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## The effect of simulator-education on students receiving education at the department of elderly care

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### Abstract

Usage and development of new learning tools increased along with the developing technology in health education. The changing expectations in the health services drew attention to clinical skill trainings. Patient safety, which is among the rising values, the struggle to increase the patient rights and student competency, enabled the simulation usage getting more and more widespread in the health education. These developments rising from the technology and education paved the way for the applications and tools of simulation, which is used widespread in enhancing the technical and non-technical skills in health education and which is among the trust worthy education methods, by bringing these two fields together along with them. Using simulation helps students have increased self-esteem and develop their ability to make clinical decisions by providing learning based on experience. Because it contributes to the experiences and occupational skills of the students positively at the same time, the goal of increasing the clinical competence of the students in a virtual or laboratory environment prior to the patient care environment is accomplished. Before going out to the clinic, students can develop their occupational skills in a laboratory that reflects a real clinical environment that is integrated with the life like scenario.

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### 1. Introduction

Usage and development of new learning tools increased along with the developing technology in health education (Bradley, P., Bligh, J., 2005). The health education needs to provide students of associate degree level with knowledge, skills( Karaoğlu et al., 2011), and attitudes they can use in daily practice and usage (General

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Medical Council. Tomorrow's Doctors. Report of the Education Committee, 1993). Clinical skill is a skill that all the students must learn and something that can be used by the individual in all aspects of his life (Çifçili et al., 2006). While some writers define clinical skill as procedures and attempts to be used for the occupation, some writers include to this definition of the clinical skills, communication, professional ethics, physical examination, resuscitation skills, problem solving, team work and information technologies (Das et al., 1998 , Ledingham et al., 2006). Today, which we define as an age of information technology and change, the importance of the easy way of observing very fast developments in science and technology and the medical cognitive applications such as simulator and virtual reality in terms of internalizing during the process of education cannot be denied (Kapıcıoğlu et al., 2014 ).

Simulation is defined as the imitation of duties, relationships, phenomena, equipments, behaviors or some cognitive activities that exist in reality (Patrik 2002). Developments in technology and education have brought along the association of these two areas and enabled the simulation applications and instruments to become widespread and be used in education. Both the patient safety that is among the rising values and the efforts of increasing the patient rights and student's competence have enabled the simulation to be commonly used in medical education (Midik et al., 2010). Patient simulators provide a number of opportunities in medical education. In the system involving a robot patient (model) operating based on a computer program, as well as a required computer software and various accessories, the model enables us to obtain information about the heartbeat, respiration, pulses, pupil reflex, urination, all kinds of normal and abnormal heart and respiratory sounds (Kneebone 1999). Models being used provide the students a chance to apply many of the skills before encountering the real patients. Model applications that will be used in the skill laboratory will gain the students the basic medical skills that are necessary without damaging the patient (Yazar 2003). Both in the world countries and in our country, the population of the elderly increase day by day. Along with the scientific differences, the prevention of the diseases by scientific and technological developments, providing early stage diagnosis and treatment, the decrease of the fertility rate and infant death are reflected to the average life positively and this helped the increase of the age of death. Thus the rate of population above the age of 65 increased. In this age group, where both physical and cognitive ability losses are experienced, dependency constitutes a very important problem (Onat 2004., Öztop et al., 2008, Bahar et al., 2007, Akgün et al., 2004).

### *1.1. Purpose*

In this study we conducted with the 45 student of the elderly care program on the efficiency of the simulator usage, it is determined that the simulator usage affects the learning.

Elderly Care Associate Degree Program raises students that can take part in academic and service areas related with the elderly health which is needed in our country; and raises individuals that can provide service and studies in the fields of aging process, protection of the health of the elderly, encouraging aging healthily, and meeting the needs of our society.

## **2. Method**

The research was planned and carried out as descriptive in order to find out about the thoughts of the students that are studying in the elderly care department of the Selçuk University Health Services Occupational High School, concerning their education with the simulator. The scope of the study is comprised of the students that are studying in the care services department during the academic year of 2013- 2014. In order to carry out the research, a written permission is taken from the Directorate of Selçuk University Health Services Occupational High School. The survey form, which is prepared by the researcher through the analysis of related literature, consists of 2 sections. In the first section, there are questions about the sociodemographic features related with the student; the age, sex, income and education period of the students in the university. In the second section, there are questions that include the impacts of the simulator usage on the learning. There are many applications performed on the alternating student groups by different instructors annually. In the assessment of the study, each student that provide feedback is asked survey questions with the answers: I agree, I am unsure, I do not agree and his views on the educations with the simulator are collected. In the statistical assessment of the data acquired as a result of the research, number percentage distributions are used.

### 3. Findings

Table 1. Sociodemographic features of the students

Sociodemographic features of the students		Frequency	Percentage
Sex	Female	28	62.2
	Male	17	37.8
Age groups (years)	18-21	25	55.6
	21-23	15	33.3
	24 and above	5	11.1
Economic Status	Bad	15	33.3
	Medium	12	26.7
	Good	18	40.0
Education year in university	1.Sınıf	26	57.8
	2.Sınıf	19	42.2
Total		45	100

The distribution of the students taken to the research context in terms of their sociodemographic features are given in Table 1. 62.2% of the students are women and 37.8% of the students are men. When it is analyzed in terms of age groups, 55.6% is 18-21 years old, 33.3% is 21-23 years old and 11.1% is 24 years old and above. When their economic situation is analyzed, it is determined that 33.3% is bad, 26.75% is medium and 40% is good. When it is analyzed in terms of their education year in the university, 1<sup>st</sup> graders are 57.8%, 2<sup>nd</sup> graders are 42.2%.

Table 2: Thoughts of Students about the Simulator Use

Thoughts of students about the simulator use	Agree n %	Disagree n %	Undecided n %
Simulator use has helped me in learning a lot.	42 93.4	1 2.2	2 4.4
Simulator use has increased my communicational skills.	36 80.0	3 6.7	6 13.3
Simulator use has developed my autonomy.	37 82.2	3 6.7	5 11.1
Simulator use has increased my self-confidence.	37 82.2	-	8 17.8
I can easily apply the skill that I have acquired following the simulator-education in my professional life.	34 75.6	1 2.2	10 22.2
Simulator-education has decreased my anxiety about the clinic.	30 66.7	1 2.2	14 31.1
The course hour should be higher in the simulator-education.	33 73.3	5 11.1	7 15.6
Both the physical space and the duration were convenient for me in terms of the simulator-education.	18 40.0	11 24.4	16 35.6
The attitude of the instructor considerably affects my motivation in the simulator-education.	35 77.8	3 6.7	7 15.6
Total		n=45	100 %

The views of the students taken to the scope of research concerning the simulator usage are provided in table 2.

93.4% of the students stated that the simulator is helpful for learning, 80.05 stated that it increased their communication skills, 82.2% stated that it enhanced their autonomy, 75.6% stated that they can apply the skills gained from the simulator in their professional lives, 77.8% stated that the instructor's attitude is important, 73.3% stated that the hours of the applicable lessons must be increased, 66.7% stated that the anxiety towards clinic decreases with the simulator usage. In addition to that, 24.4% of the students stated that the physical environment and time provided to them is not sufficient (Table 2).

#### 4. Discussion

With the simulation education, students gain a full care application ability, technical skill, making decision, assessment, team work and management skill in a safe environment without having the fear of misunderstanding the current situation of the patient and being unsuccessful (Alinier G, 2003). Students can experience fear and anxiety related with the lack of experience in clinical applications (Rhodes M, Curran C, 2005). (Altıok HÖ, Üstün B, 2013). The anxiety levels of the students can affect their skills of making decisions directly for the clinic and it also affects their learning (Altıok HÖ, Üstün B, 2013). Continuous repetitions provided by the education based on simulation increases the performance and self-esteem of the student (Moule et al., 2008), (Burgess 2007).

Schoening et al. (2006); stated that the simulation for the students are not merely an effective learning tool but also a learning tool that increases their self-esteem for unexpected situations occurring in the clinic. Besides, they stated that this self-esteem after the simulation education is related with the development of hand skill, team work, communication and decision making skills.

In another study related with the topic, it is indicated that students must take a major role in order to control the situation during the simulation. With this way, the students learn to see their mistakes by making appropriate decisions in patient care and treatment and they learn how to move upon their decisions (Alinier et al., 2006), (Göriş et al., 2014)

#### 5. Result

There should be studies towards enabling the society to develop positive attitudes and preventing the nursing home and care center to be seen as the last resort of life. The first of them is the need for qualified care personnel. The presentation of elderly care given within the scope of corporate care is performed by the helping attendants. In this context, the need for educated personnel to be employed for elderly care services is inevitable.

Physical, emotional and cognitive incompetence are very important problems for the old age. Diseases and loss of abilities cause both decrease in quality life and health expenses at great dimensions. However, it is possible to decrease them with protective measures. Elderly Care Associate Degree Program raises students that can take part in academic and service areas related with the elderly health which is needed in our country; and raises individuals that can provide service and studies in the fields of aging process, protection of the health of the elderly, encouraging aging healthily, and meeting the needs of our society. As a result with the usage of skill laboratories and simulators in health education, the potential medical errors can be decreased to a large extent, and a better and effective health service can be provided.

Simulator use will enable the student to prepare for the professional life better by smoothing the way especially for some complicated basic applications and the perception of both biochemical and physiological incidents occurring in body.

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