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The opinions of nursing students regarding the first implementation of distance education

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Abstract

With rapid developments being made in science and technology, there is also an increasing need for different educational methods. Distance education allows increased access to education and more flexibility for the students. This descriptive study was conducted to establish the opinions of nursing students about distance education being adopted for the first time. The study comprised 261 nursing students, who were applied a data collection form in class. Of these students, 55.6% stated that they had problems while taking courses through distance education, 83.1% stated that it was not beneficial, 90.8% stated that distance education could not be used for applied vocational courses. It was found the mean scale scores were lower for the students who thought that distance education was not beneficial, who would like to take these courses through formal education and who believed that the applied vocational courses could not be provided through distance education. The students had difficulties in accessing the internet during the courses. The students' attitudes towards distance education were at moderate level and the negative conditions adversely affected the students' opinions. In addition, the majority of the students thought that the vocational courses could not be made through distance education, and this is considered to be a positive finding.

Keywords: distance education, nursing education, nursing students.

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1. Introduction

In the current information age, strength is defined in terms of the ability to acquire knowledge effectively, to build upon this knowledge and to ensure the dissemination of information and knowledge across society (Soran, Akkoyunlu & Kavak, 2006). We live in an era of rapid changes and advances in science and technology. Developments in technology are inevitably necessitating changes in all areas, including the education system. In contemporary societies, where education is no longer limited to schools, it has become necessary to re-evaluate the educational requirements of individuals (Soran *et al.*, 2006). In view of the changing characteristics of the educational system, these rapid changes require the application of an innovative approach in education (Dil, Uzun & Aykanat, 2012; Holly, 2009).

Traditional methods commonly used in education are no longer able to keep pace with present-day changes and developments, and the need for alternative educational methods is gradually increasing (Akca, 2006). As a means for satisfying this growing educational need, since the second half of the 2000s the use of the internet is being increasingly considered as an option (Odabasi, Coklar, Kiyici & Erdogan, 2005).

The use of the internet in education provides both students and instructors with many opportunities (Uzun, Ozden & Yildirim, 2013). The internet can provide student-centred and individualized educational environments and remove the limitations associated with time and location. Furthermore, this technology allows students to access information whenever and wherever they desire (Yigit, Yildirim & Ozden, 2000). The internet also enables the use of different teaching technologies in class (Uzun *et al.*, 2013). In this context, it is possible to discuss the concept of distance education, which involves technology-based learning during educational processes. Such computer technology can be used for various purposes in distance education. Distance education is defined as education delivered to students on an individual basis at their own location, without any physical school environment being necessary (Tuncer & Taspinar, 2008; Yuksekdog, 2015).

Distance education is one of the fastest developing educational methods of the last decade (Holly, 2009). Distance education is planned learning that occurs in places that are different from the teaching. Distance education makes a significant contribution to studying where students and teachers are in separate physical locations. In this way, distance education allows increased access to education and more flexibility for the students (Holly, 2009; Lowery & Spector, 2014).

As the internet can facilitate education in this way, during the 2013-2014 academic year of Gazi University, Turkish Language lessons, classes on Atatürk's Principles and the History of the Turkish Revolution and Foreign Language lessons were provided using the distance education method. The students completed their system registration for these lessons using the passwords that they had been given for this purpose. The students were able to enter the distance education system at any time or location, during which they could access lesson contents through e-books and watch/listen to lesson contents through e-videos. In this context, overcrowded classes, an insufficient number of instructors and current developments in the field of education have all necessitated that instructors must also adapt to present-day developments and conditions. As individuals are constantly required to adapt to the new conditions, educational methods should be used in the field of education/teaching. The developments and the necessity for novel approaches in education have thus brought to the attention of education models implemented through distance education.

In Turkey, there are only a limited number of studies regarding distance education. Nowadays, distance education is mainly being used in nursing. However, there are only a few studies that have investigated the effect of distance education on student performance, as well as the opinions of students regarding this method. The aim of this study was to determine the opinions of nursing students regarding a distance education program that was implemented in Gazi University for the first time. We believe that the study will demonstrate attitudes concerning distance education of students

receiving distance education for the first time, and that it will also identify student opinions regarding the implementation of distance education in other classes.

1.1. Structure

This study was conducted at the Gazi University Faculty of Health Sciences Department of Nursing using a descriptive approach in order to determine the opinions of students regarding distance education, which was used in the department for the first time.

2. Study Participants and Methods

2.1. Study Population and Sample

The study population comprised 310 students who were registered as second-year students during the 2014-2015 academic year at Gazi University Faculty of Health Sciences Department of Nursing. A sample selection was not performed in this study, and 261 students who agreed to participate in the study were included. All of these students were nursing students who received distance education at Gazi University for the first time during the 2013-2014 academic year.

2.2. Data Collection Tool

The data collection form contained two parts. The first part consisted of nine questions, developed by the researchers, regarding the characteristics of the students (including gender, academic grade point average, computer/internet use, and opinions about distance education). The second part of the form consisted of the "Distance Education Attitude Scale" (DEAS) developed by Fatma Agir in 2007. A part of the DEAS was used in this study.

The part of the scale used consisted of 21 items and assessed the thoughts and opinions of students regarding distance education. The scale is based on a five-point Likert-type design, with answers scored from 1 to 5, which respectively correspond to the "Strongly Disagree" and "Strong Agree" response options. The Cronbach's alpha internal consistency coefficient and reliability coefficient of the scale was calculated as 0.83. The form consists of 21 items, 14 of which are positive (items 1, 2, 3, 5, 7, 8, 10, 11, 13, 14, 16, 17, 19, 21), and 7 of which are negative (items 4, 6, 9, 12, 15, 18, 20). The lowest score is 21 and highest score is 105, respectively.

A higher scale score is associated with a more positive attitude towards distance education. The 261 students who had agreed to participate in the study completed the data collection forms in a classroom setting.

2.3. Data Analysis

The study data were collected using the Statistical Package for the Social Sciences (SPSS) 17 package program. Percentages and the t-sample test were employed for the analysis of the data. A *p*-value of 0.050 was considered to be statistically significant.

2.4. The Ethical Aspect of the Study

Gazi University Faculty of Health Sciences gave the necessary written approvals for the study to be conducted. The students participating in this study were informed regarding its purpose and methods, and the students' verbal consent was obtained concerning their participation. Participation in this study was entirely on a voluntary basis.

2.5. Implementation of the Study

The data collection form was administered to the students by the researchers between November 10 and 14, 2014 within a classroom environment. The completion of the data collection forms took 10 minutes, after which the researchers collected them.

3. Results

Table 1. The Characteristics of Students

Characteristics	N	%
Gender		
Female	229	87.7
Male	32	12.3
Daily computer/internet use		
Not used	18	6.9
0-1 hour	97	37.2
1-5 hour	127	48.7
More than 5 hours	19	7.2
Computer/internet use prior to university education		
Yes	213	88.5
No	30	11.5
Prior knowledge of the concept of "Distance Education"		
I know	181	69.3
I do not know	80	30.7
Experienced problems/difficulties while receiving distance education		
Yes	145	55.6
No	116	44.4
Opinion regarding the benefit of receiving distance education		
Beneficial	44	16.9
Not beneficial	217	83.1
Willingness to receive the same courses through formal education		
Willing	173	66.3
Not willing	88	33.7
Opinion regarding the applicability/suitability of distance education for the courses of applied professions		
Applicable	24	9.2
Not applicable	237	90.8

It was determined that 87.7% of the students participating in the study were female. Of the students, 48.7% explained that they used computers/internet for 1-5 hours a day, while 88.5% explained that they had begun to use computers/internet before beginning their university education.

In addition, 69.3% of the students said that they had prior knowledge of the concept of distance education, while 55.6% explained that they experienced problems/difficulties while receiving distance education. Finally, 83.1% of the students considered distance education not to be beneficial, while 66.3% explained that they preferred to receive the same courses through formal education, and 90.8% explained that distance education would not be applicable nursing courses relating to psychomotor skills (Table 1). In this study, the mean grade point average of the students was 2.89 (min: 1.67, max: 4.00).

Table 2. The Mean Distance Education Attributes Scale (DEAS) Scores of the Students According to Their Sociodemographic Characteristics

Characteristics	Mean	SS	P
Computer/internet use prior to university education			
I use	49.74	13.35	0.96
I do not use	49.62	15.24	
Prior knowledge of the concept of "Distance Education"			
I know	49.66	13.40	0.90
I do not know	49.88	13.87	
Experienced difficulties while receiving distance educa			
Yes	46.06	13.12	0.00
No	54.31	12.63	
Opinion regarding the benefit of receiving distance education			
Beneficial	63.29	13.87	0.00
Not beneficial	46.98	11.69	
Willingness to receive the same courses through formal education			
Willing	46.09	12.14	0.00
Not willing	56.88	13.29	
Opinion regarding the applicability/suitability of distance education for the courses of applied professions			
Applicable	61.08	13.14	0.00
Not applicable	48.58	13.04	
Total	49.73	13.52	

The mean DEAS score of the students was 49.73±13.52. The results from this study also showed no statistically significant difference in students' mean DEAS scores with their use of computers/internet prior to university education and their prior knowledge of the concept of distance education (p>0.05). Then again, students who did not experience any difficulties while receiving distance education and students who considered distance education as beneficial had significantly higher mean DEAS scores (p=0.00). In addition, students who wished to take the same lessons through formal education had significantly lower mean DEAS scores than the students who did not wish to do so (p=0.00). Similarly, students who thought that distance education would not be applicable for courses related to psychomotor lessons of nursing also had significantly lower mean DEAS scores than students who thought otherwise (p=0.00) (Table 2).

In addition to the data illustrated on Table 2, the students also indicated that they did not understand the lessons well enough through distance education; that they had difficulties in finding computers and accessing the internet; that it would be better and preferable for the subjects to be

explained by an instructor face to face; and that they experienced technical problems with the online teaching materials.

4. Discussion

The study was carried out at the Gazi University Faculty of Health Sciences Department of Nursing using a descriptive approach in order to determine the opinions of students regarding distance education, which was being used in their department for the first time. A total of 261 students participated in this study. During the study, the mean DEAS score of the students was determined as 49.73 ± 13.52 , which corresponds to a moderately high score. In a study previously conducted by Uzun *et al.* (2013) that investigated the attitudes of students towards web-based learning, where the students ($n=32$) participated in a lesson called web design, it was determined that the students generally had an ambivalent attitude towards web-based distance education. In our study, we also observed that the students had an ambivalent attitude towards distance education. This might be due to the fact that the students were taking courses based on distance education for the first time, and that they were not familiar with having courses taught using this approach.

In our study, 55.6% of the students experienced some problems/difficulties while receiving distance education. These students, who had experienced problems/difficulties, generally had lower DEAS scores. In a study conducted by Brinkerhoff & Koroghlanian (2005) investigating the computer skills of students and their attitude towards web-based education, it was similarly observed that the students showed a neutral attitude towards web-based education. Brinkerhoff and Koroghlanian's study also determined that students who had previously used web-based learning had a more positive attitude towards the distance education method. In a study by Drennan, Kennedy & Pisarski (2005), investigating attitudes on distance education through face-to-face interviews with students ($n=248$), it was determined that students with better computer skills were able to adapt more easily to distance education classes. In addition, these students were also better able to solve the technical problems they encountered, and had a more positive attitude towards distance education. In a study by Ates & Altun (2008) that investigated the attitudes of third and fourth year students from the Department of Computer and Teaching Technologies towards distance education ($n=129$), it was determined that students who had used computers for a longer period of time, and who were better at using computers, generally had higher attitude scores towards distance education. As described in the literature, the reasons why students experience problems in distance education include an inability to adapt to rapid changes in technology; lack of adequate information and knowledge among instructors on this subject; and the students' inability to readily change their teaching materials (Tuncer & Taspinar, 2008). In this context, it is expected that students who are more familiar with technologies used in the distance education method would also show more positive attitudes towards this method. For this reason, it is important to familiarize students beforehand with education management technologies that are being used for the first time, and to also reduce the difficulties they could experience in using these technologies in a new area.

In our study, 83.1% of the students explained that distance education was not beneficial for them. The reasons given were the absence of an instructor, and their lack of proficiency with computers. The mean DEAS score of these students was also lower when compared to the mean score of the other students ($p < 0.05$). Similarly, in a study performed by Birisci (2013) to determine the attitudes and opinions of students in a Sociology Department ($n=41$) regarding distance education, it was determined that the students' attitudes were undecided towards this method of education. As the results of all these studies regarding the distance education method illustrate, students can become less motivated in educational environments where they are not face to face with an instructor and as a consequence exhibit a noncommittal attitude towards distance education. Furthermore, institutions that are implementing it for the first time may encounter various problems associated with the lack of familiarity among their instructors with this method, and/or a lack of the necessary infrastructure and

capabilities. These problems may, in turn, reduce the extent to which students are able to benefit from distance education.

In our study, 66.3% of the students explained that they would like to be taught these lessons formally, while 90.8% explained that distance education would not be applicable for practical courses related to psychomotor nursing skills. These students had a lower mean DEAS score ($p < 0.05$). These findings could possibly be associated with the students' opinion that having lessons through distance education is not beneficial, and also with their preference for learning with traditional teaching methods. In a study conducted by Dick, Case and Burns (2001) that investigated the attitudes towards distance education of undergraduate and graduate students in the United States and Australia, it was determined that most students who regularly participated in formal education environments did not prefer distance education. However, students who participated in more interactive educational environments tended to display more positive attitudes towards distance education. For this reason, it is believed that distance education can be used as an educational approach to support the normal school curriculum.

The results of our study demonstrated that the students had a largely undecided attitude towards the distance education method, and they were not accustomed to taking courses using this method. The study also showed that the students experienced certain difficulties when the distance education method was implemented for the first time at their institution; this indicated the necessity for institutions to conduct preliminary preparations prior to applying this method in their education program. In nursing education, students are expected to acquire cognitive and psychomotor skills, using the distance education method after all the system-related problems has been resolved. For this reason, we believe that until all preliminary preparations regarding the application of distance education systems and activities are completed, it would be preferable to limit the use of distance education for nurses' training to theoretical subjects. It is important to bear in mind that distance education provides students with the possibility of accessing information whenever and wherever they want, and that this consequently represents a very important opportunity for both students and instructors.

5. Conclusion

In this study, which was conducted to determine the opinions of students regarding the first implementation of distance education at their department, we observed that the students generally had a moderate attitude towards distance education. These students who received distance education for the first time indicated that the lessons were not very understandable or effective; that they had difficulties in finding computers and accessing the internet; that it would be better and preferable for the subjects to be explained by an instructor; and that they experienced technical problems with the online teaching materials. In addition, most of the students explained that distance education would not be applicable for courses related to lessons for psychomotor nursing skills.

6. Recommendations

Distance education should be used as a method to provide lifelong learning, instead of being a stand-alone method for nursing education and the use of this form should be expanded. In light of these results, we believe that for applied disciplines such as nursing, distance education would be more appropriate for supporting theoretical courses. Based on the study results, we can recommend the following:

- Increase the knowledge of students and instructors regarding distance education applications and methods,

- Increase the use of distance education methods for theoretical courses, and evaluating the results and outcomes associated with these methods.

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