

## Empathy with Patients Compared between First and Final Year Nursing Students

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### Abstract

**Introduction:** Patient-nurse relationship has been recognized as the key factor in nursing practice. Considering the importance of professional relationship in nursing discipline, and especially empathy and its professional role, the need to address this phenomenon in nursing education in Iran is profoundly felt.

**Objective:** The present study was conducted with the aim to compare level of empathy with patients and related factors between first- and final-year nursing students of Guilan University of Medical Sciences.

**Materials and Methods:** The present descriptive-analytical study was conducted on 180 nursing students of Guilan University of Medical Sciences (ShahidBeheshti School of Nursing and Midwifery in Rash and Langrood) selected by census from the academic year 2014-15. Data collection tool was a two-part questionnaire consisting of socio demographic data details and Jefferson Scale of Empathy containing 20 items, scored according to Likert scale from strongly agree (7 points) to strongly disagree (1 point), in which students chose items based on the level their agreement. Students' mean empathy score was calculated from maximum seven points (higher empathy) and minimum one point (lower empathy). In total, the maximum score for the 20 items was 140 points and minimum 20 points. Data thus collected were analyzed using descriptive and analytical statistical tests (independent t, Pearson's correlation coefficient and logistic regression).

**Results:** Students' mean age was  $22.21 \pm 2.94$  years, and the majority were female (63.3%). No significant difference was observed between empathy among first-year students ( $5.03 \pm 0.041$ ) and final-year students ( $4.94 \pm 0.7$ ) ( $P < 0.28$ ). Students' empathy was found significantly related to interest in nursing discipline ( $P < 0.001$ ), student work ( $P < 0.012$ ), and mother's education below diploma ( $P < 0.032$ ). Among study variables, interest in nursing discipline ( $P < 0.001$ ), father's education ( $P < 0.009$ ), and history of hospitalization ( $P < 0.046$ ) were factors predicting level of empathy, such that, students who were interested in nursing discipline compared to those that were not had higher levels of empathy ( $\beta = 0.392$ ). Also, students with history of hospitalization had a higher level of empathy ( $\beta = 0.2$ ). Regression test results showed that level of empathy diminished with a higher level of father's education ( $\beta = -0.142$ ).

**Conclusion:** The results obtained showed no significant difference between first- and final-year students in terms of empathy score. Since reinforcing predicting factors leads to greater student empathy with patients, empathy skills education in the course of study and generating interest among students appears to increase their sense of empathy.

**Keywords:** Empathy, Patients, Nursing Students

## Introduction

Patient-nurse relationship has been recognized as the key factor in nursing practice. This relationship helps satisfy care needs of people in sickness, crisis, and disability. Communication skills include verbal and non-verbal skills and effective listening and responding [1]. Performing care requires technical skills, which should be accompanied by interpersonal skills such as empathy, warmth and respect [2]. As a part of communication skills, empathy has a major role in nursing and medicine in terms of patient care and treatment [3]. Empathy means understanding other people's cognitive, emotional and behavioral experiences [4]. When nurses and doctors are aware of and understand a patient's emotional state (like their physical state), their diagnostic accuracy will increase [3]. Empathy has a positive role in interpersonal interactions during nursing care, and has been highly stressed in medical relations [5].

On the other hand, poor interaction between healthcare providers and patients can lead to a lack of medication and treatment follow-up, misunderstanding, health problems, and diminished patient care. It has also been described as the most common cause of patient harm and death. Although most nursing students' communication skills should be acquired in the course of their education, these skills are overlooked in nursing education [6]. It seems that there are still problems in nurse-patient communication, which may be helped by providing training courses for nurses [7]. Poor communication between healthcare personnel and patients has concerned health care planners. Thus, as one of the key members of health system, nurses should evaluate their performance in this area and find solutions to this problem [8]. To be able to have good communication with patients, nurses need knowledge, understanding and skills in human communications [9].

Lack of communication skills may be due to inadequate training, and at the same time, due to lack of understanding the importance of the central role of skills for communicating with recipients of services [10]. Today, communication skills training is a part of nursing education curricula, and aims to prepare students for establishing constructive communication with patients [11]. Establishing communication is indeed a basic concept and among the first subjects that students are meant to learn [12].

The results of a study conducted by Nakakis and Ouzoni showed that most nursing students had a moderate sense of empathy, female students had greater empathy than male students, and also the sixth-semester nursing students had greater empathy than the first semester students [5]. Yet, a study conducted by Wilson et al. showed higher levels of empathy among third-year pharmacy students compared to first-year students, but first-year nursing students showed greater empathy compared to final-year students [13].

The importance of the concept of empathy in forming mental structure of an individual to create attitude toward oneself and others, especially its importance in establishing professional nursing communication, and also the increasing role of empathy in promotion of community health clarify the need to address empathy. As such, the present study was conducted to determine and compare the level of empathy among first- and final-year nursing students of Guilan University of Medical Sciences, so as to determine the current state of students' empathy toward patients. The results can be used in the process of education of nursing students who are meant to assume the important responsibility of patient care.

## Materials and Methods

The present descriptive-analytical study was conducted on 180 nursing students of Guilan University of Medical Sciences

(Shahid Beheshti School of Nursing and Midwifery in Rash and Langrood) selected by census from the academic year 2014-15. Data collection tool was a two-part questionnaire consisting of socio-demographic data details (age, gender, marital status, mean academic score, interest in nursing, history of student work, history of hospitalization of themselves or relatives, parents' education and occupation, household income, and residential status) and Jefferson Scale of Empathy containing 20 items, scored according to Likert scale from strongly agree (7 points) to strongly disagree (1 point), in which students chose items based on the level of their agreement. Students' mean empathy score was calculated from maximum seven points (higher empathy) and minimum one point (lower empathy), so that maximum score from the 20 items was 140 points and minimum 20 points.

Validity of the tool was assessed using content validity. Jefferson scale of empathy was first translated into Persian, and then translated back into English and made available to 10 nursing and midwifery faculty members, and modifications were made according to their recommendations. In the final version, Content Validity Ratio (CVR) score for all items was greater than 0.62, and Content Validity Index (CVI) score for all items was found between 0.8 and 0.99, rendering the questionnaire acceptable.

Reliability was assessed using test-retest method by making the questionnaire available to 20 nursing students twice, with two weeks interval. Cronbach's alpha was found 0.84, and Intra-Class Correlation (ICC) was 0.942. Data extracted from questionnaires were analyzed in SPSS-16 using descriptive and inferential statistical tests (independent t,

Pearson's Correlation Coefficient, and logistic regression).

## Results

The majority of participants were female (63.3%) and single (87%). Students' mean age was found  $22.21 \pm 2.94$  years. Academic mean score was  $15.9 \pm 1.2$  in all participating students,  $15.39 \pm 1.17$  in the first-year students, and  $16.29 \pm 1.07$  in the final-year students, with no significant difference between them ( $P=0.6$ ). In terms of interest in nursing discipline, 72 (93.5%) the first-year students, and 77 (74.8%) the final-year students were interested in nursing, with no statistically significant difference between them ( $P=0.501$ ). Mean empathy score was  $5.03 \pm 0.41$  in the first-year students, and  $4.94 \pm 0.7$  in the final-year students, with no significant difference between them ( $P=0.28$ ).

A significant relationship was observed between students' empathy and interest in nursing discipline ( $P=0.001$ ), such that mean empathy score was  $5.05 \pm 1.2$  in students that were interested in their chosen discipline, and  $4.64 \pm 0.7$  in those with no interest in nursing. A significant relationship was also found between students' empathy score and student work ( $P=0.012$ ), such that mean empathy score was  $4.8 \pm 1.01$  in students that had done student work, and  $5.05 \pm 1.03$  in students that had not. Students' empathy score was also found significantly related to mother's low education ( $P=0.032$ ) (Table 1). Among study variables, interest in nursing discipline ( $P<0.001$ ), father's education ( $P<0.009$ ), and history of hospitalization ( $P<0.046$ ) were factors predicting level of empathy, such that, students who were interested in nursing discipline compared to those that were not had higher levels of empathy ( $r=0.392$ ).

Also, students with history of hospitalization had a higher level of empathy ( $r=0.2$ ). Regression test results

showed that level of empathy diminished with a higher level of father's education ( $r=-0.142$ ) (Table 2).

**Table 1. E score in terms of personal-social data**

Variable	Sig.*	Variable	Sig.*
<b>Interest in academic discipline</b>		<b>Student work</b>	
Yes	0.0001	Yes	0.406
No		No	
<b>Academic semester</b>		<b>Family income</b>	
Two	0.6	Less than 200 \$	0.406
Seven		200 – 300 \$	
eight		More than 800 \$	
<b>Gender</b>		<b>Marital status</b>	
Female	0.367	Single	0.45
male		Married	
<b>History of hospitalization of oneself</b>		<b>History of hospitalization of relatives</b>	
Yes	0.65	Yes	0.245
No		No	
<b>Residential status</b>		<b>Student work</b>	
Home	0.406	Yes	0.012
Dormitory		No	
<b>Father's education</b>		<b>Mother's education</b>	
Below high school diploma	0.065	Below high school diploma	0.032
High school diploma		High school diploma	
University		University	
<b>Father's occupation</b>		<b>Mother's occupation</b>	
Related to treatment	0.072	Related to treatment	0.406
Unrelated to treatment		Unrelated to treatment	
		Housewife	

\* Pearson Correlation Test

**Table 2. Multivariate analysis of factors associated with empathy score**

Personal-social factors	Regression coefficient	Standard Error	Sig.*	Confidence Interval	
				Higher Limit	Lower Limit
Constant value	4.888	0.148	0.001	4.596	5.181
Interest in nursing	0.392	0.112	0.001	0.172	0.612*
Father's education	-0.142	0.054	0.009	-0.249	-0.036*
History of hospitalization	0.2	0.1	0.046	0.03	0.389*

\* Logistic regression

## Discussion

In the present study, no significant difference was found between the first- and the final-year students in terms of empathy score. In a study conducted by Jabarifar et al., no significant increase or decrease was observed in the level of empathy with higher academic year in dentistry students [14]. Williams et al. study showed no significant difference in the level of empathy among different year students of medical sciences including nursing, midwifery, nutrition, and pharmacy [15]. Yet, a study conducted by Shahab et al. showed a significant correlation between academic year and empathy in dentistry students, and students in higher years had higher empathy scores [16]. In Muneer et al. study, the fourth-year dentistry students showed higher levels of empathy compared to students in other academic years [17], and Magalhaes et al. study showed greater empathy among the final-year medical students compared to the first-year students [18]. In a study conducted by Dehning et al. in Bangladesh with the aim to assess level of empathy between the first- and the final-year students, no significant difference was observed in empathy scores of these students [19]. In a study conducted by Mostafa et al. in Bangladesh with the aim to assess level of empathy among students of medicine, the first-year students were found to have greater empathy compared to the final-year students [20], which may have been due to the difference in study groups, where in students with less training in communication and empathy with patients, or with no opportunity for applying their knowledge in clinical setting, score of these items cannot be expected to change in the course of their education. On the other hand, perhaps such results are due to the greater emphasis on students' academic knowledge and technical skills in the final year; even if students have received training on communication with patients during their education, they try to perform their

technical skills in clinical settings, and ignore communication skills.

There was a significant relationship between empathy score and students' interest in nursing discipline, such that mean empathy score was higher in students that were interested in nursing compared to those that were not. In a study conducted by Gasperi, aiming to compare empathy and associated factors in medical students in Australia, a significant difference was found in empathy score between students that liked their discipline and those that did not, and according to the researcher, interest in academic discipline creates motivation in students and desire to improve their relationship with patients [21]. There was a significant relationship between empathy score and student work, such that mean empathy score was lower in students that had done student work compared to those that had not. Similarly, a study conducted by Sadeqi et al. aiming to determine understanding of nurses and hospitalized adolescents of the importance of nurse-patient communication in Tehran University of Medical Sciences showed no significant relationship between clinical work history and communication skills in nurses [22]. Naebi et al. study showed no significant relationship between nursing work history and communication skills [9]. This may be due to the increasing occupational burn out and in difference in students through the experience of patient care, which adversely affects communication skills and empathy.

There was also a significant relationship between empathy scores and mother's education, such that mean empathy score in students with low educated mothers was higher compared to students with high school graduate mothers. Moreover, empathy score was lower in students with university educated mothers. This may have been due to the fact that highly educated mothers are likely to work outside home, which probably affects mother-child emotional interaction from

childhood, and thus affects child's communication skills.

Furthermore, students with history of hospitalization had a greater level of empathy, and better understood patients since they had experienced such circumstances themselves. On the contrary, in Naebi et al. study, patient's previous history of hospitalization had no effect on their communication skills [9]. According to the present study results, empathy diminished with higher levels of father's education. Similarly, Naebi et al. study showed that student's communication skills reduced with father's higher education [9]. Perhaps, higher education places the father in a higher social position, and by establishing this position, being in professional positions that require deeper professional communications is difficult in early for adolescents that have recently left the family environment.

Since collection of data relating to students' empathy was carried out using a self-reporting questionnaire, it is possible that students were unable to express their precise views. It is therefore recommended that observational data collection methods be used in future studies on students' empathy state.

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