

Original Article

Turkish Nursing Students' Use of Intuition

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Correspondence: Dilek Sari, Associate Professor, Ege University, College of Nursing, Department of Fundamentals of Nursing 35100 Bornova, Izmir, Turkey e-mail: dilsari@gmail.com_dilek.sari@ege.edu.tr**Abstract****Background:** The ability of intuition has a direct influence on the quality of patient care and outcomes in nursing practice. It is reported that integrating intuitional learning, which is accepted as a type of cognitive learning today, into nursing curriculum actively would be beneficial to training professional nurses.**Objective:** The current study aimed to explore the understanding of nursing students' use of intuition in clinical practice.**Methodology:** The study was carried out in a cross-sectional and descriptive design. The study population consisted of 588 nursing students enrolled at the Colleges of Nursing located in western Turkey. A total of 421 nursing students completed a questionnaire. The data of the study were collected employing the Use of Intuition by Nursing Students Scale (UINSS) and student information form. Statistical analyses were performed using percentages, means, standard deviation, independent sample t test, one-way ANOVA.**Results:** Mean age of the students was found to be 22.20 ± 1.73 years, a great majority of them (83.1%) were female. Approximately half of the students (40.3%) were sophomores, one third of students were juniors (30.2%) and seniors (29.5%). The majority of the students (75.8%) stated that intuitive approach affects the decision-making process in nursing. Total UINSS mean score for nursing students was found to be 75.06 ± 1.26 (min:25-max: 110). Senior students' were higher in physical awareness than sophomore and junior students. A statistically significant difference was found between total score, emotional awareness and physical awareness subscale and gender. Female students had higher total, emotional awareness and physical awareness scores than male students.**Conclusions:** It could be asserted that the students participated in the study had an awareness of the role of intuition at a higher than moderate level and that they were able to use this ability.**Keywords:** Intuition, nursing student, clinical practice, education.**Background**

It is known that many discoveries have been attained through intuition throughout history. According to Guven, Gardner (1983) emphasized the importance of intuition with the quotation "what makes senior scientists senior is their intuitions" (Guyen, 2000). Intuition is defined as "a feeling that guides an individual in a specific direction although the individual cannot understand its exact reason" (Robert, Tilley Scott & Petersen, 2014). Intuition, which can also be defined as "the ability to comprehend the truth accurately without applying to logical reasoning", is an important aspect of critical thinking and has a significant function in

decision making (Demir et al., 2012; Guven, 2000). Making decisions according to intuitional approach is defining the most important aspects of a given situation, differentiating between similarities and differences without losing time and interpreting the situation with related knowledge and experience (Sucu, Dicle & Saka, 2012; Demir et al., 2012).

Nursing educators state that intuition, which is the core element of holistic nursing plays a critical role in clinical decision making in nursing practices (Demir et al., 2012; Pretz & Folse, 2011; Hassani et al., 2017; Cork, 2014; Melin-Johansson, Palmqvist R & Ronnberg, 2017; Morrow, Robert & Maben, 2014; Hassani

et al., 2016). Due to the rapidly advancing technology today, most of the clinical decisions in nursing practices have a complex structure. It is reported that the most accurate clinical decisions to be taken for a safe and quality care have to be made through the practice of intuitional process (Pretz & Folse, 2011; Sucu et al., 2012). The use of intuition when making clinical decisions allows for interpreting the data that provide clues regarding the patient's state by employing the basic and practical information in memory, defining similarities and differences quickly and therefore reaching the most accurate decision (Lauri & Salantera 1998; Smith 2007). As well as making important contribution to the improvement of the quality and outcomes of patient care, using intuition in making clinical decisions is also effective on decreasing patient mortality and morbidity rates (Pretz & Folse, 2011; Effken, 2001; Payne, 2015; Rew & Barrow, 2007; Demir et al., 2012; Chilcote, 2017).

In order to make the best or the most accurate clinical decision with intuitional approach, having the required knowledge and naturally experience is a prerequisite. It is reported that integrating intuitional learning, which is accepted as a type of cognitive learning today, into nursing curriculum actively would be beneficial to training professional nurses (Güven, 2000; Veznedaroglu & Ozgur, 2005; Demir et al., 2012; Smith, Thurkettle & Dela Cruz, 2004; Hassani et al., 2016; Pretz & Folse, 2011; Rew & Barrow, 2007).

Both pedagogue and nurse researchers underline the necessity to specify an educational strategy through which students would be able to participate actively instead of direct instruction and rote learning in teaching students. In this respect, it is stated that integrating strategies that can develop critical thinking, clinical decision making and problem solving such as phenomenon presentations, case analyses, computer aided instruction, simulation practices, analyzing critical events, using concept maps, debatable and questionable education into the curriculum to help improve intuition would be beneficial in nursing education (Akca & Tasci, 2009; Veznedaroglu & Ozgur, 2005). In addition, there are a limited number of studies available on determining intuition levels of nursing students. The aim of the present study was to investigate the understanding of nursing students' use of intuition in clinical practice.

Methodology

Design: The present study was designed in the descriptive cross-sectional research model.

Participants and setting: The study population consisted of 588 nursing students enrolled at the Colleges of Nursing located in western Turkey. The participants included sophomores, juniors and seniors with minimum one year experience of clinical practice. In our study, no sample selection method was used, and we tried to reach all nursing students in the academic year 2013-2014. A total of 421 students were reached to study. The other one hundred sixty seven (167) students were excluded from the study due to illness, absenteeism and non-volunteering to participate in the study. The participation rate to this study was 71.6%.

Instruments: The data of the study were collected employing the Use of Intuition by Nursing Students Scale (UINSS) and student information form.

Student Information Form: The form consisted of six questions on students' personal characteristics (class level, age, sex and etc) and questions concerning their use of intuition states.

Use of Intuition by Nursing Students Scale: UINSS, was developed by Smith et al. (Smith et al. 2004) The Turkish version of the scale was confirmed for validity and reliability by Demir et al. (2012). The item-total correlation was found between 0.30 and 0.56 with the Cronbach α coefficient of 0.86. The scale consists of 25 items which are scored as: 1=never (1 point), 2=rarely (2 points), 3 = sometimes (3 points), 4 = often (4 points), 5 = always (5 points). High scores on the scale show higher awareness of students of the role of intuition and the abilities that they can use (Scale Total Score: min: 25- max: 125). Emotional awareness, physical awareness, spiritual connections and physical sensations made up the conceptual intuition framework of the scale (Demir Dikmen, Yorgun S & Yeşilçam, 2012).

Data collection: The research data were collected between March 2014 and July 2014. The students agreeing to participate in the study completed the self-administered questionnaires at the end of their clinical practice. All nursing students in the College of Nursing were handed out the questionnaires by the researchers. Each of the participants was given a questionnaire form and an envelope with a letter that explained the

research study in detail, the instructions for filling out the questionnaire and written assurance stating that participation was voluntary. The questionnaire forms included no information on identification of the participants. After filling out the questionnaires, the participants put them in envelopes, and gave them to researchers.

Ethical considerations: An approval was obtained from Ege University College of Nursing Ethics Committee (approval no: 2014-46) before data collection. Written approval was provided from school administrators to conduct the study confirming that there was no invasive procedure in the implementation phase of the research. The study was carried out in consideration of the Helsinki Declaration. After informing about the content of the study, verbal approval was given to each student who volunteered to participate.

Data analysis: Statistical analyses were performed using percentages, means, standard deviation, independent sample t test, one-way ANOVA. The statistical significance level was determined as $p < 0.05$.

Results

Descriptive features of the students are presented in Table 1. Mean age of the students was found to be 22.20 ± 1.73 years, a great majority of them (83.1%) were female and 16.9% were male. Approximately half of the students (40.3%) were sophomores, one third of students were juniors (30.2%) and seniors (29.5%). The majority of the students (75.8%) stated that intuitive approach affects the decision-making process in nursing (Table 1).

Table 1. Results Relating to Sample Description (n=421)

Features		n	%
▪ Gender	Female	350	83.1
	Male	71	16.9
▪ Classes	Sophomore	170	40.3
	Junior	127	30.2
	Senior	124	29.5
▪ Does Intuitive approach impact decision-making process in nursing?	Yes	319	75.8
	No	102	24.2

Table 2. The average score of the subgroups of the UINSS

		Mean	Std. Deviation	Minimum	Maximum
Subgroups of the UINSS	▪ Emotional awareness	27.90	4.80	9.00	42.00
	▪ Physical awareness	17.40	5.55	7.00	35.00
	▪ Spiritual connections	22.86	4.16	7.00	33.00
	▪ Physical sensations	6.88	1.42	2.00	10.00
UINSS total score		75.06	1.26	25.00	110.00

Table 3. Distribution of the UINSS Score by Several Variables

Total UINSS / subscale score	Features	n	Mean	Std. Deviation	F/t p
Physical Awareness	Classes				F=5.146 p=0.006
	▪ Sophomore	170	16.58	5.14	
	▪ Junior	127	17.31	5.80	
Total UINSS score	Gender				t=3.591 p=0.000
	▪ Female	350	76.04	12.57	
	▪ Male	71	70.23	11.80	
Emotional awareness	Gender				t=3.216 p=0.001
	▪ Female	350	28.24	4.73	
	▪ Male	71	26.25	4.85	
Physical awareness	Gender				t=3.836 p=0.000
	▪ Female	350	17.87	5.59	
	▪ Male	71	15.14	4.81	
Spiritual connections	Does Intuitive approach impact of decision-making process in nursing?				t=2.636 p=0.009
	▪ Yes	319	23.16	4.14	
	▪ No	102	21.92	4.13	

UINSS total score mean for student nurses was found as 75.06 ± 1.26 (min:25- max:110). Subgroup mean scores of the UINSS were 27.90 ± 4.80 for emotional awareness, 17.40 ± 5.55 for physical awareness, 22.86 ± 4.16 for spiritual connections, and 6.88 ± 1.42 for physical sensations (Table 2).

A statistically significant difference was found between physical awareness subscale and classes ($p < 0.05$). Senior students had higher physical awareness than sophomore and junior students. A statistically significant difference was found between total score, emotional awareness and physical awareness subscale and gender ($p < 0.05$). Female students had higher scores than male students. The students who mentioned that intuitive approach affects the decision-making process in nursing had higher spiritual connections scores than others ($p < 0.05$) (Table 3).

Discussion

Intuition is an affective part of critical thinking and plays a significant role in clinical decision making. The educational setting is supposed to enhance critical thinking and clinical judgment, so it has to support and promote nursing students' recognition of intuitive abilities (Smith & Glaser, 2008). It could be said that the students who participated in our study have a higher-than-moderate level of awareness of the role of

intuition and they are able to use their ability of intuition. There are only few studies conducted on nursing students' use of intuition (McCormick, 1993; Smith, 2007). McCormick (1993) investigated 10 nursing students' intuitive decision making and reported that the students in the study seemed to experience difficulty in acknowledging their intuitive thinking, and even when they did, they doubted its existence and use. The students did not clearly understand the holistic nature of intuitive thinking. The findings of the study emphasized the need to include intuition into nursing curriculum (McCormick, 1993; Tatano Beck, 1998). According to Smith (2004), Sublett (1997) studied the correlation between cognitive development and intuitive judgment in senior nursing students and found that they did have intuitive judgment to a certain level. Studies on the use of intuition in nursing practice have overlooked nursing students with the association between experience and intuition (Smith, Thurkettle & Dela Cruz, 2004). There is a lack of intuition measures particularly developed for nursing students (Smith, 2007).

In this study, physical awareness scores of senior students were found to be higher than those of others. Physical awareness arises from inside of the body, is interpreted by the five sense organs and both used in patient care and the process making related decisions (Demir Dikmen, Yorgun & Yeşilçam, 2012; Smith, Thurkettle &

Dela Cruz, 2004). It can be claimed that senior students can perceive the patient's non-verbal message since they have more clinical experience than others. Similarly, Demir et al. (2012) determined that students with more clinical experience had higher physical awareness scores. It is also stated in the literature that experienced nurses use intuition more frequently when making decisions (Demir Dikmen, Yorgun & Yeşilçam, 2012; Sucu et al., 2012; King & Appleton, 1997; King & Clark, 2002; English, 1993). Lauri et al (2001) found that nurses with a bachelor's degree uses intuition more compared to nurses who received 2.5-3 years of education (Lauri et al., 2001).

Female students were found to have higher physical awareness, emotional awareness and UINSS total scores. Physical awareness, which is used both in patient care and in making decisions about patient care, involves the sensory organs (Demir Dikmen, Yorgun & Yeşilçam, 2012; Smith, Thurkettle & Dela Cruz, 2004). The emotional awareness factor, on the other hand, is defined as awareness coming out of sensitivity feeling and the use of the ability of empathy. It can be said that female students are able to perceive the patient's nonverbal message better and thus can have better empathy with the patients. Likewise, as Hayes states, Loden (1985) describes males as insensitive and analytic problem solvers while suggesting that females support this reasonable approach with intuition and empathy (Hayes, 2007).

Spiritual connections scores of the students who stated that they used intuition in their decisions were found to be higher. As the literature suggests and empirical studies show, making spiritual connections can also occur at the spiritual level. Making spiritual level connections includes a combining framework and the connection among all aspects of life (Smith, Thurkettle & Dela Cruz, 2004). In order to be healthy individuals, human beings have to meet their physical, emotional, social, cultural, spiritual and intellectual needs. In this respect, as well as the individual's biological, psychological, and social needs, his/her spiritual dimension is also important in nursing care and plays a big role in problem solving (Kostak, 2007; Demir Dikmen, Yorgun & Yeşilçam, 2014). For this reason, it is an expected result that spiritual connection scores of the students who stated that they used intuition were higher.

Study Limitations

The results obtained from the research are based on the students self-declaration of the students who were studying at the nursing college and do not give information about observational results. In addition, the results of this research are limited to a single city in Turkey, and it does not include other parts of Turkey. In this case, the results of research it is not possible to generalize to all nursing students in Turkey.

Conclusion

As a result, it was found that intuition is used by nursing students in clinical decision-making process at moderate levels. It is particularly used by senior nursing students' and female students use intuition in their clinical practices more than male students do. In clinical decision making, intuition is used quite frequently; however, in comparison with scientific decision making, the use of intuition is rather underestimated. The ability of intuition has a direct influence on the quality of patient care and outcomes in nursing practice, which makes it an important part of nursing education. Therefore, it is important to integrate methods of instruction which can promote nursing students' intuition abilities into the curriculum. This would allow students to interpret the data that carry clues about the patient's state rapidly, specify similarities and differences easily and finally come up with the most accurate decision.

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