

Original Article

Determination of Problem-Solving and Communication Skills of Nursing/Midwifery Students

Yadigar Cevik Durmaz, PhD in Nursing

Munzur University, Department of Psychiatry Nursing, Tunceli, Turkey

Emine Kaplan Serin, PhD of Nursing

Munzur University, Department of Internal Medicine Nursing, Tunceli, Turkey

Hilal Turkben Polat, PhD of Nursing

Firat University, Department of Nursing Fundamentals, Elazig, Turkey

Correspondence: Emine Kaplan Serin, Munzur University, Department of Internal Medicine Nursing, Tunceli, Turkey E mail: emineserin@munzur.edu.tr

Abstract

Introduction: Effective problem-solving skills and decision making skills based on sound knowledge are expected from professional nurses. Problem-solving process, which requires creative thinking, is at the heart of nursing practices. Nursing is a profession of helping others. The main purpose of helping is to know the served people through communication and interaction based on mutual trust, identify their care needs and, as a result, help them to cope with their problems more efficiently and satisfy their needs.

Aim: This study was conducted to determine the problem-solving and communication skills of nursing students.

Materials-Method: This descriptive study was conducted with the students of Nursing/Midwifery Department of a state university from March 01 to March 30, 2018. Students agreeing to participate in the study filled in the descriptive characteristics form, Problem-Solving Inventory and Communication Skills Assessment Scale (CSAS). Percentage, mean, t-test, Kruskal Wallis Variance Analysis, Mann Whitney U tests and correlation analysis were used in data assessment.

Results: Participant students (n=246) had a mean score of 116.15 ± 19.55 in Problem Solving Inventory and a mean score of 77.32 ± 11.33 in Communication Skills Assessment scale. It was found that students' demographic characteristics, experience as a companion in the hospital, difficulty in relationships with patients and negative experiences with patient or patient's relatives did not affect problem-solving and communication skills. On the other hand, it was observed that participation in social activities and difficulty in interpersonal communication in daily life affected problem-solving and communication skills, and experience of hospitalization only had an impact on communication skills. A negative correlation was detected between problem-solving skills and communication skills of students.

Conclusion: It was detected that students included in the study had moderate levels of problem-solving and communication skills. Students with high level of communication skills also had high level of problem-solving skills. In line with these results, it is suggested that students should participate in more social activities and be provided training on improving problem-solving behaviors and communication skills throughout the nursing education.

Keywords: Midwife, Nurse, Problem Solving, Communication

Introduction

Problem-solving is a cognitive-emotional-behavioral process in which individuals try to find the most appropriate solutions to the stressful circumstances they experience during their daily lives (Cinar, Hatunoglu, & Hatunoglu, 2009; Lau, 2014). Problem-solving process can be briefly defined as a way of thinking and implementation that consists of activities such as understanding and identifying the problem, producing a hypothetical solution and supporting this solution with satisfying evidence (Cinar, Hatunoglu, & Hatunoglu, 2009).

In recent years, nurses experience crises and are faced with higher number of problems due to the increasingly complex healthcare system and the technological advancements in this field (Mattila, Pitkajarvi, & Eriksson, 2010; Tasci, S, 2005). When nurses are faced with unpredictable circumstances, they must have good problem-solving skills in order to manage these processes (Oldenburg, & Hung, 2010). For nursing students to have adequate problem-solving skills when they start working as nurses, theoretical knowledge must be integrated with practice throughout their education, they must be encouraged to think critically of the circumstances encountered and must be provided with an education that promotes creative thinking (Elbas, Bulut, Demir, & Yüceer, 2010). This approach will help students to offer creative solutions when they are faced with difficulties in a clinical setting (Solvoll, & Heggen, 2010).

When we examined the studies on this subject, we observed that effective problem-solving skills are significantly correlated with better family functions (Siu & Shek, 2010), mental health and high quality of life. Similarly, low levels of social problem-solving skills were found to be correlated with depression (Lau, 2014)

Communication skills are the key-point of nursing practices and the most fundamental need for provision of the best care to patients. Effective communication skills are the most important tool that enables nurses to present their knowledge and demonstrate it in practice (Halkett, McKay, & Shaw, 2011). Nursing students must understand the importance of communication and gain an adequate skill of communication throughout their education in order to provide the required care to

patients and their families. Therefore, instructors must encourage students to find solutions to the problems they encounter and contribute to building self-confidence in them. Students lacking this skill make more medical errors in practice and cause the nursing care quality to fall (Smith, Adam, Kirkpatrick, & McRobie, 2011).

Relationships of nursing students with patients, colleagues or other healthcare professionals in clinical practice throughout their education play a vital role in the improvement of their problem-solving and communication skills, because nursing students with good communication skills have been observed to be more successful in problem-solving. (6)

Aim: This is a descriptive study conducted to determine the "problem-solving and communication skills of Nursing/Midwifery Students."

Methods

Study Design and Sample: The present study is a correlational and descriptive study.

The study included 748 students of nursing/midwifery department of Firat University, Faculty of Health Sciences. Study data were collected from March 01 to April 01, 2018 from the students who agreed to participate in the study. 258 students who were not present at school during the data collection (at practice or absent) and 182 students who refused to participate in the study were not included. Participants were informed on the aim and characteristics of the study and signed informed consent forms. They filled in the data collection tools within 15 minutes. Since 62 participants did not answer all the questions, their questionnaires were excluded from the study and only 246 of them were assessed.

Ethical Statement: An ethics committee approval was received from Non-interventional Clinical Studies Ethics Committee of Munzur University and a written consent was received from the Faculty of Health Sciences of Firat University where the study was conducted. After receiving all necessary legal permissions, students agreeing to participate in the study were informed on the study aims and their verbal and written consents were received.

Data Collection Tools: In this study, socio-demographic questionnaire prepared in accordance with the literature, Problem-solving Inventory and Communication Skills Assessment Form (CSAS) were applied to the participants.

Questionnaire: The socio-demographic information form prepared by the researchers in accordance with literature consists of a total of 16 questions.

Problem-Solving Inventory (PSI): Problem-Solving Inventory is a Likert-type self-assessment questionnaire consisting of 35 items scored between 1-6 and measuring the individual's self-perception regarding his/her problem-solving skills. Developed by Heppner and Petersen in 1982, the inventory was adapted to Turkish by Şahin and Heppner (1993). Items 9, 22 and 29 are excluded from scoring. Items 1, 2, 3, 4, 11, 13, 14, 15, 17, 21, 25, 26, 30 and 34 are reverse-scored. After assessing the remaining 32 items, the lowest and highest scores than can be obtained from the scale are 32 and 192, respectively. High total score from the inventory indicates that the individual feels inadequate regarding his/her problem-solving skills, while low total score shows that the individual feels adequate regarding his/her problem-solving skills. The inventory has three subscales: “*Problem-solving confidence*” subscale (items 5, 10, 11, 12, 19, 23, 24, 27, 33, 34, 35) refers to the individual's faith in his/her ability of solving new problems; “*approach-avoidance*” subscale (items 1, 2, 4, 6, 7, 8, 13, 15, 16, 17, 18, 20, 21, 28, 30, 31) refers to reviewing the first problem-solving efforts in order to resort to them in the future and doing active research for various alternative solutions and “*personal control*” subscale (items 13, 14, 25, 26, 27, 32) refers to an individual's ability to maintain his/her control of emotions in problematic situations. During the adaptation process of the inventory, total Cronbach's alpha coefficient was calculated as 0.88(Erol, Tanrikulu, Dikmen, & Akduran, 2016.)

Communication Skills Assessment Scale (CSAS): It is 5-point Likert-type scale developed

by Korkut and rated from "always" to "never" and aims to provide an understanding of how individuals assess their own communication skills. The scale consists of a total of 25 items and the highest obtainable score is 100 while the lowest score is 0. High scores indicate that individuals assess their communication skills as positive. Reliability and validity studies were conducted by the same person and alpha internal consistency coefficient was calculated as .80.

Data Assessment: To analyze the data, (SPSS) 21.0 software package was used and percentage, mean, t-test, Kruskal Wallis Variance Analysis, Mann Whitney U tests and correlation analysis were performed.

Results

A 73.6% of the participant students (n=246) were in first grade, 61.4% were in nursing department, 80.9% were female and 98.8% were single. It was detected that 77.2% of students were aged between 17-20. It was reported that 44.7% of them chose nursing department due to job opportunities, 46.7% of them found their participation in social activities insufficient and 83.7% of them had no difficulties in interpersonal relationships during their daily lives. 68.3% of students had no experience of hospitalization due to any disease, 55.7% of them had not ever stayed in the hospital as a companion and 50.8% of them answered the question regarding difficulties in communication with patients as “sometimes”. 82.5% of students reported the status of having any negative experiences with patients and/or patients' relatives as “sometimes”.

Problem-solving inventory mean score of students was 105.45 ± 18.06 , personal control subscale mean score was 24.86 ± 5.53 , problem-solving confidence subscale mean score was 31.87 ± 8.84 and approach/avoidance subscale mean score was 54.56 ± 9.54 . In this assessment of problem-solving skills, students were found to have moderate levels of problem-solving skills. Communication Skills Assessment Scale mean score of students was found to be 77.32 ± 11.33 (Table 1).

Table 1. Distribution of problem-solving inventory subscale mean scores and communication scale mean scores of students

	N	Minimum	Maximum	Mean \pm SD
Skills-Confidence	246	14.00	66.00	31.873 \pm 8.848
Personal Control	246	7.00	42.00	24.865 \pm 5.538
Approach-Avoidance	246	23.00	96.00	54.565 \pm 9.547
Total problems	246	51.00	192.00	105.457 \pm 18.068
Total communication	246	39.00	96.00	77.325 \pm 11.331

Table 2. Distribution of problem-solving inventory and communication scale mean scores of students by some variables

Variables	N	%	Total problems			Total Communication		
			X \pm SD	F	p	X \pm SD	F	p
Department								
Nursing	151	61.4	104.96 \pm 15.88	-0.54	0.58	76.90 \pm 10.59	-0.74	0.46
Midwifery	95	38.6	106.24 \pm 21.12			78.00 \pm 12.43		
Participation in Social Activities				F	p		F	p
Sufficient	29	11.8	109.68 \pm 18.48	3.06	0.04	75.62 \pm 11.23	7.47	0.02
Partially Sufficient	102	41.5	102.21 \pm 18.34			79.58 \pm 10.83		
Insufficient	115	46.7	107.28 \pm 17.37			75.74 \pm 11.53		
Do you have difficulty in interpersonal relationships?				t	p		t	p
Yes	40	16.3	100.53 \pm 19.18	-1.83	0.04	73.32 \pm 12.79	-2.38	0.01
No	206	83.7	106.38 \pm 17.97			77.98 \pm 10.99		
Have you ever been hospitalized due to a condition?				t	p		t	p
Yes	78	31.7	104.82 \pm 16.64	-0.36	0.71	74.88 \pm 13.17	-2.35	0.01
No	168	68.3	105.73 \pm 18.84			78.52 \pm 10.24		

In this study where problem-solving and communication skills total mean scores are compared based on students' grade, age, department, gender, marital status, university, reason of choosing the nursing profession, employment status, job, staying in the hospital as a companion, difficulty in relationships with patients and any negative experiences with patients or their relatives, no statistically significant difference was found between problem-solving and communication skills mean scores ($p>0.05$). It was detected that participation in social activities and difficulties in interpersonal communication during daily life affected problem-solving and communication skills, while experience of hospitalization only affected communication skills ($p<0.05$) (Table 2).

Difficulties in interpersonal relationships during daily life result from its difference between the problem-solving skills subscale personal control ($p<0.05$). The difference between personal control and difficulties in relationships with patients was found to be statistically significant ($p<0.05$). A negative relationship was detected between problem-solving skills and communication skills of students ($p<0.05$).

Discussion

Problem-solving is at the center of nursing practices and it is very important for nurses to improve their problem-solving skills to increase the patient care quality (Erol, Tanrikulu, Dikmen, & Akduran, 2016). Therefore, nursing/midwifery students are expected after completing their education to spot the problems by using their instincts, think creatively to find solutions to these problems and acquire the skill of making connections between events and concepts. It is not always possible to learn the problem-solving methods during daily life. In this case, professionals must teach these skills in a systematical manner (Basar, Akin, & Durna, 2015; Koc, Koyuncu, & Saglam, 2015). In the present study, nurses were found to have moderate levels of problem-solving skills. Results of some studies are similar to our findings (Kanbay, Aslan, Isik, & Kilck, 2013; Koc, Koyuncu, & Saglam, 2015; Tezel, Arslan, Topal, Aydogan, Koc, & Senlik, 2009; Yuksel, 2015). These moderate levels of problem-solving skills imply that the

education/training received by students and the methods used are not at a level sufficient to improve their problem-solving skills (Basar, Akin, & Durna, 2015; Yuksel, 2015).

Factors such as age-appropriateness of the problem, the individual's level of prior knowledge and education required for the solution, ability, attitude, personal characteristics and the benefit brought to him/her by the solution are effective in problem-solving. In this study, no statistically significant difference was observed between Problem-Solving Inventory total mean scores of students in terms of gender, age and grade variables. However, students' problem-solving skills improved as the number of years studied increased. It is believed that this result stems from the fact that students take not only basic vocational courses but also courses improving their personal and vocational abilities throughout their undergraduate education. Results of some studies also support our study ((Basar, Akin, & Durna, 2015; Erol, Tanrikulu, Dikmen, & Akduran, 2016; Koc, & Senlik, 2009, Kanbay, Aslan, Isik, & Kilck, 2013; Tezel, Arslan, Topal, Aydogan, 2009; Yuksel, 2015).

In the present study, Problem-Solving Inventory mean scores of nursing students were 102.38 ± 12.25 while Problem-Solving Inventory mean scores of midwifery students were 107.88 ± 12.91 and no statistically significant difference was found ($p=<0.05$). Since high scores from the inventory indicate low levels of skills, nursing students were found to have higher problem-solving skill levels than midwifery students. Other studies also support the results of our study (Koc, & Senlik, 2009). In this study, it is thought that higher problem-solving skill levels of nursing students compared to midwifery students may result from the difference in their curricula and the different university exam scores required to be eligible to enter their respective departments.

A statistically significant difference was detected between personal control and difficulties in relationships with patients. However, the difference between difficulties in interpersonal relationships in clinical practices and mean scores from both scales was insignificant ($p>0.05$). It was observed that participation in social activities and difficulties in interpersonal communication during

daily life had an impact on problem-solving skills ($p < 0.05$) 83.7% of students stated that they experienced no difficulties in relationships with others during daily life. Although no significant difference was detected in mean scores from both scales in terms of participation in social activities ($p > 0.05$), it was seen that participants with higher social participation also had higher mean scores from both scales. These study results are the first in the literature.

Communication skills which are highly important in professional nursing can be improved firstly during university education (Tutuk, Al, & Dogan, 2002). The importance of communication increases depending on the conditions a person is in, and it becomes much more important especially during illness periods when that person is dependent on others in every way. An effective communication increases the quality of care and patient's satisfaction. Since nurses have to provide service 24 hours a day and are closer to patients than other healthcare professionals, they have to assume some additional responsibilities. Nurses have to make a holistic assessment of patients, identify their needs, collect information that may help physicians in diagnosis and understand the patients and express himself/herself to the patients well in order to facilitate patients' cooperation required during diagnosis and treatment. Therefore, nurses are expected to activate their communication skills in order to perform their responsibilities (Basar, Akin, & Durna, 2015; Tutuk, Al, & Dogan, 2002).

Communication skills scale mean scores of participants were found to be a moderate result of 77.325 ± 11.331 . In a study by Bingol et al., communication skills of students were found to be high. In this study, participation in social activities, difficulties in interpersonal relationships and experience of hospitalization due to any illness were detected to affect communication skills. A significant correlation was found between difficulties in interpersonal relationships and communication skills in a study by Tutuk, 2002 et. al. Furthermore, they observed no significant difference between participation in social activities and communication skills while they observed that individuals participating in many activities had better communication skills. The present study shows that communication skills improve as the number of years studied increases. The training

received is considered to be an effective factor. This study is important in that it is the first one that reveals the experience of hospitalization affects communication skills. It is observed that such experiences have an impact on communication.

Good communication is generally an effective method for the solution of problems and it is difficult to lead a satisfying life without solving the communication problems. Communication awareness provides great interaction opportunities to individuals. It is pointed out that self-confidence, time, energy and basic communication skills are necessary for being successful in problem-solving process (Basar, Akin, & Durna, 2015). The negative correlation between problem-solving skills and communication skills of students demonstrates that problem-solving skills of students may be improved if their interpersonal communication skills are improved.

Conclusion

In conclusion, problem-solving skills and communication skills of participant students were found to be moderate. Students with high levels of communication skills also had high levels of problem-solving skills. In line with these results, it is suggested that students should be encouraged to participate in more social activities and given courses for improving their problem-solving behaviors and communication skills throughout their nursing/midwifery education. It may also be suggested that curricula should be restructured in a manner to further improve problem-solving and communication skills of students.

References

- Basar, G., Akin, S., & Durna, Z. (2015). Evaluation of problem solving and communication skills in nurses and nursing students. *Gümüşhane University Journal of Health Sciences*, 4(1), 125-147.
- Bingol, G., & Demir, A. (2011). Communication skills of Amasya health school students. *Goztepe Medical Journal*, 26(4), 152-159.
- Cinar, O., Hatunoglu, A., & Hatunoglu, Y. (2009). Problem solving skills of teachers. *Journal of Erzincan University Faculty of Education*, 11(2), 215-226.
- Elbas, N. O., Bulut, H., Demir, S. G., & Yuceer, S. (2010). Nursing students' opinions regarding the clinical practice guide. *Procedia-Social and Behavioral Sciences*, 2(2), 2162-2165.

- Erol, F., Tanrikulu, F., Dikmen, Y., & Akduran, F. (2016). Examination of problem solving skills of nursing students in terms of some variables. *Journal of Human Sciences, 13*(3), 5460-5470.
- Halkett, G. K., McKay, J., & Shaw, T. (2011). Improving students' confidence levels in communicating with patients and introducing students to the importance of history taking. *Radiography, 17*(1), 55-60.
- Kanbay, Y., Aslan, O., Isik, E., & Kilck, N. (2013). Problem Solving and Critical Thinking Skills of Nursing Undergraduate Students. *Journal of Higher Education & Science / Journal of Higher Education and Science, 3*(3).
- Koc, Z., Koyuncu, S., & Saglam, Z. (2015). Problem Solving and Critical Thinking Skills of Nursing Undergraduate Students. *Journal of Higher Education & Science / Journal of Higher Education and Science, (HEAD), 12*(1), 41-50.
- Lau, Y. (2014). Factors affecting the social problem-solving ability of baccalaureate nursing students. *Nurse education today, 34*(1), 121-126.
- Mattila, L. R., Pitkajarvi, M., & Eriksson, E. (2010). International student nurses' experiences of clinical practice in the Finnish health care system. *Nurse Education in Practice, 10*(3), 153-157.
- Oldenburg, N. L., & Hung, W. C. (2010). Problem solving strategies used by RN-to-BSN students in an online problem-based learning course. *Journal of Nursing Education, 49*(4), 219-222.
- Siu, A. M., & Shek, D. T. (2010). Social problem solving as a predictor of well-being in adolescents and young adults. *Social Indicators Research, 95*(3), 393-406.
- Smith, S., Adam, D., Kirkpatrick, P., & McRobie, G. (2011). Using solution-focused communication to support patients. *Nursing Standard, 25*(52).
- Solvoll, B. A., & Heggen, K. M. (2010). Teaching and learning care—Exploring nursing students' clinical practice. *Nurse Education Today, 30*(1), 73-77.
- Tasci, S. (2005). Problem solving process in nursing. *Erciyes University Journal of Health Sciences Nursing Special Issue, 14*, 73-78.
- Tezel, A., Arslan, S., Topal, M., Aydogan, O., Koc, C., & Senlik, M. (2009). Examining problem solving skills and depression levels of nursing students. *Journal of Anatolia Nursing and Health Sciences, 12*(4).
- Tutuk, A., Al, D., & Dogan, S. (2002). Determination of communication skills and empathy levels of nursing students. *CU Journal of Nursing Journal, 6*(2), 36-41.
- Yuksel, A. (2015). The results of self-evaluation of nursing students and problem-solving factors. *Hacettepe University Faculty of Nursing Journal, 2*(1).