



# Critical thinking tendency and Professional behavior of nurses

## Hemşirelerin eleştirel düşünme eğilimleri ve profesyonellik davranışları

<sup>1</sup>Gizem Açıkgöz, <sup>2</sup>Ayşe Nefise Bahçecik

<sup>1</sup>İstanbul Kent Üniversitesi, gzmackigoz@gmail.com, 0000-0002-6133-9038

<sup>2</sup>İstanbul Sabahattin Zaim Üniversitesi, Sağlık Bilimleri Fakültesi, ayse.bahcecik@izu.edu.tr, 0000-0002-5290-1017

### ABSTRACT

**Introduction and Objective:** Critical thinking is widely emphasized as a cornerstone of effective decision-making and the delivery of quality care. Professional behaviours, on the other hand, are highlighted as essential for strengthening nurses' professional identity and enhancing the quality of healthcare services. One of the essential conditions for providing qualified nursing care is to think critically in care management and evaluate the process from a professional perspective. This study aims to determine nurses' critical thinking tendencies and professional behaviors, as well as the relationship between these two aspects. **Material and Methods:** The descriptive study was conducted with 678 nurses. Introductory Information Form, California Critical Thinking Disposition Scale, and Behavioral Inventory for Professionalism in Nursing were used to collect data. Descriptive statistical analyses, including independent group t-tests, Pearson correlation analysis, and one-way ANOVA tests, were used to evaluate the data. **Results and Discussion:** Nurses' critical thinking tendencies ( $211.05 \pm 23.32$ ) and professionalism behaviors ( $6.41 \pm 4.08$ ) were found to be low. A significant relationship was found between the nurses' critical thinking tendency and their professionalism behaviors, as well as the total score and its sub-dimensions. The study reveals that critical thinking and professionalism behaviors have an essential place in the nursing profession and are related to professional development characteristics.

### ÖZ

**Giriş ve Amaç:** Hemşirelik mesleğinde eleştirel düşünme, etkili karar verme ve kaliteli bakım sunumunun temel unsurlarından biri olarak vurgulanmaktadır. Profesyonellik davranışları ise hemşirelerin mesleki kimliğini güçlendiren ve sağlık hizmetlerinin niteliğini artıran önemli bir kavram olarak öne çıkmaktadır. Nitelikli hemşirelik bakımı sağlamanın önemli koşullarından biri bakım yönetiminde eleştirel düşünmek ve süreci profesyonel bir bakış açısıyla değerlendirmektir. Bu çalışma hemşirelerin eleştirel düşünme eğilimlerini ve profesyonellik davranışlarını ve aralarındaki ilişkiyi belirlemeyi amaçlamaktadır. **Gereç ve Yöntem:** Tanımlayıcı nitelikteki bu çalışma 678 hemşire ile yürütülmüştür. Verilerin toplanmasında Tanıtıcı Bilgi Formu, Kaliforniya Eleştirel Düşünme Eğilimi Ölçeği ve Hemşirelikte Profesyonellik Davranış Envanteri kullanılmıştır. Verilerin değerlendirilmesinde tanımlayıcı istatistiksel analizler, bağımsız grup T testi, Pearson korelasyon analizi ve One-Way Anova testi kullanılmıştır. **Bulgular ve Sonuç:** Hemşirelerin eleştirel düşünme eğilimleri ( $211,05 \pm 23,32$ ) ve profesyonellik davranışları ( $6,41 \pm 4,08$ ) olarak düşük bulunmuştur. Hemşirelerin eleştirel düşünme eğilimleri ile profesyonellik davranışları, toplam puan ve alt boyutlar arasında anlamlı ilişki bulunmuştur. Çalışma, eleştirel düşünme ve profesyonellik davranışlarının hemşirelik mesleğinde önemli bir yere sahip olduğunu ve mesleki gelişim özellikleriyle ilişkili olduğunu ortaya koymaktadır.

### Key Words:

Critical Thinking, Nursing, Professionalism, Professional Behavior

### Anahtar Kelimeler:

Eleştirel Düşünme, Hemşirelik, Profesyonellik, Profesyonel Davranış

### Corresponding Author/Sorumlu Yazar:

İstanbul Kent Üniversitesi, gzmackigoz@gmail.com, 0000-0002-6133-9038

Received Date/Gönderme Tarihi: 21.08.2025

Accepted Date/Kabul Tarihi: 26.02.2026

Published Online/Yayımlanma Tarihi: 31.03.2026

**Reference | Atif :** Açıkgöz, G. & Bahçecik, A.N. (2026). Hemşirelerin eleştirel düşünme eğilimleri ve profesyonellik davranışları. *Sağlık Akademisyenleri Dergisi*, 13(1), 85-96.

## **INTRODUCTION**

Critical thinking is the ability to judge objectively, based on logical reasons, the research, beliefs, and actions that confirm that information but oppose it while evaluating evidence or suggestion, and to question and monitor the way of thinking while doing this (Facione, 1990; Facione et al., 1992; Hendekçi, 2024; Ludin, 2018; Paul, 2014; Perez et al., 2018; Tavakoli et al., 2024; Zarzycka & Gesek, 2022). In a study conducted in 1990 prepared by the American Psychological Association (APA) with the participation of 46 theorists from the United States and Canada, critical thinking is defined as “The individual’s ability to make analytical and evaluative conscious judgments in order to decide what to do and what to believe, and to express these judgments”. Although the primary aims of nursing remain the same, the scope and quality of nursing practice have been significantly influenced by the evolving needs of society. As societies, social dynamics, healthcare needs, and health policies evolve, nursing has become a modern profession. (Appling & Giulano, 2017; Chao et al., 2013; Westerdahl et al., 2025). Therefore, nurses must utilize and enhance their critical thinking abilities through the education they receive to address the challenges of the current century (Hendekçi, 2024; Mahmoud & Mohamed, 2017; Zarzycka & Gesek, 2022). Critical thinking, which involves objectively evaluating information, organizing data from various sources, determining needs, selecting appropriate approaches, applying interventions, and evaluating outcomes, is described as a deliberate and reflective thinking process (Gloude-mans et al., 2013; Ludin, 2018).

As a core cognitive skill, critical thinking forms the basis of effective decision-making in all health professions. In healthcare settings where complex, unpredictable, and rapidly changing clinical situations are common professionals are expected to interpret evidence accurately and make sound judgments. Within this context, the ability to think critically becomes particularly essential for nurses, who frequently encounter situations requiring rapid assessment, problem-solving, and evidence-based decision-making. Nurses must think critically to learn throughout their lives, develop professionally, work effectively with others, achieve targeted results, contribute to societal change, and enhance intercultural understanding. To effectively address patients’ problems, nurses rely on their independent roles and utilize their intellectual skills efficiently (Appling & Giulano, 2017; Tavakoli et al., 2024; Westerdahl et al., 2025). As critical thinking enables nurses to make informed, ethical, and evidence-based decisions, it also supports the development of behaviors that align with the expectations of modern professional practice.

This relationship highlights the importance of professionalism, a concept that has become increasingly central in contemporary societies. Professionalism is one of the most important issues in contemporary societies today. Professionalism encompasses receiving a high-level intellectual education to perform tasks, achieving perfection through the acquisition of knowledge and experience, and having the ability to translate experiences into action and engage in free activities aligned with individual principles. Professionalism is crucial in establishing professional standards (Khachian et al., 2016; Tavakoli et al., 2024). Nursing, which is making significant strides towards professionalization, is a profession that arises from human needs and provides health services to individuals, families, and society. Professional nursing constitutes the expanding role of the nursing profession within the rapidly changing healthcare system. Today, in addition to providing healthcare, nurses are responsible for performing various functions that professionals typically undertake, such as conducting research, developing theories, and participating in professional organizations and political activities (Miller et al., 1993; Tanaka et al., 2014; Tavakoli et al., 2024). Technological and political developments in recent years have also impacted the healthcare system, leading to changes in the roles and functions of nurses, one of the key healthcare providers. In

particular, the emphasis on preventive services rather than curative services leads to a shift from focusing on the individual who is sick to the healthy individual and their family. This situation affects the duties and responsibilities of the nurse. It particularly highlights the roles of educator, consultant, decision-maker, manager, coordinator, and caregiver. Thus, the nursing profession is undergoing a transition from the traditional nursing model to one of professionalism (Adıgüzel et al., 2011; Khachian et al., 2016). Nurses are obligated to carry out the professional decision-making process effectively and efficiently in order to provide high-quality health services. The most important determinant of an effective decision-making process is having sufficient professional knowledge and the ability to interpret it effectively. (Hendekçi, 2024; Tavakoli et al., 2024). Continuous development of the information learned should be ensured, and the practical results of this information should be constantly evaluated. It is of great importance for nurses to develop their critical thinking and professionalism in making the profession a discipline that relies on science, research, and applies scientific facts, and carries out its practices based on evidence (Gloude-mans et al., 2013; Ludin, 2018). As a result, in the 21st century, nurses need to be professional individuals who take responsibility by using critical thinking and decision-making skills (Appling & Giulano, 2017).

From a theoretical perspective, critical thinking is regarded as a foundational cognitive skill that shapes nurses' professional behaviors. Professional competence models propose that analytical reasoning, reflective judgment, and evidence-based decision-making guide essential professional behaviors such as autonomy, ethical practice, engagement in continuing education, and participation in professional organizations. Therefore, critical thinking can be conceptualized as a predictor of professionalism, as it enables nurses to act independently, make responsible clinical decisions, and uphold professional values. Clarifying this theoretical linkage is essential for understanding how cognitive dispositions translate into observable professional behaviors, which forms the basis of the present study (Falcó-Pegueroles et al., 2021; Westerdahl et al., 2025; Zarzycka & Gesek, 2022).

The research aims to determine nurses' critical thinking tendencies and professional behaviors, and to examine the relationship between these variables and descriptive characteristics. Additionally, another aim of the research is to investigate the relationship between nurses' critical thinking tendencies and professional behaviors. Critical thinking and professionalism are two essential competencies that directly influence the quality of nursing care, decision-making, patient safety, and the professional development of nurses. However, the relationship between these two concepts has not been sufficiently examined in the existing literature, particularly among clinical nursing populations. Therefore, this study aims to contribute to the field by addressing this gap and providing empirical evidence that may guide future research and professional development initiatives.

## **METHODS**

### **Study Type**

This is a descriptive cross-sectional quantitative study.

### **Research Sample**

The research was conducted at 10 Public Training and Research Hospitals operating in Istanbul between February 10, 2014, and May 10, 2014. To determine the sample for the study,

the sample formula with a known population was used, and the sample size was found to be 339 with a 95% confidence interval. It was desired to reach a larger number of people, and the sample size was determined as 678, which is twice the existing number. The number of nurses to be recruited from each hospital was determined using the stratified sampling method. Nurses in the units were selected randomly.

## **Instruments**

Introductory Information Form, California Critical Thinking Disposition Inventory, and Behavioral Inventory on Professionalism in Nursing were used to collect data.

**Introductory Information Form:** The introductory information form consists of 11 questions, including age, gender, marital status, educational background, years of experience in the profession, unit of work, position held, working style, preference for the profession, status of following scientific publications, and participation in scientific activities.

**California Critical Thinking Disposition Inventory (CCTDI):** The scale was developed by Facione et al. (1998), and its validity and reliability in Turkish were determined by Kökdemir (2003). The scale is a 5-point Likert-type scale consisting of 51 questions and six sub-dimensions: truth-seeking, open-mindedness, analyticity, systematicity, self-confidence, and curiosity. Cronbach's Alpha value was found to be 0.88 in Kökdemir's study (Kökdemir, 2003). In the present study, the Cronbach's Alpha value for the overall scale was 0.91, indicating high internal consistency.

**The Behavioral Inventory for Professionalism in Nursing (BIPN):** It was developed by Barbara Miller et al. in 1989, and its Turkish validity and reliability were determined by Karadağ et al. in 2004. The scale consists of nine sub-dimensions and 46 questions: educational preparation, publication, research, participation in professional organizations, social service, competence and continuing education, nursing codes, theory, and autonomy. The first seven questions of the scale assess demographic characteristics of nurses, while the remaining questions evaluate nurses' professionalism-related behaviors. Cronbach's Alpha value was found to be 0.78–0.87 in Karadağ et al.'s study (Karadağ et al., 2004). In this study, the Cronbach's Alpha value for the overall scale was 0.85, demonstrating acceptable internal reliability.

## **Data Collection**

To collect data, the researcher conducted face-to-face meetings with the participants. After the participants were informed about the purpose of the research and the data collection tools, they were asked to sign the informed consent form and complete the questionnaire if they agreed to participate in the research.

## **DATA ANALYSIS**

Percentage, mean, standard deviation, independent group t-test, one-way ANOVA, Scheffe test, and Pearson correlation test were used in the analysis of the data. The analyses were conducted using IBM SPSS Statistics for Windows, Version 22.0. The normality of the data distribution was assessed using the Kolmogorov–Smirnov test due to the large sample size. The results were evaluated using a 95% confidence interval, and the significance level was set at  $p < 0.05$ .

## **Ethical Consideration**

Ethics committee approval for the research was obtained from the non-invasive research ethics committee of a state university's health sciences institute. Institutional permissions were obtained from a public hospital association and its general secretariat. Approval to participate in the research was obtained in writing from the participating nurses. Additionally, permissions for the use of the scales were obtained via email from the academicians who adapted the scales into Turkish.

## **RESULTS**

### **Descriptive Characteristics**

It was determined that 33.8% of the nurses were between the ages of 26 and 30, 93.7% were female, 64.5% were married, 46.2% had a bachelor's degree, 38.8% had been working in the profession for less than 5 years, 56% worked in internal medicine units, and 76.7% worked as ward nurses. It was also determined that 60.8% of the nurses worked shifts, 85.5% loved their profession, 78.5% occasionally followed scientific publications, and 80.1% rarely participated in scientific activities (Table 1).

### **Nurses' Critical Thinking Tendencies and Professionalism Behaviors**

The nurses' total mean CCTDI score was found to be low, at  $211.05 \pm 23.32$ . Furthermore, in the sub-dimensions, truth-seeking was  $26.71 \pm 5.49$ ; Open-mindedness was  $47.81 \pm 9.10$ ; analyticalness  $44.47 \pm 6.86$ ; systematicity  $25.61 \pm 4.09$ ; self-efficacy  $28.01 \pm 5.15$ ; and curiosity  $38.44 \pm 6.16$  (Table 1).

The nurses' total BIPN mean score was found to be low at  $6.41 \pm 4.08$ . Furthermore, the sub-dimensions for educational preparation were  $0.90 \pm 0.87$ ; publications  $0.15 \pm 0.49$ ; research  $0.53 \pm 0.77$ ; professional organizations  $0.42 \pm 0.73$ ; social work  $0.31 \pm 0.87$ ; competency/continuing education  $1.27 \pm 0.87$ ; nursing ethics code  $0.52 \pm 1.14$ ; theory  $1.97 \pm 1.09$ ; and the autonomy sub-dimension was  $0.41 \pm 0.48$  (Table 2).

### **The Relationship Between Nurses' Critical Thinking Tendencies and Professionalism Behaviors and Descriptive Characteristics**

Nurses' critical thinking dispositions were higher among those with advanced educational attainment, longer professional experience, managerial roles, and day-shift work patterns ( $p < 0.001$ ). Additionally, nurses who reported enjoying their profession and regularly following scientific publications demonstrated higher levels of critical thinking. Professionalism behaviors were similarly influenced by educational level, managerial responsibility, and engagement in scientific activities, with nurses holding graduate degrees and those participating in professional or scientific events showing the highest scores ( $p < 0.001$ ). These findings

**Table 1.** The Relationship Between Descriptive Characteristics and Nurses' Critical Thinking Tendencies and Professional Behaviors

Descriptive Characteristics	Groups	n	%	CCTDI		BIPN	
				M(SD)	p	M(SD)	p
Age	25 and less	179	26.4	204.15 (17.75)	0.000	5.78 (3.32)	0.033
	26-30	229	33.8	213.36 (20.95)		6.96 (4.52)	
	31-40	225	33.2	211.75 (25.49)		6.41 (4.20)	
	41 and more	45	6.6	223.24 (33.64)		6.12 (3.48)	
Gender	Women	635	93.7	211.39 (23.31)	0.141	6.55 (4.13)	0.001
	Men	43	6.3	205.98 (22.98)		4.33 (2.36)	
Marital Status	Single	241	35.5	209.15 (20.61)	0.116	6.33 (4.05)	0.685
	Married	437	64.5	212.10 (24.64)		6.46 (4.09)	
Education	Undergraduation	145	21.4	203.50 (22.16)	0.000	4.83 (3.22)	0.000
	High School	114	16.8	210.17 (22.55)		4.11 (3.03)	
	Baccelore	313	46.2	213.01 (23.24)		6.72 (3.55)	
	Higher Education	106	15.6	216.54 (23.62)		10.17 (4.70)	
Duration of Working in the Profession (years)	5 vand less	334	49.3	206.30 (19.28)	0.000	6.57 (3.98)	0.590
	6-10	181	26.7	213.11 (22.05)		6.10 (4.34)	
	11-15	105	15.5	205.63 (23.06)		6.37 (3.84)	
	16 and more	58	8.6	225.82 (28.98)		6.66 (4.05)	
Department	Internal Medicine	380	56.0	211.22 (23.94)	0.827	6.60 (4.26)	0.177
	Surgical Medicine	298	44.0	210.83 (22.53)		6.17 (3.82)	
Position	Staff Nurse	520	76.7	209.52 (21.04)	0.002	5.32 (3.06)	0.000
	Manager Nurse	158	23.3	216.08 (29.11)		10.04 (.86)	
Working Type	Day Shift	266	39.2	215.23 (27.26)	0.000	8.20 (4.79)	0.000
	Night Shift	412	60.8	208.35 (19.94)		5.25 (3.02)	
Status of Loving the Profession	Yes	580	85.5	212.22 (23.67)	0.002	6.45 (4.06)	0.596
	No	98	14.5	204.15 (19.80)		6.21 (4.16)	
Broadcast Following Status	Usually	58	8.6	220.90 (16.54)	0.003	9.47 (4.60)	0.000
	Seldomly	532	78.5	209.95 (23.82)		6.42 (4.02)	
	Never	88	13.0	211.22 (22.68)		4.31 (2.45)	
Participation in Scientific Events	Usually	30	4.4	218.80 (20.16)	0.150	9.68 (5.98)	0.000
	Seldomly	543	80.1	210.46 (23.17)		6.47 (4.09)	
	Never	105	15.5	211.88 (24.64)		5.20 (2.53)	

**Table 2.** Critical Thinking Tendencies and Professional Behaviour Scale and Sub-Scale Scores

	CCTDI	Mean ± SD	BIPN	Mean ± SD
Scale Scores	Truth-Seeking	26.71 ± 5.49	Educational Preparation	0.90 ± 0.87
	Open-Mindedness	47.81 ± 9.10	Publication	0.15 ± 0.49
	Analyticity	44.47 ± 6.86	Research	0.53 ± 0.77
	Systematicity	25.61 ± 4.09	Professional Organizations	0.42 ± 0.73
	Self-Confidence	28.01 ± 5.15	Social Service	0.31 ± 0.86
	Curiosity	38.44 ± 6.16	Proficiency/Cont. Education	1.27 ± 0.87
	Total	211.05 ± 23.32	Nursing Codes	0.52 ± 1.14
			Theory	1.97 ± 1.09
			Autonomy	0.41 ± 0.48
			Total	6.41 ± 4.08

indicate that both individual and organizational factors contribute to variations in critical thinking and professionalism among nurses (Table 1).

### The Relationship Between Nurses' Critical Thinking Tendencies and Professional Behaviors

A statistically significant relationship was found between nurses' critical thinking dispositions and professionalism behaviors ( $r = 0.098$ ,  $p < 0.001$ ). Furthermore, statistically significant relationships were found between the subscales of both scales, ranging from  $r = 0.079$ ,  $p < 0.001$  to  $r = 0.171$ ,  $p < 0.001$  (Table 2).

## DISCUSSION

This study found that nurses' critical thinking dispositions (CCTDI =  $211.05 \pm 23.32$ ) and professionalism behaviors (BIPN =  $6.41 \pm 4.08$ ) were generally low. This finding is consistent with both national and international literature (Chen et al., 2020; Gezer et al., 2018; Zuriguel-Pérez et al., 2019). Nurses' low critical thinking levels are often associated with both individual factors and systemic factors, such as the organizational environment, workload, working conditions, and a lack of managerial support (Mahmoud & Mohammed, 2017; Van Nguyen & Liu, 2021).

This study also clearly demonstrated that critical thinking disposition increases in direct proportion to age, education level, and professional experience. These results are consistent with previous studies (Chen et al., 2020), which also reported similar findings. These studies demonstrate that life experience, self-awareness, and self-confidence increase with age, which has positive implications for analytical thinking, evaluation, and decision-making processes. Similarly, Gloude-mans et al. (2013) and Hunter et al. (2014) have also emphasized the contribution of professional experience to the development of critical thinking. The high levels of critical thinking found in nurse managers and day nurses have also been demonstrated by Burke et al. (2013), Saksvik-Lehouillier et al. (2016), and, most recently, Beşyataş et al. (2021). Nurse managers' increased decision-making responsibilities and their role as internal leaders lead them to encounter situations requiring problem-solving and critical analysis more frequently. The fact that nurses working day shifts do not experience cognitive fatigue and have easier access to social support resources may support their critical thinking performance (Lee & Oh, 2020; Griffiths et al., 2014).

Nurses' level of love for their profession and their habit of following scientific publications also create a significant difference in their critical thinking levels. In this context, Campbell et al. (2020) stated that individuals who regularly follow scientific literature improve their multi-faceted perspective, analysis, and decision-making skills. It is also emphasized that nurses who follow a scientific updates approach to their clinical decisions more flexibly and based on data

Table 2. The Relationship Between Nurses' Critical Thinking Tendencies and Professional Behaviors

	CCTDI																				
	Truth-Seeking			Open-Mindedness			Analyticity			Systematicity			Self-Confidence			Curiosity			Total		
	r	p	r	p	r	p	r	p	r	p	r	p	r	p	r	p	r	p	r	p	
Educational Preparation	0.098	0.011	0.061	0.113	-0.006	0.883	0.024	0.528	0.074	0.055	-0.052	0.178	0.052	0.176							
Publication	0.010	0.792	0.093	0.016	-0.116	0.002	-0.017	0.665	-0.110	0.004	-0.096	0.012	-0.048	0.211							
Education	0.080	0.037	0.008	0.835	-0.022	0.561	-0.036	0.345	0.094	0.014	-0.063	0.102	0.013	0.732							
Professional Organizations	0.134	0.000	0.090	0.019	-0.096	0.013	-0.007	0.846	0.066	0.086	0.013	0.729	0.055	0.152							
Social Service	0.053	0.166	-0.002	0.967	-0.142	0.000	-0.053	0.171	-0.002	0.954	-0.085	0.026	-0.062	0.106							
Proficiency/Cont. Education	0.161	0.000	0.177	0.000	-0.003	0.934	0.116	0.002	0.128	0.001	0.150	0.000	0.194	0.000							
Nursing Codes	0.084	0.028	0.141	0.000	0.030	0.437	0.111	0.004	0.106	0.006	0.082	0.033	0.148	0.000							
Theory	0.059	0.124	0.098	0.011	0.038	0.329	0.097	0.011	0.079	0.039	-0.027	0.484	0.091	0.018							
Autonomy	0.064	0.095	0.005	0.902	-0.162	0.000	-0.009	0.818	-0.076	0.047	-0.101	0.008	0.076	0.049							
Total	0.147	0.000	0.140	0.000	-0.067	0.084	0.064	0.098	0.096	0.013	-0.017	0.651	0.098	0.011							

BIPN

(Choi & Lindquist, 2021). This study also found lower levels of professionalism among nurses. A similar study by Karaca et al. (2023) also found that nurses' professionalism scores were lower than expected. The primary reasons for this situation include the fact that nursing has not yet undergone its institutionalization and recognition process in Turkey, educational disparities, a lack of career support systems, and wage policy imbalances. Professional behaviors are significantly correlated with variables such as age, gender, education level, position, work style, and participation in scientific events. In particular, nurses aged 26–30, female, with a master's degree, and in managerial positions were found to have higher professionalism scores. These results are similarly reported in studies by Hampton & Hampton (2002), Tanaka et al. (2014), and Celik et al. (2012). Higher education fosters professional responsibility in both theoretical knowledge and ethical values. At the same time, management enhances the perception of professionalism through elements such as independent decision-making, team management, and mentoring colleagues. Nurses who regularly follow scientific publications and participate in professional events have been found to exhibit higher levels of professional behavior. The RCD systematic review (2023) has emphasized that such activities have positive effects on both individual development and professional belonging. Access to up-to-date information, adapting to changing practices, and exchanging information with colleagues directly impact professional development.

The study found a positive yet weak relationship between nurses' critical thinking dispositions and professional behaviors ( $r = 0.098$ ,  $p < 0.001$ ). While Paul (2014) emphasized that critical thinking meaningfully contributes to the development of professional judgment, the weak association observed in the present study may be explained by the complex and context-dependent nature of critical thinking, which develops through experiential learning, guided practice, emotional intelligence, and educational strategies rather than directly translating into observable professional behaviors (Chan, 2013; Nelson, 2017; Wong & Kowitlawakul, 2020; Zarzycka & Gesek, 2022; Falcó-Pegueroles et al., 2021). This suggests that although critical thinking provides an important cognitive foundation, professional behavior is shaped by multiple additional factors, including organizational conditions, role expectations, and opportunities for professional engagement. As a result, the influence of critical thinking on professionalism may remain limited in magnitude, reflecting the multifactorial structure of both constructs.

This relationship has implications for clinical practice, particularly in settings such as internal medicine where nurses frequently manage complex patient conditions. The low levels of critical thinking observed in this study suggest that nurses may face challenges in evaluating rapidly changing clinical situations, synthesizing information, and making timely decisions—skills highlighted in previous studies examining how critical thinking develops through analytical reasoning, reflective questioning, and the ability to connect theory with practice (Chan, 2019; Zarzycka & Gesek, 2022). Additionally, the limited professionalism scores underscore the importance of fostering reflective practice and lifelong learning, both of which strengthen clinical reasoning and adaptability (Wong & Kowitlawakul, 2020). These findings suggest that integrating structured critical thinking activities—such as guided reflection, problem-based learning, and case-based analysis—into continuing education and in-service programs may support more effective clinical judgment and professional behavior among nurses (Nelson, 2017; Falcó-Pegueroles et al., 2021).

In summary, this research has revealed that numerous individual and environmental variables influence critical thinking dispositions and professional behaviors. Factors such as age, education, experience, position, and academic interaction play a significant role in the development

of these skills. However, while critical thinking is considered a key factor in professionalism, the relationship between these factors remains limited. These findings demonstrate that both individual development programs and institution-supported practices should be structured holistically to support the development of critical thinking.

### **Limitations**

The research is limited to nurses working at 10 Public Training and Research Hospitals operating in Istanbul between February 10, 2014, and May 10, 2014. Although the data were collected in 2014, the core concepts examined critical thinking disposition and professionalism remain central and relatively stable components of nursing practice; however, changes in nursing education, digitalization, and role expansion over the past decade may influence these constructs, and this should be considered a limitation. In addition, the data were collected through self-reported questionnaires, which may introduce response bias and may not fully reflect actual professional behaviors or critical thinking performance. The cross-sectional design also prevents causal interpretations. Furthermore, organizational and institutional factors that could influence nurses' critical thinking and professionalism were not controlled for, and the findings may not be generalizable to nurses working in different healthcare settings. These limitations should be considered when interpreting the results.

### **CONCLUSION**

The findings of this study reveal that nurses' critical thinking tendencies and professionalism levels are generally low. Differences were observed according to education level, professional experience, working conditions, work style, and position. Experienced and highly educated nurses demonstrated higher scores in both critical thinking and professionalism. Additionally, daytime nurses and managerial nurses showed higher levels compared to shift workers and ward nurses. Nurses who regularly follow scientific publications and participate in scientific activities also had higher scores on both scales.

In conclusion, nurses' critical thinking and professionalism are shaped not only by individual characteristics but also by environmental factors such as educational opportunities, in-house support, scientific participation, and working conditions. Strengthening these areas through continuous professional development programs, institutional support mechanisms, and evidence-based training initiatives may contribute to enhancing nurses' competencies. Additionally, creating organizational environments that promote learning, research engagement, and participatory decision-making could further support the development of both critical thinking and professional behavior. Planned and sustainable arrangements in these domains are expected to positively influence the quality of nursing care and overall healthcare services.

### **Ethical Consideration**

Ethics committee approval for the research was obtained from the non-invasive research ethics committee of a public university's health sciences institute. Institutional permissions, and written approval to participate in the research was obtained. Additionally, permissions for the use of the scales were obtained via email from the academicians who adapted the scales into Turkish.

## REFERENCES

- American Philosophical Association. (1990). Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction (ERIC Document No. 315–423).
- Burke, R. J., Dolan, S. L., & Fiksenbaum, L. (2013). Part-time versus full-time work: An empirical evidence-based case of nurses in Spain. *Evidence-Based HRM*, 2(2), 176–191. <https://doi.org/10.1108/EBHRM-02-2013-0001>
- Campbell, J., & Bunting, S. (2020). Effects of problem-based learning vs. traditional lectures on Korean nursing students' critical thinking. *Nurse Education Today*, 98, 104112. <https://doi.org/10.1016/j.nedt.2020.104112>
- Campbell, K. A., Van Borek, N., Marcellus, L., Landy, C. K., Jack, S. M., & British Columbia Healthy Connections Project Process Evaluation Research Team. (2020). "The hardest job you will ever love": Nurse recruitment, retention, and turnover in the Nurse-Family Partnership program in British Columbia, Canada. *PLOS ONE*, 15(9), e0237028. <https://doi.org/10.1371/journal.pone.0237028>.
- Chan, Z. C. Y. (2019). Nursing students' view of critical thinking as 'own thinking, searching for truth, and cultural influences'. *Nurse Education Today*, 78, 14–18. <https://doi.org/10.1016/j.nedt.2019.03.015>
- Chao, S. Y., Liu, H. Y., Wu, M. C., Clark, M. J., & Tan, J. Y. (2013). Identifying critical thinking indicators and critical thinker attributes in nursing practice. *Journal of Nursing Research*, 21(3), 204–211. <https://doi.org/10.1097/jnr.0b013e3182a0aee9>
- Chen, Q., Liu, D., Zhou, C., & Tang, S. (2020). Critical thinking ability and medication safety competence among clinical nurses: A multicenter study. *Journal of Clinical Nursing*, 29(7–8), 1332–1340. <https://doi.org/10.1111/jocn.15153>
- Choi, E., & Lindquist, R. (2021). Problem-based learning and nursing education: A systematic comparison. *Nurse Education Today*, 104, 104943. <https://doi.org/10.1016/j.nedt.2021.104943>
- Dur, Ş., & Erkin, Ö. (2023). Hemşirelikte eleştirel düşünme eğitiminin etkisi: Yarı deneysel çalışma. *Gençlik Araştırmaları Dergisi*, 11(29), 82–84.
- Erkuş, B., & Bahçecik, N. (2015). Level of critical thinking and problem-solving skills of administrator nurses and nurses who work at private hospitals. *Clinical and Experimental Health Sciences*, 5(1), 1–9. <https://doi.org/10.5455/musbed.20141106035312>
- Facione, P. A. (1990). Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction. Research findings and recommendations. California Academic Press.
- Facione, P. A., Facione, N., & Giancarlo, C. A. F. (1992). The California Critical Thinking Disposition Inventory: CCTDI. California Academic Press.
- Falcó-Pegueroles, A., Rodríguez-Martín, D., Ramos-Pozón, S., & Zuriguel-Pérez, E. (2021). Critical thinking in nursing clinical practice, education and research: From attitudes to virtue. *Nursing Philosophy*, 22(1), e12332. <https://doi.org/10.1111/nup.12332>.
- Gezer, N., Yıldırım, B., & Özyayın, E. (2017). Factors in the critical thinking disposition and skills of intensive care nurses. *Journal of Nursing and Care*, 6(2), 1–5. <https://doi.org/10.4172/2167-1168.1000390>
- Gloudemans, H. A., Schalk, R. M., & Reynaert, W. (2013). The relationship between critical thinking skills and self-efficacy beliefs in mental health nurses. *Nurse Education Today*, 33(3), 275–280. <https://doi.org/10.1016/j.nedt.2012.05.006>
- Griffiths, P., Dall'Ora, C., Simon, M., Ball, J., Lindqvist, R., Rafferty, A. M., Schoonhoven, L., Tishelman, C., Aiken, L. H., & RN4CAST Consortium. (2014). Nurses' shift length and overtime working in 12 European countries: The association with perceived quality of care and patient safety. *Medical Care*, 52(11), 975–981. <https://doi.org/10.1097/MLR.0000000000000233>
- Hampton, D. L., & Hampton, G. M. (2000). Professionalism and the nurse-midwife practitioner: An exploratory study. *Journal of the American Academy of Nurse Practitioners*, 12(6), 218–225. <https://doi.org/10.1111/j.1745-7599.2000.tb00185.x>
- Hunter, S., Pitt, V., Croce, N., & Roche, J. (2014). Critical thinking skills of undergraduate nursing students: Description and demographic predictors. *Nurse Education Today*, 34(5), 809–814. <https://doi.org/10.1016/j.nedt.2013.08.005>
- Karaca, A., Kaya, G., & Kaya, L. (2023). The relationship between critical thinking skills and caregiving roles of nurses. *Journal of Educational Research in Nursing*, 20(4), 360–366.
- Karadağ, A., Hisar, F., & Özhan, E. N. (2004). Behavioral inventory of professionalism in nursing. *Nursing Forum*, 7(4), 14–22.
- Khachian, A., Farahani, M. A., Haghani, H., & Tamed, M. A. (2016). Evaluation of nurses' professional behavior and its relationship with organizational culture and commitment. *International Journal of Medical Research and Health Sciences*, 5(12), 247–252.
- Kökdemir, D. (2003). Decision-making and problem-solving in uncertain situations (Doctoral thesis). Ankara University, Institute of Social Sciences, Department of Social Psychology, Ankara.
- Ludin, S. M. (2018). Does good critical thinking equal effective decision-making among critical care nurses? A cross-sectional survey. *Intensive & Critical Care Nursing*, 44, 1–10. <https://doi.org/10.1016/j.iccn.2017.06.002>Mahmoud, A. S., & Mohamed, H. A. (2017). Critical thinking disposition among nurses working in public hospitals at Port-Said Governorate. *International Journal of Nursing Sciences*, 4(2), 128–134. <https://doi.org/10.1016/j.ijnss.2017.02.006>
- Miller, B. K., Adams, D., & Beck, L. (1993). A behavioral inventory for professionalism in nursing. *Journal of Professional Nursing*, 9(5), 290–295. [https://doi.org/10.1016/8755-7223\(93\)90055-h](https://doi.org/10.1016/8755-7223(93)90055-h)
- Nelson, A. E. (2017). Methods faculty use to facilitate nursing students' critical thinking. *Teaching and Learning in Nursing*, 12(1), 62–66. <https://doi.org/10.1016/j.teln.2016.09.007>
- Paul, S. A. (2014). Assessment of critical thinking: A Delphi study. *Nurse Education Today*, 34(11), 1357–1360. <https://doi.org/10.1016/j.nedt.2014.03.008>
- RCD Systematic Review. (2023). Reflective case discussion for enhancing nurses' professionalism and critical thinking: A PRISMA systematic review. *Journal of Medicine and Life*, 16(1), 45–52. <https://doi.org/10.25122/jml-2023-0045>
- Saksvik-Lehouillier, I., Bjorvatn, B., Magerøy, N., & Pallesen, S. (2016). Hardiness, psychosocial factors and shift work tolerance among nurses: A 2-year follow-up study. *Journal of Advanced Nursing*, 72(8), 1800–1812. <https://doi.org/10.1111/jan.12951>
- Tanaka, M., Yonemitsu, Y., & Kawamoto, R. (2014). Nursing professionalism. *International Journal of Nursing Practice*, 20(6), 579–587. <https://doi.org/10.1111/ijn.12201>
- Van Nguyen, T., & Liu, H.-E. (2021). Factors associated with the critical thinking ability of professional nurses. *Nursing Open*, 8(5), 1970–1980. <https://doi.org/10.1002/nop2.832>
- Voldbjerg, S. L., Grønkvær, M., Sørensen, E. E., & Hall, E. O. (2016). Newly graduated nurses' use of knowledge sources: A meta-ethnography. *Journal of Advanced Nursing*, 72(8), 1751–1765. <https://doi.org/10.1111/jan.12914>
- Von Colln-Appling, C., & Giuliano, D. (2017). A concept analysis of critical thinking: A guide for nurse educators. *Nurse Education Today*, 49, 106–109. <https://doi.org/10.1016/j.nedt.2016.11.007>
- Walker, S. E. (2003). Active learning strategies to promote critical thinking. *Journal of Athletic Training*, 38(3), 263–267.

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- Wangenstein, S., Johansson, I. S., Björkström, M. E., & Nordström, G. (2010). Critical thinking dispositions among newly graduated nurses. *Journal of Advanced Nursing*, 66(10), 2170–2181. <https://doi.org/10.1111/j.1365-2648.2010.05282.x>
- Westerdahl, F., Wennick, A., Borglin, G., & Carlson, E. (2025). Nurse Educators' Conceptions of How They Facilitate Critical Thinking in Bachelor Nursing Students: A Phenomenographic Study. *Journal of advanced nursing*, 10.1111/jan.70327. Advance online publication. <https://doi.org/10.1111/jan.70327>.
- Wong, S. H. V., & Kowitlawakul, Y. (2020). Exploring perceptions and barriers in developing critical thinking and clinical reasoning of nursing students: A qualitative study. *Nurse Education Today*, 95, 104600. <https://doi.org/10.1016/j.nedt.2020.104600>
- Zarzycka, D., & Gesek, M. (2022). The factors affecting critical thinking skills among nursing students: An integrative literature review. *Pielgniarstwo XXI Wieku / Nursing in the 21st Century*, 21(3), 174–180. <https://doi.org/10.2478/pielxxiw-2022-0021>
- Zuriguel-Pérez, E., Falcó-Pegueroles, A., Agustino-Rodríguez, S., Gómez-Martín, M. D. C., Roldán-Merino, J., & Lluch-Canut, M. T. (2019). Clinical nurses' critical thinking level according to sociodemographic and professional variables (Phase II): A correlational study. *Nurse Education in Practice*, 41, 102649. <https://doi.org/10.1016/j.nepr.2019.102649>
- Zuriguel-Pérez, E., Lluch-Canut, M. T., Agustino-Rodríguez, S., Gómez-Martín, M. D. C., Roldán-Merino, J., & Falcó-Pegueroles, A. (2018). Critical thinking: A comparative analysis between nurse managers and registered nurses. *Journal of Nursing Management*, 26(8), 1083–1090. <https://doi.org/10.1111/jonm.12640>