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Professional Competence and Attitudes Toward Clinical Practice Among Nursing Students: The Mediating Role of Evidence-Based Practice Perspectives

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ABSTRACT

Purpose: Professional competence and evidence-based practice are important components of nursing education and may influence how students approach clinical practice. This study aimed to examine the mediating role of nursing students' perspectives toward evidence-based practice in the relationship between professional competence and attitudes toward clinical practice.

Methods: This cross-sectional correlational study was conducted with 239 nursing students enrolled in public and private universities in İstanbul, Türkiye, between December 2023 and March 2024, and was reported in accordance with the STROBE guideline. Data were collected using the Nursing Students' Competency Scale, the Nursing Students' Attitude Scale Towards Clinical Practices, and the Students' Knowledge, Attitude, and Behavior on Evidence-Based Nursing Scale. Regression analyses and mediation analysis using PROCESS Macro were performed in SPSS 24.0.

Results: Professional competence significantly predicted attitudes toward clinical practice (β=0.254, $p<0.001$) and perspectives toward evidence-based practice (β=0.300, $p<0.001$). Perspectives toward evidence-based practice significantly mediated the relationship between professional competence and attitudes toward clinical practice (effect=0.1876, BootSE=0.0383, 95% bootstrap CI [0.1087, 0.2592]).

Conclusion: Nursing students' professional competence was associated with both attitudes toward clinical practice and perspectives toward evidence-based practice. Evidence-based practice perspectives also mediated the relationship between competence and attitudes toward clinical practice. Educational strategies that strengthen evidence-based practice orientation may help foster more positive attitudes toward clinical learning.

Keywords: clinical practice; evidence-based practice; nursing students; professional competence

ÖZET

Amaç: Profesyonel yeterlik ve kanıta dayalı uygulama, hemşirelik eğitiminin önemli bileşenleridir ve öğrencilerin klinik uygulamaya yönelik tutumlarını etkileyebilir. Bu çalışma, hemşirelik öğrencilerinde profesyonel yeterlik ile klinik uygulamaya yönelik tutumlar arasındaki ilişkide kanıta dayalı uygulama perspektiflerinin aracı rolünü incelemeyi amaçladı.

Yöntem: Bu kesitsel ve korelasyonel çalışma, Aralık 2023-Mart 2024 tarihleri arasında İstanbul'daki devlet ve vakıf üniversitelerinde öğrenim gören 239 hemşirelik öğrencisi ile yürütülmüş olup STROBE rehberine uygun olarak raporlanmıştır. Veriler, Hemşirelik Öğrencileri Yeterlik Ölçeği, Hemşirelik Öğrencilerinin Klinik Uygulamalara Yönelik Tutum Ölçeği ve Hemşirelik Öğrencilerinin Kanıta Dayalı Hemşireliğe Yönelik Bilgi, Tutum ve Davranış Ölçeği kullanılarak toplanmıştır. Verilerin analizinde regresyon analizleri ve PROCESS Macro ile aracılık analizi kullanılmıştır.

Bulgular: Profesyonel yeterlik, klinik uygulamaya yönelik tutumları (β=0.254, $p<0.001$) ve kanıta dayalı uygulama perspektiflerini (β=0.300, $p<0.001$) anlamlı düzeyde yordadı. Kanıta dayalı uygulama perspektiflerinin, profesyonel yeterlik ile klinik uygulamaya yönelik tutumlar arasındaki ilişkide anlamlı bir aracı rol oynadığı belirlendi (etki=0.1876, BootSE=0.0383, %95 GA [0.1087, 0.2592]).

Sonuç: Hemşirelik öğrencilerinin profesyonel yeterliği, hem klinik uygulamaya yönelik tutumları hem de kanıta dayalı uygulama perspektifleri ile ilişkili bulundu. Ayrıca, kanıta dayalı uygulama perspektifleri, profesyonel yeterlik ile klinik uygulamaya yönelik tutumlar arasındaki ilişkide aracı rol oynadı. Kanıta dayalı uygulama yönelimini güçlendiren eğitim stratejileri, klinik öğrenmeye yönelik daha olumlu tutumların gelişmesini destekleyebilir.

Anahtar Kelimeler: klinik uygulama; kanıta dayalı uygulama; hemşirelik öğrencileri; profesyonel yeterlik

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Nursing education aims to prepare students to provide safe, effective, and high-quality care by developing their professional knowledge, clinical skills, decision-making abilities, and professional values (1,2,3,4). In this context, professional competence is considered a core outcome of undergraduate nursing education because it reflects the ability to apply knowledge, attitudes, values, and clinical reasoning appropriately in practice (5,6). Strengthening professional competence during undergraduate education is therefore essential for preparing future nurses for clinical practice and supporting quality of care (7).

Clinical practice is a central component of nursing education, where students are expected to translate theoretical learning into practice, gain professional experience, and develop their professional identity (8,9,10). Students' attitudes toward clinical practice may influence their adaptation to the clinical environment as well as their personal and professional development. Positive clinical experiences can support the development of knowledge, self-confidence, communication skills, and professional responsibility, whereas negative attitudes may hinder engagement with clinical learning (9,11).

Evidence-based practice (EBP) is another important component of nursing education and clinical decision-making. EBP involves integrating the best available evidence with clinical expertise and patient preferences to guide care (12–14). For nursing students, developing knowledge, attitudes, and behaviours related to EBP is important because they are expected to apply evidence-informed care in clinical settings after graduation (15,16). However, previous studies have shown that although students often report positive attitudes toward EBP, they may experience difficulties in applying it in practice, particularly when educational preparation and institutional support are insufficient (17,18). It has also been suggested that EBP-related knowledge, skills, and attitudes are interrelated, and that weakness in one domain may affect the others (19).

Although previous studies have examined nursing students' professional competence, attitudes toward clinical practice, and EBP-related knowledge or attitudes, the way these variables interact remains unclear. In particular, whether students' perspectives toward EBP help explain the relationship between professional competence and attitudes toward clinical practice has not been adequately examined. Understanding this relationship is important because professional competence may not be fully reflected in positive clinical attitudes unless students also develop an evidence-informed perspective toward care and decision-making. Therefore, this study aimed to examine the mediating role of nursing students' perspectives toward EBP in the relationship between their professional competence and attitudes toward clinical practice.

Material and Method

Research Design

This cross-sectional correlational study aimed to examine the mediating role of nursing students' perspectives toward EBP in the relationship between professional competence and attitudes toward clinical practice. The study examined the relationships among nursing students' professional competence, attitudes toward clinical practice, and perspectives toward EBP. A mediation model was tested using Hayes' PROCESS Macro (Model 4) to determine whether perspectives toward EBP mediated the association between professional competence and attitudes toward clinical practice (20,21). The study was reported in accordance with the STROBE guideline for cross-sectional research (22).

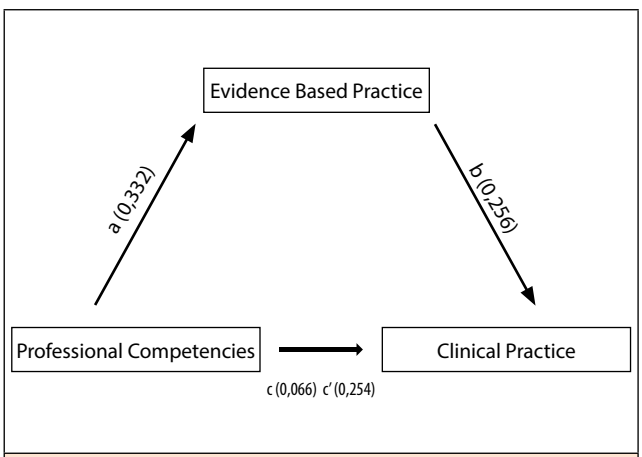


Figure 1. Structural Equation Modelling of the Study

Before hypothesis testing, the validity and reliability of the study scales were evaluated using exploratory factor analysis, confirmatory factor analysis, and internal consistency analysis. Because the study was based on self-report questionnaires, response bias may have occurred. In addition, the cross-sectional design limited causal interpretation of the findings.

Conceptual Framework and Research Hypotheses

In line with Hayes' PROCESS Model 4, professional competence was defined as the independent variable (X), attitudes toward clinical practice as the dependent variable (Y), and perspectives toward EBP as the mediating variable (M).

The study was guided by the following hypotheses:

H1: Nursing students' professional competence significantly predicts their attitudes toward clinical practice.

H2: Nursing students' professional competence significantly predicts their perspectives toward EBP.

H3: Nursing students' perspectives toward EBP mediate the relationship between professional competence and attitudes toward clinical practice.

Setting and Time of the Study

This study was conducted with fourth-year nursing students enrolled in Faculties of Health Sciences at public and private universities in İstanbul, Türkiye. Data were collected between December 2023 and March 2024.

Population and Sample

The target population consisted of approximately 1,580 fourth-year nursing students enrolled in 47 nursing departments in İstanbul, according to the Higher Education Council's 2022 data. The minimum required sample size was calculated as 310 students at a 95% confidence level and a 5% margin of error. Participants were recruited through voluntary participation following five recruitment announcements, and 239 nursing students took part in the study, corresponding to a response rate of 77%.

Inclusion and Exclusion Criteria

The inclusion criteria were being a fourth-year nursing student, having completed or currently been completing at least one full day (8 hours) of clinical practice per week, and agreeing to participate voluntarily. Students with no prior clinical practice experience were excluded.

Instruments

Data were collected using the Descriptive Information Form, the Self-Assessment of Professional Competence Scale (SAPCS), the Nursing Students' Attitudes Towards Clinical Practices Scale (NSATCP), and the Knowledge, Attitude, and Behaviors of Nursing Students Towards Evidence-Based Nursing Scale (KABEBN).

The Descriptive Information Form consisted of nine questions developed by the researchers based on the relevant literature (8,10,11,16).

The SAPCS was developed by Hsu and Hsieh in 2013 and adapted into Turkish by Ülker and Korkmaz in 2022 (6). It is a 43-item, 7-point Likert-type scale, with higher scores indicating higher perceived professional competence. In the present study, Cronbach's alpha was 0.798.

The NSATCP was developed by Akdeniz Uysal and Yeşil Bayülgen in 2022 (23). It is a 26-item, 5-point Likert-type scale, with higher scores indicating more positive attitudes toward clinical practice. In the present study, Cronbach's alpha was 0.911.

The KABEBN was developed by Johnston et al. in 2003 and adapted into Turkish by Muslu et al. in 2015 (24). It consists of 26 items assessing students' knowledge, attitudes, and behaviors regarding evidence-based nursing. In the present study, Cronbach's alpha was 0.857.

Data Collection

Data were collected using an online questionnaire. The questionnaire included an informed consent section on the first page, and only students who provided voluntary consent were able to proceed. The online form was distributed to undergraduate nursing students enrolled at various universities in İstanbul, as well as to academics who were in contact with these students. During the data collection period, five recruitment announcements were made at approximately 15-day intervals to encourage participation. A total of 239 students completed the study.

Data Analysis

Data were analysed using SPSS version 24.0. Descriptive statistics were used to summarise participant characteristics. Regression analyses were performed

to examine the predictive effects of professional competence on attitudes toward clinical practice and perspectives toward evidence-based practice. Mediation analysis was conducted using Hayes' PROCESS Macro (Model 4) with 5,000 bootstrap samples to test whether perspectives toward evidence-based practice mediated the relationship between professional competence and attitudes toward clinical practice (20,21). Exploratory factor analysis, confirmatory factor analysis, and internal consistency analysis were also performed to evaluate the validity and reliability of the measurement instruments. Statistical significance was set at $p<0.05$. No missing data were identified because all questionnaire items were mandatory.

Ethical Considerations

Ethical approval was obtained from the İstanbul Kent University Ethics Committee before data collection commenced (Approval No: E-10420511-050-28572/2023/8). Participation was voluntary, and all participants were informed about the purpose and procedures of the study prior to enrollment. Electronic informed consent was obtained from all participants, and confidentiality and anonymity were ensured throughout the research process.

Results

Characteristics of the Participants

The mean age of the 239 participants was 22.45 years (SD=1.74). Most participants were female (67.8%) and enrolled in a private university (84.5%). The majority rated their satisfaction with clinical practice as good (66.1%), and 69.0% reported that the practical experience they had gained was good. More than half of the students (65.3%) had not previously received training in evidence-based practice, and 82.4% had never participated in an evidence-based practice-related certification programme (Table 1).

Table 1. Characteristics of the Participants

		Mean±SD	Min-Max (Median)
Age		**22.45±1.74**	**20-38 (23)**
		n	**%**
Gender	Male	77	32.2
	Female	162	67.8
University	Public	37	15.5
	Private	202	84.5
Satisfaction with practice	Very Good	26	10.9
	Good	158	66.1
	Bad	3	1.3
	Moderate	52	21.8
Experience gained in practice	Very Good	30	12.6
	Good	165	69.0
	Bad	6	2.5
	Moderate	38	15.9
Previous training in evidence-based nursing	Yes	83	34.7
	No	156	65.3
Participation in a certification program on evidence-based nursing	Yes	42	17.6
	No	197	82.4

SD: standard deviation.

Validity and Reliability of the Scales

The validity and reliability of the measurement instruments were evaluated using exploratory factor analysis, confirmatory factor analysis, and internal consistency analysis. Kaiser-Meyer-Olkin values indicated excellent sampling adequacy for all scales, and Bartlett's tests of sphericity were significant for all instruments ($p<0.001$). Exploratory factor analysis showed that the scales explained 64.978%, 80.042%, and 80.204% of the total variance, respectively. Confirmatory factor analysis further supported the structural validity of the instruments. Cronbach's alpha coefficients indicated good internal consistency for the SAPCS (0.798), NSATCP (0.911), and KABEBN (0.857) (Table 2 and Figure 2).

Table 2: Validity and Reliability of the Scales

		Professional Competency Scale of Nursing Students	Attitude Scale Towards Clinical Practices for Nursing Students	Students' Knowledge, Attitude, and Behavior Scale on Evidence-Based Nursing
KMO Coefficent and Bartlett's Test Results of Scales	**KMO Measure of Sampling Adequacy.**	0.909	0.926	0.938
	Chi-Square	15735.508	7759.314	7394.158
	Df	903	325	325
	Sig.	<0.000	<0.000	<0.000
Exploratory Factor Analysis	**Total Explained Variance**	64.978	80.042	80.204
Confirmatory Factor Analysis	**χ^2/df**	3.61	3.38	3.33
	RMSEA	0.095	0.098	0.093
	SRMR	0.057	0.095	0.073
	NFI	0.95	0.94	0.95
	CFI	0.95	0.96	0.96
	NNFI	0.92	0.96	0.96
Internal Consistency Analysis	**Cronbach's Alpha**	0.798	0.911	0.857

KMO; Keiser-Mayer-Olkin, df; Degrees of Freedom, Sig.; Significance, χ2 /df ; The ratio of the chi-square statistic to the respective degrees of freedom, RMSEA: Root mean square error of approximation, SRMR; Standardized root mean square residual, NFI; The normed fit index, CFI; Comparative fit indices, NNFI; The (Non) normed fit index.

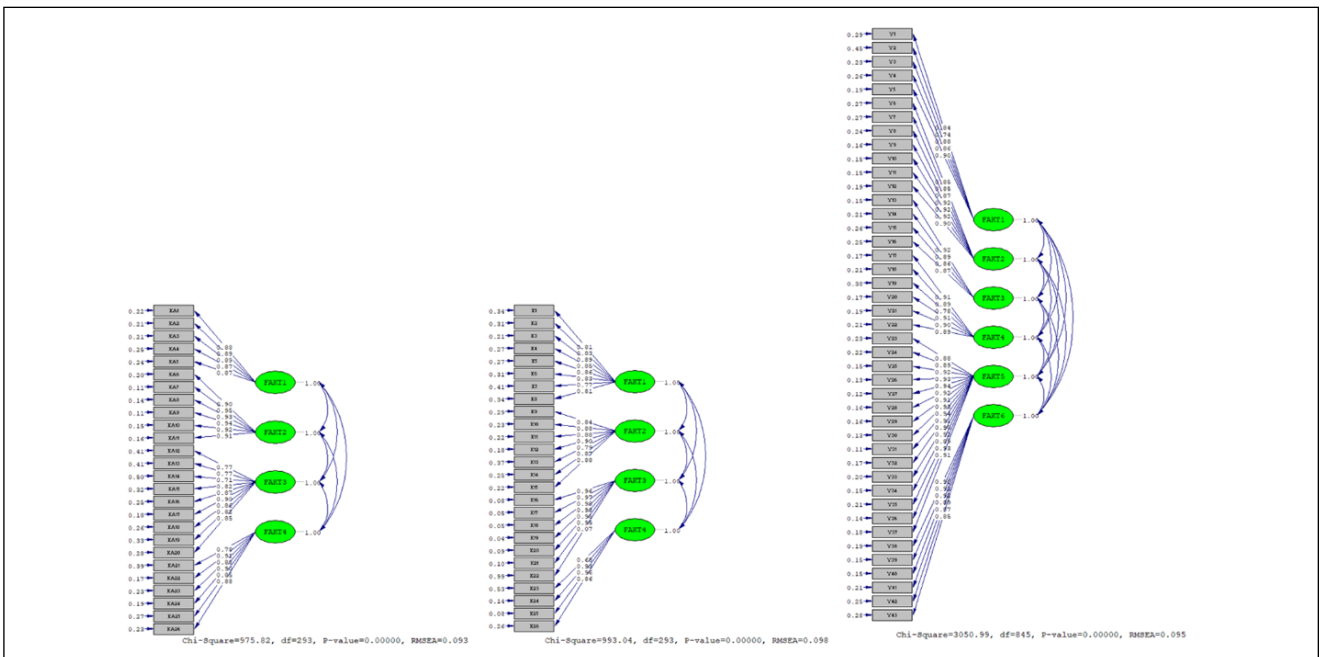


Figure 2. Confirmatory Factor Analysis of the Scales

Relationships Between the Study Variables

Skewness and kurtosis values indicated that the data met the assumption of normality for the subsequent regression analyses. Professional competence significantly predicted students' attitudes toward clinical practice (β=0.254, p<0.001; adjusted R^2=0.180), indicating that higher levels of competence were associated with more positive attitudes toward clinical practice (Table 3). Professional competence also significantly predicted students' perspectives toward evidence-based practice (β=0.300, p<0.001; adjusted R^2=0.283) (Table 4).

Mediation analysis using PROCESS Macro (Model 4, 5,000 bootstrap samples) showed that evidence-based practice perspectives significantly mediated the relationship between professional competence and attitudes toward clinical practice. The total effect of competence on attitudes toward clinical practice was 0.2543, and the direct effect decreased to 0.0667 when evidence-based practice perspectives were included in the model. The indirect effect was significant (effect=0.1876, BootSE=0.0383, 95% bootstrap CI [0.1087, 0.2592]) (Table 5).

Table 3. The Impact of Nursing Students' Professional Competencies on Students' Attitudes Towards Clinical Practices

Coefficient	B	Standard Error	t	p
Fixed Value	2.356	0.192	12.252	0.001*
Professional Competencies of Nursing Students	0.254	0.035	7.295	0.001*

B; regression coefficients
*y; Attitudes of Nursing Students Towards Clinical Practices, *p<0.01*

Table 4. The Impact of Nursing Students' Professional Competencies on Students' Knowledge, Attitudes, and Behaviors Regarding Evidence-Based Nursing

Coefficient	B	Standard Error	t	p
Fixed Value	2.502	0.130	19.216	0.001*
Professional Competencies of Nursing Students	0.300	0.031	9.748	0.001*

B; regression coefficients
*y; Knowledge, Attitudes and Behaviors of Students Regarding Evidence-Based Nursing, *p<0.01*

Table 5. The Mediating Effect of Nursing Students' Knowledge, Attitudes, and Behaviors Regarding Evidence-Based Nursing

	Effect	SE / BootSE	LLCI	ULCI
Total Effect	0.254	0.034	0.185	0.322
Direct Effect	0.066	0.044	-0.218	0.155
Indirect Effect	0.187	0.038	0.108	0.259

LLCI; Lower-Level Confidence Interval, ULCI; Upper-Level Confidence Interval

Discussion

In this study, nursing students' professional competence significantly and positively predicted their attitudes toward clinical practice. This finding suggests that students who perceive themselves as more professionally competent tend to approach clinical practice more positively, with greater confidence and willingness. Clinical practice is a core component of nursing education in which knowledge, skills, and professional attitudes develop together, and students' level of competence may shape both their adaptation to the clinical environment and their overall approach to clinical learning (5,8–10). Therefore, the positive relationship identified between professional competence and attitudes toward clinical practice is consistent with existing expectations. Previous research has similarly shown that students who perceive themselves as more competent, and who are at more advanced stages of training, tend to report higher levels of clinical competence and more positive attitudes toward clinical practice (9). In addition, students' competencies and their attitudes toward the nursing profession have been shown to influence their attitudes toward clinical practice. Similarly, recent evidence has demonstrated that higher levels of competence and related psychological resources

are associated with stronger clinical performance and professional readiness among nursing students, further highlighting the importance of competence development during undergraduate education (25). Furthermore, studies examining nursing students' clinical competence have suggested that competence is closely related to students' ability to manage clinical demands, adapt to practice environments, and translate theoretical learning into professional performance (4,5,8).

Professional competence, however, involves not only possessing knowledge and skills but also applying them effectively in authentic clinical settings. Given the complex and often unpredictable nature of clinical environments, students' sense of readiness for their professional role may shape how they perceive and engage with clinical practice (8). Clinical learning environments may also present challenges related to stress, unfamiliar situations, and adaptation to complex healthcare settings, all of which can influence students' learning experiences and attitudes toward clinical practice (26). Attitudes toward clinical practice are also influenced by factors beyond individual competence, including interactions within the clinical environment, anxiety, and the quality of mentorship support. From this perspective, students with higher professional competence may be better able to cope with clinical demands and evaluate their clinical experiences more positively (27). Moreover, because supportive and effective mentorship helps students transfer theory into practice, develop confidence, and strengthen clinical competence, the relationship between professional competence and attitudes toward clinical practice should also be interpreted in relation to the quality of the clinical learning environment (28). Recent evidence further suggests that well-prepared and competent mentors contribute to more supportive clinical learning experiences and facilitate students' professional development, reinforcing the importance of mentorship quality within clinical education (29).

At the same time, a positive perspective toward EBP appears to develop not only through theoretical instruction but also through the integration of theory and practice. For students to view EBP as a natural part of clinical decision-making, they need both educational support and opportunities to encounter its relevance in actual practice settings. From this perspective, students with higher professional competence may be more likely to recognise the clinical value of EBP and to be more receptive to this approach (30). Recent evidence suggests that students often value EBP and recognise its importance for professional practice; however, translating positive attitudes into actual evidence-informed decision-making remains challenging, reflecting a persistent theory–practice gap in nursing education (17,18). Although students often report positive attitudes toward EBP, they may still experience difficulties translating these attitudes into practice, particularly when educational preparation and institutional support are insufficient (17,18). Furthermore, EBP learning appears to be most effective when educational experiences progressively integrate theoretical knowledge, critical appraisal skills, and opportunities for practical application across the nursing curriculum (15,16). Previous studies have also demonstrated that EBP-related knowledge, skills, and attitudes are closely interconnected and tend to develop together through structured educational interventions and curriculum integration (15,16,19). These findings suggest that, alongside the development of professional competence, nursing education should incorporate learning experiences that strengthen students' EBP awareness, knowledge, and skills.

Another important finding of this study was that nursing students' perspectives toward EBP mediated the relationship between professional competence and attitudes toward clinical practice. This suggests that professional competence may influence attitudes toward clinical practice not only directly but also indirectly through students' orientation toward EBP. In other words, students who feel more professionally competent may be more open to research-based and evidence-informed care, and this orientation may in turn contribute to more positive attitudes toward clinical practice (19). This interpretation is consistent with previous literature showing that the knowledge, skills, and attitudinal dimensions of EBP are interrelated and that development in these domains shapes how students approach evidence-based nursing (15,19,30). The present findings also align with recent evidence suggesting that competence development in EBP involves interconnected cognitive, practical, and attitudinal processes, and that strengthening these dimensions may facilitate the translation of professional competence into more effective engagement with clinical learning and practice environments (16).

The mediating role of EBP further suggests that the link between theory and practice may be strengthened through students' evidence-informed perspectives. EBP is an important professional framework that not only enables students to access research knowledge but also helps them interpret clinical decisions on a scientific basis

and evaluate care practices more critically (16). Recent evidence has further highlighted that EBP competence is a multidimensional construct requiring the integration of knowledge, critical appraisal abilities, practical skills, and positive attitudes to support evidence-informed decision-making in clinical settings (3,19). In addition, academic–practice partnerships and strong collaboration within clinical learning environments have been identified as important facilitators of students' EBP awareness, knowledge, and skills, whereas limited time and constraints within practice settings may hinder the teaching and implementation of EBP (18). Similarly, although students may generally hold positive views toward EBP, educational and institutional barriers may limit their ability to translate these perspectives into clinical practice (17). Taken together, these findings suggest that the influence of EBP perspectives on attitudes toward clinical practice should be considered not only in relation to students' individual competence but also in connection with the quality of the learning environment. Therefore, integrating educational experiences that strengthen students' EBP knowledge, skills, and positive perspectives may help foster more positive attitudes toward clinical practice (16,19).

Methodologically, the strong validity and reliability findings for the study measures, together with acceptable CFA fit indices, support the robustness of the measurement model used in this study. In addition, the mediation model was tested using Hayes' PROCESS framework, which is widely recognised as a rigorous approach for examining indirect effects and mediation pathways in behavioural research (22,23).

Overall, the findings suggest that strengthening nursing students' professional competence alone may not be sufficient; fostering positive perspectives toward evidence-based nursing also appears to be important for supporting attitudes toward clinical practice. In this respect, interactive and student-centred pedagogical approaches such as EBP-integrated simulations, case-based learning, academic–practice partnerships, and mentored research activities may help improve both competence development and students' engagement with evidence-based care (15,16,18). In addition, positive and meaningful clinical experiences have been associated with the development of professional identity, motivation, and effective interpersonal and collaborative practice skills among nursing students (9,28). Therefore, redesigning nursing curricula to strengthen the integration of EBP with clinical learning may contribute to better preparation of the future nursing workforce and support higher-quality patient care (17,19). This perspective is consistent with recent evidence suggesting that EBP competence develops progressively through the integration of theoretical learning, practical application, and collaborative educational experiences across nursing curricula (15,16). The present findings further suggest that professional competence, EBP perspectives, and attitudes toward clinical practice should not be viewed as isolated educational outcomes. Rather, these domains appear to develop in an interconnected manner, highlighting the importance of curriculum designs that support their progressive and integrated development throughout nursing education.

Limitations

Several limitations should be acknowledged. First, the cross-sectional design does not allow causal interpretation of the relationships among professional competence, perspectives toward EBP, and attitudes toward clinical practice. Second, the use of self-report measures may have introduced response bias, including social desirability bias. Third, the final sample size did not reach the calculated minimum, which may have affected representativeness. Fourth, the study was conducted with fourth-year nursing students from a single metropolitan area, which may limit the generalisability of the findings to other academic years or regions. Finally, potential confounding factors related to educational and clinical contexts were not examined. Future research should use longitudinal or mixed-method designs with broader and more diverse samples to better understand how competence and EBP perspectives develop over time and how educational interventions influence these relationships.

Conclusion

This study examined the mediating role of nursing students' perspectives toward evidence-based practice (EBP) in the relationship between professional competence and attitudes toward clinical practice. The findings demonstrated that professional competence was positively associated with both attitudes toward clinical practice and EBP perspectives. In addition, EBP perspectives significantly mediated the relationship between professional competence and attitudes toward clinical practice, supporting the proposed hypotheses.

These findings suggest that professional competence alone may not be sufficient to foster positive attitudes toward clinical practice. Students' orientation toward evidence-based nursing appears to be an important mechanism through which professional competence is translated into more positive perceptions of clinical learning and practice. Therefore, strengthening EBP-related knowledge, skills, and attitudes during undergraduate nursing education may contribute to both competence development and clinical engagement.

From an educational perspective, nursing curricula should provide opportunities for students to integrate evidence-based decision-making into clinical learning experiences. Given the interrelated nature of professional competence, evidence-based practice perspectives, and attitudes toward clinical practice, curriculum developers should consider not only the inclusion of these competencies but also their sequencing, timing, and integration throughout the educational process. Ensuring that educational content addressing these competencies is introduced at appropriate stages and reinforced progressively may facilitate their development and enhance students' readiness for clinical practice. In addition, educational strategies that promote research literacy, critical thinking, and the application of evidence in practice may further support the development of these competencies.

Future research should employ longitudinal, multicenter, or intervention-based designs to further examine the causal relationships among professional competence, EBP perspectives, and attitudes toward clinical practice. Such studies may provide a deeper understanding of how evidence-based practice competencies develop throughout nursing education and influence professional readiness for practice.

Declarations

Funding

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Conflicts of interest/Competing interests

The authors declare no conflicts of interest.

Ethics approval

Ethical approval for this study was obtained from the İstanbul Kent University Ethics Committee (Approval No: E-10420511-050-28572/2023/8). Participants were informed about the purpose and scope of the study, and data confidentiality was ensured. Electronic informed consent was obtained from all participants prior to data collection.

Availability of data and material

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

Authors' contributions

SS: Conceptualization, data curation, funding acquisition, investigation, methodology, project administration, resources, writing-original draft.

EA: Conceptualization, data curation, funding acquisition, investigation, methodology, project administration, resources, writing-original draft.

GA: Conceptualization, data curation, funding acquisition, investigation, methodology, project administration, resources, supervision, writing-original draft, writing-review and editing.

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