Problem-Solving Training: Effects on the Problem-Solving Skills and Self-Efficacy of Nursing Students[1]

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Abstract

Problem Statement: Problem-Solving (PS) skills have been determined to be an internationally useful strategy for better nursing. That is why PS skills underlie all nursing practice, teamwork, and health care management, and are a main topic in undergraduate nursing education. Thus, there is a need to develop effective methods to teach problem-solving skills. The present study, as a first study in Turkey, may provide valuable insight for nurse academicians employed at üniversities.

Purpose of the Study: This study aims to determine the effect of problem-solving training, through a management course, on nursing students' perceived problem-solving skills and self-efficacy beliefs.

Method: Study data, based on pretest–posttest application and a semi-experimental design, were collected using a socio-demographic data form, Problem-Solving Inventory, and Self-Efficacy Scale. Data were analyzed with the Statistical Package for Social Sciences (SPSS) version 15.0 using definitive statistical analysis, the Wilcoxon test, and the Spearman correlation test for inter-scale relations.

Findings: After training, the Problem-Solving Inventory (PSI) and Self-Efficacy Scale scores showed a significant difference ($p < 0.05$). Regarding PSI subdimensions, it was determined that students receiving training perceived themselves as more competent in the Reflective Approach, the Evaluative Quick Approach, and the Planned Approach ($p < 0.05$), but there was no difference in the Quick Approach, Abstention Approach, And Self-Reliable Approach. A positive, medium-level but statistically insignificant relation between perceived problem-solving and self-efficacy has been found.[1]

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Conclusions and Recommendations: This study shows that training for problem-solving through a structured management course improves confidence in problem-solving skills and self-efficacy beliefs. In light of this, nursing students should be trained in more creative ways than just traditional methods, and PS strategies related to management should be integrated into the nursing process. In this regard, academicians should be aware of the importance of the teaching method used and the content of the course. It is also considered that examining multidimensionally to what extent the nursing process improves PS skills would be useful. Further study is needed to clarify the relation between training programs and perceived problem-solving in different samples.

*Keywords: N*ursing process, nursing, education, management course.

Introduction

Problem-solving (PS) skills have been used internationally as a strategy for better nursing care (Hoyt, 2007). In order to give nurses a key role in the health care system and activate them in developing, planning, and making policy in health care, the Dreyfus Health Foundation (DHF) developed the "Problem Solving for Better Health Nursing" (PSBHN) program in 2002, focusing on nurses. DHF had pilot programs in 14 countries in 2005. The results of this programs show that the PS process has increased the skill set and professional confidence of the nurses and strengthened their leadership and also has improved the quality of services provided by nurses.

PS skills are the most important skills used in determining, practicing, and evaluating nursing care for sick or healthy individuals (Wang, Lo, Chi-Hui, & Ya Lie, 2004; Lee & Brysiewicz, 2009). Institutions providing nursing education must raise the PS skills of nurses in order to give qualified health systems the best chance to solve the possible or actualized health problems of individual or groups. PS skills are taught through the application of the "nursing process"education as scientific problem-solving (Bayindir & Olgun, 2015; Burns, O'Donnell, & Artman, 2010).

The nursing process, which is called a PS process, is an organized, systematic approach composed of collecting data, defining problems, determining interventions toward patient care, intervening, and evaluating outcomes. It is possible to provide effective, objective, and professional care by using the nursing process. Nurses have to acquire PS skills in teamwork and health care management as well as in their role of caregiving. That is why PS skill underlie all nursing practice and is one of the main topics in undergraduate nursing education.

Nursing education includes a comprehensive PS education and PS skills can be learned and improved through a nursing process education (Wang et al., 2004; Lee & Brysiewicz, 2009). However, PS skills stand out as the least understood and least studied topic, and studies show that PS skills of nursing students are insufficient,

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moderate, or of a low level. (Lee & Brysiewicz, 2009; Altun, 2003; Bayindir & Olgun, 2015). Studies assert that PS education has a significant effect on PS skills (Heppner & Krauskopf 1987; Taylor, 2000). Yet some studies indicate that undergraduate nursing education does not improve PS skills (Seyedfatemi, Moshir, Abadi, & Borimnejad, 2011; Altun, 2003; Kanbay, Aslan, Isik, & Kilic, 2013). According to Burns et al. (2010), student acquisition of PS skills is impeded by many factors, such as the lack of opportunities to practice PS skills and the challenges instructors face in teaching the skills in realistic situations.

Studies concerning the relationship between undergraduate nursing education and PS skills in Turkey show the gap between theory and practice: Nursing students had difficulty in performing PS activities; they could not grasp PS procedures adequately; and they were reluctant to utilize PS skills in clinical practice because they found them difficult, time-consuming, and too theoretical (Olgun, Onturk, Karabacak, Aslan, & Serbest, 2010). The study by Ulupinar (2007) proves that the greater the exposure to PS training a four-year education, the greater the improvement in PS skills; hence, PS education affects PS skills. Another study monitors the change in PS skills among students receiving an integrated education (Kelleci, Golbasi, Dogan, & Tugut, 2011). This study proves that PS skills improve during the first three years, but that no improvement is made in the last year of internship. Researchers of this study assert that the interruption in improvement may be a result of problems concerning practice settings. Another study monitors the change in first-year nursing students' PS skills in a year, measuring them at the beginning, middle, and end of the education term (Olgun et al., 2010). A significant increase has been identified between the second and third measures during the monitoring. This increase has been correlated with the initiation of PS education and practice in the period following the second measurement. Contrary to these studies, there are also studies which point out that there is no difference between classes regarding PS skills and emphasizing that in most of these studies the students' PS levels are either low or medium (Ancel, Erkal-Ilhan, & Gencturk, 2015; Altun, 2003). Interestingly, nursing students were not aware that they had received problem-solving training integrated into the nursing process (Ancel et al., 2015). Moreover, the study by Bayindir and Olgun (2015), which is the only study conducted in Turkey, examined the relationship between PS and the nursing process application skills of nurses and found no correlation between them. However, the nursing process education in Turkey based on PS skills starts from the second term of the four-year undergraduate education and continues for 7 semesters. The students receive both a theoretical and practical education on PS during each term for 8-16 hours per week. It is interesting to find that the students' PS skills stay at a low- to medium-level even though they receive a lengthy period of education. Therefore, further studies should be conducted to analyze factors concerning curriculums, students, educators, and learning environments. All studies conducted in Turkey concerning PS skills and nursing process have been descriptive; no experimental study has been found. The studies carried out so far have determined the change in students' level of PS skill, but the correlation between this change and education has not been clearly proved. Therefore this study, in a departure from previous studies, aims to analyze the effect

of PS training on students' PS skills, as configured in the scope of a professional management course in nursing. In addition, it is envisaged that good PS skills alone are not adequate, that a belief in self-efficacy (SE) may also play a role in using PS skills; to that end, the interaction between PS and SE belief was also examined. As evidenced from a literature review, both PS and SE beliefs of nursing students have been examined in various studies, but no study on their interrelation has been found except the previously noted research by Ançel et al. (2015). This study seeks to answer the following questions:

- Does PS training affect the perceived PS skills of students?
- Does PS training affect the SE beliefs of students?
- Is there a correlation between SE beliefs and perceived PS skills?

The Concepts of Problem-Solving and Self-Efficacy

The concept of a problem is identified as the perceived gap between the existing state and the desired state, in which an individual experiences mental confusion, distress, or obstruction in reaching an objective. As for PS, it is a cognitive, emotional, and behavioral process to cope with the obstructions, stress, and complications to be solved (Heppner, 1978). PS is also used as a synonym of coping (Heppner, 1982). PS is defined by Dewey as a way students reflect their lessons onto real life; reflective thinking is acknowledged as an equivalent of the scientific method and has a structure consisting of stages (Hermanowicz, 1961 cf. Dewey). Nowadays, the PS process is accepted to consist of five stages: collecting data, analyzing the data, determining alternative solutions, intervening, and evaluating.

PS is an important skill, necessary throughout a lifetime, present in all activities, and requiring continuous improvement. After Dewey's discussion on PS in 1933 and his view that education is life itself, PS skills became the main topic in education and a field of study that many academicians concentrated on. According to Mayer (1998) students should learn PS in a realistic setting, by practicing and knowing what to do when. Mayer argues that an effective PS education is hierarchical and contains three dimensions: a cognitive dimension that demonstrates learning ability (skill); a metacognitive dimension that demonstrates gaining ability in a realistic setting (metaskill); and a motivational dimension that demonstrates eagerness (will). This conceptual model emphasizes the importance of motivation toward learning as well as PS education in improving PS skills. In Mayer's model, the motivational dimension is associated with three cognitive factors: interest, attribution, and SE. According to Interest Theory, students will work harder and be more successful on problems when they are interested. SE predicts that students work harder on a learning task and understand the problem better when they have high SE. SE theory also predicts that students who improve their SE will improve their success in learning to solve problems. According to Attribution Theory, students' PS behavior depends on teachers' reactions such as whether offering sympathy or pity to failure or encouragement. Mayer's model may prove a theoretical framework for the relationship between SE belief and PS for educators when they teach. SE affects how the student learns PS in an academic environment and a correlation is found between academic success and SE belief (Gore, 2006; Zajacova, Lynch, & Espenshade, 2005;

Zimmerman, 2000). Therefore, the effect of SE belief in improving students' PS skills is essential.

SE, which has origins in Bandura's Social Learning Theory, is the judgement of an individual towards her/his capacity to successfully organize the activities in achieving a task in certain conditions (Bandura, 1997). Bandura states that SE belief arises from four information sources. These are listed as: mastery experiences, the successful performance of an individual based on her/his own experiences; vicarious experiences, which are indirect experiences, learning by observing others' experiences; verbal persuasion, receiving positive feedback from other people regarding her/his performance in carrying out the task; and, lastly, physiological or emotional states, representing the individual's ability to regulate and explicate her/his psychological and emotional arousal such as stress when faced with problems.

A concept analysis of SE by Zulkosky (2009) explores the "feeling," "thinking," and "behaving" dimensions of the cognitive model. In terms of "feeling," a low sense of SE is associated with stress, depression, anxiety, and helplessness. Hence, such individuals fail to cope with potential dangers, become pessimistic about their personal developments and accomplishments, and eventually lose their self-esteem. In terms of "thinking," it is suggested that a strong sense of SE facilitates cognitive processes in a variety of settings such as decision making and academic achievement. As for "behaving," an individual's level of SE is said to be directly influential on his/her choice of activities.

SE is one of the main concepts in education, providing improvement in the learning, succeeding, and motivation of the student. (van Dinther, Dochy, & Segers, 2011). SE belief shows that advanced students become more motivated in learning activities, struggle and develop more effective strategies when faced with difficulties, and give a higher performance (Bandura, 1997; Zimmerman, 2000; Eggen &Kauchak, 2013). According to Bandura (1997), SE belief affects people's decisions in determining a goal, how much they will struggle to reach that goal, and how long they will be able to face the difficulties they encounter or whether they will avoid such difficulties. The concept of SE is also defined as the main concept of nursing education (Robb, 2012). Robb's study shows that an increase in SE level resolves the gap between theory and practice and makes it easier to gain clinical skills. Robb (2012), in his paper reviewing publications between 1982 and 2010, affirms that Bandura's definition of the cognitive dimension of SE belief and its four main sources comply with nursing education. It is common to use these sources for enhancing SE in nursing education. Correlated results indicate significant relationships between SE belief and perceived PS skill for nurse and midwifery students (Ancel et al., 2015). Beyond a doubt, aside from learning PS, students have to believe in themselves in this respect. A cycle can be envisaged where students' strength of SE belief can help them use PS skills effectively and, in turn, PS skills can increase SE belief.

Method

Research Design

This study is pretest, posttest, and semi-experimental in design. A control group could not be arranged because there was no second group. Measurements were applied in the class, before and after training.

Research Sample

The participants were undergraduate, four-year nursing students from a university, registered to a professional management course. Sample choosing was not preferred and all 26 students willing to participate in the study were accepted.

Research Instrument and Procedure

The data were collected using a socio-demographic information form, the Problem-Solving Inventory (PSI) developed by Heppner and Peterson (1982), its validity and reliability tested by Taylan (1990), and a Self-Efficacy Scale (SES) developed by Sherer and Madduks (1982) and adapted to Turkish by Gozum and Aksayan (1999). The socio-demographic information form was used to identify participants' characteristics.

Problem-Solving Inventory: PSI is a 6-point, Likert-type scale with 35 items. It reflects general perceived PS skills, and the scoring limits are between 32 and 192; the average score is 80. Low scores (under 80) show high confidence in PS (Table 1). The scale has 6 subdimensions, namely, Reflective Approach, Evaluative Approach, Self-Reliable Approach, Planned Approach, Quick Approach, and Abstention (Skeptical) Approach.

Table 1.

Interpretation of the Scores of the Problem-Solving Inventory

Subscales	Increase in Scale Scoring	Decrease in Scale Scoring
Subdimensions measuring the type of positive-desired approaches (Reflective, Self-Reliable, Evaluative, Planned)	Individual uses the positive approaches less	Individual uses the positive approaches more
Subdimensions measuring the type of negative-ineffective approaches (Quick, Abstention)	Individual uses the negative approaches more	Individual uses the negative approaches less
Problem-Solving Inventory	Perceived PS skills is negative	Perceived PS skills is positive

Self-Efficacy Scale: SES is a 5-level, Likert-type scale with 23 questions and measures general SE belief. The scores of the scale are between 23 and 115. The high scores indicate higher SE belief. Although the scale has 4 subdimensions, total scoring instead of the use of subdimensions was recommended, because the Turkish version of the scale differs from the original one. Therefore, the results of this study were evaluated according to the total scores.

Before starting, the necessary institutional permissions and informed consent from participants were taken. The students were given 7-week training composed of 8 hours theory and 56 hours practice as a part of the professional management course. Theoretical contents of the training include the following issues: Conceptualizing and defining a problem, specifying alternative solutions, deciding on a suitable solution by comparing the advantages and disadvantages of the options, organizing the practical steps for carrying out the solution, and determining the conclusive outcomes for evaluation. As part of the theoretical education, techniques such as the Pareto Analysis to determine the priority of problem, "Cause-Effect Diagraming" to analyze the problem, and "SWOT Analysis" to evaluate the strengths (S), weaknesses (W), threats (T) and opportunities (O) in PS are taught. The theoretical education is supported with in-classroom practices, individual or group practices, homework, and, lastly, clinical practices. The students are first encouraged to use exercises learned in the classroom for their own lives, and secondly to practice them in university hospital clinics.

Validity and Reliability

In terms of the reliability of the scales, a test of Coefficient Alpha (Cronbach's alpha) was conducted. The scale's Cronbach alpha coefficient of PSI in Taylan's study (1990) was found to be 0.88 while in our study it was 0.87. The Cronbach's alpha coefficient of SES was 0.81, while in this study it was estimated at 0.85. Completing the questionnaire and scales took approximately 20 minutes.

Data Analysis

The data was evaluated with the Statistical Package for Social Sciences (SPSS) version 15.0, and the Wilcoxon test was used to determine the difference in students' PSI and SES scores pre- and posttests; the Spearman correlation test was applied concerning the relation between scales. The significance level was accepted as 0.05.

Findings

Students' age mean was 21.9 ± 1.38, 92.3% of were girls, and all were single; mean academic success was 2.6 ± .31. About 4. 65% of the students stated they had lived in cities before university and during education, and 61.5% were living with their families while 38.5% were living with friends. The mothers of 15.4% of the students were illiterate; most (73.1%) had only primary school education and were housewives (96.2%). The fathers of 3.8% of the students were illiterate, 76.9% of them had primary and secondary education, and 19.2% of them attended university; 88.4%

of them were employed as civil servants or workers. Students stating that they had not received PS training during their undergraduate education accounted for 80.7% (Table 2).

Table 2.

Socio-Demographic Characteristics of Students

Characteristics	n	%
With whom they live		
Family	16	61.5
Friend	10	38.5
Alone	0	0
Place of living before university		
Village-town	9	34.6
City	17	65.4
Educational level of mothers		
Illiterate	4	15.4
Primary school	19	73.1
Secondary school	2	7.7
University	1	3.8
Educational level of fathers		
Illiterate	1	3.8
Primary school	13	50.0
Secondary school	7	26.9
University	5	19.3
Living place of family		
Village-town	82	33.9
City	161	66.1
Received PS training before		
Received	5	19.3
Not received	21	80.7

The students' PSI total scores were determined as 87.0 ± 16.7 before training (low between 81 and 192) and 82 ± 12.9 after training (the level of satisfaction increases as the scores decrease). After training the students' perceived PS skills improved and reached medium-level. As a result of the training, it was found that the subdimension scores of the PSI's Reflective Approach, Evaluative Approach, and Planned Approach changed significantly and the students perceived themselves more competent in these subdimensions ($P<0.05$). On the other hand, the subdimension of the Self-Reliable Approach, although being statistically insignificant, maintained a positive difference. However, the PSI's Quick Approach and Abstention Approach that are mentioned as negative dimensions did not have a significant difference ($p>0.05$).

The students' SES scores were identified as 85.23 ± 11.8 before training and 94.35 ± 9.3 after training, so that their SE belief increased significantly (P<0.05) and reached a high level (Table 3).The relation between PS skills and SE was examined using the Spearman correlation test and a medium level, negative but a statistically significant relationship could not be found (r= -317, p=.115) (p>0.05).

Table 3.

PSI and SES Scores of Students

	Score Limits	Before Training		After Training		
		X	S	X	S	P
PSI-dimensions						
Quick A.**	9-54	25.38	5.24	25.96	7.77	.689
Thinking A.	5-30	13.34	4.74	10.88	4.29	.035*
Abstention A.	4-24	12.54	5.30	14.04	5.84	.252
Evaluative A.	3-18	7.35	3.09	6.23	2.56	.028*
Self-Confident A.	6-36	15.77	4.60	13.80	4.12	.112
Planned A.	4-24	9.85	3.43	8.19	3.42	.024*
PSI Total	32-192	87.00	16.78	82.00	2.89	.258
SES Total	23-11	85.23	11.85	94.34	9.28	.000*

Wilcoxon test was applied *p<0.05
**Approach

Discussion and Conclusion

This study aimed to identify the effect of training on perceived PS skills and the SE belief of nursing students. The training program created a significant difference in the students' PS perception. This is in line with studies supporting the idea that education increases PS skills (Heppner & Peterson, 1982; Lee & Brysiewicz, 2009; Bayindir & Olgun, 2014). Nonetheless, Heppner and Peterson, stating that an increase in PS perception does not necessarily mean an increase in skills, propose measuring it in real settings. In developing students' PS skills, it is suggested to evaluate PS skills throughout their nursing education; to measure real PS practices and carry out education, as in this study, both theoretically and in real settings.

PS education in nursing is mostly given to teach the nursing process for patient care. In this study, as in the previous study by Ancel et al. (2015), most of the students (80.7%) stated that they had not received PS education before the training program, although they had received nursing process education throughout their four-year education. This finding shows that students do not perceive nursing process as a PS process and that PS skills have to be integrated into nursing process more clearly. At this point, future studies need to investigate how PS skills are taught to students and what the impact of nursing process or any training is on their PS skills. Bayindir and Olgun (2015) found no relationship between the PS skills of

students and nursing process grades. Wang et al. (2004) demonstrated that PS strategies should be integrated into the nursing process and that PS skills can be improved. However no studies were found as to whether a management course would improve PS skills. In this study, the content of the training program was designed differently from the other studies to gain managerial PS skills. The subdimensions of Reflective, Evaluative, and Planned Approaches of the students were positively affected by this program. High academic scores of students and a training program that consists of skills-enabling critical thinking such as the cause-effect diagraming may have an influence on the PS skills of students. The ineffectiveness of the provided training concerning some PSI subdimensions (Quick, Abstention, and Self-Reliable Approaches) indicate the need for more attention to motivational strategies and problem-based teaching strategies in teaching PS, as suggested by Cholowski and Chan (2004).

The study states that the training program also influences students' SE belief. According to Bandura's (1997) theory, a high level of SE belief facilitates decision making, which is an important element of PS. At this point it is possible to create mutuality between SE belief and perceived PS. As explained in the cognitive model of the SE concept by Zulkosky (2009), the thinking dimension of SE may have been positively affected by the PSI's Reflective, Evaluative, and Planned Approaches dimensions, by enhancing decision making and success. Similarly, the failure of the same effect in the PSI's Quick, Abstention, and Self-Reliable Approaches subdimensions may be improved to enhance the emotional and behavioral dimension of SE belief. When the finding of the current study was interpreted in the context of Mayer's model (1998), it showed that the training program improved PS perception and the students received training in a realistic setting, but the motivational dimensions, which are an element of SE theory, need a better analysis. For example, the students' interest and how they are seen by teachers need to be specified, interest of the students has to be raised, and educators have to provide the students with supportive feed-back during education. In this way, it was anticipated that the PSI's Quick, Abstention, and Self-Reliable subdimensions could undergo a positive change. The four sources of SE belief are guidance for this change and more attention to the four information sources should be recommended in teaching planning for better outcomes. The training education program for PS skills should aim to ensure that the students gain mastery experiences, increase their vicarious experiences, affect their verbal persuasion, and control psychological, physiological, and emotional arousal.

In the present study, a statistically insignificant but medium-level negative relation was found between PS and SE. Studies that have directly examined the relation between PS training, PS skills, and SE belief have not been found in the literature. There is one study which determined that higher critical thinking, which is positioned as an essential concept for effective PS skills, leads to higher SE beliefs and perceived performance (Gloudemans, Schalk, & Reynaert, 2013). Another study which examined the PS and SE relationship indicated that better PS leads to a better SE (Ancel et al., 2015). Therefore, nurse academicians and researchers stressed that

focusing on this relationship will help give direction to the professional nursing education.

This study points out that a structured training program increases cognitive dimensions of PS skills and SE beliefs. Since PS and SE are the main concepts of nursing education, this relationship needs to be investigated more precisely and further studies are needed to determine how PS skills could be effectively improved. Since there was no possibility to establish the study with a control group, it is suggested to repeat the study with a control group and with different samples, and to measure the real PS practices of students with longitudinal monitoring. It is also considered that examining multidimensionally to what extent the nursing process improves PS skills would be useful.

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Hemşirelik Öğrencilerinde Problem-Çözme Eğitiminin Problem Çözme Becerisi ve Öz-Yeterlilik İnancına Etkisi

Atıf:

Özet

Problem Durumu: Hemşirelikte problem çözme (PÇ) becerisi, "hemşirelik süreci" olarak adlandırılan ve sağlıklı ya da hasta bireylerin gereksindiği hemşirelik bakımının belirlenmesi, uygulanması ve değerlendirilmesinde kullanılan en önemli beceridir. Hemşirelik süreci, bilimsel PÇ aşamalarını kullanarak gerçekleştirilmektedir. PÇ becerisi, iyi bir hemşirelik bakımı sunulabilmesi için

uluslararası strateji olarak belirlenmiştir. Veri toplama, verileri değerlendirerek hemşirelik tanısı koyma (problemi belirleme), problemi çözmek için gerekli hemşirelik bakımı girişimlerini belirleme, girişim planını uygulama ve sonucu değerlendirme aşamalarından oluşan hemşirelik süreci, dinamik bir süreçtir. Bu nedenle hemşirelik eğitimi veren kurumlar, topluma kaliteli bir sağlık hizmeti sunabilmeleri için bu beceriye sahip meslek üyeleri yetiştirmek durumundadırlar. Türkiye'de PÇ becerisi eğitimi, hemşirelik süreci sistemi adıyla ve dört yıllık lisans eğitiminin ikinci döneminden başlayıp yedi sömestre boyunca devam etmektedir. Öğrencilerden teorik eğitimde öğrendikleri PÇ becerisini haftada 8-16 saatlik klinik alan/toplum sağlığı uygulamalarında kullanmaları ve geliştirmeleri beklenmektedir. Lisans eğitimi süresince PÇ eğitimi ve uygulaması almalarına karşın, öğrencilerin PÇ becerilerinin düşük ya da orta düzeyde olduğu ya da eğitim boyunca artmadığı görülmektedir. Bu nedenle öğrencilerin PÇ becerilerini etkileyebilecek eğitim, eğitici, öğrenci ya da eğitim programından kaynaklanan nedenler mutlaka incelenmeli, PÇ becerileri ile ilişkili faktörler araştırılmalı ve farklı eğitim programları denemelidir. Literatür taramasında, Türkiye'de hemşirelik öğrencilerinde PÇ becerilerini artırmada mesleki yönetim dersi kapsamında verilen PÇ eğitiminin etkisi ve PÇ ile öz-yeterlik (ÖY) inancı arasındaki ilişkinin incelendiği bir çalışmaya ulaşılamamıştır. Hemşirelik eğitiminin etkili biçimde yapılması ve geliştirilmesi için bu konuda çalışmalar yapılmasına gereksinim bulunmaktadır.

Araştırmanın amacı: Bu çalışma, hemşirelik öğrencilerinin PÇ becerilerinin artırılmasında mesleki yönetim dersi kapsamında verilecek bir eğitimin etkisini belirlemeyi amaçlamaktadır. Ayrıca öğrencilerin, PÇ becerilerini kullanabilmelerinin bu konuda kendilerine inanmaları ile de ilişkili olduğunun düşünülmesi nedeniyle; eğitimin ÖY inancına etkisi ve problem çözme ile öz-yeterlik arasındaki ilişkinin de belirlenmesi amaçlanmıştır.

Araştırmanın Yöntemi: Çalışma ön test-son test uygulamalı ve deneysel olarak planlanmıştır. Son sınıfta okuyan öğrenci sayısının çalışmaya katılanlarla sınırlı olması ve ikinci bir grup olmaması nedeniyle kontrol grubu oluşturulamamıştır. Çalışmaya bir üniversitenin hemşirelik lisans programına kayıtlı olan, PÇ becerisine dayalı hemşirelik süreci eğitimi almış, son sınıfta okuyan ve mesleki yönetim dersine kayıt yaptırmış öğrenciler alınmıştır. Örneklem seçimine gidilmemiş ve çalışmaya katılmaya gönüllü olan 26 öğrencinin tamamı alınmıştır. Veriler öğrencilerin sosyo-demografik özellikleriyle ilgili soru formu, Problem Çözme Envanteri (PÇE) ve Öz-Yeterlik-Etkililik Ölçeği (ÖYÖ) kullanılarak ölçülmüştür. PÇE'nin Cronbach alfa katsayısı çalışmamızda .87 olarak ÖYÖ'nin ise .85 olarak hesaplanmıştır. Öğrencilere mesleki yönetim dersi kapsamında 8 saati kuramsal, 56 saati uygulamadan oluşan 7 haftalık bir eğitim verilmiştir. Kuramsal eğitim, problem kavramı ve tanımı, problemin belirlenmesi ve ifade edilmesi, çözüm seçeneklerini sıralama, seçeneklerin avantaj ve dezavantajlarını karşılaştırarak uygun seçeneğe karar verme, çözümü uygulamak için eylem basamaklarının oluşturulması ve değerlendirme için sonuç çıktılarını belirleme konularını kapsamaktadır. Kuramsal eğitimde, ayrıca öncelikli problemi belirleyebilmek için "Pareto Analizi",

kök nedenleri bulabilmek için "Ishikawa Diyagramı", problem çözümünde sahip olunan güçlü (Strength) ve zayıf (Weakness) yanlar ile tehditler (Threats) ve fırsatları (Oportunities) değerlendirebilmek amacıyla "SWOT Analizi" gibi teknikler öğretilmiştir. Kuramsal eğitim, sınıf içi uygulamalar, bireysel ve grup çalışmaları, ev ödevleri ve son olarak ta klinik ortamda yapılan tartışmalarla pekiştirilmiştir. Öğrenciler egzersizlerle önce kendi yaşamlarında karşılaştıkları problemleri çözme konusunda cesaretlendirilmişlerdir. İkinci aşamada, bir üniversite hastanesinin kliniğinde, belirledikleri bir yönetimsel problem çözümü için uygulama yapmışlardır. Veriler, SPSS (Statistical Packages for Social Sciences) 15. paketi ile değerlendirilmiş, tanımlayıcı istatistik analizler, öğrencilerin eğitim öncesi ve sonrası PÇE ve ÖYÖ puanlarındaki değişimi belirlemek için Wilcoxon Testi ve ölçekler arası ilişki için Spearman Korelasyon Testi kullanılmıştır. Anlamlılık düzeyi 0.05 olarak kabul edilmiştir.

Araştırmanın Bulguları: Öğrencilerin % 80.7 sinin eğitimleri boyunca hemşirelik süreci eğitimi almalarına karşın PÇ eğitimi almadıklarını belirtmeleri, hemşirelik süreci eğitiminin PÇ becerisi ile ilişkilendirilerek öğretilmesinde sorun olduğunu göstermiştir. Çalışma bulguları, mesleki yönetim dersi kapsamında yapılandırılmış bir PÇ eğitiminin öğrencilerin PÇ becerileri ve ÖY inancını artırabileceğini ortaya koymuştur. Eğitim öncesi öğrencilerin PÇE puanlarının 87.0±16.7(81-192 arası düşük), eğitim sonrası 82±12.9, olduğu (puan azaldıkça yeterli hissetme düzeyi yükselmektedir) ve ÖY inancı puanlarının eğitim öncesi 85.23±11.8, sonrası 94.35±9.3 olduğu (puan arttıkça yeterlik inancı artmaktadır) belirlenmiştir. Eğitimle PÇE'nin "düşünen yaklaşım" "değerlendirici yaklaşım" ve "planlı yaklaşım" alt boyut puanlarında istatistiksel olarak anlamlı değişim olduğu ve öğrencilerin kendilerini daha yetkin algıladıkları görülmüştür (p<0.05). PÇE'nin "Kendine güvenli yaklaşım" alt boyutunda ise istatistiksel olarak anlamlı olmasa da olumlu bir değişim görülmüştür. Aynı şekilde, ÖY inançlarında da anlamlı bir artış olduğu (p<0.05) belirlenmiştir. PÇ becerisi ve ÖY inancı arasında orta düzeyde, negatif ancak, istatistiksel olarak anlamlı bir ilişki bulunamamıştır (p=.072).

Araştırmanın Sonuçları ve Önerileri: Öğrencilere verilen eğitim, problem çözmede olumlu alt boyutlar olarak anılan "düşünen, değerlendirici ve planlı yaklaşım" üç alt boyutunda istatistiksel olarak anlamlı bir değişim "kendine güvenli yaklaşım" alt boyutunda ise istatistiksel olarak anlamlı olmasa da olumlu bir değişim sağlamıştır. Ancak, problem çözmede olumsuz boyutlar olarak anılan "aceleci yaklaşım" ve "kaçıngan yaklaşım" alt boyutlarında anlamlı bir değişimin olmaması, verilen eğitimin problem çözmenin bilişsel boyutunu etkilediği ve duyuşsal boyutu etkilemesi için farklı stratejiler gerektiğini düşündürmüştür. Eğitim sonrası öğrencilerin ÖYÖ puanının artmış olmasına karşın PÇE'nin "kendine güvenli yaklaşım" ve duyuşsal boyutlarında farklılık yaratmaması ve PÇ becerisi ve ÖY inancı arasında istatistiksel olarak ilişki bulunmaması ilgi çekicidir. Çalışmada ÖYÖ'nin alt boyutlarının kullanılamaması (ölçeğin geçerlik güvenirlik çalışmasında önerilmemiştir) nedeniyle ölçekler arası ilişki toplam puanlar üzerinden çalışılabilmiş, bu nedenle, alt boyutlar arasında karşılaştırma yapmak mümkün

olamamıştır. Çalışmanın bulguları, öğrencilere verilecek yapılandırılmış bir PÇ eğitiminin PÇ becerisini ve ÖY inancını arttırabileceğini göstermektedir. Ancak, kontrol gruplu ve her iki cinsiyette öğrencinin olduğu farklı örneklemlerle çalışmanın tekrarlanması ve uzunlamasına izlemle öğrencinin gerçek PÇ eylemlerinin ölçülmesi daha güvenilir kanıtlar sağlayacağı için önerilir. Ayrıca hemşirelik öğrencilerine verilen eğitimin sosyal kognitif teoriler açısından gözden geçirilmesinin ve hemşirelik süreci içerisinde PÇ becerisini geliştirici değişiklikler yapılmasının etkili ve yararlı olacağı düşünülmüştür.

Anahtar Kelimeler: Hemşirelik süreci, hemşirelik, eğitim, yönetim dersi.