Relationship between Pediatric Nurses' Professional Values and their Attitudes towards Patient Safety

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Abstract

Introduction: This study was conducted to determine whether pediatric nurses' professional values affect their attitudes towards patient safety.

Methods: The study was a descriptive cross-sectional study and it was carried out with 101 nurses working in pediatric clinics of a state hospital in Turkey in 2015. Data were collected using the Personal Information Form, the Nurses Professional Values Scale and the Safety Attitudes Questionnaire.

Results: A positive correlation was determined between the scores obtained from the Safety Attitudes Questionnaire and the scores obtained from the Nurses Professional Values Scale (r: .315, p: .001). There was a significant positive correlation between the Perceptions of Management subscale of the Safety Attitudes Questionnaire and the Nurses Professional Values Scale (r: .706), and its Activism (r: .796), ANA (American Nurses Association) Ethical Code 1 (r: .708), and ANA Ethical Code 11 (r: .772) subscales. There was a moderate positive correlation between the Perceptions of Management subscale of the Safety Attitudes Questionnaire and the Nurses Professional Values Scale (r: .603), and its ANA Ethical Code 4 (r: .530)

Conclusion: Pediatric nurses' professional values affect their attitudes towards patient safety.

Keywords: Professionalism • Patient safety • Nursing • Pediatrics

Introduction

Professionalism is defined as "the skill, competence, and character expected of members of highly trained occupations, including physicians" [1]. Theoretically the health professionals promise that they will always act professionally, adhere to ethical principles and establish respectful communication with patients. However, in actual life, they do not know how to behave professionally especially in stressful situations. To eliminate such problem, professionalism should be included in health education and taught to health professionals [2].

Until recent years, topics such as professionalism and patient safety were not included in health undergraduate education significantly. Instead, it was assumed that students' awareness of these issues was sufficiently raised and they were helped to develop appropriate professional behaviors. Over the past ten years, a new paradigm has emerged in the health education. Patients and the community expect and deserve more [2]. Duff described the desirable character attributes of professionalism as integrity, honesty, accountability, responsibility, and humility. According to Duff, although a person's basic traits cannot be changed, certain behaviors of his/hers can be modified [3]. For example, values are gained in the early stages of life; however, they can be oriented with educational strategies while professional formation is acquired [4,5].

While a nurse provides healthcare for a healthy person or a patient, he/she may face with an ethical dilemma when making an appropriate decision, so he/she needs some guidance. These are the ethical principles and professional values. The American Nurses Association Code for Nurses defines the basic values of nursing and fundamentals [4]. These codes are; the nurse provides services with respect for human dignity and the uniqueness of the client, unrestricted by considerations of social or economic status, personal attributes, or the nature of health problems (Ethical Code 1). The nurse safeguards the client's right to privacy by judiciously protecting information of a confidential nature (Ethical Code 2). The nurse acts to safeguard the client and the public when health care and safety are affected by the incompetent, unethical, or illegal practice of any person (Ethical Code 3). The nurse assumes responsibility and accountability for individual nursing judgments and actions (Ethical Code 4). The nurse maintains competence in nursing (Ethical Code 5). The nurse exercises informed judgment and uses individual competence and qualifications as criteria in seeking consultation, accepting responsibilities, and delegating nursing activities to others (Ethical Code 6). The nurse participates in activities that contribute to the ongoing development of the profession's body of knowledge (Ethical Code 7). The nurse participates in the profession's efforts to implement and improve standards of nursing (Ethical Code 8). The nurse participates in the profession's efforts to establish and maintain conditions of employment conducive to high quality nursing care (Ethical Code 9). The nurse participates in the profession's effort to protect the public from misinformation and misrepresentation and to maintain the integrity of nursing (Ethical Code 10). The nurse collaborates with members of the health professions and other citizens in promoting community and national efforts to meet the health needs of the public (Ethical Code 11) [5]. Professional values which form the basis of nursing practices guide nurses when they interact with patients, colleagues, and the public [6]. Professional values adopted by the nursing profession ensure the development of the standards of patient care. Quality care is the sign of the professional values nurses have [4]. One of the most important determinants of quality care is the patient safety.

Preventable medical errors that occur in the clinical setting is a worldwide vital issue in terms of the health care system [7]. Patient safety

is all the measures taken in health care facilities in order to prevent harm to the people likely to be caused by health care providers. Patient safety is the primary and indispensable requirement of a quality health care. The purpose of patient safety is to ensure safety by creating an environment having a physical and psychological positive effect on patients, their relatives and health professionals. The main objective here is the prevention of errors from occurring during the provision of health services, and the establishment of a system to protect patients from being harmed and to eliminate the possibility of error [8,9]. Ensuring a safe environment for patients who are to receive healthcare services and protecting them from any harmful condition is the responsibility of both the hospital administration and members of the health care team [10].

Compared with adult patients, effects of medical errors and patient harm on children differ in various ways. Firstly, children are more at risk due to such factors as children's developmental characteristics and dependence on parents and other caregivers, and differences in the patterns of diseases [11]. Children hospitalized in intensive care units are particularly at greater risk due to lack of sufficient technological support, communication and fragile physiology [12].

Errors in the prescription, administration and management of drugs constitute a large proportion of preventable medical errors in children. Computer-assisted drug order entry systems designed for adults do not have sufficient efficacy in reducing pediatric medical errors. In order to determine the best strategy to reduce avoidable harm in children, there is a need for further research on pediatric patient safety. The causes and solutions of patient safety issues for children are quite varied [11,13] categorized these factors under three headings: (a) physical characteristics, (b) developmental problems and (c) legal issues. Based on these three factors, a general patient-safety approach which includes the following 3 main strategies has been developed: (a) understanding the epidemiology of errors and having sources of error identification, (b) understanding the scientific facts behind improvement, including the safety culture, and (c) having a source of basic patient-safety solutions [13].

The literature includes studies on nurses' professional values [14-21] and nurses attitudes towards patient safety [22-25] conducted independently of each other. However, our search for studies investigating the relationship between professional values and patient safety demonstrated a gap in the literature. This study was planned to investigate whether pediatric nurses' attitudes towards patient safety are related with their professional values. The results of the study are expected to shed light on the understanding of scientific rationales to create a culture of patient safety as stated above by Woods et al. [13].

This study was aimed at investigating the relationship between pediatric nurses' attitudes towards patient safety and their professional values.

Materials and Methods

Study design

This study was designed as a descriptive cross-sectional study.

Setting and sample

The study was conducted at the pediatric clinics of a training and research hospital in Turkey. At the time the study was conducted (2015), 205 pediatric nurses were employed in the pediatric inpatient clinics of the Hospital. Of these nurses, those who volunteered to participate in the study were included in the study. When the data were collected, the number of the nurses was less than normal due to factors such as maternity leave, annual leave, unpaid leave and assignments to other health institutions. Thus, the number of the nurses who accepted to participate in the study was 107. However, six of them did not complete the questionnaires appropriately. Therefore, the study was conducted with 101 nurses. The participation rate was 49.27%.

The researchers collected the data through face-to-face interviews using the survey method. It took 20-25 minutes to fill in the questionnaires.

Ethical considerations

The permission to carry out the study was obtained from the Ethics Committee of the Tepecik Training and Research Hospital (Decision Date: March 19, 2015, decision number: 29). Verbal consent was obtained from the nurses participating in the study. Confidentiality and anonymity of participants' names and answers to the questionnaires are provided.

Measurements/Instruments

Questionnaire items: To collect the data, the following forms were used: the Personal Information Form, the Nurses Professional Values Scale and the Safety Attitudes Questionnaire.

Personal information form: The form consists of 12 items questioning the socio-demographic characteristics of the participants such as age, gender, whether they chose the nursing profession willingly, the nursing school they last graduated, the nursing school they attend at present, the length of the service as a nurse, the length of the service as a pediatric nurse, the clinic they currently work in, the post they work in as a nurse, the number of hours they work per week, the type of work, the number of patients they look after per day.

Nurses professional values scale –NPV: The scale developed by Darlene Weis and Mary Jane Schank has 44 items. The scale has two parts: (1) professionals values (31 items), (2) ethical values (13 items). The professional values part includes 5 subscales: Human dignity (11 items), Responsibility (7 items), Taking Action (5 items), Safety (4 items), Autonomy (4 items). The scale is a 5-point Likert-type scale. The total score to be obtained from the scale ranges from 44 to 220. A high score indicates that nurses pay more attention to professional and ethical values. The Turkish validity and reliability study of the scale was conducted by Orak and Alpar in 2012. The item-total scores of the scale ranged between 0.36 and 0.66. Cronbach's alpha coefficient was 0.95 [6].

Safety attitudes questionnaire-SAQ: The scale was developed by Sexton et al. and its Turkish validity and reliability study was conducted by Baykal et al. [26]. The scale consists of 46 items and the following 6 subscales: Job Satisfaction (11 items), Teamwork (12 items), Safety Climate (5 items), Perceptions of Management (7 items), Stress Recognition (5 items) and Working Conditions (6 items). The item-total scores of the scale ranged between 0.35 and 0.58. Cronbach's alpha coefficient was 0.95 for the overall scale and respectively 0.85, 0.86, 0.83, 0.77, 0.74, and 0.72 for the subscales [26].

Data analysis

The data obtained from this study were analyzed using the SPSS 21.0 statistical software. Sociodemographic characteristics of the nurses participating in the study were given in numbers and percentage distribution. The relationship between the Nurses Professional Values Scale and the Safety Attitudes Questionnaire was investigated with the Pearson Product-Moment Correlation Coefficient score (Pearson's r). The statistical significance level was set at 0.05.

Results

The mean age of the participants was 28.92 ± 5.82 (min:17 and max:44). Of them, 94.1% (n: 95) were female, 68.3% (n:69) had a bachelor degree, 47.5% (n:48) worked in nursing for 1-5 years, 60.4% (n:61) worked as a pediatric nurse for 1-5 years, 41.6% (n:42) were working in the Neonatal Intensive Care Clinic, and 73.3% (n:74) were working night and day shifts alternately (Table 1).

There was a statistically significant difference between the Graduated School and Nurses Professional Values Scale Total Scores, NPV Taking Action subscale scores and NPV Autonomy subscale scores (p: .01, p: .003, p: .022). The scores of Bachelor's Degree and Postgraduate Degree are higher. There was a statistically significant difference between the NPV Safety subscale scores and working year as a nurse (p: .03). NPV Safety subscale scores of nurses who worked for 5 years or more are found to be lower than nurses who worked shorter (Table 2).

Table 1. Socio-demografic data (n: 101).

Socio-demografic data	n	%	Socio-demografic data	n	%
Gender			**Graduated School**		
Female	95	94.1	Vocational Nursing High School	18	17.8
Male	6	5.9	Vocational Nursing School (two years after high school)	10	9.9
			Bachelors Degree in Nursing	69	68.3
			Master Degree in Nursing	4	4.0
Continued Education			**Working year as a pediatric nurse**		
No	87	86.1		11	10.9
Yes*	14	13.9	Less than 1 year	61	60.4
			1-5 years	24	23.8
			6-10 years	5	5.0
			More than 11 years		
Working year as a nurse			**Unit**		
Less than 1 year	5	5.0	NICU	42	41.6
1-5 years	48	47.5	PICU	26	25.7
6-10 years	27	26.7	Pediatric ER	4	4.0
			Pediatric Surgery Unit	5	5.0
More than 11 years	21	20.8	Milquetoast Unit	6	5.9
			Pediatric Internel Disease Unit	15	14.9
			Pediatric Oncology Unit	3	3.0
Duty			**Manner of work**		
Chief Nurse	5	5.0	Daytime	18	17.8
Clinic Nurse	96	95.5	Nighttime	9	8.9
			Daytime+Nighttime	74	73.3

Table 2. Socio-demographic variables with safety attitudes questionnaire, nurses professional values scale and ethical codes.

	NPV Taking Action	NPV Safety	NPV Autonomy	NPV Total Score	SAQ Perceptions of Management	SAQ Stress Recognition	Ethical Code 4	Ethical Code 5	Ethical Code 6	Ethical Code 7	Ethical Code 8	Ethical Code 9
Graduated School												
VNHS+VNS (n: 28)	17.3 ± 3.2	15.1 ± 2.2	14.4 ± 3.0	163.4 ± 24.9	26.3 ± 6.6	14.0 ± 4.3	14.9 ± 2.3	14.6 ± 2.5	14.4 ± 2.5	14.7 ± 2.8	14.8 ± 2.7	15.2 ± 2.3
BDN+MDN (n: 73)	19.6 ± 7.1	15.9 ± 2.5	16.4 ± 2.7	177.7 ± 27.8	28.9 ± 8.3	14.1 ± 5.1	16.2 ± 2.3	15.7 ± 2.3	16.1 ± 4.0	16.3 ± 4.0	15.9 ± 2.6	16.3 ± 2.3
Analysis: MWU	723.0 p: 0.022	836.5 p>0.05	638.0 p: 0.003	684.0 p: 0.01	732.0 p: 0.027	981.0 p>0.05	719.5 p: 0.020	715.0 p: 0.019	694.0 p: 0.012	717.5 p: 0.020	766.0 p: 0.050	747.5 p: 0.036
Continued Education No(n: 87) Yes (n: 14)	19.1 ± 6.8 18.2 ± 2.4	15.7 ± 2.5 15.1 ± 2.4	15.9 ± 3.0 15.5 ± 2.7	174.8 ± 28.4 167.2 ± 22.1	28.4 ± 8.4 26.6 ± 4.2	13.5 ± 4.0 17.5 ± 7.8	15.9 ± 2.4 15.0 ± 2.2	15.5 ± 2.5 14.6 ± 2.0	15.8 ± 3.9 14.7 ± 2.3	16.1 ± 4.0 14.6 ± 2.0	15.6 ± 2.7 15.3 ± 2.5	16.0 ± 2.4 15.8 ± 2.2
Analysis: MWU	589.0 p>0.05	492.5 p>0.05	561.0 p>0.05	511.0 p>0.05	541.5 p>0.05	409.5 p=0.049	475.0 p>0.05	457.0 p>0.05	498.0 p>0.05	440.5 p>0.05	558.5 p>0.05	589.0 p>0.05
Working year as a nurse 1day -5 years (n: 72) 5 years+ (n: 29)	20.0 ± 8.2 17.8 ± 3.1	16.2 ± 2.6 15.0 ± 2.3	16.2 ± 2.88 15.5 ± 3.0	178.6 ± 29.8 168..4 ± 24.3	29.4 ± 9.4 26.9 ± 5.7	14.3 ± 5.6 13.8 ± 3.9	16.1 ± 2.5 15 ± 2.2	15.8 ± 2.5 15.0 ± 2.3	16.2 ± 4.7 15.8 ± 4.7	15.9 ± 2.7 15.4 ± 2.5	15.7 ± 2.7 15.4 ± 2.5	16.3 ± 2.3 15.7 ± 2.4
Analysis: MWU	1008.5 p>.05	956.0 p: .03	1107.5 p>.05	1054.5 p>.05	1016.5 p>.05	1233.5 p>.05	1125.0 p>.05	1058.0 p>.05	1054.5 p>.05	1140.0 p>.05	1187.5 p>.05	1093.0 p>.05

V.N.H.S.=Vocational Nursing High School V.N.S.=Vocational Nursing School, B.S.N=Bachelors Degree in Nursing,   M.S.N.=Master Degree in Nursing, NPV=Nurses Professional Values Scale SAQ=Safety Attitudes Questionnaire

There was a statistically significant difference between Graduated School and Ethical Codes 4-5-6-7-8-9-10-11 (p: .020, p: .019, p: .012, p: .020, p: .050, p: .036, p: .020, p: .007). There was also a statistically significant difference between Graduated School and Safety Attitudes Questionnaire Perceptions of Management subscale scores (p: .027). It was found that the SAQ Perceptions of Management subscale scores of the participants who have a Associate degree or less are lower than those who got a Bachelor's degree or Post graduate degree. There was a statistically significant difference between Continued School and SAQ Stress Recognition subscale scores (p: .049). There was no statistically significant difference between the other variables

and Ethical Codes or Safety Attitudes Questionnaire (Table 2).

There was a positive correlation between total scores obtained from the Nurses Professional Values Scale and the Safety Attitudes Questionnaire (r: .315, p: .001). There was a positive correlation between the Perceptions of Management subscale of the Safety Attitudes Questionnaire and the following subscales of the Nurses Professional Values Scale: Taking Action (r: .796), Human dignity (r: .603), Responsibility (r: .385), Safety (r: .334), Autonomy (r: .464). There was a positive correlation between the Teamwork subscale of the Safety Attitudes Questionnaire and the following subscales of the Nurses

Table 3. Safety attitudes questionnaire and nurses professional values scale correlation table.

		NPV TÖP	NPV Human dignity	NPV Responsibility	NPV Taking Action	NPV Safety	NPV Autonomy	Ethical Code 1	Ethical Code 2	Ethical Code 3	Ethical Code 4	Ethical Code 5	Ethical Code 6	Ethical Code 7	Ethical Code 8	Ethical Code 9	Ethical Code 10	Ethical Code 11
SAQ TQP	r	0.315**	0.226*	0.348**	0.111	0.258**	0.284**	0.158	0.141	0.294**	0.328**	0.349**	0.183	0.232*	0.332**	0.279**	0.304**	0.142
	p	0.001	0.023	0.00	0.270	0.009	0.004	0.114	0.161	0.003	0.001	0.00	0.068	0.020	0.001	0.005	0.002	0.156
SAQ Job Satisfaction	r	0.073	0.026	0.136	0.036	0.070	0.046	-0.007	0.019	0.106	0.078	0.121	0.030	0.043	0.086	0.033	0.074	0.069
	P	0.466	0.794	0.174	0.721	0.489	0.648	0.945	0.850	0.292	0.439	0.229	0.767	0.666	0.394	0.743	0.462	0.494
SAQ Teamwork	r	0.337**	0.287**	0.355**	0.085	0.232*	0.339**	0.149	0.237*	0.296**	0.412**	0.362**	0.163	0.273**	0.350**	0.299**	0.250*	0.117
	p	0.001	0.004	0.000	0.395	0.019	0.001	0.136	0.017	0.003	0.000	0.000	0.103	0.006	0.000	0.002	0.012	0.243
SAQ Safety Climate	r	0.219*	0.140	0.261**	0.069	0.176	0.198*	0.111	0.064	0.120	0.229*	0.214*	0.125	0.203*	0.258**	0.266**	0.231*	0.103
	p	0.028	0.161	0.008	0.495	0.078	0.048	0.271	0.524	0.233	0.022	0.032	0.213	0.042	0.009	0.007	0.020	0.307
SAQ Perceptions of Management	r	0.706**	0.603**	0.385**	0.796**	0.334**	0.464**	0.708**	0.191	0.460**	0.530**	0.489**	0.236*	0.567**	0.443**	0.504**	0.456**	0.772**
	p	0.00	0.00	0.00	0.00	0.001	0.00	00.00	0.055	0.00	0.00	0.00	0.018	0.00	0.00	0.00	0.00	0.00
SAQ Stress Recognition	r	-0.094	-0.049	-0.185	-0.091	-0.057	-0.037	0.037	-0.030	-0.159	-0.129	-0.091	-0.006	-0.089	-0.134	-0.039	0.058	-0.111
	p	0.351	0.628	0.063	0.366	0.572	0.712	0.714	0.764	0.111	0.197	0.368	0.953	0.377	0.183	0.697	0.566	0.270
SAQ Working Conditions	r	0.174	0.132	0.152	0.168	0.161	0.124	0.140	0.056	0.164	0.084	0.187	0.021	0.083	0.175	0.123	0.285**	0.146
	p	0.082	0.187	0.130	0.092	0.108	0.218	0.164	0.578	0.101	0.404	0.061	0.838	0.407	0.081	0.220	0.004	0.146

* Correlation's significant value is p=.005; ** Correlation's significant value is p=0.001

Professional Values Scale: Human dignity (r: .287), Responsibility (r: .355) and Autonomy (r: .339). There was a positive correlation between the Responsibility subscale of the Nurses Professional Values Scale and the Safety Climate subscale of the Safety Attitudes Questionnaire (r: .261) (Table 3).

There was a positive correlation between the total score obtained from the Safety Attitudes Questionnaire and the following subscales of the Nurses Professional Values Scale: Ethical Code 3 (r: .294), Ethical Code 4 (r: .328), Ethical Code 5 (r: .349), Ethical Code 8 (r: .332), Ethical Code 9 (r: .279) and Ethical Code 10 (r: .304). There was a positive correlation between the Perceptions of Management subscale of the Safety Attitudes Questionnaire and the following subscales of the Nurses Professional Values Scale: Ethical Code 1 (r: .708), Ethical Code 3 (r: .460), Ethical Code 4 (r: .530), Ethical Code 5 (r: .489), Ethical Code 7 (r: .567), Ethical Code 8 (r: .443), Ethical Code 9 (r: .504), Ethical Code 10 (r: .456), Ethical Code 11 (r: .772) (Table 3).

Discussion

Professional values adopted by members of the nursing profession improve the quality of care by ensuring the development of standards of care [4]. Patient safety is the most important indicator of quality healthcare. The World Health Organization introduced the "WHO Patient Safety Curriculum Guide for Medical Schools" program and published guidelines recommending that patient safety should be included in the curriculum in medical schools in 2009 [27], and in 2011, these curriculum guidelines were expanded to include nurses, midwives and other healthcare professionals [28]. In the light of these guidelines, courses on patient safety have been added into the educational curricula of health professionals.

That 68.3% of the participating nurses had Bachelor's degree and they indicate that the level of their professional training was satisfactory (Table 1). On the other hand, that their mean age was not high and that the majority of them were new graduates indicate that they received training on professionalism and patient safety all of which were added to the curriculum in recent years. This training increases nurses' awareness and thus ensures that they gain professional values and pay attention to the quality of healthcare and patient safety.

In this study, it was found that participants' age was related with their NPV Total Score, NPV Human Dignity-Responsibility-Taking Action-Safety-Autonomy subscale scores- Ethical Code 1-2-3-4-5-6-7-8-9-10-11 and SAQ Total Score, SAQ Safety Climate-Perceptions of Management-Teamwork subscales. Similarly, in Bondevik's study; participants' age was found related with their SAQ scores [29].

In several studies conducted on the issue, nurses' professional values were found to be associated with education and length of service in the profession. In this study, it was found that participants' education level and working year are related with their NPV scores. Similarly Gallegos' study participants's education level and working year were found with their NPV Scores [30]. Factors affecting nurses' attitudes towards patient safety have been investigated in several studies [31,32]. While some studies indicate that male health professionals' attitudes towards patient safety are more positive than are those of their female counterparts, some other studies show that health professionals develop more positive attitudes towards patient safety as their length of service in the profession increases [31] or as their age increases [29,32] reported that if the number of nurses decreased by 50%, mortality rates would increase by 50% [31,32].

Limitations

The study was conducted in one children's hospital and the sample size was limited. Another limitation was that although differences related to people's personality traits manifest themselves in the values they have, the study did not investigate the effects of nurses' personality traits; it only investigated the study topic in terms of such socio-demographic characteristics as age, gender and occupational data.

Conclusion

At the end of the study, it was concluded that nurses' professional values positively affected their attitudes towards patient safety. It was also concluded that nurses' previous training on professionalism and patient safety were effective too. Considering the aforementioned limitations, it is recommended that these issues should be investigated in future studies because such studies investigating personality traits can help to interpret the weak correlation between the results.

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