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Professional values in nursing students in Jordan: baccalaureate nursing students' perception

Original Article

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Abstract: **Objective:** Baccalaureate degree curricula consist of several professional values required for nursing students, which are taught in many ways. This study aimed to explore the perception of baccalaureate Jordanian nursing students regarding professional values and to assess the relationship between students' demographics and their perception of professional values.

Methods: The study design was a descriptive, cross-sectional correlational design. A convenience sample of 182 Jordanian undergraduate nursing students enrolled at one of the most prominent universities in Jordan who completed and submitted a self-administered Nurses' Professional Values Scale (NPVS) was considered for this study.

Results: The NPVS total score ranged from 37 to 130, with a relatively high total score mean (99.68 with a mean of 3.83 out of 5). The highest score domain in NPVS was "Justice" with a mean of 3.97, while the lowest ranked domain was "Activism" with a mean of 3.69. The correlation coefficient showed no statistically significant correlation between age nor accumulative students' average with a total score of Nurses Professional Values Scale-revised (NPVS-R) and its subdomains. The t test results showed that gender and type of students' enrollment (regular vs. upgrading) did not affect the means of NPVS-R and its subdomains. But differences were found to be statistically significant between the means of first year students and fourth year students in the total score of NPVS-R.

Conclusions: Findings of the study alert nursing educators to pay more attention to the importance of promoting the values related to "activism" and "professionalism" among nursing students. Suggestions for enhancing the roles of peer supervision and providing peer review to colleagues would contribute to improving nursing students' performance and raising self-awareness because when nursing educators pay more attention to the items of these domains, better future nursing professionals, leaders, and researchers can be gained. Also, understanding nursing students' perceptions of the importance of professional values and the difficulties in its application would be vital to enlighten educators about the areas that need improvement.

Keywords: *activism • caring • justice • nursing • professional values • professionalism • student values • trust*

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1. Introduction

Nursing is one of the noblest health care professions. Nurses have a great responsibility to take care of human lives. In Islam, the protection and preservation of human life rank second after the protection of religion.[1] Nurses are required to make every effort to achieve optimal performance in their work and seek perfection in performing

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their duties while adhering to the Islamic values, which God has gifted to those who understand people's needs, remove their pains, and resolve their problems.[1] Ethics related to work in Islam are multi-faceted and intertwined with political, social, and economic aspects of life. Work ethics in Islam include a set of principles or a system of beliefs about work and hard work that are derived from the Sunnah and the Holy Qur'an.[1] There are some characteristics that the nurses should acquire to be able to fulfill this role, such as holding values. Presence of the requisite values is regarded as the accepted attainment that needs to be present in all health care providers, and assessing the extent up to which these are present delivers a structure for rating beliefs and attitudes that determine the behavior.[2] Values are found in every profession, defined as professional values.[3]

According to Rassin,[4] nursing professional values (NPV) are gained from nursing codes of ethics, practice, and education. Values involve standards and principles that define professional etiquette, provide direction to practice, and influence moral judgment. The importance of nursing values relies on inter-professional collaboration.[5] Nursing values are fundamental to the profession because they drive work standards, provide a framework for evaluating conduct, and affect decision-making.[5] Embracing professional values in nursing leads to improving patients' outcomes and job satisfaction among nurses; accordingly, it increases clients' recognition and nurses' retention.[2] As a result, embracing NPV is an integral part of professional development.

When we look at nursing education nationally and globally, starting from the past till today, we can realize that nursing education focuses on developing and improving competencies that are related to promoting and maintaining the health of individuals, families, and the public, preventing illness, helping patients to recover, and relieving suffering. However, recently, there has been a dramatic change in the delivery of health care services as there is more focus on shortening hospitalization time, social justice, equality, reducing the cost of services, and cultural values that contribute to the growing complexity of nursing.[6]

The results of these changes in values provide a direct learning opportunity for nursing students, because when there is a shift in values, it simultaneously introduces the need for developing new information, skills, and competencies. Nursing faculty should design the framework for gaining knowledge, examining values, and using concepts and skills to achieve these improvements. Each student begins nursing school with a previous set of values that could be changed throughout their education to match the principles of the nursing profession. Education allows people to learn, modify, and apply their values.[3] Values evolve, influencing nursing practice, directing nursing actions, and determining the ways to achieve nursing goals.[6] Therefore, teaching professional values in nursing is pivotal in preparing nursing students for their future professional careers.

Relatedly, there are some studies that have been conducted to assess nursing students' perception of professional values. One study[7] conducted in Iran compared perception of professional values in nurses, nursing students, and nursing instructors. According to results of this study, significant differences were observed among these 3 groups' perceptions in all dimensions of professional values. Two other studies[8,9] in the USA showed no difference between the nurses and nursing students with regard to the professional value scores.

Jordanian nursing students should be aware that understanding NPV is critical because they work in a field that entails significant privileges and duties toward patients, families, and communities. Moreover, Jordan, one of the Islamic countries, considers professional values as guaranteed principles and practices of the Islamic religion. The Jordanian Islamic cultural values are mostly generosity, selflessness, hospitality, respect for relatives and others, willingness to engage in altruistic ventures, chastity, and sexual modesty, which are the same values that are enunciated, directly or tacitly, in several other religions.[1] These values are inextricably linked to professional values; thus, holding a professional value will not be challenging for Jordanian nursing students. College years highly influence values; 4 years of study at a nursing faculty lead to changes in students' values. Professional values are tough to instill in students as part of their education. Nursing professors are challenged to instill fundamental nursing values that lead to the development of a caring professional nurse. As a result, teaching nursing students about the importance of NPV and the necessity to be committed to putting those values into practice in their health care practices and decision-making will improve patients' care and outcomes.

Nursing students' education should be value driven, guiding for future practice while being grounded in reality to prepare future professionals for the existing health care system.

In addition, to appropriately prepare nursing students for practice and provide high-quality care, a curricular focus on professional values in nursing education is critical.[10] Faculty members must, however, "create learning opportunities that support empathic, sensitive, and compassionate care for individuals, groups, and communities," as well as "promote and reward honesty and accountability, raise awareness of social and ethical issues, and nurture students' awareness of their own" and others' value systems.[11]

Moreover, "The Essentials of Baccalaureate Education for Professional Nursing Practice" identifies and defines professional values.[12] It is imperative to understand the future baccalaureate nursing students' perspective of professional values in providing competent care for their clients and understand their perception about embracing the professional image of nursing upon their graduation. In addition, understanding nursing students' perception, and how they apply it and how they understand the meaning of professional aspects with its importance and difficulty could provide worthy information for nursing educators in designing more functional teaching methods. However, Weis and Schank[13] stated that "developing professional values is an important aspect in nursing education."

According to the researchers' knowledge, a few studies in Jordan have addressed the issue of professional values, but none of them aimed to explore the professional values of nursing students. Therefore, in this study, we will investigate the development of professional values among nursing students to guide health care practices, particularly nursing practice, because Jordanian nursing students need to know the importance of understanding the professional values of nurses since they have significant privileges and responsibilities. The results of this study will enhance professional values among nursing students because this specialization carries honor and great responsibility.

The purposes of the present study are to explore the perception of Jordanian nursing students regarding professional values and to assess the relationship between the student demographics and their perception of professional values.

2. Methods

2.1. Study design

The study design for this study was a descriptive, cross-sectional correlational design.

A cross-sectional correlation design is a non-experimental research design that utilizes data collected from a single time point. This design aims to discover if there are differences in the characteristics of a population depending on whether or not its subjects have been exposed to an event of interest.[14] This design allows the researchers in this study to compare many different variables at the same time.

2.2. Setting and sample

The target population of this study is Jordanian undergraduate nursing students enrolled at one of the most prominent universities in Jordan, which has been offering a bachelor nursing program since 2006. The faculty of nursing at the university understudy aspire that the nurses trained at this institution should be among the best in the region, and to this end, regional faculties of nursing are optimally utilized to create an attractive and supportive environment for baccalaureate nursing students. A total of 500 nursing students were enrolled in the faculty of nursing, distributed in 4 academic years.

Participants were recruited using the college Facebook home page, WhatsApp groups, Microsoft Teams, and other electronic means. The sample size of (150) participants was estimated for this study using a G power analysis computer program developed by Erdfelder et al.,[15] with a low effect size of 0.2, power of 0.8, and α (the risk of type I error) at 0.05. However, all the population was targeted to compensate for missing responses and reach the intended sample size. A convenience sample of 182 participants completed and submitted their responses. Being a nursing student enrolled in a bachelor nursing program was the inclusion criteria for this study. Because of the COVID-19 pandemic, data were collected through an electronic survey.

2.3. Study instrument

In this study, a self-administered questionnaire was used. Weis and Schank[16] developed the Nurses Professional Values Scale (NPVS) in the United States to measure professional nursing values based on the 1985 American Nurses Association Code of Ethics for Nurses (2000). Later, the same authors revised the NPVS, and now, it is known as Nurses Professional Values Scale-revised (NPVS-R).[16] The NPVS-R is a professional value assessment tool, which was translated into Arabic and certified by Allari.[17]

The NPVS-R consists of 26 items based on the ninth provision of the Nurses' Code of Ethics.[18] Each NPVS-R item includes an explicit statement that reflects the ANA's Code of Ethics' interpretation statements. Each statement is rated on a 5-point Likert scale, where 1 = not important and 5 = most important. The scale was developed with 5 subdomains supported by a psychometric evaluation conducted by Weis and Schank.[16] The validity and reliability of the Arabic version were examined by Allari.[17] The results demonstrated that the scale is both valid and reliable. The internal consistency reliability of the5 domains ranged from 0.71 to 0.91, indicating high significance. The results of this study reflected high internal constancy reliability with a Cronbach's α of 0.975 for the NPVS-R. For the subdomains, Cronbach's α ranged between 0.826 for the "Trust" domain and 0.942 for the "Caring" domain. The Arabic version of NSVS-R was used in this study without checking validity

and reliability because it fits the culture and target population; also, the type and content of nursing programs in both countries were similar.

2.4. Data collection and ethical consideration

Prior to data collection, the researchers obtained permission to conduct this study from the Institutional Review Board (IRB) at the university in which the study was conducted: IRB permission code number (2020/2ف). Participants were told about the aim of the study and that participation is voluntary. Before beginning the survey, an informed consent form had to be signed by participants. Students were assured about maintaining confidentiality and anonymity of personal data and the option to withdraw from the study if they so desired. Furthermore, participants were assured that refusing to participate in the study would not jeopardize their academic standing.

Nursing students were requested to take part in the study by filling out and submitting questionnaires online, and the primary researcher was the only one who distributed the questionnaire via students' WhatsApp groups and Microsoft Teams. The data were collected from 1 of March 2020 to 1 of April 2020. Online tracking by the primary researcher was done daily to check the response rate and organize efforts to recruit more students.

Permission to translate and use the original NPVS-R designed by Weis and Schank (2009) was received by E-mail.

2.5. Data analysis

Descriptive statistics such as frequency distribution, mean, and standard deviation (SD) were used to summarize data. Multivariate analysis and analysis of variance (ANOVA), *t* test, and Pearson's correlation coefficient were used to examine impact of study variables on professional values. Statistical significance was established at the 0.05 level. Data were analyzed using SPSS (for Windows, version 18, IBM Corporation, Armonk, New York, United States).

3. Results

3.1. Characteristics of participants

A total of 182 nursing students completed and submitted the questionnaire. Most of participants were males (65.9%, n = 120). Participants' age ranged between 18 years and 43 years with a mean of 22.1± 3.5 years. The majority of participants were enrolled as regular students (83%, n = 151), and more than a quarter of them were fourth year students (28%, n = 51). The grade point average (GPA) of participants ranged between 55 and 100 with a mean of 75.83 ± 11.72. Finally, most of the participants (86.3%, n = 157) reported that they had planned to study nursing at the time of enrollment to the nursing program (Table 1).

Variables	Frequency	%
Gender		
Male	120	65.9
Female	62	34.1
Type of enrollment		
Regular student	151	83.0
Bridging student	31	17.0
Academic year		
First year	28	15.4
Second year	32	17.6
Third year	71	39.0
Fourth year	51	28.0
Planning to study nursing		
Yes	157	86.3
No	17	9.3
I don't know	8	4.4

Table 1. Participants' characteristics.

3.2. NPVS-R and its dimensions

The NPVS-R total score ranged from 37 to 130, with a total score of 99.68 ± 22.50, and the mean was 3.83. Table 2 shows the number of items, minimum, maximum, total score, SD, mean, and Cronbach's α for NPVS-R and each domain. Our participants gave the highest mean to the "Justice" domain (3.97), while the lowest mean to "Activism" (3.69).

3.3. NPVS-R domains and statements mean and ranks

The statement that received the highest score in the "Caring" domain was "Maintain the confidentiality of patient" with a mean of 4.13 ± 1.06 followed by "Safeguard patient's right of privacy" with a mean of 4.11 ± 1.04. Moreover, participants rated "Refuse to participate in care if in ethical opposition to own professional values" as the lowest statement in the caring domain with a mean of 3.68 ± 1.13 (Table 3).

The top-rated statement by our participants in the "Activism" domain was "Advance the profession through active involvement in health-related activities" with a mean of 3.96 ± 1.06. On the other hand, the statement "Participate in public policy decisions affecting the distribution of resources" received the lowest score in the "Activism" domain with a mean of 3.39 ± 1.22 (Table 3). The statement "Seek additional

Domains	Number of items	Min. score	Max. score	Total score	SD	Mean*	Rank	Cronbach's α
Total score	26	37	130	99.68	22.50	3.83		0.975
Caring	9	12	45	35.10	8.18	3.90	2	0.942
Activism	5	6	25	18.45	4.73	3.69	5	0.891
Trust	5	7	25	19.19	4.28	3.84	3	0.857
Professionalism	4	6	20	15.01	3.81	3.75	4	0.865
Justice	3	3	15	11.93	2.81	3.97	1	0.826

Note: *Total score/number of items for each domain;
NPVS-R, Nurses Professional Values Scale-revised; SD, standard deviation.

Table 2. Descriptive statistics for NPVS-R and its domains

Ranking of dimensions	Item No.	Statement	Mean	SD
Caring				
1	25	Maintain confidentiality of patient	4.13	1.06
2	21	Safeguard patient's right to privacy	4.11	1.04
3	24	Practice guided by principles of fidelity and respect for person	4.03	1.05
3	16	Protect moral and legal rights of patients	4.03	1.08
5	20	Provide care without prejudice to patients of varying lifestyles	3.81	1.10
6	22	Confront practitioners with questionable or inappropriate practice	3.80	1.19
7	18	Act as a patient advocate	3.78	1.14
8	23	Protect rights of participants in research	3.73	1.13
9	17	Refuse to participate in care if in ethical opposition to own professional values	3.68	1.13
Activism				
1	10	Advance the profession through active involvement in health related activities	3.96	1.06
2	11	Recognize role of professional nursing associations in shaping health care policy	3.76	1.07
3	26	Participate in activities of professional nursing associations	3.68	1.20
4	19	Participate in nursing research and/or implement research findings appropriate to practice	3.66	1.10
5	4	Participate in public policy decisions affecting distribution of resources	3.39	1.22
Trust				
1	9	Seek additional education to update knowledge and skills	3.94	1.07
2	14	Accept responsibility and accountability for own practice	3.93	1.05
3	15	Maintain competency in area of practice	3.89	1.10
4	2	Request consultation/collaboration when unable to meet patient needs	3.85	1.06
5	1	Engage in ongoing self-evaluation	3.58	1.09
Professionalism				
1	8	Initiate actions to improve environments of practice	3.91	1.09
2	7	Promote and maintain standards where planned learning activities for students take place	3.81	1.15
3	6	Establish standards as a guide for practice	3.8	1.14
4	5	Participate in peer review	3.51	1.15
Justice				
1	3	Protect health and safety of the public	4.23	1.05
2	12	Promote equitable access to nursing and health care	3.95	1.11
3	13	Assume responsibility for meeting health needs of the culturally diverse population	3.76	1.10

Note: NPVS-R, Nurses Professional Values Scale-revised; SD, standard deviation.

Table 3. Means and ranking of NPVS-R dimensions' statements

education to update knowledge and skills" received the highest mean within the "Trust" domain with a mean of 3.94 ± 1.07. Moreover, the statement "Engage in ongoing self-evaluation" was ranked last with a mean of 3.58 ± 1.09.

Means for the statements related to the "Professionalism" dimension ranged between 3.91 ± 1.09 for the "Initiate actions to improve environments of practice" statement and 3.51 ± 1.15 for the "Participate in peer review" statement (Table 3).

Finally, the top statement rated by the participants in the "Justice" dimension was "Protect health and safety of the public" as it received a mean of 4.23 ± 1.05. On the other hand, participants rated the statement "Assume responsibility for meeting health needs of the culturally diverse population" as the lowest rated statement with a mean of 3.76 ± 1.10 (Table 3).

3.4. Factors influencing NPVS-R and its subdomains

3.4.1. Age and GPA

The correlation coefficient showed no statistically significant correlation between age and GPA with a total score of NPVS-R and its subdomains.

3.4.2. Gender and type of enrollment

The *t* test results showed that gender and type of students' enrollment (regular vs. bridging) did not affect the means of NPVS-R and its subdomains. These results were supported by the result of multivariate analysis, which revealed that neither gender not enrollment affected the score of the total NPVS-R nor any of its subdomains.

3.4.3. Academic year

Students from various levels of the study revealed statistical differences in the means of the NPVS-R and its 5 subdomains when tested using a one-way ANOVA test (Table 4). Differences were found to be statistically significant between the means of first year students and fourth year students in the total score of NPVS-R (0.006), "Caring" domain ($P = 0.17$), "Trust" domain ($P = 0.002$), "Professionalism" domain ($P = 0.001$), and "Justice" domain ($P = 0.029$). Moreover, there were statistically significant differences in the "Trust" domain between third and fourth year students ($P = 0.032$).

Furthermore, the result of the multivariate analysis revealed that there were significant differences among students from different years of study. The results of Wilk Lambda test = 0.815, $F = 2.47$, and $P = 0.002$.

Academic year	Mean	SD	*P* value
Total score			0.003
First year	3.40	0.91	
Second year	3.98	0.94	
Third year	3.75	0.83	
Fourth year	4.10	0.76	
Caring			0.006
First year	3.47	0.97	
Second year	4.10	1.01	
Third year	3.81	0.86	
Fourth year	4.14	0.78	
Activism			0.019
First year	3.32	0.83	
Second year	3.90	0.97	
Third year	3.58	0.98	
Fourth year	3.92	0.88	
Trust			0.001
First year	3.41	0.95	
Second year	3.92	0.85	
Third year	3.72	0.80	
Fourth year	4.18	0.77	
Professionalism			0.001
First year	3.20	0.97	
Second year	3.80	1.04	
Third year	3.71	0.90	
Fourth year	4.09	0.83	
Justice			0.020
First year	3.55	1.05	
Second year	4.10	1.01	
Third year	3.92	0.89	
Fourth year	4.20	0.81	

Note: NPVS-R, Nurses Professional Values Scale-revised; SD, standard deviation.

Table 4. Scores of NPVS-R and its domains in relation to the academic year

3.4.4. Planning to study nursing

While the ANOVA test did not show any significant differences in the mean of the "Trust" subdomain in relation to students' planning at enrollment time, there were statistically significant differences in the means of the total score of NPVS-R and the other subdomains (Table 5). Similarly, the significance in differences in the activism domain was due to the difference in the means of students who planned to enroll at the faculty of nursing and those who did not know ($P = 0.015$) and between students who did not plan to study nursing and those who did not know ($P = 0.046$).

Plan	Mean	SD	*P* value
Total score			0.220
Planned to enroll	3.90	0.81	
Did not plan to enroll	3.56	0.92	
Did not know	3.11	1.41	
Caring			0.034
Planned to enroll	3.96	0.86	
Did not plan to enroll	3.70	0.98	
Did not know	3.17	1.44	
Activism			0.020
Planned to enroll	3.76	0.89	
Did not plan to enroll	3.40	0.96	
Did not know	2.93	1.49	
Professionalism			0.016
Planned to enroll	3.83	0.90	
Did not plan to enroll	3.38	0.99	
Did not know	3.03	1.47	
Justice			0.005
Planned to enroll	4.06	0.87	
Did not plan to enroll	3.57	1.03	
Did not know	3.17	1.47	

Note: NPVS-R, Nurses Professional Values Scale-revised; SD, standard deviation.

Table 5. Scores of NPVS-R and its domains in relation to students' plan to study nursing at the time of enrollment

4. Discussion

This study aimed to explore the perception of Jordanian undergraduate nursing students regarding professional values and to assess the relationship between the student demographics and their perception of professional values. Results revealed that the mean of the NPVS-R was 3.83. The means for total scores of the NPVS-R subdomains ranged between 3.97 for the "Justice" domain and 3.69 for the "Activism" domain. Most of the demographic variables did not affect the scores of the NPVS-R, except for "Year of study" and "Plan to study nursing" variables.

The results of our study showed a relatively high total score regarding nursing students' perception of professional values (total score 99.68 with a mean of 3.83 out of 5). Our results show a good degree of agreement with many other findings reported concerning the perception of nursing students in different parts of the world.[8,19–26] The high scores of NPVS-R reported in this study could be related to adherence of nursing programs in Jordan to providing undergraduate nursing students with the important standards that contribute to shaping and preparing nursing students for future practice and support in developing and maintaining their professional values.[27] Sibandze and Scafide[28], after an extensive literature review, found that nurses holding a bachelor degree in nursing have higher levels of awareness and application of professional values in their practice than nurses with lower levels of academic education, thus extending strong support for the notion that proper nursing training is indispensable for inculcating in nurses a system of values that would enable them to discharge their duties with the highest efficiency.

While the domain "Justice" received the highest score and the domain "Activism" received the least score from our participants, many other studies that assessed professional values among nursing students reported different results. For example, students reported that the most important domain was "Trust", and that "Activism" was the least important. Participants in the study of Jasemi et al.[23] ranked the domain of trust first, followed by the domain of justice, and activism received the least score. Similarly, results from Green's study[29] revealed that the caring dimension ranked first, followed by the justice dimension, and the domain activism ranked last. This also was noticed among Indonesian students who ranked caring as the first dimension and activism as the last.[19] The domain "Justice" received the highest score from our participants and from Palestinian nursing students.[30] The justice domain is considered the "basis for all professional interactions across all care settings",[16] and it reflects nurses' duty to provide equal care to all patients regardless of their diversity.[8] The researchers believe that "Justice" was rated as the highest domain by Jordanian nursing students because justice is one of the basics of Islam, which is the most common faith in Jordan. Therefore, it is natural for these students to deal with their clients based on justice and to avoid discrimination among patients.

The "Caring" dimension was rated as the second most important domain of NSV-R by our participants. This domain was rated by many other studies as the first or second most important domain.[17,27, 31–33] Caring includes "having a concern or regard for that which affects the welfare (of another)," and it is considered central to nursing practice.[16] Begum and Slavin[34] added that nurturing a "caring" attitude among nursing students is important as this is the first place for students to learn about the essence and the most significant values of their profession, which is considered as the most fundamental values and commitments of the nurse in the ANA code of ethics.[18] Moreover, Allari et al.[27] argued that assignment of high scores by nursing students to items related to the "Caring" dimension could be related to the fact that caring is considered by students as the major role of nurses and the spirit of nursing practice.

The present authors also believe that nursing programs could have an influence on shaping nursing students' caring values, since students are evaluated mostly based on their skills of caring during their clinical practice.[27]

What merits attention, from the results of all of the previously mentioned studies as well as the result of our study, is that the domains "Activism" and "Professionalism" received the lowest scores. Jasemi et al.[23] tried to explain this observation and mentioned that this could be because the "Activism" domain is not directly related to nursing students' clinical practice. We add that the absence of most items of these domains from the evaluation criteria for evaluating students during their clinical practice can play a causative role for the fact that these domains obtained relatively low scores from participants. In spite of their importance, it seems that the components of this item (i.e., participating in research activities and professional association) would be valued more by nurses who are involved with clinical practice and nursing education rather than nursing students who focus more on gaining skills during their study period and passing their exams.

When it comes to the "Professionalism" domain, which received the lowest score from our participants, the possible explanation is that nursing students do not feel that activities within this domain are of concern to them. It sounds to them as if these activities are limited to nurses, especially those in leadership positions and those involved in nursing education. The item "Participation in peer review" received the lowest score (3.51) of all the NPVS-R items, which was the case in the studies of Abu-El-Noor et al.,[30] Jasemi et al.,[23] and Allahyari Bayatiani et al.[35] too.[36] Jasemi et al.[23] explained that this could be attributed to misconceptions among nursing students about supervision and evaluation of the performance of their colleagues. Also, they mentioned that this could be related to the fear of students "over creating an inappropriate workplace environment due to peer supervision and evaluation." We also believe that students would like to avoid "peer evaluation" as they are apprehensive that their colleagues' feelings would be hurt if they were to give them negative feedback.

It is also worth noticing that the item "Maintain the confidentiality of patient" received the highest score in our study and other studies.[20,23] This reflects the importance that nursing students attach to providing care within the codes of nursing ethics. Our findings also revealed that the items "Safeguard patient's right to privacy," "Practice guided by principles of fidelity and respect for a person," and "Protect moral and legal rights of patients" received the second highest to fourth highest scores, all of which are also related to ethics, thus lending credence to our argument.

Our findings should alert nursing educators to pay more attention to the importance of promoting the values related to "Activism" and "Professionalism" among nursing students. Furthermore, Jasemi et al.[23] argued that enhancing the roles of peer supervision and providing peer review to colleagues would contribute to improving nursing students' performance, raising self-awareness, and improving the quality of nursing care. We can also add that in paying more attention to the items of these domains, nursing educators would be taking active steps toward preparing better nursing leaders and researchers for the future. Nonetheless, these results must be interpreted with caution because of one limitation related to the sample size that is relatively small, but it is representative in the same time also convenient sampling method that was used in this study, which may limit the generalizability of the results.

5. Conclusions

Understanding B.Sc. nursing students' perception of the relevance of professional values and the difficulties faced by them in applying these would be vital in enlightening nursing educators about areas for improvement in nursing education. This study identified the most and least essential components of professional values from the perspectives of Jordanian undergraduate nursing students. The findings provide implications for nursing education and research on nursing students' views of professional values. The results of this study should alert nursing educators to pay more attention to the importance of promoting the values related to "Activism" and "Professionalism" among undergraduate nursing students.

Ethical approval

Ethical approval was granted by the Institutional Review Board of the university understudy (Approval №. ف/2/2020; dated 15 June 2020).

Conflicts of interest

All contributing authors declare that no conflicts of interest exist.

Authors' contributions

RA, primary author, confirms contribution in study conception and design, data collection, interpretation of results, and draft manuscript preparation. NA confirms contribution to the paper in the following areas: data collection, analysis, interpretation of results, and

draft manuscript preparation. MA confirms contribution to the paper in the following areas: data collection, analysis, interpretation of results, and draft manuscript preparation. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

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