



Surgical patient education: Turkish nursing students experiences

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Summary Patient education has been widely used by medical schools and schools of nursing as a method for evaluating clinical performance. Training of patients provides a viable method for teaching and evaluating nurse practitioner students as they progress through their educational programs toward clinical competency. Evaluation of patient education experience provided objective and valid information regarding the students' delivery of didactic information and ability to apply knowledge in the clinical setting. The purpose of this article is to describe the preparation of materials for preoperative patient education and to evaluate patient education carried out by second-year students of the University Of Ege School Of Nursing. In this study, students, patients and lecturers evaluated patient education carried out by the nursing students. Criteria including relationships between people (listening, talking and communication ability), and behavior before education (prepare topic content, develop appropriate material for the topic, communicate which topic will be explained, etc.) and during education (attract listeners' attention to the topic, give information about the target, present the content and material of the subject well, etc.) were appraised. According to the results of evaluation, the education carried out by the students achieved the highest score from patients; the students gave the second-highest score. The lecturers gave scores that were lower than those of students and patients.

At the end of this study, it has been found that patients were pleased with the education prepared according to their individual requirements and the students were pleased with giving education with the material they have prepared employing their own creativity.

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Introduction

Nurse education programs involve training for advanced practice roles. The competencies of nurse practitioners are dependent upon the development and application of a strong base of knowledge in specialty areas and the demonstration of technical, interpersonal and critical thinking skills, attitudes, and ethics (Ebbert and Connors, 2004). Due to the broad educational diversity in nursing, objective evaluation of multiple components using traditional evaluation methods has proved to be impossible. Evaluations conducted by clinical tutors and direct observation by faculty staff are the most frequent methods used for the evaluation of nurse practitioner students in the clinical area (Wotton and Gonda, 2004; Ebbert and Connors, 2004).

For nurses in surgical and clinical areas, preoperative preparation is a routine task that is one of the most important parts of nursing care. It is also the task most often applied and studied, as well as being the most longstanding topic in nursing research (Potter and Perry, 1997; Lewis et al., 2002).

Effective preoperative education has a positive effect on postoperative outcomes. Patients who receive preoperative education have a reduced stress and anxiety level, and shorter length of stay; as well as reduced postoperative narcotic use (King and Tarsitano, 1982; Burden, 1983; Devine and Cook, 1983). Although the purpose of patient education in an acute care facility is to support informed decision-making by patients and to teach post-hospital survival skills, education is also needed for intelligent management of long-term conditions in the home (Taylor et al., 1989; Litwack, 1996; Kassel and Lookinland, 1997; Potter and Perry, 1997; Fox, 1999; Smeltzer and Bare, 2004).

Reduction of postoperative respiratory and circulatory complications through deep breathing, coughing, and bed exercises has been widely discussed in the nursing literature. Because of the lack of nursing literature and the continuing high incidence of postoperative respiratory and circulatory complications, Lindeman and Van Aernam (1971) conducted a comparative investigation of the effects of structured and unstructured preoperative teaching of deep breathing, coughing, and bed exercises upon postoperative ventilatory function, length of hospital stay, and postoperative need for analgesics in 261 surgical patients. Their data showed that receiving structured preoperative teaching significantly improved the

ability to deep breathe and cough postoperatively, and also significantly reduced the mean length of hospital stay (Lindeman and Van Aernam, 1971; Lewis et al., 2002).

For preoperative education to be effective, nurses must respond to the learning needs of patients and adjust educational strategies according to ongoing assessments of learning styles and preferences. With ongoing advances in computers and technology, the learning needs and preferences of the healthcare consumer have become more sophisticated (Lewis et al., 2002).

Effective patient education materials are important supplements for patients in any healthcare setting. Well-planned and carefully documented materials (written, audio, video, or computerized) help to improve patient understanding and skills related to their healthcare needs. Careful planning, development, and evaluation of patient education materials provide benefits to healthcare professionals and patients by enhancing patient teaching efforts and enabling successful patient education outcomes (Barnes, 1997).

The practical component of fundamental nursing courses is now based on a behavioral approach. This focuses on teaching clinical techniques experimentally, and students spend long periods of time doing repetitive practice in the school laboratory to master nursing skills. However, although the laboratory offers a controlled setting where students can practice clinical skills safely, they cannot use or adapt the skills they have learned to interact with patients in a real clinical setting. These students experience severe anxiety when placed in the hospital ward to care for real patients, and this stress affects their ability to perform adequately (Yoo and Yoo, 2003).

Purpose

This study was planned for the purpose of developing material for preoperative patient education and evaluating the patient education delivered by second-year students of the University of Ege School of Nursing.

Research questions

Clinical application is part of the education of nursing school students through which they gain appropriate professional experience, and thus it is an important part of nurse training. Investigation of the delivery of patient education provided by the students was based on five questions.

The research questions were as follows:

- What are the problems the students encounter while they are preparing written material for patient education?
- What are the problems the students face while they are teaching patients?
- What do the patients think of the patient education carried out by the students?
- How do the lecturers evaluate the patient education material written by the students?
- How do the lecturers evaluate the patient education carried out by the students?

Method

This study was designed as a descriptive survey and was carried out at the University of Ege Hospital, Department of General Surgery Clinic.

Sampling

The study population consisted of 91 second-year students from the University of Ege Nursing School who were being trained in the field of surgery. The study sample consisted of 79 students who provided patient education during internship.

Before starting the study, permission was granted by the Head of the Department of General Surgery and the School of Nursing Ethics Committee. Permission to conduct the research was obtained from the Ethics committee as per the regulations pertaining to the protection of human participants. The explanations required were orally presented to the students and patients who were included in the research group.

Instruments

A questionnaire consisting of three parts was used to collect data.

1. *Personal information form*: A personal information form was developed by researchers for the students and the patients, which contained two sections.
 - (a) *Personal information form intended for students*. The students were asked questions about their age, working position, what literature they made use of while preparing the educational material, if they encountered problems in preparing, delivering or applying the patient education, and if preparing the

patient education had any benefit to the student or not, involving suggestions and criticisms for subsequent patient education programs. In total, this section consisted of 12 questions.

- (b) *Personal information form intended for patients*. Patients were asked questions about their age, sex, education level, whether they had ever been hospitalized, whether they had undergone any operation beforehand, and whether they received any education before and after the operation, about the time of the patient education that was given by the students, if they encountered any difficulty or not during education, whether the education or the brochure presented had been effective or beneficial, their opinion about the education material, and their suggestions and criticisms for subsequent education programs. In total, this section consisted of 11 questions.
2. *Patient education evaluation form*: A patient education evaluation form was prepared by researchers who thoroughly searched the relevant literature for evaluation of patient education, which was then customized and applied by the students. This form consisted of criteria for evaluating relationships between individuals and for behavior before and during the education. Using this form, the students evaluated the education they themselves delivered to the patients; the patients also evaluated this education and the lecturers evaluated the patient education that was prepared and presented by the students.
3. *Visual materials evaluation form*: To evaluate the materials prepared by the students, a visual material evaluation form adapted from Yalin's (2000) book on "Instruction Technologies and Material Development" was used. All the students prepared a brochure including information on breathing deeply, coughing, getting up from the bed, turning and doing foot exercises for surgical patients to be used before and after operations. While preparing these brochures, the students were given free rein. All brochures were produced on computers.

Data collection

Data were collected during the spring semester from April to June, 2004.

Data analysis

The data obtained from the research were evaluated using SPSS for Windows version 10.0; the functions used were number, percentage.

Sample demographics

The research revealed the following: the mean student age was 21.5 years (range 19–26); 100% ($n = 79$) of the students were female; 82.3% ($n = 65$) of the students were not working; and 17.7% ($n = 14$) of them were working as a nurse.

The mean patient age was 54.0 years (range 25–84); 59.5% ($n = 47$) of the patients were female and 40.5% ($n = 32$) were male; 10.1% ($n = 8$) of them graduated from university and 19.0% ($n = 15$) from high school, 63.3% ($n = 50$) had a primary education and 7.6% ($n = 6$) were illiterate.

Results

This study involved evaluation data from students, patients and lecturers taken from the written form developed for patient education by second-year students of the nursing school, who were doing their internship in a surgical clinic.

It was found that while the students were preparing an educational brochure for patients, 65.9% ($n = 52$) of them used lecture notes, books and the Internet, 30.4% ($n = 24$) used only lecture notes, and 3.8% ($n = 3$) did not answer this question. When problems in preparation of the educational material were investigated, 59.5% ($n = 47$) of the students did not encounter any problems, 21.5% ($n = 17$) did not have enough time while preparing the material, and 19.0% ($n = 15$) had problems in terms of finding suitable pictures and composing the information. The students reported that 72.2% ($n = 57$) of them delivered their patient education in the preoperative phase and 27.8% ($n = 22$) in the postoperative phase. In addition, while delivering the patient education, 75.9% ($n = 60$) of them did not encounter any difficulties and 24.1% ($n = 19$) came across a problem (one patient did not want to take part in the education session, one patient had hearing loss and one patient was old and had other illness problems), while 100% ($n = 79$) of the students said that they were supported by the clinic staff. The students also stated that 96.2% ($n = 76$) of them did not have any problem with the physical environment, while 98.7% ($n = 78$) had no trouble preparing the patient education brochure, and added that taking patient education was beneficial to themselves. At the end of the training,

when the students were asked for suggestions and comments, 73.4% ($n = 58$) of them had no suggestions, 20.3% ($n = 16$) had a suggestion related to preparing the educational material (e.g., use of different topics, acceptance of hand writing, use of group education) and 6.3% ($n = 5$) suggested a longer preparation time. The educational experience got positive feedback from 93.7% ($n = 74$) of the students.

The data for educated patients showed that 64.4% ($n = 51$) of them were hospitalized beforehand, 53.2% ($n = 42$) had a previous operation, 79.7% ($n = 63$) did not have any education about exercises before and after the operation, while 20.3% ($n = 16$) were informed about exercises before and after the operation. Moreover, 100% of the patients ($n = 79$) had no problem with the students, 96.2% ($n = 76$) had no problem with the place in which the education was carried out, 96.2% ($n = 76$) stated that the education was useful, and 94.9% ($n = 75$) reported that they benefited from the material. Regarding the brochure, 51.9% ($n = 41$) of patients agreed that it was ‘‘well done’’ and 46.8% ($n = 37$) that it was ‘‘good’’. In general, 93.7% ($n = 74$) found the education useful and 6.3% ($n = 5$) had suggestions (e.g., brochure could be like a book, it was about different illnesses, could include more pictures) about the educational material. Overall, 100% ($n = 79$) of the patients had affirmative suggestions about the education and the brochure.

The students, patients and lecturers using the same criteria evaluated the patient education given in the surgery clinic by the students. These criteria included relationships between people, and attitude before and after the education. Data for this evaluation are shown in [Table 1](#).

[Table 1](#) shows the distribution of data on education evaluation. This result shows only good ratings. It is evident that the patients gave the highest ratings. This reflects their satisfaction with the education delivered by the students and shows that the patients found that the students were highly qualified.

In this study, it is also evident that the students were very pleased with the education they delivered to patients and that they found themselves capable.

The lecturer ratings in evaluating the education were lower compared with the student and patient ratings, and the lowest rating was given for students taking and giving feedback, at 17.7% ($n = 14$).

A lecturer guided all of the students. Feedback was given to the students regarding their performance.

Lecturers, using a visual material evaluation form, evaluated the brochure prepared by the

Table 1 Distribution of data from the patient education evaluation form filled out by students, patients and lecturers

Criterion	Patient education evaluation					
	Student		Patient		Lecturer	
	N	%	N	%	N	%
Relationship between individuals						
Listening ability	72	91.1	75	94.9	69	87.3
Talking ability	75	94.9	74	93.7	55	69.6
Communication ability	72	91.1	75	94.9	54	68.4
Before education						
Prepare topic content	69	87.3	72	91.1	61	77.2
Develop appropriate material for the topic	60	75.9	70	88.6	57	72.2
Communicate which topic will be explained	70	88.6	74	93.7	51	64.6
Determine appropriate time	68	86.1	74	93.7	63	79.7
During education						
Attract listeners' attention to the topic	72	91.1	77	97.5	59	74.7
Give information about the target	72	91.1	71	89.9	44	55.7
Present the content and material of the subject well	66	83.5	73	92.4	51	64.6
Answer questions appropriately and give suitable examples	72	91.1	69	87.3	34	43.0
Delivery to attain target behavior	71	89.9	74	93.7	45	57.0
Give and take feedback	65	82.3	74	93.7	14	17.7
Summarize the topic with appropriate repetition	71	89.9	71	89.9	18	22.8
Use time well	69	87.3	67	84.8	72	91.1

students. (Yalin, 2000). Data on the evaluation of the educational material are presented in Table 2.

Table 2 demonstrates that in evaluating the education brochures, the lecturers gave a total positive rating of 75.4% ($n = 58$) for understandability, simplicity and usability of the brochure. All of the students prepared these brochures using a computer and gave a copy to the patients after the education session.

Discussion

In nursing education, application of theoretical information in the practical area is very important. The student can display a change in behavior by combining the theory and practice in education (Olgun et al., 1999).

Choosing a suitable application area for the theoretical information given, as well as establishing cooperation and adaptation between students,

Table 2 Distribution of data related to the evaluation form for visual material filled out by the lecturers

Criterion	Visual material evaluation					
	Good		Average		Poor	
	N	%	N	%	N	%
Appropriateness to the target	56	70.9	22	27.8	1	1.3
Degree of visual reality/abstractness	51	64.6	27	34.2	1	1.3
Ability to attract attention/maintain interest	56	70.9	21	26.6	2	2.5
Comprehensibility	58	73.4	20	25.3	1	1.3
Quality of technique	57	72.2	18	22.8	4	5.1
Usability	58	73.4	18	22.8	3	3.8
Simplicity (clarity, design integrity)	58	73.4	19	24.1	2	2.5
Appropriate use of color	56	70.9	19	24.1	4	5.1
Appropriateness of related oral knowledge	48	60.8	27	34.2	4	5.1
Up-to-date style of delivery	34	43.0	44	55.7	1	1.3

lecturers and clinic nurses, is very important (Ozcan et al., 1996).

In this research, 96.2% ($n = 76$) of the students reported that they did not encounter any problems in the clinical environment. Moreover, 100% ($n = 79$) of the students stated that they had obtained support from clinical staff.

One of the basic factors affecting success is the use of educational material during patient education. In the selection of educational material, properties such as: appropriateness to the target, subject, student and budget; ease in finding the subject; usability; and effectiveness should all be considered (Olgun et al., 1999; Kayis, 2001; Ozvaris, 2001; Orgun and Ozkutuk, 2003; Ozden, 2003).

In this investigation, while preparing educational material, 65.9% ($n = 52$) of the students made use of lecture notes, books and the Internet, while 30.4% ($n = 24$) stated that they had just benefited from lecture notes. While preparing educational material, 59.5% ($n = 47$) of the students did not encounter any difficulties, 21.5% ($n = 17$) complained about the lack of time, and 19.0% ($n = 15$) reported that they had difficulties in finding pictures and composing information.

Ulupinar et al. (2001) demonstrated that, in preparing and evaluating health education materials, 67% of students stated that preparing material increased their creativity, contributed to their development, was pleasing and motivated them. They faced some difficulties regarding time for preparing material and in forming content (Ulupinar et al., 2001).

In this research, 98.7% ($n = 78$) of the students reported that preparing education material and delivering patient education were useful for themselves.

Literature indicated that education should according to the individual needs of the patient (Kozier and Erb, 1987; Narrow and Buschle, 1987; Smith, 1987; Potter and Perry, 1997; Dewit, 2001).

In this study, the students prepared materials especially for their patients. The level of patient benefit from the education was high.

Conclusions

In this study, it was demonstrated that the education delivered by students during clinical applications was a useful and positive experience for the students, patients and lecturers. During the education of the nursing school students, the positive feedback they experienced will be helpful in facilitating their occupational adaptation.

In this study, patient were pleased with the education according to their individual needs instead of routine education materials. Students were pleased with developing patient education material according to the educated patient. This patient education experiences are useful for students in revealing their creativity, increasing their self-confidence and increasing their work motivation. This benefit has been both stated by students and observed by lecturers.

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