 4 (Resolute)	Innovative (1)	4	18.50	1.73	19.88	<0.0001	1-3 1-4 1-5 2-4 2-5
	Pioneer (2)	33	16.33	1.83			
	Questioner (3)	161	14.29	2.43			
	Skeptic (4)	50	12.34	1.99			
	Traditionalist (5)	2	12.00	1.41			

LSPS: Leadership Self-Perception Scale. The table presents the mean scores, standard deviations, and statistical results for the Leadership Self-Perception Scale (LSPS) across different levels of individual innovativeness. Significant differences between categories were identified using one-way ANOVA and post-hoc comparisons ($p < 0.05$).

The total LSPS score was significantly correlated with all sub-dimensions of LSPS: Sub-Dimension 1 ($r=0.840$, $p=0.000$), Sub-Dimension 2 ($r=0.814$, $p=0.000$), Sub-Dimension 3 ($r=0.869$, $p=0.000$), and Sub-Dimension 4 ($r=0.826$, $p=0.000$). All LSPS sub-dimensions were also significantly correlated with each other, with correlation coefficients ranging from 0.561 to 0.675, all significant at $p=0.000$. The total LSPS score was significantly correlated with the total IIS score ($r=0.625$, $p=0.000$) and all IIS sub-dimensions: Sub-Dimension 1 ($r=0.146$, $p=0.021$), Sub-Dimension 2 ($r=0.729$, $p=0.000$), Sub-Dimension 3 ($r=0.735$, $p=0.000$), and Sub-Dimension 4 ($r=0.756$, $p=0.000$). LSPS Sub-Dimension 1 was significantly correlated with the IIS Total score ($r=0.544$, $p=0.000$) and with IIS Sub-Dimensions 2, 3, and 4 ($r=0.549$, $r=0.628$, and $r=0.516$, respectively; all significant at $p=0.000$). LSPS Sub-Dimension 2 was significantly correlated with the IIS Total score ($r=0.463$, $p=0.000$) and with IIS Sub-Dimensions 2, 3, and 4 ($r=0.688$, $r=0.587$, and $r=0.534$, respectively; all significant at $p=0.000$). LSPS Sub-Dimension 3 was significantly correlated with the IIS Total score ($r=0.549$, $p=0.000$) and with IIS Sub-Dimensions 2, 3, and 4 ($r=0.573$, $r=0.668$, and $r=0.752$, respectively; all significant at $p=0.000$). LSPS Sub-Dimension 4 was significantly correlated with the IIS Total score ($r=0.528$, $p=0.000$) and with IIS Sub-Dimensions 2, 3, and 4 ($r=0.681$, $r=0.563$, and $r=0.721$, respectively; all significant at $p=0.000$). The total IIS score was significantly correlated with all IIS sub-dimensions: Sub-Dimension 1 ($r=0.467$, $p=0.000$), Sub-Dimension 2 ($r=0.675$, $p=0.000$), Sub-Dimension 3 ($r=0.761$, $p=0.000$), and Sub-Dimension 4 ($r=0.445$, $p=0.000$). Significant correlations were also found between all IIS sub-dimensions, with coefficients ranging from 0.116 to 0.761 (all significant at $p<0.066$).

Table 3. Correlation Matrix Between Leadership Self-Perception Scale (LSPS) and Individual Innovativeness Scale (IIS) Total and Sub-Dimension Scores

LSPS Total		LSPS Sub-Dimensions					IIS Sub-Dimensions				
		1	2	3	4	IIS Total	1	2	3	4	
LSPS Total	r	1	,840**	,814	,869	,826	,625	,146	,729	,735	,756
	p		,000	,000	,000	,000	,000	,021	,000	,000	,000
1	r	,840	1	,561	,630	,570	,544	,062	,549	,628	,516
	p	,000		,000	,000	,000	,000	,329	,000	,000	,000
2	r	,814	,561	1	,593	,675	,463	,244	,688	,587	,534
	p	,000	,000		,000	,000	,000	,000	,000	,000	,000
3	r	,869	,630	,593		,606	,549	,098	,573	,668	,752
	p	,000	,000	,000		,000	,000	,121	,000	,000	,000

4	r	,826	,570	,675	,606	1	,528	,121	,681	,563	,721
	p	,000	,000	,000	,000		,000	,055	,000	,000	,000
IIS Total	r	,625	,544	,463	,549	,528	1	-,467	,675	,761	,445
	p	,000	,000	,000	,000	,000		,000	,000	,000	,000
1	r	,146	,062	,244	,098	,121	-,467	1	,223	,117	,116
	p	,021	,329	,000	,121	,055	,000		,000	,064	,066
2	r	,729	,549	,688	,573	,681	,675	,223	1	,715	,516
	p	,000	,000	,000	,000	,000	,000	,000		,000	,000
3	r	,735	,628	,587	,668	,563	,761	,117	,715	1	,526
	p	,000	,000	,000	,000	,000	,000	,064	,000		,000
4	r	,756	,516	,534	,752	,721	,445	,116	,516	,526	1
	p	,000	,000	,000	,000	,000	,000	,066	,000	,000	

LSPS (Leadership Self-Perception Scale): Comprises four sub-dimensions: Participative Leader, Confident Leader, Principled Leader, and Resolute Leader. IIS (Individual Innovativeness Scale): Consists of four sub-dimensions: Resistance to Change, Opinion Leadership, Openness to Experience, and Risk Taking. r: Pearson correlation coefficient. p: Significance value.

4. DISCUSSION

The findings of this study underscore the crucial role of leadership and individual innovativeness in nursing, aligning with existing literature that considers these competencies fundamental to effective nursing practice. Previous research, such as the systematic review by Labrague and Toquero (2023), highlights the positive influence of transformational and authentic leadership styles on nurses' innovative behaviors (Labrague & Toquero, 2023). This observation is consistent with the current study, which identified significant correlations between leadership self-perception and individual innovativeness among nursing students. Furthermore, Bagheri and Akbari (2018) emphasize the value of an entrepreneurial and self-leadership mindset, which is mirrored in our findings, suggesting that leadership perception enhances students' readiness to engage in innovative practices (Bagheri & Akbari, 2018). These competencies are not only pivotal for managing patient care effectively but also for addressing evolving challenges in healthcare, such as integrating new technologies and ensuring patient safety (Seo & Ko, 2024). Therefore, prioritizing these attributes in nursing education can better equip students for the complexities of contemporary healthcare environments.

Our results demonstrate a significant positive correlation between nursing students' self-perception of leadership and their individual innovativeness. Students who perceive themselves as stronger leaders also exhibit higher levels of innovativeness. This finding aligns with the study by Stilgenbauer and Fitzpatrick (2019), which reported that nurse leaders with stronger self-perceived leadership skills were more inclined toward innovative approaches in acute care settings (Stilgenbauer & Fitzpatrick, 2019). Similarly, Seo and Ko (2024) emphasize the role of self-leadership in fostering professionalism and innovative thinking among nursing students. This connection suggests that the development of self-leadership skills may inherently encourage a greater propensity for innovation, which is essential for adapting to the dynamic and often unpredictable healthcare landscape. Moreover, Sarıköse and Türkmen (2020) found that transformational leadership perceptions positively influenced individual innovativeness, reinforcing the idea that cultivating leadership qualities can lead to enhanced innovative behaviors (Sarıköse & Türkmen, 2020). Together, these findings highlight the intertwined nature of leadership and innovativeness, indicating the need for educational programs that concurrently develop both competencies to prepare nursing students for complex professional roles.

The results of our study also revealed significant differences in leadership self-perception and innovativeness based on specific demographic factors such as grade level and income status. These findings are in line with previous research, such as Sarıköse and Türkmen's (2020) study, which indicated that students' perceptions of transformational leadership varied across different occupational and demographic contexts. Similarly, Gündoğdu and Gündüz (2022) found that

demographic variables, including socioeconomic status, influenced individual innovativeness among nurses, with those from higher-income backgrounds demonstrating greater openness to change and innovation (Gündoğdu et al., 2022). In our study, senior students exhibited higher levels of leadership perception and innovativeness compared to their junior counterparts. This is consistent with the findings of Stilgenbauer and Fitzpatrick (2019), who reported that experience and exposure to leadership opportunities enhance leadership perceptions and innovative capabilities. These results suggest that exposure to diverse experiences and challenges throughout nursing education plays a pivotal role in shaping students' leadership and innovative thinking skills. Therefore, these findings underscore the importance of considering demographic factors when designing educational interventions to enhance leadership and innovativeness in nursing programs.

The findings from this study suggest critical implications for nursing education programs, particularly concerning the integration of leadership and innovativeness training into the curriculum. As the healthcare landscape becomes increasingly complex, traditional educational approaches that primarily focus on clinical competencies may no longer be adequate. Studies by Stilgenbauer and Fitzpatrick (2019) and Seo and Ko (2024) highlight the necessity of developing leadership and self-leadership skills alongside innovative thinking to better prepare nursing students for future challenges. Similarly, Sarıköse and Türkmen (2020) emphasize that perceptions of leadership and innovativeness can be shaped through targeted educational interventions, such as experiential learning, mentorship programs, and leadership workshops. Incorporating structured modules on leadership theories, self-regulation techniques, and innovation processes could effectively address existing gaps in nursing education. This approach aligns with the recommendations by Gündoğdu and Gündüz (2022), who suggest that fostering a culture of leadership and innovation empowers students to take proactive roles in patient care and healthcare improvement initiatives. By enriching the curriculum with these competencies, nursing programs can produce graduates who are not only clinically proficient but also equipped with essential leadership and innovative capabilities, allowing them to excel in dynamic healthcare environments.

Despite the acknowledged significance of leadership and innovativeness in nursing, several barriers hinder the development of these competencies among nursing students. One major challenge is the traditional structure of nursing education, which often prioritizes rote learning and clinical skills over leadership and innovation training (Sarıköse & Türkmen, 2020). This conventional model limits opportunities for experiential learning, mentorship, and exposure to real-world leadership scenarios, which are crucial for the development of these skills (Stilgenbauer & Fitzpatrick, 2019). Additionally, Bagheri and Akbari (2018) note that the lack of structured entrepreneurial and self-leadership programs within nursing curricula impedes the cultivation of innovative thinking. The hierarchical nature of clinical environments also presents a barrier, potentially discouraging students from taking initiative or proposing new ideas, thereby fostering a culture resistant to change (Seo & Ko, 2024). Another key barrier identified by Gündoğdu and Gündüz (2022) is the insufficient emphasis on fostering self-awareness and self-regulation strategies, which are essential for both leadership and innovativeness. Overcoming these challenges requires a concerted effort to reform nursing education by adopting a more holistic approach that integrates leadership training and innovation-focused learning experiences.

The practical implications of this study underscore the need for targeted interventions within nursing education to foster leadership and innovativeness among students. Recognizing the positive relationship between leadership perception and individual innovativeness, educators can design programs that focus not only on clinical skills but also on the development of self-leadership and creative problem-solving techniques (Bagheri & Akbari, 2018). For instance, integrating modules that emphasize experiential learning, mentorship opportunities, and leadership simulations could bridge the gap between theoretical knowledge and practical application (Stilgenbauer & Fitzpatrick, 2019). Additionally, the findings highlight the importance of cultivating a supportive learning environment that encourages innovative thinking and reduces resistance to change within clinical settings (Sarıköse & Türkmen, 2020).

In terms of future research, there is a need for longitudinal studies to explore the development of these competencies over time and across different educational stages. Further investigations could also assess the effectiveness of specific interventions, such as leadership workshops or innovation labs, in enhancing students' readiness for leadership roles (Seo & Ko, 2024). Moreover, comparative studies examining different educational models or cultural contexts could provide deeper insights into the most effective approaches for cultivating these skills among nursing students. By addressing these areas, future research can contribute to the ongoing refinement of nursing education programs, ultimately leading to a workforce better prepared to meet the evolving challenges of healthcare.

5. CONCLUSION AND RECOMMENDATIONS

This study highlights the importance of leadership perception and individual innovativeness among nursing students, emphasizing the interconnected nature of these competencies in preparing future healthcare professionals. The findings demonstrate a significant positive correlation between students' self-perceived leadership and their inclination toward innovative behaviors, indicating that fostering leadership skills may concurrently enhance innovative thinking. Additionally, differences in leadership perception and innovativeness based on demographic factors such as grade level and income status suggest that targeted educational interventions may be necessary to address these variations.

Given these findings, it is crucial for nursing education programs to incorporate structured modules focused on leadership development and innovation processes. Experiential learning opportunities such as mentorship, and leadership workshops can play a pivotal role in nurturing these skills. Moreover, understanding the impact of demographic factors on these competencies can help educators tailor interventions that foster inclusive and supportive learning environments for all students.

Recommendations for future research include longitudinal studies exploring how leadership perceptions and innovativeness evolve throughout students' academic and professional careers. Comparative studies across different educational models or cultural contexts would provide deeper insights into effective approaches for nurturing these essential competencies. By addressing these areas, both nursing education and research can contribute to developing a more adaptive and innovative nursing workforce, capable of meeting the evolving demands of modern healthcare.

KAYNAKÇA

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