

The Relationship Between Attitudes Toward Postgraduate Education and Scientific Research Competency Among Graduate Nursing Students: A Cross-sectional Study

Lisansüstü Hemşirelik Öğrencilerinde Lisansüstü Eğitime Yönelik Tutum ile Bilimsel Araştırma Yetkinliği Arasındaki İlişki: Kesitsel Bir Çalışma

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ABSTRACT

Objective: This study aimed to examine the relationship between graduate nursing students' attitudes toward postgraduate education and their scientific research competency.

Methods: This cross-sectional study included 418 students enrolled in graduate nursing programs across Türkiye. A snowball sampling method was used. Inclusion criteria were being enrolled in a master's or doctoral nursing program and voluntarily agreeing to participate, while exclusion criteria included incomplete responses and non-enrollment in a graduate program. Data were collected online between December 2024 and August 2025 using the Student Information Form, the Postgraduate Education Attitude Scale, and the Scientific Research Competency Scale.

Results: The mean score for attitudes toward postgraduate education was 49.07 ± 10.31 , indicating a moderate level, while the mean score for scientific research competency was 216.78 ± 41.47 , indicating a competent level. A low-level significant negative correlation was found between overall attitude toward postgraduate education and scientific research competency ($r = -0.215$, $p < 0.05$). Similarly, negative correlations were observed between valuing postgraduate education ($r = -0.281$, $p < 0.05$) and attaching importance to education ($r = -0.235$, $p < 0.05$) with scientific research competency. In contrast, resistance to postgraduate education showed a low positive correlation ($r = 0.128$, $p < 0.05$). A moderate negative correlation was found between the "attitude and behaviours" subdimension of scientific research competency and the "valuing postgraduate education" subdimension of the attitude scale ($r = -0.340$, $p < 0.05$).

Conclusion: The findings indicate that the relationships between scientific research competency and attitudes toward postgraduate education among graduate nursing students are predominantly negative. As research competency increases, positive attitudes toward postgraduate education appear to decrease in some dimensions. These results highlight the need for comprehensive, structured, and sustainable educational strategies that jointly promote both scientific research competency and academic attitudes in graduate nursing education.

Keywords: Nursing students, postgraduate education, attitudes, research, competencies

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ÖZ

Amaç: Bu araştırma, lisansüstü hemşirelik öğrencilerinin lisansüstü eğitime yönelik tutumları ile bilimsel araştırma yetkinlikleri arasındaki ilişkiyi incelemek amacıyla yapılmıştır.

Yöntem: Kesitsel tasarımdaki bu araştırma Türkiye’de hemşirelik lisansüstü programlarında öğrenim gören 418 öğrenci ile yürütülmüştür. Örneklem yöntemi olarak kartopu örnekleme kullanılmıştır. Dahil edilme kriteri lisansüstü hemşirelik programına kayıtlı olma ve gönüllü katılım sağlama, dışlanma kriteri ise eksik veri ve lisansüstü programa kayıtlı olmama olarak belirlenmiştir. Veriler Aralık 2024-Ağustos 2025 tarihleri arasında çevrimiçi olarak “Öğrenci Bilgi Formu”, “Lisansüstü Eğitime Yönelik Tutum Ölçeği” ve “Bilimsel Araştırma Yetkinlik Ölçeği” ile toplanmıştır.

Bulgular: Katılımcıların lisansüstü eğitime yönelik tutum puan ortalaması $49,07 \pm 10,31$ olup orta düzeyde, bilimsel araştırma yetkinliği puan ortalaması ise $216,78 \pm 41,47$ olup yetkin düzeyde bulunmuştur. Lisansüstü eğitime yönelik genel tutum ile bilimsel araştırma yetkinliği arasında negatif ve düşük düzeyde anlamlı ilişki saptanmıştır ($r = -0,215$, $p < 0,05$). Ayrıca lisansüstü eğitimi değerli bulma ($r = -0,281$, $p < 0,05$) ve eğitime önem verme ($r = -0,235$) alt boyutları ile de negatif ilişkiler belirlenmiştir. Lisansüstü eğitime yönelik direnç ile bilimsel araştırma yetkinliği arasında pozitif ve düşük düzeyde ilişki bulunmuştur ($r = 0,128$, $p < 0,05$). Bilimsel araştırma yetkinliği “tutum ve davranışlar” alt boyutu ile “lisansüstü eğitimi değerli bulma” alt boyutu arasında orta düzeyde negatif ilişki saptanmıştır ($r = -0,340$, $p < 0,05$).

Sonuç: Bulgular, lisansüstü hemşirelik öğrencilerinde bilimsel araştırma yetkinliği ile lisansüstü eğitime yönelik tutumlar arasındaki ilişkilerin çoğunlukla negatif yönde olduğunu göstermektedir. Araştırma yetkinliği arttıkça lisansüstü eğitime yönelik olumlu tutumların bazı boyutlarda azaldığı görülmektedir. Bu durum, lisansüstü hemşirelik eğitiminde araştırma yetkinliği ve akademik tutumun birlikte geliştirilmesini hedefleyen bütüncül, yapılandırılmış ve sürdürülebilir eğitim stratejilere ihtiyaç olduğunu ortaya koymaktadır.

Anahtar kelimeler: Hemşirelik öğrencileri, lisansüstü eğitim, tutum, araştırma, yetkinlik

INTRODUCTION

Graduate education in nursing not only provides students with the opportunity to enhance their professional knowledge and skills but also strengthens their research competence and promotes lifelong learning by encouraging participation in scientific studies⁽¹⁾. This process enables students to develop their abilities in analytical thinking, problem-solving, and the practical implementation of scientific research processes⁽²⁾. In this context, examining graduate nursing students’ attitudes toward education and their scientific research competence is of great importance for supporting academic development and enhancing the effectiveness of educational programs.

The level and quality of attitude toward education among graduate nursing students are considered key determinants of professional development and the advancement of nursing practice. At the graduate level, this attitude may influence students’ scientific research competence, depending on their interest in research, modes of thinking, and academic goals. In the study by Öztürk et al.⁽³⁾ it was reported that the quality of education positively affected nurses’ attitudes toward continuing graduate education. Therefore, evaluating graduate nursing students’ attitudes toward education serves as an important indicator for improving educational quality and understanding their research and academic performance. Attitudes toward postgraduate education may shape students’ engagement with academic activities, willingness to participate in research processes, and motivation to develop scientific skills. Likewise, students with higher levels of scientific research competency may perceive postgraduate education differently due to increased exposure to academic expectations, research workload, and scholarly responsibilities. Therefore, these two constructs may interact reciprocally within the context of graduate nursing education.

The nursing profession requires a body of research-based knowledge to respond effectively to the constantly changing and evolving healthcare needs and to provide scientifically grounded

care⁽⁴⁾. Organizations such as the International Council of Nurses and the American Association of Colleges of Nursing have emphasized that the nursing profession can achieve effectiveness in research and practice through the use of scientific methods⁽⁵⁾. Studies have underlined that nursing students generally hold positive views toward scientific research^(4,6). Such perspectives reinforce their ability to make evidence-based decisions in nursing practice and to develop innovative solutions in clinical settings. Scientific research enables nurses to address clinical problems and improve the quality of care^(7,8). Participation of nurses and nursing students in research contributes to more informed and effective clinical decision-making, leading to improved outcomes⁽⁸⁾.

The significance of scientific research in nursing education has been increasingly recognized both nationally and internationally. Participation in research processes and the acquisition of scientific competence provide nursing students with valuable opportunities for professional growth while contributing to the improvement of healthcare quality. To the best of our knowledge, limited evidence exists regarding the relationship between attitudes toward postgraduate education and scientific research competency among graduate nursing students. The findings of this study are expected to reveal the current status of these variables among graduate nursing students and to guide the development of innovative approaches and the improvement of educational programs in nursing education. Given the limited evidence in this area, the present study adopted an exploratory approach to examine the potential relationships between attitudes toward postgraduate education and scientific research competency among graduate nursing students.

Research Questions

1. What are the attitudes of graduate nursing students toward postgraduate education?
2. What are the levels of scientific research competence among graduate nursing students?

3. Is there a relationship between attitudes toward postgraduate education and scientific research competency among graduate nursing students?

MATERIAL AND METHOD

Design

The research was conducted using a cross-sectional design.

Population and Sample

The population of the study consisted of master's and doctoral students enrolled in graduate nursing programs in Türkiye. The sample size was determined using the G*Power 3.1.9.7 software. Based on a correlation test with an effect size of 0.15, a type I error level of 0.05, and a statistical power of 85%, the minimum sample size was calculated as 390 participants. To reach this number, the snowball sampling method, one of the purposive sampling techniques, was used. Questionnaires were distributed online via Google Forms, and participation was voluntary. Initially, graduate students known to the researchers were invited to participate, and then the link was shared with other students through social media platforms. Participants were encouraged to forward the survey to their peers to expand the sample. Data collection was completed between December 2024 and August 2025 with 418 graduate nursing students. Since the researchers specialized in the field of fundamental nursing, most participants were students from this discipline.

Inclusion criteria for the study were; being enrolled in a master's or doctoral nursing program in Türkiye, being currently a graduate student at the time of data collection, and agreeing to participate voluntarily in the study. Exclusion criteria were; not being enrolled in a graduate nursing program, incomplete or missing questionnaire responses, and refusal to participate or withdrawal during the data collection process.

Data Collection Tools

The data of the study were collected using the Student Information Form, the Postgraduate Education Attitude Scale (PEAS) and the Scientific Research Competency Scale (SRCS).

Student Information Form

This form, prepared by the researchers, included questions regarding the sociodemographic and educational characteristics of graduate students, such as age, gender, marital status, professional experience, department, graduate education period, current position, and the region of their university⁽⁹⁾.

PEAS

Developed by Çetin et al.⁽¹⁰⁾ this five-point Likert-type scale consists of 21 items designed to examine graduate students' attitudes toward education in relation to various factors. The scale includes three subdimensions: valuing postgraduate education, attaching importance to postgraduate education, and resistance

to postgraduate education. The highest score that can be obtained in the "valuing postgraduate education" sub-dimension is 45 and the lowest score is 9; in the "attaching importance to postgraduate education" sub-dimension, scores range from 6 to 30; and in the "resistance to postgraduate education" sub-dimension, scores also range from 6 to 30. Negative items are scored on a 1-5 Likert scale, while positively worded items are reverse-coded in accordance with the original scale structure. The scale's Cronbach's alpha reliability coefficient was reported as 0.94⁽¹⁰⁾. In the present study, the Cronbach's alpha coefficients were found to be 0.84 for the PEAS.

SRCS

Developed by Duru and Örsal⁽¹¹⁾, this scale consists of 57 items rated on a five-point Likert scale. It aims to measure graduate students' level of competence in conducting scientific research. The scale has four subdimensions: technical skills, attitude and behaviours, estimation capacity, and foreign language skill. The total score ranges from 57 to 285, with a cut-off score of 190. Students scoring 190 or below are considered "not competent", whereas those scoring above 190 are considered "competent" in terms of scientific research competence. The scale's Cronbach's alpha reliability coefficient was reported as 0.98⁽¹¹⁾. In the present study, the Cronbach's alpha coefficients were found to be 0.98 for the SRCS.

Statistical Analysis

Data were analyzed using SPSS 26.0 software. The assumption of normality was assessed using Skewness and Kurtosis coefficients within the range of ± 1.5 . Descriptive statistics were presented as frequency, percentage, mean, and standard deviation. For normally distributed variables, independent samples t-test and one-way analysis of variance were used. When homogeneity of variance was met, the Tukey test was applied for post-hoc analysis; when it was not met, the Games-Howell test was used. For non-normally distributed data, the Mann-Whitney U and Kruskal-Wallis tests were conducted. The relationship between attitude toward postgraduate education and scientific research competency was analyzed using Spearman's correlation analysis. The level of statistical significance was set at $p < 0.05$ for all analysis.

Ethical Approval

Permission to use the scales was obtained via email from the original authors. After obtaining institutional permission, ethical approval was granted by the İnönü University Health Sciences Scientific Research Ethics Committee (approval no: 2024/6611, date: 05.11.2024). Before accessing the questionnaire items, participants were informed about the purpose of the study and provided voluntary consent. Data were collected only from those who agreed to participate. The study was conducted in accordance with the principles of the Declaration of Helsinki.

RESULTS

The mean age of the participants was 28.79 ± 5.05 years, of whom 83% were female and 67.7% were single. A total of 35.2% had more than five years of professional experience. Among the departments, the highest participation rate was in fundamentals of nursing (25.1%). Of the participants, 56.4% were master's students, 33% were in the coursework period, 59.3% were employed as nurses, and 34.4% were studying at universities located in the Marmara Region.

No significant difference was found between the PEAS scores and the demographic variables ($p > 0.05$). However, SRCS scores differed significantly according to department, education period, employment status, and the geographical region of the university ($p < 0.05$). Students in public health nursing had higher SRCS scores than those in fundamentals of nursing, and scores tended to increase as the education period advanced. Moreover, students studying in the Marmara Region had significantly higher scientific research competency scores than those in Central Anatolia, Eastern Anatolia, and Southeastern Anatolia ($p < 0.05$) (Table 1).

The mean score of the PEAS among participants was 49.07 ± 10.31 . Based on the equal interval classification (21-105 range), this score indicates a moderate level of attitude toward postgraduate education. The mean score of the SRCS was 216.78 ± 41.47 . Since this value is above the cut-off point of 190, it suggests that participants were competent in scientific research. The Cronbach's alpha coefficients are 0.847 for the PEAS and 0.985 for the SRCS (Table 2).

Significant correlations were observed between the SRCS and the PEAS and its subdimensions ($p < 0.05$). A negative and low-level significant correlation was found between SRCS scores and the overall attitude toward postgraduate education ($r = -0.215$), valuing postgraduate education ($r = -0.281$), and attaching importance to postgraduate education ($r = -0.235$), whereas a positive and low-level significant correlation was found with resistance to postgraduate education ($r = 0.128$). Furthermore, a moderate negative correlation was observed between the attitude and behaviours subdimension of the SRCS and the valuing postgraduate education subdimension of the PEAS ($r = -0.340$) ($p < 0.05$) (Table 3).

Table 1. Comparison of PEAS and SRCS Scores by Participants' Characteristics (n=418)

Variables				PEAS	SRCS
Age	Mean $\pm$ SD: 28.79 ± 5.05	Min-max: 22-56		Mean rank	Mean $\pm$ SD
		n	%		
Gender	Female	347	83.0	207.04	33.06 ± 13.92
	Male	71	17.0	221.51	34.76 ± 13.53
	Test/p			-0.922/0.357 [#]	-937/0.349 ⁺
Marital status	Married	135	32.3	224.42	34.54 ± 14.63
	Single	283	67.7	202.38	32.79 ± 13.46
	Test/p			-1.749/0.080 [#]	1.207/0.228 ⁺
Professional experience	None	49	11.7	209.47	205.18 ± 42.23
	Less than 1 year	74	17.7	202.04	220.64 ± 40.09
	1-3 years	92	22.0	195.32	214.70 ± 41.46
	3-5 years	56	13.4	220.53	215.92 ± 40.58
	More than 5 years	147	35.2	217.94	220.32 ± 41.97
	Test/p			2.750/0.601 ^{##}	1.457/0.214 ⁺⁺
Department/major	Fundamentals of nursing ¹	105	25.1	208.20	207.23 ± 41.58
	Medical nursing	56	13.4	197.16	223.25 ± 48.27
	Surgical nursing	45	10.8	217.28	208.60 ± 46.96
	Nursing management	25	6.0	219.84	223.24 ± 23.35
	Obstetrics and gynecology nursing	35	8.4	209.10	217.74 ± 43.44
	Pediatric nursing	35	8.4	208.16	209.25 ± 42.91
	Psychiatric nursing	44	10.5	232.34	217.45 ± 32.30
	Public health nursing ²	55	13.2	180.54	233.94 ± 36.87
	Other	18	4.3	257.75	223.94 ± 34.01

Table 1. Continued

	Test/p			8.623/0.375 ^{##}	2.563/0.010 ⁺⁺ 1<2*
Postgraduate education period	Master's coursework period ¹	138	33.0	210.16	198.70±41.25
	Master's thesis period ²	98	23.4	217.19	213.82±37.37
	Doctoral coursework period ³	72	17.2	198.51	225.77±37.01
	Doctoral thesis period ⁴	110	26.3	209.02	236.20±38.06
	Test/p			1.004/0.800 ^{##}	20.638/<0.001 ⁺⁺ 1<2,3,4;2<4
Position	Nurse ¹	248	59.3	216.37	208.41±40.97
	Research Assistant ²	97	23.2	207.70	229.76±37.95
	Lecturer ³	53	12.7	180.53	236.43±35.94
	Other ⁴	20	4.8	209.83	205.55±46.08
	Test/p			3.893/0.273 ^{##}	11.850/<0.001 ⁺⁺ 1<2,3
Region of the university	Central Anatolia Region ¹	77	18.4	215.76	204.74±45.29
	Eastern Anatolia Region ²	62	14.8	234.40	207.12±36.70
	Black Sea Region ³	29	6.9	215.17	231.17±35.18
	Marmara Region ⁴	144	34.4	204.95	229.54±37.28
	Southeastern Anatolia Region ⁵	53	12.7	185.08	204.43±44.86
	Mediterranean Region ⁶	15	3.6	142.13	205.33±53.33
	Aegean Region ⁷	38	9.1	229.75	219.34±34.66
	Test/p			11.064/0.086 ^{##}	5.879/<0.001 ⁺⁺ 1<3,4;2<4;5<4*

#: Mann-Whitney U test, #: Kruskal-Wallis test, *: Independent-samples t-test, ++: One-way analysis of variance, for PEAS, post-hoc analysis were conducted using the Mann-Whitney U test, for SRCS, post-hoc analysis were conducted using Tukey and Games-Howell tests (*); p<0.05 was considered statistically significant, ¹⁻⁷: Group codes used in post-hoc comparisons, PEAS: Postgraduate Education Attitude Scale, SRCS: Scientific Research Competency Scale, SD: Standard deviation

Table 2. Mean Scores of the PEAS and the SRCS and Their Subdimensions (n=418)

	Mean	SD	(Min-max)	Cronbach's alpha
PEAS	49.07	10.31	21-93	0.84
Valuing postgraduate education	12.94	6.11	9-45	
Attaching importance to postgraduate education	10.26	4.73	6-30	
Resistance to postgraduate education	25.85	6.42	6-30	
SRCS	216.78	41.47	57-285	0.98
Technical skills	100.96	21.38	27-135	
Attitude and behaviours	78.54	14.11	19-95	
Estimation capacity	27.32	7.71	8-40	
Foreign language skills	9.95	3.46	3-15	

PEAS: Postgraduate Education Attitude Scale, SRCS: Scientific Research Competency Scale, SD: Standard deviation

Table 3. Correlation Analysis Between the PEAS and the SRCS and Their Subdimensions (n=418)

Variables	Correlation coefficient	PEAS	Valuing postgraduate education	Attaching importance to postgraduate education	Resistance to postgraduate education
SRCS	r	-0.215 ^{**}	-0.281 ^{**}	-0.235 ^{**}	0.128 ^{**}
Technical skills	r	-0.190 ^{**}	-0.250 ^{**}	-0.202 ^{**}	0.104 [*]
Attitude and behaviours	r	-0.183 ^{**}	-0.340 ^{**}	-0.241 ^{**}	0.235 ^{**}
Estimation capacity	r	-0.241 ^{**}	-0.194 ^{**}	-0.236 ^{**}	0.007
Foreign language skills	r	-0.166 ^{**}	-0.110 [*]	-0.156 ^{**}	-0.023

*: p<0.05, **: p<0.01, r: Spearman correlation coefficient, PEAS: Postgraduate Education Attitude Scale, SRCS: Scientific Research Competency Scale

DISCUSSION

In this study, it was determined that postgraduate nursing students had moderate scores on the PEAS. Consistent with previous literature, postgraduate nursing students in this study demonstrated a moderate level of attitude toward postgraduate education^(3,12). Although some studies have reported more positive attitudes or willingness toward postgraduate education⁽¹³⁾, findings across undergraduate and graduate samples remain inconsistent⁽¹⁴⁻¹⁶⁾. It is considered that students' attitudes are influenced by individual and environmental factors. The literature emphasizes that factors such as academic motivation, length of professional experience, stress level, financial conditions, quality of education, and work-life balance play important roles in transforming interest in postgraduate education into a positive and strong attitude^(3,17,18). In this context, initiatives aimed at improving postgraduate students' attitudes toward education can enhance their academic motivation, support professional development, and contribute to the formation of a highly qualified academic nursing workforce.

In our study, participants were found to be competent in terms of scientific research, as measured by the SRCS. Although limited evidence exists on scientific research competency specifically among postgraduate nursing students, one study examined postgraduate nursing students' research utilization competence and reported that students' research knowledge and skills were at a good level⁽¹⁹⁾. Studies at the undergraduate level have reported mixed results: Grande et al.⁽²⁰⁾ found that students' research competencies were moderate, whereas Akdeniz Kudubes and Saray Kılıç⁽⁹⁾ reported high perceived competence in research execution and positive attitudes toward research. Additionally, Tolentino et al.⁽²¹⁾ reported a positive correlation between students' scientific research competency scores and their motivation. These findings indicate that students possess varying levels of knowledge and skills in conducting scientific research. Our study aimed to evaluate scientific research competence holistically, encompassing students' involvement in all stages of the research process. To address this gap in the literature, it is recommended that scientific research courses at both undergraduate and postgraduate levels in nursing be project-based and practice-oriented, that students be involved in research projects early in their education, and that training in research ethics and methodology be strengthened.

In the present study, SRCS scores increased as students progressed through their education. Corrêa et al.⁽²²⁾, in a qualitative study, also reported that nurses enrolled in master's programs in specific specialties gained increasing competence in research production, knowledge transfer, and integration into clinical practice over the course of their education. Similarly, studies across various disciplines indicate that individuals enrolled in doctoral programs demonstrate higher levels of scientific research competence compared to master's students^(23,24). These findings and the literature suggest that as students progress through their education, their technical knowledge and skills develop, and accumulated research experience strengthens their competence.

Doctoral students' intensive engagement in research projects, academic publication, and advanced data analysis activities enhances their technical skills, analytical thinking, and scientific attitudes.

In our study, SRCS scores varied according to participants' roles. Faculty members scored higher than research assistants, and research assistants scored higher than nurses. The literature reports similar findings: Duru and Örsal⁽¹¹⁾ found that academic staff demonstrated significantly higher research competence than undergraduate students. Kaya et al.⁽²⁵⁾ reported that the need for competence development decreased as academic rank increased, while Ioannidis et al.⁽²⁶⁾ showed that higher academic rank and level of work were associated with increased research output and citations. Similarly, Wu et al.⁽²⁷⁾ reported that nurses generally have lower research capacity, whereas those with higher educational levels, technical titles, and administrative positions exhibit higher research competence. However, considering the cross-sectional nature of the present study, these differences should be interpreted cautiously, as unmeasured factors such as institutional support, motivation, and research experience may also influence competency levels^(28,29). Therefore, scientific research competence should be evaluated not only by role title but also in conjunction with responsibilities, academic duties, professional experience, and education level.

In our study, SRCS scores also varied according to the geographical region of the university. Students studying in the Marmara Region scored higher than those in Central Anatolia, Eastern Anatolia, and Southeastern Anatolia. The Marmara Region is the most developed region in Türkiye and has the highest number of universities, which may facilitate access to academic resources, research opportunities, and support services⁽³⁰⁾. In contrast, universities in Central, Eastern, and Southeastern Anatolia are fewer and more limited in resources, which may restrict students' opportunities to develop scientific research competence. The TÜBİTAK "Competency Analysis of Universities by Field" report highlights that universities' research performance differs by geographical region, related to resource utilization, research infrastructure, and academic collaborations⁽³¹⁾. These findings align with our results, indicating that the geographical location of universities is an important factor in students' development of scientific research competence.

Significant relationships were found between scientific research competence and attitudes toward postgraduate education and its subdimensions. SRCS scores were negatively and weakly correlated with overall PEAS scores, valuing postgraduate education, and attaching importance to postgraduate education, whereas a positive and weak correlation was observed with the resistance to postgraduate education subdimension. Additionally, a moderate negative correlation was observed between the attitude and behaviours subdimension of the SRCS and the valuing postgraduate education subdimension of the PEAS. The literature reports varying results: Zhang et al.⁽³²⁾ found that postgraduate nursing students with high motivation, strong

academic performance, and active engagement in education had higher research abilities. Kakupa and Xue ⁽³³⁾ also reported that participants with high self-efficacy had positive overall attitudes toward research. Overall, existing evidence suggests a complex and potentially bidirectional relationship between attitudes toward postgraduate education and scientific research competency, which may vary depending on individual, educational, and contextual factors. In this context, the negative correlations observed in our study may be explained by students becoming more aware of the challenges, workload, and stress associated with postgraduate education as their scientific research competence increases. However, given the cross-sectional design, these interpretations should be considered exploratory rather than causal. This finding indicates that in postgraduate programs, maintaining positive attitudes toward education is as important as developing scientific research competence.

Study Limitations

The limitations of this study can be outlined as follows. First, the data were collected cross-sectionally at a single time point, reflecting participants' perceptions that may have been influenced by the specific period. Therefore, causal relationships between variables cannot be inferred. Second, since the data collection tools were self-reported, there may be social desirability bias and evaluation bias. Third, the data were collected online; therefore, participants' responses could not be independently verified and may have been influenced by uncontrolled environmental factors during completion. Fourth, the use of the snowball sampling method may have introduced selection bias, as participants were recruited through peer networks, which may limit the representativeness of the sample. Fifth, the sample may not fully represent all geographical regions equally, as there was a higher concentration of participants from certain regions, which may limit the generalizability of the findings. Additionally, contextual factors such as institution, advisor characteristics, and university-specific conditions were not examined in detail due to the study design. It is recommended that future studies employ larger samples and longitudinal designs to address these limitations.

CONCLUSION

This study demonstrated that the associations between postgraduate nursing students' attitudes toward postgraduate education and scientific research competency were predominantly negative. Higher levels of scientific research competency were associated with lower scores in overall attitude toward postgraduate education, as well as in valuing and attaching importance to postgraduate education. In contrast, resistance to postgraduate education showed a positive association with scientific research competency. These findings indicate that increased research competency does not necessarily translate into more positive attitudes toward postgraduate education among nursing students.

The results revealed that attitudes toward postgraduate education did not differ significantly according to the examined

sociodemographic and academic characteristics. However, scientific research competency showed significant differences according to department, educational stage, professional position, and geographical region of the university.

In line with these findings, postgraduate nursing education programs should focus on strategies addressing the observed negative attitudinal tendencies associated with higher research competency. Strengthening structured academic guidance and mentoring systems may help students balance the development of scientific research skills with more positive educational attitudes.

Ethics

Ethics Committee Approval: After obtaining institutional permission, ethical approval was granted by the İnönü University Health Sciences Scientific Research Ethics Committee (approval no: 2024/6611, date: 05.11.2024).

Informed Consent: Before accessing the questionnaire items, participants were informed about the purpose of the study and provided voluntary consent. Data were collected only from those who agreed to participate.

Footnotes

This study was previously presented as an oral presentation at the 2nd International Congress on the Future of Nursing Education, organized by Başkent University on September 17-19, 2025.

Author Contributions

Surgical and Medical Practises: SK; Concept: SK, ZG, ZC; Design: SK, ZC; Data Collection or Processing: SK, ZG, ZC, ST, Şİ; Analysis or Interpretation: ZG, ZC; Literature Search: SK, ZG, ZC; Writing: SK, ST, Şİ.

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