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The Relationship between Professional Values and Satisfaction among Nursing Students: A Descriptive Correlational Study

Background: Nurses' professional values are instilled during nursing education and are reinforced throughout their professional careers. Both professional values and student satisfaction are crucial indicators of the quality of nursing education. This study aimed to examine the relationship between professional values and satisfaction among nursing students.

Method: This descriptive correlational study was conducted from January 2019 to October 2020. A total of 280 final-semester undergraduate nursing students enrolled at the School of Nursing and Midwifery, Mashhad University of Medical Sciences, were selected through convenience sampling. Participants completed a demographic form, a Professional Values Scale, and Nursing Student Satisfaction Scale (NSSS). Data were analyzed using SPSS version 25 and statistical tests including Spearman's correlation coefficient, Mann-Whitney and Kruskal-Wallis tests.

Results: The total mean score of nursing students' professional values was 103.75 ± 15.83 which was at a high level. The total mean score of nursing student satisfaction was 104.43 ± 27.30 which was at a moderate level. Spearman's correlation test revealed a significant positive correlation between professional values—and their dimensions including care, activism, trust, professionalism, and justice—and nursing student satisfaction ($p < 0.05$). Low interest in nursing and unwillingness to work as a nurse after graduation were found to negatively affect professional values and student satisfaction ($p < 0.05$).

Conclusion: There was a significant positive relationship between professional values and nursing student satisfaction. Therefore, fostering professional values and enhancing student satisfaction during nursing education may contribute to the development of professional values.
Keywords: Nursing Student, Professional Values, Satisfaction

العلاقة بين القيم المهنية والرضا لدى طلبة التمريض: دراسة ارتباطية وصفية

الخلفية: تُغرس القيم المهنية للممرضات خلال تعليم التمريض وتُعزز طوال مسيرتهن المهنية. تُعد كل من القيم المهنية ورضا الطلاب مؤشرات حاسمة لوجود تعليم التمريض. هدفت هذه الدراسة إلى دراسة العلاقة بين القيم المهنية والرضا بين طلاب التمريض.

الطريقة: أُجريت هذه الدراسة الارتباطية الوصفية من يناير ٢٠١٩ إلى أكتوبر ٢٠٢٠. تم اختيار ما مجموعه ٢٨٠ طالباً وطالبة في الفصل الدراسي النهائي من طلاب التمريض المسجلين في كلية التمريض والقبالة بجامعة مشهد للعلوم الطبية من خلال أخذ العينات الملائمة. أكمل المشاركون استمارة ديموغرافية ومقياس القيم المهنية ومقياس رضا طلاب التمريض (NSSS). تم تحليل البيانات باستخدام برنامج SPSS الإصدار ٢٥ والاختبارات الإحصائية بما في ذلك معامل ارتباط سبيرمان واختباري مان ويتني وكروسكال واليس.

النتائج: بلغ متوسط الدرجات الإجمالية للقيم المهنية لطلاب التمريض 103.75 ± 15.83 وهو مستوى مرتفع. بلغ المتوسط الإجمالي لرضا طلاب التمريض 104.43 ± 27.30 وهو مستوى متوسط. كشف اختبار ارتباط سبيرمان عن وجود علاقة إيجابية ذات دلالة إحصائية بين القيم المهنية—وأبعادها، بما في ذلك الرعاية والنشاط والثقة والاحترافية والعدالة—ورضا طلاب التمريض ($p < 0.05$). وُجد أن انخفاض الاهتمام بالتمريض وعدم الرغبة في العمل كممرضة/بعد التخرج يؤثران سلباً على القيم المهنية ورضا الطلاب ($p < 0.05$).

الخلاصة: وُجدت علاقة إيجابية ذات دلالة إحصائية بين القيم المهنية ورضا طلاب التمريض. لذلك، فإن تعزيز القيم المهنية وتحسين رضا الطلاب أثناء دراسة التمريض قد يساهم في تطوير هذه القيم.

الكلمات المفتاحية: طلاب التمريض، القيم المهنية، الرضا

ارتباط ارزش های حرفه ای و رضایتمندی در دانشجویان پرستاری: یک مطالعه توصیفی - همبستگی

زمینه و هدف: ارزش های حرفه ای پرستاری و رضایتمندی دانشجویان دو شاخص مهم کیفیت آموزش هستند که در طول آموزش پرستاری القا می شوند و در طول دوران حرفه ای تقویت می شوند هدف از این مطالعه تعیین ارتباط ارزش های حرفه ای و رضایتمندی دانشجویان پرستاری بود.

روش: در این مطالعه توصیفی - همبستگی که از دی ۱۳۹۸ تا آبان ۱۳۹۹ انجام شد تعداد ۲۸۰ دانشجوی کارشناسی پرستاری ترم آخر در دانشکده پرستاری و مملایی دانشگاه علوم پزشکی مشهد به روش نمونه گیری در دسترس انتخاب شدند فرم مشخصات فردی، مقیاس ارزش های حرفه ای و مقیاس رضایتمندی دانشجویان پرستاری جهت تکمیل در اختیار دانشجویان قرار گرفت. داده ها با نرم افزار SPSS نسخه ۲۵ و آزمون های آماری ضریب همبستگی اسپیرمن، من ویتنی و کروسکال والیس تحلیل شد.

یافته ها: میانگین کل نمره ارزش های حرفه ای دانشجویان 103.75 ± 15.83 بود که در سطح بالایی قرار داشت. میانگین کل نمره رضایتمندی دانشجویان پرستاری 104.43 ± 27.30 بود که در سطح متوسطی قرار داشت. آزمون اسپیرمن همبستگی مثبت و معنی داری بین ارزش های حرفه ای و همه ابعاد آن (مراقبت، اعتماد، عدالت، کنشگری و حرفه ای گری) با رضایتمندی دانشجویان نشان داد ($p < 0.05$). علاقه کم به رشته پرستاری و عدم تمایل به کار به عنوان پرستار بعد از فارغ التحصیلی بر ارزش های حرفه ای و رضایتمندی دانشجویان تأثیر منفی داشت ($p < 0.05$).

نتیجه گیری: ارزش های حرفه ای با رضایتمندی دانشجویان رابطه مثبت و معنی دار داشت. بنابراین، پرورش ارزش های حرفه ای و افزایش رضایتمندی دانشجویان در طول آموزش پرستاری می تواند به توسعه ارزش های حرفه ای کمک کند.
واژه های کلیدی: دانشجوی پرستاری، ارزش های حرفه ای، رضایتمندی

نرسنگ طلبه کے درمیان پیشہ ورانہ اقدار اور اطمینان کے درمیان تعلق: ایک وضاحتی ارتباطی مطالعہ

پس منظر: نرسوں کی پیشہ ورانہ اقدار نرسنگ کی تعلیم کے دوران پیدا کی جاتی ہیں اور ان کے پیشہ ورانہ کیریئر کے دوران ان کو تقویت ملتی ہے۔ پیشہ ورانہ اقدار اور طالب علم کا اطمینان دونوں نرسنگ کی تعلیم کے معیار کے اہم اشارے ہیں۔ اس مطالعہ کا مقصد نرسنگ طلبہ کے درمیان پیشہ ورانہ اقدار اور اطمینان کے درمیان تعلق کو جانچنا تھا۔

طریقہ: یہ وضاحتی ارتباطی مطالعہ جنوری ۲۰۱۹ سے اکتوبر ۲۰۲۰ تک کیا گیا تھا۔ کل ۲۸۰ فائنل سمسٹر کے انڈرگریجویٹ نرسنگ طلبہ جو مشہد یونیورسٹی آف میڈیکل سائنسز کے اسکول آف نرسنگ اینڈ مڈوائفری میں داخل ہوئے تھے، کو سہولت کے نمونے لینے کے ذریعے منتخب کیا گیا تھا۔ شرکاء نے آبادیاتی فارم، پیشہ ورانہ اقدار کا پیمانہ، اور نرسنگ سٹوڈنٹ اطمینان کا پیمانہ (NSSS) مکمل کیا۔ ڈیٹا کا تجزیہ SPSS ورژن ۲۵ اور شماریاتی ٹیسٹوں کے ذریعے کیا گیا جس میں Spearman's correlation coefficient اور Mann-Whitney اور Kruskal-Wallis ٹیسٹ شامل ہیں۔

نتائج: نرسنگ طلبہ کی پیشہ ورانہ اقدار کا کل اوسط اسکور 103.75 ± 15.83 تھا جو کہ اعلیٰ سطح پر تھا۔ نرسنگ طالب علم کے اطمینان کا کل اوسط اسکور 104.43 ± 27.30 تھا جو ایک اعتدال پسند سطح پر تھا۔ اسپیرمن کے ارتباط کے ٹیسٹ نے پیشہ ورانہ اقدار کے درمیان ایک اہم مثبت ارتباط کا انکشاف کیا — اور ان کے جہتوں بشمول دیکنہ، بھال، سرگرمی، اعتماد، پیشہ ورانہ مہارت، اور انصاف — اور نرسنگ طالب علم کی اطمینان ($p < 0.05$)۔ نرسنگ میں کم دلچسپی اور گریجویٹن کے بعد نرس کے طور پر کام کرنے کی خواہش پیشہ ورانہ اقدار اور طالب علم کی اطمینان کو منفی طور پر متاثر کرتی پائی گئی ($p < 0.05$)۔

نتیجہ: پیشہ ورانہ اقدار اور نرسنگ طالب علم کی اطمینان کے درمیان ایک اہم مثبت تعلق تھا۔ لہذا، نرسنگ کی تعلیم کے دوران پیشہ ورانہ اقدار کو فروغ دینا اور طالب علم کے اطمینان کو بڑھانا پیشہ ورانہ اقدار کی ترقی میں معاون ثابت ہو سکتا ہے۔
کلیدی الفاظ: نرسنگ طالب علم، پیشہ ورانہ اقدار، اطمینان

INTRODUCTION

Nurses' professional values refer to the beliefs and principles that guide nurses' decision-making, behaviors, and interactions within their professional practice. These values are initially instilled during nursing education and are progressively reinforced throughout their professional careers (1). Nursing students initially acquire professional values through teaching provided by their educators and the socialization process (2). These values develop throughout the educational process, both in theoretical education and clinical training (3). Nurses' professional values include care and compassion, advocacy and altruism, respect for human dignity, professional advocacy, confidentiality, safety, honesty and integrity, competency and professional growth, as well as accountability (4).

Adherence to professional values is influenced by personal values, culture, education, organizational position, and job experiences (5). According to a systematic review by Cosmai et al., (2025), cultural context and academic education influence shaping the nursing students' professional values (6). Therefore, it is necessary to pay attention to professional values in the curriculum to train qualified nursing students. Considering these values improve the quality of care behaviors, commitment to them is essential for the formation of a professional identity (5).

Students' perspectives on professional values affect their approach to applying these values in their future careers. Negash (2023) reported approximately 45% of nursing students had low awareness and understanding of the importance of professional values (2). However, Bimary et al., (2023) found that nursing students possess a high level of understanding of professional values (7). Therefore, nursing students' professional values are important output of educational practices and work as a key indicator of the quality of education (8).

Student satisfaction is another important indicator of quality in higher education (8). It plays a key role in the monitoring and continuous improvement of educational quality and significantly impacts student retention as well as the ranking of educational institutions (9). Satisfaction within an academic context is a multidimensional, complex and dynamic construct. Student satisfaction is considered as a subjective assessment by the students and determined by the gap between their expectations and perception of the educational experiences (9). According to the study conducted by Chen et al., (2012), student satisfaction evolves through a dynamic process influenced by the interaction between faculty-student, as well as the teaching-learning environment. It is influenced by four main constructs: content and structure of curriculum, faculty teaching strategies, social

interaction among students and faculty, and the learning environment (10).

Based on studies evaluating clinical education for nursing students, the average level of student satisfaction has been reported at 83.2% (11). A study by Hakim (2014), in Iran, showed that while 83.3% of Iranian students expressed satisfaction with the educational environment, nearly half reported low levels of satisfaction with the clinical setting, the theoretical teaching methods used by faculty, the approach to clinical instruction by clinical educators, and the evaluation methods employed by academic staff (12). Nursing student satisfaction contributes to increased self-confidence and self-efficacy, both of which are necessary for the development of knowledge, academic performance, and clinical competencies (9).

Nursing professional values are as predictors of the quality of care, job satisfaction, and motivation (13). According to studies by Kootahiet al., (2023) in Iran, and by Pham and Huang (2025) in Vietnam, a positive correlation was found between professional values and job satisfaction among nurses (1, 14). Additionally, Kantek et al. (2015) reported a positive relationship between professional values and nursing students' satisfaction, and concluded that enhancing students' understanding of professional values ensures greater satisfaction (8).

As nurses' professional values and job satisfaction are two important concepts that are affected by culture and working condition, different results may be obtained by evaluating them in different societies. Considering the relationship between nursing professional values and satisfaction is multifaceted (1), and given the differences in cultural, social, and economic contexts, as well as variations in the structure of nursing education, the social status of nurses, and educational and clinical resources, conducting a regional study on the relationship between these two concepts and their influencing factors appears to be of significant importance. Considering the importance of students' professional values and satisfaction as key indicators of educational quality and given the limited number of studies conducted in this area, the present study aimed to determine the relationship between nursing students' professional values and satisfaction.

METHODS

This study was a descriptive correlational one conducted from January 2019 to October 2020, at the School of Nursing and Midwifery, Mashhad University of Medical Sciences, Iran. A total of 280 eligible undergraduate nursing students who were studying in the final semester of the nursing program, were enrolled. They were selected using convenience sampling. Inclusion criteria were willingness to participate and studying in the final

semester of the undergraduate nursing program. Moreover, the students who transferred from other universities to Mashhad University of Medical Sciences were not included in the study. Exclusion criterion was withdrawal from the study. The sample size was estimated based on the correlation coefficient between professional values and student satisfaction reported by Kantek et al., (2015) ($r = 0.168$) (8). By the formula, with a 95% confidence level and 80% statistical power, the sample size was calculated to be 275, for which 280 students were recruited.

$$n = \left(\frac{z_{1-\frac{\alpha}{2}} + z_{1-\beta}}{0.5 \ln\left(\frac{1+r}{1-r}\right)} \right)^2 + 3$$

The study utilized three questionnaires including: a demographic information form, the Professional Values Scale, and the Nursing Student Satisfaction Scale. The demographic form included questions regarding age, gender, marital status, grade point average (GPA), residence (home/dormitory), level of interest in the nursing profession, and considering working as a nurse after graduation.

The Professional Values Scale consists of 26 items across five subscales (dimensions) including care, activism, professionalism, trust, and justice. It was developed by Weis and Schank (2009) and its construct validity and internal consistency reliability have been confirmed. Cronbach's alpha reliability was reported as 0.92 (15). Additionally, the validity and reliability of this scale were confirmed in a study by Parvan et al., (2012) in Iran. They translated the English original version of the scale to Persian by a forward-backward translation method. Content validity of the scale was approved by 7 faculty members in nursing who assessed intelligibility and clarity of the scale content. Afterward, the final version of scale was pilot tested with 60 nursing students which yielded a Cronbach's alpha of 0.81 (16). Responses are measured on a 5-point Likert scale ranging from "not important" to "very important". Each item was scored from 1 to 5 and the total score ranges from 26 to 130, with higher scores indicating a greater internalization of professional values among students (15). In the present study, the reliability of the scale was confirmed with a Cronbach's alpha coefficient of 0.94.

Nursing Student Satisfaction Scale (NSSS) was developed and psychometrically validated by Chen et al. (2012) to assess nursing students' satisfaction with their nursing program. It includes 30 items divided into three subscales (dimensions) including curriculum and teaching (14 items), professional and social interaction (9 items), and environment (6 items), with the final item measuring overall satisfaction. Responses are recorded on a 6-point

Likert scale ranging from "not at all satisfied" to "very satisfied". Each item was scored from 1 to 6 and the total score ranges from 29 to 174, with higher scores indicating greater student satisfaction. Content and construct validity have been confirmed, and its internal consistency reliability was confirmed with a Cronbach's alpha of 0.93 for the scale (10). In the present study, due to the absence of a validated Persian version, the first author obtained permission to use and translate the scale from the developer via email. The scale was translated into Persian language using the forward-backward translation method. First, the scale was translated to Persian by two translators. The translations were then compared and the items were matched in terms of meaning and content. Finally, a Persian version of the scale was developed. Afterward, the Persian version was translated into English by two other English translators to ensure that the Persian version matched the original text. The final Persian version of the scale was assessed for face validity by 10 nursing students in terms of clarity, spelling, legibility, writing style and ease of completion of the scale. Moreover, the scale was reviewed for content validity by 10 faculty members from the School of Nursing and Midwifery at Mashhad University of Medical Sciences. They assessed the items for relevance, clarity, and cultural appropriateness. Based on their evaluations, all items were relevant and understandable. The Content Validity Index (CVI) and Content Validity Ratio (CVR) were calculated for each item and the overall scale. The overall CVI was 0.98, and the CVR was 0.87 that both considered acceptable. In terms of reliability, Cronbach's alpha was calculated as 0.96 for the overall scale. Subscale reliabilities were 0.94 for "curriculum and teaching," 0.93 for "professional and social interaction," and 0.93 for "environment" subscales. Moreover, intraclass correlation coefficient (ICC) was 0.92. The psychometric evaluation of this scale was conducted by Abbaspour et al., (2025) in Iran, confirming both its content and construct validity. The overall reliability of the scale was 0.91 with a Cronbach's alpha coefficient (17).

After obtaining approval from the Ethics Committee of Mashhad University of Medical Sciences, the researcher proceeded with convenience sampling of eligible nursing students who were studying the final semester. Initially, the researcher visited clinical departments where the students were present, explained to them the study objectives, and assured participants of the confidentiality of their responses. Informed consent was obtained from the students willing to participate. Following this, eligible students were provided with a demographic information form, the Professional Values Scale, and the Nursing Student Satisfaction Scale to complete. Sampling continued

until the predetermined sample size was reached. The data were analyzed using SPSS statistical software version 25. There was no missing data. The Kolmogorov–Smirnov tests didn't show the normal distribution of the study data ($P < 0.05$). Descriptive statistics were used to summarize the study variables. Given that the variables of professional values, satisfaction, and age did not have a normal distribution, Spearman's correlation test was used to examine the relationship between these variables. Moreover, Mann-Whitney and Kruskal-Wallis tests were used to assess their associations with demographic variables. A significance level of 0.05 was set for all statistical tests.

RESULTS

The mean age of the students was 23.3 ± 2.03 years. The frequency distribution of the students' demographic characteristics is presented in Table 1. Moreover, Table 2 displays the mean, standard deviation, and items score of professional values and their dimensions, including care, activism, trust, professionalism, and justice. The total mean score of professional values is 103.75 ± 15.83 . The justice dimension has the highest score, while activism scored the lowest. Moreover, Table 2 shows the mean, standard deviation, and items score of nursing student satisfaction and its dimensions, including curriculum and teaching, professional and social interaction, and environment. The total mean score of nursing student satisfaction is 104.43 ± 27.30 . The highest scores were observed in the dimension of professional and social interaction, followed by curriculum and teaching, and then environment. Spearman's correlation test revealed a significant positive relationship between professional values and all their dimensions (care, activism, trust, professionalism, and justice) with nursing student satisfaction and its dimensions including curriculum and teaching and professional and social interaction ($p < 0.05$), except for the environment dimension, where the relationship was not significant ($p > 0.05$) (Table 3). Furthermore, Table 4 shows the associations between professional values and student satisfaction with demographic characteristics. There was a significant association between sex, interest in nursing profession, and considering working as a nurse after graduation with professional values ($p < 0.05$). Additionally, there was a significant association between interest in nursing profession, considering working as a nurse after graduation, and residence with student satisfaction ($p < 0.05$).

DISCUSSION

The findings of the present study indicated that professional values among nursing students were at a high level, consistent with the results of the

Table 1. Demographic characteristics of nursing students

Variable	N (%)
GPA	
< 16	71 (25.4)
16-16.99	96 (34.2)
17 $\geq$	113 (40.4)
Gender	
Male	106 (37.9)
Female	174 (62.1)
Marital status	
Single	176 (62.9)
Married	104 (37.1)
Interesting in nursing	
Low	55 (19.6)
Moderate	165 (58.9)
High	60 (21.4)
Residence	
Dormitory	103 (36.8)
Home	177 (63.2)
Considering working as a nurse after graduation	
Yes	170 (60.7)
No	30 (10.7)
Indecisive	80 (28.6)

Abbreviations: number of students (N), percentage of total participants (%), Grade Point Average (GPA)

studies by Bimary et al., (2023) and Nasser et al., (2023) (7,18). However, in Negash's study (2023) conducted in Ethiopia, approximately half of the students had a low understanding of professional values (2). In the current study, the ranking of professional values dimensions, from the highest to the lowest, was justice, trust, care, professionalism, and activism, which is consistent with Nasser et al.'s (2023) findings where justice received the highest score (18). Moreover, Bimary et al., (2023) reported the priority order as trust, justice, care, professionalism and activism (7). A systematic review by Cosma et al., (2025) found that care was the highest priority among the dimensions of professional values in nursing students (6). Similarly, Arabameri et al., (2023), in an integrative review, concluded that care was the most valued dimension, while activism and professionalism were considered less important by nursing students. They also highlighted that individual and educational factors significantly influence students' professional values (5). Alfred et al., (2013) reported that although nurses who are educated in various countries with different cultural perspectives acknowledge the same core professional values, but they differ in the priority they give to these core values, which reflects their cultural values (19). Indeed, differences in the adherence to professional values among nursing students are influenced by a variety of factors including personality characteristic, personal values, culture, professional education and experience, and organizational position (20). Therefore, based on the aforementioned points, the probable reason for the difference in understanding and prioritizing professional values in different

Table 2. Mean scores of professional values and satisfaction

Professional Values	Items Score Mean (SD)	Mean (SD)	Min-Max
Care	4.091(0.64)	36.82(5.76)	12-45
Activism	3.72(0.84)	18.64(4.21)	8-25
Trust	4.095(0.72)	20.48(3.64)	6-25
Professionalism	3.82(0.81)	15.3(3.26)	5-20
Justice	4.17(0.82)	12.51(2.46)	3-15
Total score	3.98(0.62)	103.75(18.82)	60-130
Satisfaction			
Curriculum and Teaching	3.05(1.00)	49.04(14.11)	14-84
Professional Social Interaction	3.91(1.07)	35.26(9.68)	9-54
Environment	3.35(1.24)	20.13(7.46)	6-36
Total Score	3.59(0.96)	104.43(27.30)	38-158

Table 3. The correlations between professional values and satisfaction of nursing students

Professional Values	Satisfaction			
	Curriculum and Teaching	Professional Social Interaction	Environment	Total Score
	r (p)	r (p)	r (p)	r (p)
Care	0.175 (0.003)	0.209 (<0.001)	0.065 (0/266)	177 (0.003)
Activism	0.220 (<0.001)	0.225 (<0.001)	0.169 (0.005)	0.241 (<0.001)
Trust	0.124 (0.038)	0.213 (<0.001)	0.032 (0.592)	0.135 (0.023)
Professionalism	0.181 (0.002)	0.194 (0.001)	0.065 (0.277)	0.171 (0.004)
Justice	0.159 (0.008)	0.145 (0.015)	0.072 (0.231)	0.140 (0.019)
Total Score	0.210 (<0.001)	0.225 (<0.001)	0.096 (0.109)	0.236 (<0.001)

Abbreviations: Spearman's correlation coefficient (r); p-value (p). Correlation is significant at the 0.05 level

Table 4. The associations between professional values and satisfaction with demographic characteristics of nursing students

Variable	Professional Values		Satisfaction	
	Mean (SD)	Test results	Mean (SD)	Test results
Age		r=-0.036		r=-0.82
GPA		P=0.551		P=0.172
< 16	100.55 (17.41)		101.82 (29.72)	
16-16.99	102.79 (14.99)	H=5.516	104.30 (27.30)	H=1.334
17≥	106.58 (15.10)	P=0/062	106.19 (25.79)	P=0.513
Gender				
Male	98.17 (16.15)	Z=-4.58	105.99 (29.61)	Z=0.96
Female	107.16 (14.64)	P<0.001	103.48 (25.84)	P=0.337
Marital status				
Single	103.66 (15.71)	Z=-4.21	106.82 (28.11)	Z=-1/91
Married	103.91 (16.08)	P=0.674	100.38 (25.50)	P=0.056
Interesting in nursing				
Low	98.02 (15.97)		91.85 (29.51)	
Moderate	104.25 (15.09)	H=10.382	105.36 (25.35)	H=18.908
High	107.63 (16.43)	P=0.006	113.40 (26.65)	P<0.001
Residence				
Dormitory	102.71 (17.47)	Z=0.760	100.21 (29.45)	Z=-2.14
Home	104.36 (14.79)	P=0.447	106.89 (25.74)	P=0.032
Considering working as a nurse after graduation				
Yes	105.11 (16.14)		109.39 (25.56)	
No	97.23 (16.27)	H=6.416	95.73 (29.08)	H=15.61
Indecisive	103.31 (14.46)	P=0.04	97.16 (26.04)	P<0.001

Notes: Statistical tests used include Mann-Whitney test (Z) and Kruskal-Wallis test (H).

societies, in addition to culture, could be the structure of the health system, the social status of nurses, and the content of educational programs. In fact, these differences should not be viewed as indicators of cultural weakness or superiority, but rather as reflections of the diverse cultural, ethical,

and educational contexts within which each nursing system has developed.

In the present study, nursing students' satisfaction was at a moderate level, which is consistent with the findings of Hirsch et al., (2015) (21). Moreover, Kantek et al., (2015) reported 53% of students were

satisfied, while 39% expressed partially satisfied (8). Conversely, Thomas et al., (2022) reported that 70% of students were satisfied with their nursing program (22). In this study, the highest levels of satisfaction were related to the dimensions of professional and social interaction, curriculum and teaching, and environment, respectively. In contrast, Hirsch et al., (2015) found the highest satisfaction levels in curriculum and teaching, environment, and professional and social interaction, respectively (21). The present study findings highlight that students were most satisfied with professional and social interaction, which indicates the importance of faculty-student interactions in fostering student satisfaction. This dimension includes interpersonal relationships, interaction, trust, respect, and active participation in the teaching-learning process within educational settings (9). According to another study, student satisfaction is closely linked to their perception of positive interactions with faculty and the support they receive (21). Moreover, interaction and motivation are factors that are related to satisfaction and are known as the drivers of effective learning process and academic achievement (9). In the present study, the lowest level of student satisfaction was related to the environment, specifically due to dissatisfaction with the facilities and equipment in the educational setting. This finding is consistent with Hakim's study (2014) in which the majority of students expressed dissatisfaction with the learning environment (12). The investment in structural improvements can enhance students' efficiency and productivity (21). Therefore, to increase student satisfaction, attention should be given to the social climate as well as the aesthetic aspects of the physical infrastructure (23). It appears that the possible reasons for the differences observed in various dimensions of nursing students' satisfaction across studies could be due to educational, cultural, economic, and social factors. In this way, applying modern educational methods, appropriate clinical facilities, academic and career support, and the positive attitude of society towards the nursing profession can affect their satisfaction.

The results of the present study showed a significant and positive relationship between professional values and all of its dimensions (care, activism, trust, professionalism, and justice) with nursing students' satisfaction and its dimensions, except for the environmental dimension. These findings are consistent with those of Kantek et al., (2015), who concluded that enhancing nursing students' professional values leads to increased satisfaction (8). Consistent with the findings of the present study, Kootahi et al., (2023) and Kantek et al., (2017) reported a positive and significant association between professional values and nurses' job satisfaction (3, 14). However, Pam and Huang

(2025) found that only the activism and justice dimensions were positively and significantly correlated with job satisfaction (1). Strong professional values support nurses in ethical decision-making and can lead to increased self-confidence and higher job satisfaction (1). According to the studies' results, the development of strong professional values not only enhances nursing students' satisfaction but also improves their ethical decision-making abilities and shapes the social image of the profession (24). Therefore, higher education institutions are expected to actively promote professional values among students and ensure higher levels of their satisfaction (8). In a study, Bimary et al., (2023) concluded that it is necessary to embed professional values in the nursing education curriculum (7). Therefore, given the positive relationship between professional values and student satisfaction, it appeared that by enhancing student satisfaction, especially in the dimensions of curriculum and teaching, and interaction, the formation of professional values can be developed. Instilling professional values in undergraduate nursing students during formal education program improves service delivery for clinical practice and quality patient care (7). In the present study, no significant relationship was found between satisfaction with the environment and professional values. This finding highlights the importance of paying attention to satisfaction in the dimensions of curriculum and teaching, and professional and social interaction, as key contributors to the development of professional values among nursing students. It seems that by creating appropriate conditions to enhance the curriculum and teaching methods, as well as by promoting effective interactions between faculty and students, it is possible to increase student satisfaction and contribute to the development of their professional values.

The results of the present study indicated that variables such as gender, interest in the nursing profession, and considering working as a nurse after graduation significantly influenced nursing students' professional values. Specifically, male students and those with lower interest in nursing, and those unwilling to work as a nurse after graduation scored lower on professional values. This finding is consistent with those of Donmez et al., (2016), who reported that female students and the students who chose nursing willingly achieved higher professional values scores (25). However, Pasalak et al., (2021) found considering working as a nurse after graduation was not related to professional values and they concluded the factors affecting the level of nursing students' professional values were different by countries (26).

Our findings also revealed that interest in the nursing field, considering working as a nurse after

graduation significantly, and residence influenced students' satisfaction. The students with lower interest in the nursing field, dormitory living, and those unwilling to work as a nurse scored lower satisfaction. These results are consistent with the findings of Masoudi et al., (2023) which showed that more than half of Iranian nursing students were dissatisfied with their chosen field of study (27). However, interest in and satisfaction with the field of study are important factors influencing students' education and success (12). Braim et al., (2023) concluded that dormitory living had negative effects on students' academic performance (28). Generally, student dormitories significantly influenced students' social interactions, academic success, and overall satisfaction (29). These findings highlight the importance of paying attention to students' situation and interest, which can be effective in developing professional values and satisfaction with the nursing course.

This study was conducted at a single university, which reduces its generalizability and represents the limitation of this study. Additionally, self-reported data may be subject to social desirability bias.

CONCLUSION

According to findings of this study, nursing students' professional values were at a high level, while their satisfaction with the nursing program was moderate. The highest level of satisfaction was related to the dimension of professional and social interaction, whereas the lowest was related to the educational environment. A significant and positive relationship was found between students' professional values and their satisfaction with the nursing program. This suggests that, by providing appropriate educational opportunities and facilities, it is possible to enhance students' satisfaction and promote the development of their professional values. The study also found that being male, having low interest in nursing profession and unwillingness to work in nursing career in the

future were negatively associated with students' professional values. Similarly, low interest in nursing, dormitory living, and unwillingness to work as a nurse in the future had a negative effect on student satisfaction. It appears that paying attention to students' situation and interest in choosing the nursing major, as well as providing greater awareness of the nursing profession prior to university admission and during the early years of study, would be beneficial in this regard. Moreover, the implementation of innovative teaching methods and the provision of well-equipped clinical facilities with a focus on professional values, academic and institutional support, and a positive societal attitude toward the nursing profession can all contribute to improve both students' satisfaction and professional values development among students.

Ethical Considerations:

Ethical issues including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc. have been completely observed by the authors. This study was approved by the ethical committee of Mashhad University of Medical Sciences, Iran, Mashhad, with an ethical code of IR.MUMS.REC.1396.118. Ethical principles, including obtaining informed consent, explaining the research objectives, voluntary participation, and ensuring the confidentiality of participants' information, were observed.

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