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Nursing Students' Opinions about Usage of YouTube in Operating Room Nursing Lecture

Hemşirelik Öğrencilerinin Ameliyathane Hemşireliği Dersinde YouTube'un Kullanımına İlişkin Görüşleri*

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ABSTRACT: This study was aimed to determine the opinions of nursing students about the usage of YouTube in content of operating room nursing lecture. A descriptive study was conducted with 144 3rd grade students. The data were collected with "Sociodemographic Characteristics and Technology Use Form" and "Evaluation Form of Students' Opinions on the Use of YouTube Videos in the Operating Room Lecture". Data were analyzed by number percentage, mean and standard deviation. 68.9% of the nursing students stated that the integration of YouTube videos to be good. 97.9% of the students stated that they were pleased that the lecture was video-aided. The rate of effective, intelligibility and adequate use of YouTube videos was found between 59.7% and 74.3%, 69.5% and 90.3%, 89.6% and 95.2%, respectively. Nursing students indicated that they were pleased with the integration of YouTube videos into the Operating Room Nursing lecture and they found the videos to be effective, clear and sufficient.

Keywords: Education, nursing, operating room.

ÖZ: Bu çalışmada hemşirelik öğrencilerinin ameliyathane hemşireliği ders içeriğinde YouTube kullanımı hakkındaki görüşlerinin belirlenmesi amaçlandı. Bu çalışma, tanımlayıcı bir çalışma olup 144 3. sınıf öğrencisi ile yapıldı. Veriler "Sosyodemografik Özellikler ve Teknoloji Kullanım Formu" ve "Hemşirelik Öğrencilerinin Ameliyathane Hemşireliği Ders İçeriğinde YouTube Videolarının Kullanımına İlişkin Görüşlerinin Değerlendirilmesi Formu" ile toplandı. Veriler, sayı, yüzde, ortalama ve standart sapma ile analiz edildi. Hemşirelik öğrencilerinin %68.9'u YouTube videolarının derse dahil edilmesinin iyi olduğunu belirtti. Öğrencilerin %97.9'u dersin video destekli olmasından memnun olduklarını belirtti. YouTube videolarının etkin, anlaşılır ve yeterli kullanımı oranı sırasıyla %59.7 ile %74.3, %69.5 ve %90.3 ve %89.6 ve %95.2 arasında bulundu. Hemşirelik öğrencileri, YouTube videolarının Ameliyathane Hemşireliği dersine dahil edilmesinden memnun olduklarını ve videoların etkili, açık ve yeterli olduğunu bulduklarını belirtti.

Anahtar kelimeler: Eğitim, hemşirelik, ameliyathane.

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Nursing education is a special field structured in consideration of increasing technology possibilities in the globalizing world, cultural characteristics of the society, the profile of the students, the facts, requirements, and conditions of the country (Dil, Uzun, & Aykanat, 2012). And, employing technology-based learning techniques in this special field support students with a more productive and enriched learning environment in addition to promoting a more permanent and continuous learning. (May, Wedgeworth, & Bigham, 2013; Terkes, Celik, & Bektas, 2019). The most known video-sharing website, Youtube, which we focused on in our study, was founded in 2005. Generally, its contents range from video clips, television clips, music videos, video blogs to short original videos and educational videos (Duncan, Yarwood-Ross, & Haigh, 2013; "YouTube," 2016). Approximately 65,000 new video clips are added to YouTube daily by the users and around 100 million video clips are watched every day. ("YouTube Nedir?", 2018). YouTube is a platform that unites the information and communication technologies (Szeto & Cheng, 2014). Thus, it was stated that YouTube videos brought a new approach to teaching (Jaffar, 2012). Today, students can be effectively involved in their classes by using YouTube videos (Roodt & Peier, 2013). The use of innovative video technology resources such as YouTube in lectures has been widely recommended in many studies. YouTube videos are regarded as an effective channel and a powerful tool also for health education (Gabarron, Fernandez-Luque, Armayones, & Lau, 2013). In addition to traditional learning, YouTube is an interesting and inspirational source for new generation students and it supports technological learning (Roodt & Peier, 2013). In 2016, there were approximately 14,900 videos for operating room nursing on YouTube, and there were 365 Turkish videos with the tag "ameliyathane hemşireliği" (the Turkish term for operating room nursing) ("Operating room nursing - YouTube," 2016). So, video lists can be easily created to meet the cognitive, affective or psychomotor learning objectives in the classroom (Snelson, 2010). In a study, it was stated that the production of lecture materials with the videos from YouTube (or from the internet generally) by the students provided an opportunity to them to be active, and the students considered this method to be effective (Safar & Alkhezzi, 2016). In another study, when the YouTube videos were used in nursing education, the students' critical awareness level increased as a result of their participation in the classroom and the videos facilitated deep learning. In this rapidly changing digital world, the use of YouTube videos was claimed to facilitate learning for the new generation (Clifton & Mann, 2011). In nursing education, YouTube videos focusing on clinical skills should be used more actively by the educators as supplementary teaching materials (Duncan et al., 2013). It is also important to assess the educational impact of YouTube videos and to identify their benefits in matching the objectives of the lecture (May et al., 2013).

Objective

In this study, the YouTube videos about Operating Room Nursing lecture which was taken as an elective lecture, were selected. The lecture was taught via these selected YouTube videos. This study was conducted in order to learn the opinions of the nursing students on this selected method and to guide them for the preparation of lecture contents in the following years.

Methods

Study Setting and Sample

This study was conducted as a prospective descriptive study regarding the nursing students' assessment of the use of YouTube in the Operating Room Nursing elective lecture. The study was carried out at a Nursing Faculty between the dates of 10.12.2016 and 02.01.2017. The universe and sample of the study consisted of 144 3rd grade students enrolled in an Operating Room Nursing lecture in a Nursing Faculty. Between the dates of 10.12.2016 and 02.01.2017, the students who volunteered to participate in the study were included in the sample.

Study Instruments

The data were collected via two forms developed by the researchers. The Sociodemographic Characteristics and Technology Usage of Nursing Students Form consisting of 24 questions contained the data about sociodemographic characteristics and technology usage of the students. The Nursing Students' Opinions on the Use of YouTube Videos in the Operating Room Nursing Lecture Content Form consisting of 36 questions contained the evaluation of the lecture. Data collection forms were prepared by the researchers in line with the literature (Azer, AlEshaiwi, AlGrain, & AlKhelaif, 2012; Burke, Snyder, & Rager, 2009; Knösel, Jung, & Bleckmann, 2011).

Data Collection

At the Nursing Faculty, where the study was to be conducted, the Operating Room Nursing lecture was a 14-week course and the length of the weekly lecture was 135 minutes. After the lecture content was determined by the relevant lecturer, the videos for the weekly lecture content were searched with keywords related with the content of the lecture on https://www.youtube.com/. The videos were watched to identify if they fit in the lecture duration and the best videos were selected in context of reflecting the subject. Then, these were shown to the students according to the contents of the weekly lecture. As the videos were being watched, the lecturer paused the video when an information needed to be emphasized. In that pause time, theoretical information about the subject was transferred and the subject was discussed with the students. Each lecture was continued in this way for 14 weeks. At the 14th week of the Operating Room Nursing lecture, questionnaires were applied regarding students' sociodemographic characteristics, technology usage and Operating Room Nursing lecture. An average of 6 videos were watched during the entire lesson, and the duration of all videos watched in one lesson was 42 minutes on average.

Data Analysis

The data were collected from the students by survey method. The statistical analysis of the data was conducted via Statistical Package for Social Science – SPSS 16.0 software. The measurable data were shown as mean ± standard deviation (sd) while categorical data were shown as number and percentage (%).

Ethical Consideration

An ethical approval and a written permission were obtained from the X University Nursing Faculty Scientific Ethics Committee (28.11.2016 dated and 2016-

288 numbered) and X University Nursing Faculty, respectively. The aim and the method of the study were introduced to the students, their verbal permissions were also obtained.

Results

When the socio-demographic characteristics of the students in the study were analyzed, the mean age of the students was found to be 21.54 ± 1.33 (Min.20-Max.29) years while 79.1% of them (*n*=114) were females. When the technology use of the students in the study was examined, it was determined that 97.2% of them (*n*=140) had a smartphone, 83.3% (*n*=120) had their own internet connection. 84.0% of the students (*n*=121) used the internet at home, 38.2% of them (*n*=55) spent 2-4 hours on the internet. 94.4% of the students (*n*=136) used the internet for education and information search, 92.4% of them (*n*=133) spent zero-two hours for education. 92.4% of the students (*n*=133) spent zero-two hours a day talking on the phone. 61.1% of the students (*n*=88) used video conferencing and 36.9% of them (*n*=35) used it several times a month. 47.2% of the students (*n*=68) prefer the technology-based learning. 71.5% of the students (*n*=103) stated that the use of information technology in education increased the quality of education (Table 1).

Table 1

Nursing Students' Characteristics and Technology Usage Statuses

Variables	Variables Subgroup	*f*	%
Gender	Female	114	79.1
	Male	30	20.9
Technological Equipment Owned by Students *	Smartphone	140	97.2
	Laptop	111	77.1
	Tablet	27	18.7
	Television Connected to The Internet	27	18.7
	Desktop Computer	21	14.6
	Other	6	4.2
Own Internet Connection	Yes	120	83.3
	No	24	16.7
Internet-Enabled Environments *	Home	121	84.0
	Mobile Internet Access	115	79.9
	School	100	69.4
	Anywhere with Wifi Access	89	61.8
	Dormitory	72	50.0
	Internet Cafe	34	23.6
Time on The Internet	Less than 2 Hours	48	33.3
	2-4 Hours	55	38.2

	More than 4 Hours	41	28.5
Purpose of Using the Internet *	Social Media/Communication	139	96.5
	Education/Information Search	136	94.4
	Entertainment/Game/Movie/Series etc.	118	81.9
	Banking	80	55.5
	Shopping	78	54.2
	Utilizing Public Service	62	43.0
Time Spent for Education	Less than 2 Hours	133	92.4
	2-4 Hours	9	6.2
	More than 4 Hours	2	1.4
Time Spent Talking on The Phone	Less than 2 Hours	133	92.4
	2-4 Hours	6	4.1
	More than 4 Hours	5	3.5
Video Calling	Yes	88	61.1
	No	56	38.9
Frequency of Video Call	Once a day	4	4.2
	Several times a day	4	4.2
	Once a week	10	10.6
	Several times a week	20	21.0
	Once a month	22	23.1
	Several times a month	35	36.9
Preferred Type of Training*	Technology Based Learning	68	47.2
	Computer Based Learning	55	38.2
	Web Based Learning	51	35.4
	Traditional Learning	48	33.3
	Blended Learning	40	27.7
	Mobile Learning	39	27.1
	e-Learning	34	23.6
	Distance Learning	26	18.0
Positive Effects of Using Information Technology in Education*	Increasing the Quality of Education	103	71.5
	Faster Training for More Students	84	58.3
	Personalization of Education and Increase of Education	81	56.2
	Reduced Expenditure on Training	72	50.0
	Facilitate the Monitoring of participants	67	46.5
	Providing Continuity of Education	49	34.0
	Standardization in Education	32	22.2

	Do Not Know	2	1.4
	Other	1	0.7

* More than one option marked.

When the nursing students' opinions on the integration of YouTube videos into the Operating Room Nursing lecture were analyzed, 68.9% of the students (*n*=99) expressed a positive opinion and 71.5% of the students (*n*=103) approved the positive effect of videos on understanding the subjects. 62.5% of them (*n*=90) positively considered the contribution of the video assisted education to clinical environment. After the lesson, according to their own statements, 47.2% of the students (*n*=69) watched another video related to the lesson, 45.1% (*n*=65) watched same videos again. 61.1% of the students (*n*=88) preferred to learn with videos, 36.1% of them (*n*=52) preferred a mixed style. And 70.8% of them (*n*=102) preferred the videos due to easy access. 68.8% of the students (*n*=99) rated the videos as visually well-understood while 21.5% of them rated the video assisted education as excellent. 97.9% of the students (*n*=141) expressed satisfaction with the video assisted lecture (Table 2).

Table 2

Students' Opinions on the Integration of YouTube Videos in the Operating Room Nursing Lecture

Variables	Variables Subgroup	*f*	%
Integrating Video Content into Lecture Content	Good	99	68.7
	Middle	42	29.2
	Bad	3	2.1
The Effect of The Related Videos on The Conception	Good	103	71.5
	Middle	38	26.4
	Bad	3	2.1
How the Videos Will Contribute to The Clinical Environment	Good	90	62.5
	Middle	49	34.0
	Bad	5	3.5
Other Video Watch Status Outside of Class	Yes	69	47.2
	No	76	52.8
Outside the Classroom, The Place to Watch the Videos	YouTube	65	45.1
	Others (academic publications, Duolingo, hospital)	3	2.1
Preference to Learn by Video	Yes	88	61.1
	Partially	52	36.1
	No	4	2.8

Reasons for Choosing Video in Education*	Providing Accessibility	102	70.8
	Ability to Work on Topics as Well As Learn the Subject	88	61.1
	Ability to Work Again when The Point is Not Understood	78	54.1
	No Location Restriction	75	52.1
	Being Cheap	63	43.7
	Unlimited Time	57	39.6
	Other	8	5.5
	Don't Know	3	2.0
Reasons for Not Choosing Video in Education*	Being Delayable	74	51.3
	No Internet Connection or Interruption	51	35.4
	Falling Motivation	25	17.3
	Do not Feel Isolated/Alone	22	15.2
	Do Hesitate to Ask Questions	19	13.2
	Inadequate Use of Computers	14	9.7
	Require More Responsibility and Self-Discipline	14	9.7
Visual Understanding of Videos	Good	99	68.8
	Middle	44	30.5
	Bad	1	0.7
Evaluation of Training-Supported Video	Excellent	31	21.5
	Very good	47	32.6
	Good	42	29.2
	Middle	23	16.0
	Bad	1	0.7
Satisfaction of The Lecture with Video Assisted	Satisfied	91	63.2
	Mid-grade Satisfied	50	34.7
	Not satisfied	3	2.1

* More than one option marked.

According to the weekly course assessment of the students, the rate of the YouTube videos' effectiveness was found between 59.7% and 74.3%, the rate of the YouTube videos' pellucidity was found between 48.6% and 60.4%, the rate of the YouTube videos' sufficiency was found between 52.1% and 69.4%. The effectiveness and understandability rates of the video use in course content were the highest in the subjects of "staff safety in operating room" and the lowest in "specimens". The sufficiency was the highest in "environmental sanitation and cleaning" and the lowest in "specimens" (Table 3).

Table 3

Students' Opinions on Effectiveness, Pellucidity and Sufficiency of the Videos Used in the Lecture Content

Content	Students' Opinion		*f*	%
Basic Concepts in Operating Room Nursing	Effectiveness of Video Usage	Effective	103	71.5
		Ineffective	5	3.5
		Undecided	36	25.0
	Pellucidity of Video Usage	Understandable	74	51.4
		Partially Understandable	55	38.2
		Undecided	10	7.0
		Not Understandable	5	3.4
	Sufficiency of Video	Sufficient	85	59.0
		Partially Enough	52	36.1
		Insufficient	7	4.9
Nursing Careers in Operating Room Nursing	Effectiveness of Video Usage	Effective	91	63.2
		Ineffective	9	6.2
		Undecided	44	30.6
	Pellucidity of Video Usage	Understandable	76	52.8
		Partially Understandable	49	34.0
		Undecided	12	8.3
		Not Understandable	7	4.9
	Sufficiency of Video	Sufficient	90	62.5
		Partially Enough	43	29.9
		Insufficient	11	7.6
Patient Safety in Operating Room	Effectiveness of Video Usage	Effective	102	70.9
		Ineffective	5	3.4
		Undecided	37	25.7
	Pellucidity of Video Usage	Understandable	77	53.5
		Partially Understandable	52	36.1
		Undecided	13	9.0
		Not Understandable	2	1.4
	Sufficiency of Video	Sufficient	90	62.5
		Partially Enough	45	31.3
		Insufficient	9	6.2

Staff Safety in Operating Room	Effectiveness of Video Usage	Effective	107	74.3
		Ineffective	8	5.6
		Undecided	29	20.1
	Pellucidity of Video Usage	Understandable	87	60.4
		Partially Understandable	42	29.2
		Undecided	13	9.0
		Not Understandable	2	1.4
	Sufficiency of Video	Sufficient	97	67.4
		Partially Enough	39	27.1
		Insufficient	8	5.5
Environmental Safety in Operating Room	Effectiveness of Video Usage	Effective	100	69.5
		Ineffective	11	7.6
		Undecided	33	22.9
	Pellucidity of Video Usage	Understandable	86	59.7
		Partially Understandable	41	28.5
		Undecided	11	7.6
		Not Understandable	6	4.2
	Sufficiency of Video	Sufficient	98	68.0
		Partially Enough	37	25.7
		Insufficient	9	6.3
Infection Prevention and Control in the Perioperative Setting	Effectiveness of Video Usage	Effective	97	67.3
		Ineffective	4	2.8
		Undecided	43	29.9
	Pellucidity of Video Usage	Understandable	79	54.9
		Partially Understandable	49	34.0
		Undecided	14	9.7
		Not Understandable	2	1.4
	Sufficiency of Video	Sufficient	88	61.1
		Partially Enough	48	33.3
		Insufficient	8	5.6

Positioning the Patient for Surgery	Effectiveness of Video Usage	Effective	102	70.8
		Ineffective	7	4.9
		Undecided	35	24.3
	Pellucidity of Video Usage	Understandable	80	55.6
		Partially Understandable	44	30.6
		Undecided	16	11.1
		Not Understandable	4	2.7
	Sufficiency of Video	Sufficient	94	65.3
		Partially Enough	43	29.9
		Insufficient	7	4.8
Stures, Needles and Instruments	Effectiveness of Video Usage	Effective	98	68.0
		Ineffective	12	8.3
		Undecided	34	23.7
	Pellucidity of Video Usage	Understandable	82	56.9
		Partially Understandable	42	29.2
		Undecided	16	11.1
		Not Understandable	4	2.8
	Sufficiency of Video	Sufficient	93	64.6
		Partially Enough	41	28.5
		Insufficient	10	6.9
Specimens	Effectiveness of Video Usage	Effective	86	59.7
		Ineffective	47	32.6
		Undecided	11	7.7
	Pellucidity of Video Usage	Understandable	70	48.6
		Partially Understandable	41	28.5
		Undecided	23	16.0
		Not Understandable	10	6.9
	Sufficiency of Video	Sufficient	75	52.1
		Partially Enough	54	37.5
		Insufficient	15	10.4

Environmental Sanitation and Cleaning	Effectiveness of Video Usage	Effective	103	71.5
		Ineffective	10	7.0
		Undecided	31	21.5
	Pellucidity of Video Usage	Understandable	79	54.9
		Partially Understandable	51	35.4
		Undecided	9	6.2
		Not Understandable	5	3.5
	Sufficiency of Video	Sufficient	100	69.4
		Partially Enough	33	22.9
		Insufficient	11	7.7
Surgical Smoke	Effectiveness of Video Usage	Effective	100	69.5
		Ineffective	12	8.3
		Undecided	32	22.2
	Pellucidity of Video Usage	Understandable	84	58.3
		Partially Understandable	40	27.8
		Undecided	12	8.3
		Not Understandable	8	5.6
	Sufficiency of Video	Sufficient	94	65.3
		Partially Enough	38	26.4
		Insufficient	12	8.3
Communication Skills for Nurse in Operating Room	Effectiveness of Video Usage	Effective	104	72.2
		Ineffective	9	6.3
		Undecided	31	21.5
	Pellucidity of Video Usage	Understandable	84	58.3
		Partially Understandable	46	31.9
		Undecided	8	5.6
		Not Understandable	6	4.2
	Sufficiency of Video	Sufficient	93	64.6
		Partially Enough	42	29.2
		Insufficient	9	6.2

Discussion

Education, like many aspects of our lives, should be adapted to changing times and developments in technology. The use of YouTube videos in education has increasingly become common. In this study, the use of YouTube videos in the Optional Operating Room Nursing lecture was evaluated by the students.

Students thought that the integration of YouTube videos into their lecture content and the effect of these videos on understanding of the subject were benevolent. Most students thought that the contribution of the videos used in the optional Operating Room Nursing lecture in clinical environment would be good. June, Yaacob, and Kheng (2014) discovered that the use of YouTube videos increased students' participation and it certainly helped the development of their critical thinking skills (June et al., 2014). In another study, it was found that YouTube videos enabled the implementation of a theory, in addition to encouraging discussion and critical thinking (Burke, Snyder, & Rager, 2009). Critical thinking is a necessary process for safe, effective and skill-based nursing practice. Recently, it has been suggested that nursing education programs adopt and implement attitudes that improve critical thinking (Papathanasiou, Kleisiaris, Fradelos, Kakou, & Kourkouta, 2014). One of the ways to improve students' critical thinking skills is to use YouTube videos in lessons; this approach helps them to find effective solutions to the problems they encounter in the working environment after they graduate.

Although there are very few articles that analyzed students' perceptions and the use of YouTube, Snyder and Burke (2008) reported that 89% of the students improved their learning through YouTube videos and 73% of them wanted the videos to be used more in the classroom (Snyder & Burke, 2008). In another study, 92% of the students who watched a human anatomy training channel on YouTube stated that the video assisted education made it easier to learn anatomy (Jaffar, 2012). In another study, it was detected that the students had a positive view on using YouTube videos as teaching tools (June et al., 2014). YouTube videos were found efficient by the students because they are accessible via mobile devices and users do not need for any specific software to properly access or view videos on Youtube (Buzzetto-More, 2014).

In our study, most of the students said that they preferred YouTube videos to be used in education because they can re-watch as many as they like if they do not understand a topic. Since almost all students considered video assisted education as "excellent", "very good" and "good", it was clear that they were satisfied with the video-assisted lecture. And the fact that students found the videos adequate for the lecture can be linked with the professional guiding of the lecturer while selecting the clearest videos related to the subjects.

Duncan et al. (2013) described ten of the most commonly used clinical skills for first-class nursing students in their work. These skills are venous access, catheter placement, urinary catheterization, injection, use of pain assessment tools, wound assessment, cardiopulmonary resuscitation, oral care, electrocardiogram and aseptic technique. Ten YouTube videos related to each topic were used in training. It was found that the most frequently watched technique was cardiopulmonary resuscitation, but the videos related to injection and pain assessment were the least frequently watched ones (Duncan et al., 2013). YouTube videos classified under education in the dentistry area were also stated to be useful and knowledgeable for students (Knösel, Jung, &

Bleckmann, 2011). In another study, it was emphasized that YouTube videos could be an important tool for the anatomy training and local anesthesia in dentistry. In addition, it was thought that the view count of the videos could help to determine the desired topics. Besides, for countries where higher education is a far target, video assisted learning can also be used to address the gaps of certain professions in education-restricted areas (Mukhopadhyay, Kruger, & Tennant, 2014). However, in our study, the students indicated that the selected videos about tissue samples and surgical smoke issues were insufficient. The opinions of the students should be considered important while evaluating the existing videos and more content should be produced on the topics defined as not adequate.

Limitation of the Study

The number of videos for some subjects in the content of the Operating Room Nursing lecture was limited. The number of students in the classroom was high but, in some weeks, there were absent students. These constituted the limitations of the study.

Conclusions

The nursing students stated that they were happy with the integration of YouTube videos into the Operating Room Nursing lecture. It was found that the videos were effective, clear and sufficient according to the students. YouTube videos can be integrated into lectures to support lecture content in nursing education, to enrich the learning environment and to provide targeted information. It is recommended that the quality and quantity of YouTube videos should be increased for the subjects defined as inadequate from the perspective of the students.

Statement of Responsibility

Meryem Yavuz van Giersbergen; conceptualization, software, formal analysis, writing-reviewing & editing, methodology, validation, visualization, supervision, and project administration. Özlem Soyer Er; investigation, data curation, writing – original draft, writing-reviewing & editing, resources.

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