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Nurses' knowledge and related factors towards professional ethics: A cross-sectional study

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Abstract

This study aimed to evaluate the nurses' knowledge and related factors towards professional ethics. This cross-sectional study was carried out among nurses from Guilan University of Medical Sciences in Rasht, Iran. The research employed a systematic stratified random sampling method to select its samples. Data collection was conducted using a three-part instrument, consisting of questionnaires addressing demographic information. Moreover, the tool gauged participants' knowledge of professional ethics and their adherence to these principles. A total of 354 nurses participated in the present study. The nurses had an average age of 34.7 (SD=8.1) years. The average score of knowledge of professional ethics in nurses was 89.14 (SD=15.3) and the average score of compliance with ethical aspects was 105.20 (SD=56.16). Also, 92.4% of the research samples had good ethical knowledge. In terms of the status of compliance with aspects of professional ethics, 83.9% of the research samples had favorable compliance status. Also, the average score of knowledge of professional ethics and compliance with ethical aspects in nurses had a positive and significant correlation with each other (r=0.424, P=0.001). Therefore, while underscoring the significance of educational interventions aimed at enhancing the knowledge base of practicing nurses, there is potential to strategize actions aimed at advancing both the knowledge level and ethical compliance within the nursing realm. These efforts can play a pivotal role in averting moral dilemmas and conflicts experienced by nurses.

Keywords: Professional Ethics, Knowledge, Practice, Nursing, Nurses.

1 │ Introduction

Legal and moral principles play a crucial role in governing interpersonal interactions and behavior, holding undeniable significance across all societal connections [1]. Their significance is particularly pronounced within the nursing vocation, where the core objective revolves around restoring and safeguarding human health. In this context, adherence to both legal mandates and ethical frameworks, coupled with a sense of duty and answerability, becomes imperative for nurses [2]. Present circumstances have intensified the level of professional obligation expected from nurses, accentuating the necessity for them to be answerable for their actions. Notably, the attribute of being answerable, indicating autonomy and authority in fulfilling responsibilities, is frequently intertwined with the establishment of legal liability [1].

A nursing mistake can yield diverse repercussions for both the patient (including injuries, emotional distress, and added treatment expenses) and the nurse (such as diminished professional reputation, stress, feelings of despair, guilt, and legal ramifications). Furthermore, aside from generating individual challenges for nurses, these errors can adversely impact the esteemed

professional standing of nursing, potentially leading to a decline in the stature of the nursing vocation [3, 4].

Numerous medical errors stem from a lack of understanding regarding treatment protocols. This deficiency not only inflicts physical, psychological, and financial harm upon patients but also erodes their trust in the healthcare team responsible [5]. Familiarity with regulations stands as the foremost shield against legal pitfalls [2, 6]. Research indicates a positive link between knowledge of professional guidelines and nurses' performance, underscoring that adhering to the best and safest practices grounded in such knowledge can mitigate the likelihood of legal entanglements [2]. Consequently, the significance of nurses' grasp of professional standards and regulations in averting medical errors gains heightened clarity [6].

Divergent outcomes emerge from studies exploring nurses' awareness of and adherence to professional ethics. One study revealed that 86.4% of participants were knowledgeable about nursing ethics [7]. However, in Nepal, contrasting research indicated that most participants possessed a limited understanding of professional ethics [8]. Pertaining to ethical conduct, distinct investigations yielded varying outcomes. Several studies unveiled that a majority of participants upheld nursing ethics [7, 9]. Conversely, contrasting findings from another study indicated that merely 50% of participants exhibited commendable moral behavior [8].

Given the interconnection between the aforementioned errors and their ramifications, including patient harm or fatality, psychological distress, financial setbacks, and a nurse's diminished professional reputation, the necessity for comprehensive data in this realm becomes imperative. Consequently, this study aims to examine the current state of nurses' familiarity with professional ethics and the factors linked to it.

2 │ Methods

2.1 │ Study design and subjects

This cross-sectional study was carried out among nurses from Guilan University of Medical Sciences in Rasht, Iran. Inclusion criteria comprised being employed full-time within the research setting for the three months before sampling, possessing a minimum of an associate's degree, and providing a signed consent form to partake in the study. The study's ethical clearance was granted by the ethics committee of Guilan University of Medical Sciences in Iran (IR.GUMS.REC.1394.61).

2.2 │ Data collection

The research employed a systematic stratified random sampling method to select its samples. The participants were duly informed about the study's objectives by the researchers, who also obtained their consent for participation. Data collection was conducted using a three-part instrument, consisting of questionnaires addressing demographic information (such as gender, age, marital status, education level, ethical familiarity related to their profession, ethical challenges encountered within their field, authoritative resources sought in cases of ethical issues, history of interactions with ethical and occupational bodies, work history, shift schedule, job title, and awareness of the presence of an ethics committee in the workplace). Moreover, the tool gauged participants' knowledge of professional ethics and their adherence to these principles.

2.3 │ Questionnaire

2.3.1 │ Knowledge of professional ethics

The questionnaire assessing knowledge of professional ethics was structured into three tiers denoting low knowledge (scoring 0 to 6.99), moderate knowledge (scoring 7 to 14), and high knowledge (scoring 14 to 20) [7]. Questions concerning adherence to ethical standards in nursing provided response options on a 7-point Likert scale ranging from "always" to "never". Scores were assigned as 0 for "always" and 6 for "never", except statement 19, which was inversely scored to reflect ethical compliance. The assessment of compliance with ethical aspects within the profession (ranging from 0 to 120) was categorized into three levels: unfavorable (0-33% of the score), relatively favorable (34-66% of the score), and favorable (67-100% of the score) [9]. The tool's scientific reliability was assessed through the retest approach. The correlation between scores from the knowledge assessment and the ethical compliance evaluation through test-retest was calculated and found to be 93.6% and 96.7%, respectively. Furthermore, the reliability of the ethical knowledge questionnaire was evaluated using the Koder Richardson 20 test, yielding a confirmed value of 91.4%.

2.4 │ Statistical analysis

The collected data were subjected to analysis using the SPSS software package (version 16.0, SPSS Inc., Chicago, IL, USA). Descriptive statistics included mean (standard deviation (SD)) for continuous variables and frequency (percentage) for categorical variables. Normality checks on the data revealed a lack of normal distribution, leading to the adoption of non-parametric statistical tests. Spearman's correlation test was employed to assess the

correlation coefficient between knowledge scores and the research variables. Agreement between these scores was evaluated using the Kappa coefficient. To examine the relationship between demographic variables and compliance status as well as knowledge of the research variables, the chi-square test and Fisher's exact test were utilized. The logistic regression model was employed to identify factors associated with knowledge and ethical compliance status. The Backward LR method was utilized to determine the coefficients of the model. In this model, a score below the mean for the research variables among the study participants was treated as zero, while a score above the mean was designated as one. All relevant variables were included in the model if their significance level was less than 0.1. All statistical analyses were conducted with two-sided tests, and a significance level of 0.05 was adopted.

3 │ Results

3.1 │ Participants' characteristics

As shown in Table 1, a total of 354 nurses participated in the present study. The nurses had an average age of 34.7 (SD=8.1) years. Within the participant group, 95.2% identified as female, 73.2% were married, and 94.6% held a bachelor's degree. Among them, 28.5% had less than five years of work experience, 71.6% worked in rotating shifts, 75.0% were categorized as rotating nurses, and 37.6% were employed in emergency and critical care departments.

3.2 │ Nurses' knowledge towards professional ethics

The average score of knowledge of professional ethics in nurses was 89.14 (SD=15.3) and the average score of compliance with ethical aspects was 105.20 (SD=56.16). Also, 92.4% of the research samples had good ethical knowledge. In terms of the status of compliance with aspects of professional ethics, 83.9% of the research samples had favorable compliance status. Also, the average score of knowledge of professional ethics and compliance with ethical aspects in nurses had a positive and significant correlation with each other (r=0.424, P=0.001).

3.3 │ Factors associated with nurses' knowledge towards professional ethics

As shown in Table 2, the knowledge status of nurses working in fixed morning shifts was significantly better than active nurses in rotating shifts (P=0.031). The knowledge status of nurses with medium to high levels of knowledge regarding ethics in nursing was significantly better than those with no knowledge or little knowledge (P=0.017). None of the other demographic variables showed a significant difference in the mining of nurses' professional ethics knowledge (P>0.05). Also, none of the personal-occupational variables of the nurses had a statistically significant relationship with their ethical observance status (P>0.05).

As shown in Table 3, the final logistic regression model showed the predictive power of age variables (P=0.001) and history of being summoned to legal and police authorities (P=0.04) in the higher score of knowledge of professional ethical aspects. In such a way that nurses who had a history of being summoned to legal and disciplinary authorities had 4.05 times more ethical knowledge score (95%CI=1.06 to 15.41, OR=4.05). In addition, the samples of the age group of 30-40 years old had 2.5 times more ethical aspects knowledge score than the age group of 20-30 years old (95%CI=1.48 to 17.48, OR=2.5). Also, people who were in the age group above 40 years had 2.42 times higher ethical knowledge scores than the age group of 20-30 years (95%CI=1.33 to 4.39, OR=2.42). The final model of logistic regression has shown the predictive power of the knowledge score of ethical aspects of the profession (P=0.0001) and the history of involvement in ethical problems of the profession in a higher score of observing the ethical aspects of the profession. Nurses who had a better ethical aspects knowledge score had 1.45 times more professional ethical aspects compliance score than samples with a low score (95%CI=1.225 to 1.723, OR=1.45). Also, nurses who had a history of ethical problems in their profession had a score of 0.19 times lower than the nurses who did not have these problems (95%CI=0.049 to 0.806, OR=0.19).

4 │ Discussion

Based on the findings of this study, a majority of the participating nurses demonstrated a commendable knowledge of professional ethics. Moreover, a significant number of them exhibited favorable observance of the various facets of professional ethics.

In their respective research, Mohajal Aghdam et al. demonstrated that a considerable proportion of the participants possessed a strong knowledge of Iranian nursing ethics [7]. Conversely, Shrestha & Jose's study revealed that merely 45% of respondents exhibited suitable ethical knowledge [8]. Hariharan et al's investigation also underscored that a substantial majority (over 90%) lacked familiarity with the scrutinized ethical codes [10]. The potential rationale for the discordance between these study outcomes and the present research findings might stem from variations in educational systems and the application of ethical guidelines across different countries, including Iran. Notably, diverse regions, both within a nation and across countries, could exhibit divergent approaches to imparting nursing ethics codes

through university programs and professional development courses.

Table 1. Demographic characteristics of nurses (N=354).

	Frequency (%) or Mean (SD)
Age	34.7 (SD=8.1)
<31	131 (37.0)
31 to 40	143 (40.4)
>40	80 (22.6)
Gender	
Male	17 (4.8)
Female	337 (95.2)
Marital status	
Single	95 (26.8)
Married	259 (73.2)
Level of education	
BSN	335 (94.6)
MSN or higher	19 (5.4)
Work history (year)	
<5	101 (28.5)
10 to 5	109 (30.8)
11 to 20	83 (23.4)
>21	61 (17.2)
Work shift	
Morning fixed	98 (28.4)
Rotating	247 (71.6)
Job position	
Rotating nurse	258 (75.0)
Head nurse	45 (13.1)
Superviser	24 (7.0)
Staff nurse	17 (4.9)
Current department name	
Clinic	8 (2.3)
Emergency and critical care	133 (37.6)
Internal	97 (27.4)
Surgery and operating room	93 (26.3)
Nursing office	23 (6.5)
Existence of ethics committee in the workplace	
Yes	193 (56.8)
No	147 (43.2)
The necessity of ethics committee	
Yes	131 (92.9)
No	10 (7.1)
The level of knowledge in the field of ethical aspects of the nursing profession	
Non or low	58 (16.4)
Moderate or high	296 (83.6)
A history of being involved with the ethical problems of the nursing profession	
Yes	9 (2.5)
No	345 (97.5)
Accepted authority in case of professional ethical problems	
Nursing administrative authorities	290 (81.9)
Non-nursing administrative authorities	62 (17.5)
Jurisdictions	2 (0.6)

Values given as Mean (SD) for continuous variables and frequency (%) for categorical variables.

Table 2. Nurses' knowledge and related factors towards professional ethics (N=354).

	Level of knowledge or observance			P-value
	Low (%)	Medium (%)	High (%)	
Knowledge of ethical aspects				
Work shift				
Morning fixed	0 (0)	2 (2.0)	96 (98.0)	0.031
Circulating	16 (6.5)	7 (2.8)	224 (90.7)	
The level of knowledge in the field of ethical aspects of the nursing profession				
Non or low	4 (6.9)	5 (8.6)	49 (84.5)	0.017
Moderate or high	12 (4.1)	6 (2.0)	278 (93.9)	

Values given as frequency (%) for categorical variables.

P-value was obtained with Fisher exact test.

Table 3. Regression coefficients of factors related to the state of knowledge and compliance with professional ethical aspects (N=354).

	B	SE	OR	95%CI		P-value
				Lower	Upper	
Knowledge of ethical aspects						
Age group 30-40 years against 20-30 years	0.912	0.264	2.488	1.483	4.174	0.001
Age group above 40 years versus 20-30 years	0.885	0.303	2.423	1.337	4.390	0.004
Awareness of the existence of the ethics committee in the hospital	0.419	0.234	1.521	0.962	2.405	0.073
Record of summons to legal and police authorities	1.399	0.682	4.051	1.065	15.410	0.040
constant value (effect of unknown factors)	-1.975	0.701	0.139	-	-	0.005
Compliance of ethical aspects						
Ethical knowledge score	0.374	0.078	1.453	1.225	1.723	<0.001
The history of professional ethical problems	-1.612	0.713	0.199	0.049	0.806	0.024
constant value (effect of unknown factors)	-6.362	1.411	0.002	-	-	<0.001

The findings of this study highlight a significant association between nurses' average knowledge scores in ethical dimensions of their profession and their observance of these ethical aspects. This discovery stands in stark contrast to the outcomes of Shrestha & Jose's research, which suggested the absence of a notable link between knowledge and the ethical conduct of their study participants [8]. Behavior is essentially an outcome of decisions influenced by awareness and inclination. In simpler terms, individuals typically gather information on a subject before forming a predisposition through cognitive and emotional processes, ultimately manifesting as behavior. Knowledge or awareness triggers a person's curiosity and augments their decision-making capability by impacting their thoughts and actions. Many human challenges stem from a lack of knowledge, a premise particularly relevant in healthcare matters. Notably, awareness serves as a pivotal factor to address when attempting to induce behavioral change. Elevating awareness levels can potentially enhance individuals' proficiency, empowering them to fulfill their professional obligations more effectively [5].

Based on the findings derived from the study, a noteworthy correlation was established between the ethical knowledge of nurses and their assigned shift work. Specifically, active nurses on the morning shift exhibited significantly higher ethical knowledge than their counterparts on rotating shifts. This outcome can be attributed to several factors such as an increased likelihood of holding managerial roles, participation in hospital

committees, and possessing more extensive work experience among morning shift nurses. These circumstances are thought to have contributed to this group's heightened knowledge of professional ethics. Nonetheless, it's worth noting that Mohajal Aghdam et al.'s research yielded differing results, indicating elevated ethical knowledge among nurses engaged in night shift work [7]. The smaller sample size of morning shift workers, when contrasted with the rotating shift group, calls for a cautious interpretation of this finding and underscores the necessity for further studies with balanced representation across shift types. Furthermore, the study established a statistically significant link between the ethical knowledge status of the research subjects and their proficiency in the domain of nursing ethics. Notably, individuals reporting a moderate to high level of knowledge demonstrated superior ethical knowledge compared to those indicating lower knowledge or limited familiarity with ethical principles. These outcomes underscore the alignment between the participants' self-reported confidence in their ethical awareness and their actual ethical knowledge levels.

Based on the findings obtained from this study, the final logistic regression model has highlighted the predictive influence of age-related variables and the history of legal and police summons on the enhanced knowledge scores in professional ethical aspects. Notably, nurses with a history of legal and disciplinary summonses demonstrated higher ethical knowledge scores in comparison to their counterparts without such histories. This

phenomenon suggests that encounters with legal and law enforcement authorities contribute to a deeper understanding of professional laws and regulations. Furthermore, the interconnectedness of legal and moral foundations becomes evident, where legal rules often have their origins in moral principles. Additionally, individuals belonging to the age group of 30-40 years exhibited superior ethical knowledge scores when compared to those in the age range of 20-30 years. Moreover, participants aged above 40 years also displayed higher ethical knowledge scores than those in the 20-30 age group. This finding contrasts with the results of Aliyu et al.'s study conducted in 2015, titled "Knowledge, attitude and practice of nursing ethics and law among nurses" where they concluded that age and moral awareness among nurses lacked a significant relationship [11]. Similar conclusions were reached by Anup et al. in their research, which indicated no statistically significant connection between ethical knowledge and the age of doctors and dentists [12].

Based on the results garnered, the ultimate logistic regression model has demonstrated that both the knowledge scores about professional ethical dimensions and the history of engagement in professional ethical issues possess predictive capabilities for achieving higher observance scores in terms of professional ethical aspects. Those individuals who exhibited a heightened knowledge of ethical aspects attained an equivalent level of observance of the ethical dimensions of their profession, surpassing the compliance scores of those with lower knowledge. Furthermore, participants who had previously encountered ethical predicaments within their profession demonstrated a greater propensity for complying with ethical aspects compared to those who had not faced such challenges.

4.1 │ Limitations

Similar to other research endeavors, this study also encountered certain limitations. Factors such as personal mental predispositions, particularly those linked to the nursing vocation, could have influenced participants' responses to the questionnaire. Additionally, variations in personality and culture among individuals, despite the study's ethical underpinnings, might have impacted the precision and accuracy of their ethical responses. These variables are beyond the researcher's control.

4.2 │ Recommendations for future research

Engaging in longitudinal investigations that track nurses over an extended duration can furnish valuable insights into the progression of their understanding and practice of professional ethics. This longitudinal approach offers a comprehensive perspective on the diverse factors that shape ethical conduct. Furthermore, the development and execution of focused interventions aimed at augmenting nurses' grasp of professional ethics and their commitment to ethical benchmarks hold substantial potential. These interventions might encompass initiatives like training modules, workshops, or educational endeavors targeting the enhancement of ethical decision-making proficiencies.

5 │ Conclusions

In general, the findings of this study indicate a noteworthy proficiency among nurses in terms of their knowledge of professional ethics. Additionally, the degree of observance to ethical considerations within the nursing domain is deemed satisfactory. Consequently, while underscoring the significance of educational interventions aimed at enhancing the knowledge base of practicing nurses, there is potential to strategize actions aimed at advancing both the knowledge level and ethical compliance within the nursing realm. These efforts can play a pivotal role in averting moral dilemmas and conflicts experienced by nurses.

Authors' contributions

Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work: MPM, MB, EKL, MJ, MSS; Drafting the work or revising it critically for important intellectual content: MPM, MB, EKL, MJ, MSS; Final approval of the version to be published: MPM, MB, EKL, MJ, MSS; Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved: MPM, MB, EKL, MJ, MSS.

Ethics approval and consent to participate

The research was approved by the ethics committee of Guilan University of Medical Sciences, Rasht, Iran (IR.GUMS.REC.1394.61). After obtaining permission from the hospital administration, the researchers visited the hospital. Verbal informed consent was obtained from participants.

Competing interests

We do not have potential conflicts of interest with respect to the research, authorship, and publication of this article.

Availability of data and materials

The datasets used during the current study are available from the corresponding author on request.

Using artificial intelligent chatbots

None.

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