The Transition to Distance Learning in the Era of Covid-19 Pandemic: The Perceptions and Experiences of Nursing Students

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Abstract. During the first months of COVID-19 pandemic, authorities of many countries imposed to educational institutions of all educational levels, the online delivery of their courses to prevent the spread of SARS-CoV-2. We investigated the perceptions and first experiences of Nursing students that attended the synchronous distance learning undergraduate course of Health Informatics. Respondents' perceptions and experiences were positive regarding the design and material of the course and the discussions with their peers while the technical support was negatively rated. Students could not decide if distance learning is more difficult than traditional or whether distance learning is more time consuming than traditional learning. Nursing students prefer traditional learning as they stated that they learn more and feel more comfortable to participate in personal discussions. Distance learning can be ameliorated by careful design, more interaction initiatives, creative methods to enhance learning and availability of timely technical support. Future research should be conducted in a larger sample.

Keywords. Nursing students, E-learning, Health Informatics, Covid-19

1. Introduction

On 12 March 2020 more than 20,000 confirmed cases of SARS-CoV-2 were announced [1] resulting in almost 1000 deaths in Europe [2]. The first case of SARS-CoV-2 in Greece appeared on 26 February 2020. In order to mitigate the spread of Corona virus, Greek authorities imposed to educational institutions of all educational levels, the online delivery of their courses through electronic platforms.

Previous surveys [3] showed that pharmacists' perceptions of synchronous and asynchronous distance learning [4] were positive in terms of the quality of the courses and the delivery method, and rated their overall experience positively. Other researchers [5] concluded that educators and students had a positive perception of synchronous e-learning rating the quality of traditional and synchronous learning higher than asynchronous learning. In another study [6] it was stated that asynchronous

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e-learning better supports the cognitive dimension while synchronous distance learning provides more motivation. Evidence suggests that distance learning can be as effective as traditional learning although peer discussion might be an issue. Finally, a study [7] conducted to Nursing students concluded that online learning is effective in achieving positive learning outcomes. The aim of our study is to investigate the perceptions and first experiences of Nursing students that attended the synchronous distance learning undergraduate course of Health Informatics.

2. Methods

We used a questionnaire to assess nursing students' perceptions and preferences related to synchronous distance learning course delivery. The questionnaire [8] includes 15 items each of which consisted of a forced 4-point Likert scale statements from Strongly Agree to Strongly Disagree. The scale has no "neutral" option available, forcing the user to form an opinion. The questions examine the design of the online course, the interaction of participants, the online course content, the support of participants and the comparison between online courses and traditional ones. The questionnaire was translated into Greek and then back translated into English by two translators-researchers. Consent was given. The responses of 27 Nursing students were used to estimate the reliability of the scale and the Cronbach's alpha was 0.81. The questionnaire was distributed online and was completed voluntarily by 63 Nursing student who attended the synchronous distance learning course of Health Informatics. The data was collected and descriptive statistical analysis was performed with SPSS software.

3. Results

The majority of the sample, 81% of respondents, were women while 9% were men and 89% of the participants being aged 18 to 29 years and 11% being over 30 years old. The perceptions with which most of the students agree or strongly agree are those concerning the perception that "interaction between educator and students is necessary in e-learning"(mean: 3.48), the preference of online courses "to be conducted on a platform that does not change from one course to another" (mean: 3.38), and "to be held on specific dates and times just like traditional courses" (mean: 3.32). On the other hand, the perceptions with which most students rather disagree are that they "learn more in online courses than in traditional ones" (mean: 2.10), "prefer online courses to traditional ones" (mean: 2.25), and that "online courses have been created so in such a way that they can interact with their peers" (mean: 2.29).In Table 1 the results from Student's Perceptions on Distance Learning are presented.

T-test was conducted resulting in p>0.05 (CI 95%). Thus, there is no statistically significant difference between the two gender groups (m/f) regarding the perceptions of the structure of the course, the interaction with others, the material of the course, the comparison of distance learning and traditional learning and the online support. Moreover, there is no statistically significant difference between the two age groups (18-29 and above 30) regarding the perceptions of the structure of the course, the interaction with others, the material of the course, the comparison between distance learning and traditional learning and the online support.

Table 1. Student's Perceptions on Distance Learning

Question Item		N	Min	Max	Mean	St Deviation
Structure of the course (SOC)	I prefer online courses to be conducted on a platform that does not change from one course to another	63	2	4	3.38	.68
	I prefer online courses to be held on specific dates and times	63	1	4	3.32	.71
Interaction with others (IWO)	Online courses have been created in such a way that I can interact with their peers	63	1	4	2.29	.92
	The interaction between educator and students is necessary in e-learning	63	1	4	3.48	.62
Material of the course (MOC)	The quality of discussions in the online courses is high	63	1	4	2.40	.77
	The material of the lectures in the online courses is valuable for the discussion in the course	63	2	4	3.25	.62
	The material in the online courses supports the objectives of the course	63	2	4	3.05	.52
	The assignments in the online courses help to understand the content	63	2	4	3.08	.60
	The exams in the online courses provide me with an accurate assessment of their knowledge on the content of the courses	63	1	4	2.76	.84
Online support (OS)	The technical support hours provided by online support technicians met my needs	63	1	4	2.43	.76
Comparing Distance Learning to Traditional Learning (CDTL)	I learn more in online courses than in traditional courses	63	1	4	2.10	1.03
	I prefer online courses to traditional courses	63	1	4	2.25	1.12
	I feel more comfortable participating in online course discussions than in personal course discussions	63	1	4	2.35	.99
	Online courses require more study time than traditional courses	63	1	4	2.54	.95
	Online courses are more difficult than traditional courses	63	1	4	2.48	.82

4. Discussion

Respondents' perceptions and experiences were positive regarding the design and material of the course and the interaction with others. This finding agrees with those in other studies [9]. However, participants consider that the quality of the discussions in the online courses is not as high as they would expect, and that the online courses have not been created in such a way that they can interact with their peers. Participants negatively rated the technical support as they felt that the available hours provided by online support technicians did not meet their need. The comparison between digital and traditional learning showed that participants seem to prefer traditional learning more than the digital one. They consider that they tend to learn more in traditional courses and feel more comfortable to participate in personal discussions rather than in online course discussions. This is similar to the findings [10] which indicated that Nursing students prefer the traditional learning provided in the campus environment. Finally,

the participants could not decide whether online courses are more difficult than traditional courses and if online courses require more study time than the traditional courses.

5. Conclusions

The transition to distance learning during the COVID-19 pandemic has forced educational institutions and their teachers and students to adapt to the new way of education with unprecedented speed. The new way of teaching inevitably changed the structure and content of the courses, the way they were examined, the interaction of teachers and students and created technical challenges. Our study tried to examine these new perceptions and experiences of a group of undergraduate nursing students who participated in the distance learning course of "Health Informatics". The findings revealed that although traditional learning is preferable, the Nursing students expressed positive views regarding distance learning. They agree that interaction is necessary among peers and between students and tutors, and a proper design of the online course could facilitate it. Moreover, the inclusion of interactive methods would enhance learning, and the availability of timely technical support would decrease technical obstacles and improve distance learning experience. Such improvements could further strengthen students' perceptions of distance learning, which seems to remain a complementary way of learning in the post-pandemic period. The small number of participants in the study was one considerable limitation. Therefore, a subsequent study with a larger number of participants would further reinforce our findings, and broadly record students' perceptions and experiences.

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