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Preferences for Online Learning among Nursing Students: A Systematic Review

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Abstract

Background and objectives: The traditional teaching methods have transitioned to distance learning in all fields of education, including medical and nursing education during the Covid 19 pandemic. We aimed to perform a systematic review on preferences for online modes of learning among nursing students..

Materials and Methods: The investigator conducted a thorough literature search on PubMed and Google scholar using comprehensive search strategies to find published English free full-text scientific articles related to preferences of nursing students to online and face-to-face learning modes. Based on the inclusion criteria, articles were searched.

Results: The studies that were selected based on databases give the evidence to convince the different perceptions of nursing students to online learning modes. Out of six, 4 studies show less than 50% of preferences for online learning.

Interpretation and conclusions: Current evidence suggests that the online mode of learning has increasing preference along with face-to-face learning in nursing. However, further studies with a larger sample size and longer duration are required.

Key Words:

nursing students, online learning, preferences.

INTRODUCTION

The traditional educational system is reformed during the covid 19 pandemic in which e-learning played a significant role.The face-to-face lecture method of teaching help students absorbs information from an instructor, ensuring a real-time interaction between students and teachers, which has been unused in all school systems with the escalation of covid 19. It led to the implementation of distance learning by most institutions which was effective out of necessity.[1]

E-learning has made it possible for students to provide a quality education amidst a busy life schedule. Classes can be offered worldwide through a single internet connection with the advent of web-based instructions.[2]Distance learning using digital tools to deliver, support, and enhance the teaching and learning is facilitating a transition from a teacher-centered to a learner-centered approach which is a pedagogical transition with interaction with teachers and students.[3] The dichotomy of face-to-face learning and e-learning has been studied by researchers to analyze the differences between both and the attitude of students towards these different modes.[4]

The advantages of online education management include autonomous learning, interactive activities, presentations and tests through online mode, instant feedback and immediate scoring, and persistent training activities and assignment.[5] Though e-learning has the advantages of lectures made available anytime and anywhere, there are some disadvantages like the need for self-motivation, internet availability, difficulty to acquire psychomotor skills, and limited student feedback. Also, digital gadgets are expensive and prolonged gadget use may cause health hazards.[6]

In the field of nursing education, the campus-based learning approach played a major role in learning activities. The limited experience and knowledge of teachers in using digital tools were a barrier to the implementation of distance education in nursing. Also, teachers fear whether traditional campus-based lectures get removed by distance education. To understand the didactic strategies in nursing education, more knowledge is needed on learning styles and approaches, and their perception and preferences of online and face-to-face modes of learning.[3]

Quantitative research with a web-based survey research design was done from May–June 2020 to measure the level of satisfaction with online learning and to identify the barriers which restrict online learning among nursing students. The majority of nursing students (67.57%) were extremely satisfied with online learning. The highest barriers which restrict online learning among nursing students is the low voice and language clarity (2.16 ± 0.593), physical health barriers such as eye strain (2.43 ± 0.613), reliability, and connectivity problem (2.26 ± 0.534). [7]

So it shows the necessity of further research and evidence on the preferences of nursing students based on online learning.

MATERIALS AND METHODS

The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) protocol was used to perform this systematic review.[8]

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Data Sources

The databases of PubMed and Google Scholar were searched for relevant articles about the preferences for online learning among nursing students.

Search strategy:

Systematically planned searches were conducted to avail literature comprehensively. To identify the published articles investigators included the literature as of June 30, 2022, from the year 2019. After eliminating duplicates, the investigator independently reviewed all abstracts: free full texts of articles regarded as potentially eligible for consideration were extracted for further analysis.The search was limited to articles in the English language. Selected indexing terms included preferences, online learning, and nursing students.

Study Selection:

Potentially relevant studies with above said titles were selected. Study populations included medical professionals who had undergone the online teaching and learning methodology. Investigators ensured studies from diverse backgrounds and contents were retrieved. A preliminary screening was done based on the titles of the articles.

Study Inclusion Criteria:

- Studies conducted on medical professionals about online learning
- Studies which included the term preferences, online learning, nursing students
- Studies in the English language only
- Studies with online teaching methods

Study exclusion criteria

- Studies with a sample other than nursing students
- Studies provided abstracts only while searching
- Studies with distance learning not using the online mode for teacher-learner activities

Data Extraction:

All studies identified by the search strategy are checked in detail by the researcher. The duplicates were eliminated. Based on the inclusion and exclusion criteria eligible articles were extracted for the final analysis. With the view of the topic identified and final result of the study was formulated. An extraction data sheet was designed based on study design, the sample size for each study, the major outcome measured and the main result of the study.

Data Synthesis:

The main results of the review are summarized in a qualitative format in Table 1.

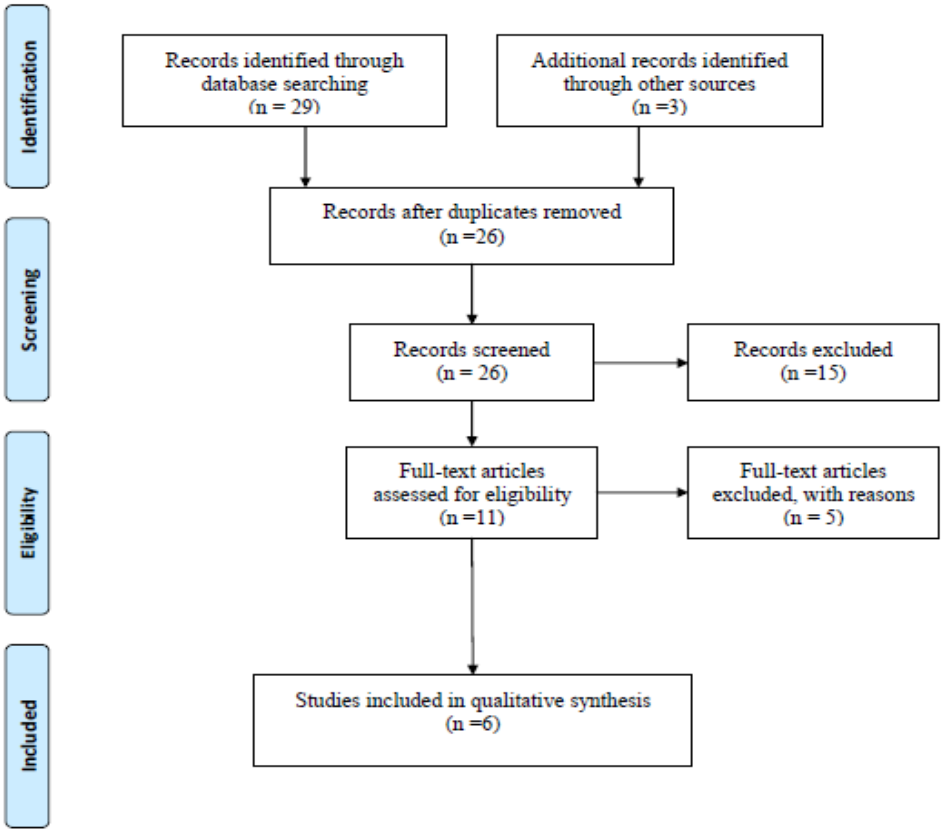

Figure 1 : PRISMA Flow Diagram

RESULTS

Table 1: Qualitative synthesis of studies included.

Sl No	Study Title	Authors and Year of Publication	Design	Sample Size	Main Outcome Measure	Main Result
1	Association between preference and e-learning readiness among the Bangladeshi female nursing students in the COVID-19 pandemic: a cross-sectional study [9]	Humayun Kabir,TajrinTahrinTonmon,Md. Kamrul Hasan,LilaBiswas,Md. Abul HasnatChowdhury,Muhammad DidarulIslam,MamunurRahman,and Dipak Kumar Mitra1 (2022)	A cross-sectional studyamong the female nursing students between December 26, 2020, and January 11, 2021	A total of 237 students were recruited who have enrolled in e-learning at least the last 30 days of the participation.	The prevalence of e-learning preference among the female nursing students of Bangladesh	The prevalence of preference for e-learning was 43.46%
2.	Perception of Online Lectures among Students of a Medical College in Kathmandu: A Descriptive Cross-sectional Study [10]	Bhagabat Bhattarai, Sujaya Gupta, SirjanaDahal, Aarzu Thapa, Pooja Bhandari (2021)	A descriptive cross-sectional study between November to December 2020	318 participants	To know about the perception towards online lectures by undergraduate students of medical college	151 (47.49%) participating students agreed that online lectures were helpful to their learning
3	Nursing students' experiences of a pedagogical transition from campus learning to distance learning using digital tools [3]	Ulrica Langegård,KianaKiani,Susanne J. Nielsen, and Per-Arne Svensson (2021)	A combination of qualitative and quantitative methodologies, by using focus groups interviews, and the analysis of these interviews formed the basis of the questionnaires used in this study and conducted during spring 2020	A focused group interview was done for 9 students and a questionnaire was sent to 132 students out of those 96 students responded	Describe and evaluate nursing students' experiences of the pedagogical transition from traditional campus-basedlearning to distance learning using digital tools.	Two-thirds of the students reported they preferred regular campus-based education to distance learning and the most preferred type of learning activity in online mode was pre-recorded video lectures.
4	Medical Education and E-Learning During COVID-19 Pandemic: Awareness, Attitudes, Preferences, and Barriers Among Undergraduate	Ronald Olum, Linda Atulinda, Edwin Kigozi, Dianah Rhoda Nassozi, AlzanMulekwa, Felix	An online cross-sectional study was conducted between July and August 2020	221 participants responded	Assess the awareness, attitudes, preferences, and challenges to e-learning among Bachelor	A total of 75.2 % preferred the blended method of teaching delivery (both e-learning and

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	Medicine and Nursing Students at Makerere University, Uganda [11]	Bongomin, Sarah Kiguli (2020)			of Medicine and Bachelor of Surgery, and Bachelor of Nursing students at Makerere University, Uganda	conventional classroom lectures).
5	A survey of E-learning methods in nursing and medical education during the COVID-19 pandemic in India [12]	Hemant Kumar Singh, Arvind Joshi, Raghavi N Malepati, Shaista Najeeb, Pavithra Balakrishna, Naresh Kumar Pannerselvam, Yashwant Kumar Singh, PratyushaGanne (2021)	a nationwide, self-administered, anonymous, questionnaire-based cross-sectional survey conducted between July and August 2020.	1541 medical and 684 nursing students completed the survey from 156 cities.	practicability/ feasibility of online classes,health issues from online classes,current methods for e-teaching, and student attitudes and preferences.	Only 45% of the students felt that e-learning is the best alternative to continue education during the pandemic.
6	Attitudes and concerns of undergraduate university health sciences students in Croatia regarding the complete switch to e-learning during COVID-19 pandemic: a survey [13]	Livia Puljak,MartaČivljak,AnaHaramina,SnježanaMališa,DaliborČavić,DinkoKlinec,DianaAranza,Jasna Mesarić,Nataša Skitarelić,Sanja Zoranić,Dijana Majstorović,MarijanaNeuberg,ŠteficaMikšić,and Kata Ivanišević (2020)	A cross-sectional observational study conducted via an online survey during April/May 2020	Of the 3582 eligible participants, they received 2520 (70.3%) completed surveys.	attitudes and concerns of health sciences students in Croatia regarding the complete switch to e-learning during the COVID-19 pandemic	The average participants' satisfaction with e-learning was 3.7 ± 1.1 About a third of participants had a neutral opinion,39.6% found e-learning better and 24.9% found e-learning worse

DISCUSSION

The total articles retrieved were 32 and 6 articles were found relevant. The reasons for the exclusion were that (1) studies mentioned that online education in the health profession specifically focused on medical education only [14] and (2) the preference for different modes of education in the non-nursing field.[14][15] (3) studies on only about information technology in nursing institutions [16] (4) studies focused only on health issues and stress related to online education.[17][18]

Only 6 studies met the inclusion criteria.[3] [9-13] Out of these studies, the total sample size was 6031. 4933 responses were included in the six studies. A cross-sectional study measured the prevalence of e-learning preference among female nursing students was 43.46%.[9] Another descriptive cross-sectional study analyzed the perception of online lectures by undergraduate students and 47.49% of participating students agreed that online lectures were helpful to their learning.[10] In a focused group interview, the pedagogical transition from traditional campus-based learning to online learning among nursing students was evaluated and two-thirds of students preferred regular campus-based learning. The preferred online classes were pre-recorded video classes.[3] Based on a cross-sectional study, blended methods of teaching, which include e-learning and conventional method were preferred by 75.2 %.[11] The survey of E-learning methods in nursing and medical education during COVID 19 with the practicability/feasibility of online classes shows that only 45% of the students felt that e-learning is the best alternative to continue education during the pandemic. [12]

The effectiveness of learning also depends on how the content is set up for an online environment and on how well students' problems are understood and dealt with. The study

is even more important because India has never tried online education on this large of a scale before. This is like a huge social experiment. Also, in the field of nursing education, the curriculum puts a lot of emphasis on hands-on learning, and whether or not it can be done online will determine how well it works.

The study's results are important for nursing for a number of different reasons. First of all, the switch to online mode happened quickly because of the unprecedented lockdown that was put in place to run COVID-19. This meant that the institutes didn't have time to design and adopt online course content. In this situation, students' experiences and what they've learned can be used to make online learning easy, efficient, and useful. Second, life after the COVID-19 pandemic will not be the same, even after lockdown is lifted, and online learning is here to stay, though it will be used alongside regular offline classes. Since no one knows how long the pandemic will last or how likely it is to spread again, people may start to stay away from each other. This could become the new norm.

If you want to improve how well online learning works, you need to know how users feel about it. Students have both good and bad things to say about online learning. How the teacher interacts with the students has a big effect on how the students feel about online learning. Consistency in course design, the ability of interaction with course instructors to improve critical thinking skills and the rate of information processing in the online setting, the amount of instructional emphasis on learning through interaction, the flexibility of online learning, the chance of interacting with teachers and peers in online learning settings, social presence, and the skills needed to use technology were seen as the most difficult parts.

Because of how far technology has come, there are now many ways to design online content. When designing online courses, it's important to think about what the learners want and how they see the world. This will make learning more effective and productive. The learner's preference has to do with how ready or willing they are to take part in collaborative learning and the factors that affect how ready they are for online learning. Hence this study recommends for large scale cross cultural studies so as to analyse the students preferences before inculcating online mode of education during post covid era.

CONCLUSION

Although online learning has many advantages like self-directed learning, nursing education includes both theoretical and practical learning developing both knowledge and skills of nurses, which were traditionally imparted through face-to-face lectures, clinical rotations, and laboratory instructions.[19] The online classes provide various restrictions like getting subject clarity and understanding of topics and it limits the interaction of teachers and students. Prolonged online classes may also cause negative health impacts.[20] So, all colleges need to be ready to move most of their course content to e-learning platforms and change the structure and curriculum of their courses to fit. The results of our study can help decide what kind of learning environment will help people learn best on an online platform.

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Conflicts of Interest

None declared

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