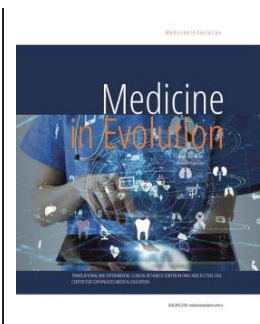


The internet-effective educational instruments in health education



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Abstract

The aim of this study is to demonstrate the innovative use of technology in medical education and bring awareness of current and future trends in the use of technology to enhance teaching and learning. Also, the purpose of this study is to reveal patterns in the use of health information on the Internet.

Material and method: 1028 people responded to the telephone survey and that was conducted between October 2020 to December 2020. 865 out of 1028 completed the survey and 678 of them, used the Internet to obtain health information in the last year.

Results: The determining factors in the use of the Internet for the selection of the hospital were represented by the area of residence, age and health status and the recommendations received on the social platforms.

Discussions: There are several ways in which the Internet has been used for health education. The first involves professional development and the second and most important is the use of the Internet as a channel of intervention.

Conclusions: The implementation of "learning engineering" as an emerging technology can help in the teaching and learning process. Training of more educators who can continue their further training in the effective use of technology to improve teaching and learning.

Keywords: medical education, technology, health information

INTRODUCTION

The Internet is the usual way to access all kinds of information, so it has a very influential place in the field of healthcare. More and more people are using the Internet to get the latest information on health issues. However, it is very important, but it is not easy to find the right data and select it efficiently from the huge amount of information. In order to identify information seekers and understand their needs or purposes, they would be very effective for providers to provide high quality health information to Internet users.

Innovative use of technology in medical education and an awareness of current and future trends in the use of technology to enhance teaching and learning. We will begin with a reflection on the current increased use of technology as a major factor in enabling the continuation of medical education during the pandemic. This reflection will be followed by a discussion of several potential future scenarios that are based on emerging trends in the use of technology, but also on an understanding of how complex social systems respond over time to the trigger of major events. We will also discuss the benefits and challenges of the future use of technology in medical education after the pandemic is resolved.

CBL is a teaching-learning practice in which clinical cases are used to aid traditional lectures. CBL promotes active learning and has recently been used to compensate for lack of motivation in teaching lectures. Students are given the opportunity to explore real cases in which the patient's history, signs, symptoms are provided, along with clinical and laboratory results [1]. Through teamwork and peer interaction, students evaluate the case as they plan investigations and proper management. The motto is to equip students with the skills needed for critical analysis.

EBM provides students with the tools they need to learn, understand, and evaluate the medical literature. The EBM follows five steps: a) translating indeterminate information to a question with an answer, b) retrieving the best available evidence, c) critically understanding the evidence for internal validity, d) applying the results in practice, and e) evaluating performance. Advocates long-term learning and disciplined thinking, allowing meticulous and sensitive application of current medical evidence in patient care decisions [2].

The main principle behind simulation learning (SBL) is to use simulation means to mimic real clinical scenarios. Although medical simulation is fairly new, simulation has long been used in other high-risk professions, such as aviation. Medical simulation allows the recovery of clinical skills through intentional practice, rather than through an apprenticeship learning style. It can help instead of real patients and clinical scenarios. Barriers surrounding limited clinical settings have encouraged the use of SBL in preclinical teaching. One of the most important advantages is the absolute freedom for trainees to commit and repeat mistakes without harming the patient [3].

Virtual reality can also be involved in SBL to increase learning standards and confidence in patient care [4]. It is best represented as a state-of-the-art concept to facilitate human-machine interaction and to effectively reduce the gap between realistic and theory-based learning by involving the learner in pseudo-realistic environments. It differs a lot in terms of its level of development, authenticity and end-user synergy with the virtual background. Understanding the use of haptic feedback can produce a sense of resilience when using tools in a simulated environment. Similar technological principles are used in the training of laparoscopic and endoscopic instruments for resident physicians.

Social platforms can help with traditional subsidiary knowledge and improve distance learning. Students and learners of all strata usually check the internet for details about diseases, therapies and associated physiology. Moreover, many organizations have realized that supporting live-tweeting or blogging medical conferences, as well as providing opportunities for a wide spread of content, can go far beyond personal presence.

Information technology has shown a greater impact on medical education, most recently through the electronic distribution of videos. The widespread use of the vast educational resources available on the Internet is of significant medical importance. These online resources can be used for practical learning of clinical procedures, demonstrations of anatomical dissections, as well as asynchronous learning through online lectures [5 - 7].

Online classroom learning has been the new innovative teaching and learning strategy that incorporates blended learning techniques using online and / or offline instructional content outside the traditional classical framework. Students are offered pre-recorded lectures assigned as homework for the course, from the instructor's focus to self-taught learning. Solve medical cases by engaging in small groups that will facilitate a team-based approach and promote longer fact-keeping [8].

Team-based learning (TBL) is one of the best learning techniques that has recently gained popularity in medical education, based on student-centered learning [9]. Team-based learning is defined as a learning strategy with a small group of students who have the opportunity to apply educational concepts through various activities that include critical thinking, individual and team-based tasks, brainstorming followed by immediate feedback from the instructor. TBL has a greater advantage in increasing communication skills and teamwork strategies in student groups, which are essential for patient care [10].

Aim and objectives

The purpose of this study is to reveal patterns in the use of health information on the Internet. Also, the aim of this study is to demonstrate the innovative use of technology in medical education and bring awareness of current and future trends in the use of technology to enhance teaching and learning.

MATERIAL AND METHODS

1028 people received a response to the telephone survey and the survey was conducted from October 2020 to December 2020. 865 out of 1028 completed the survey and 678 of them used the Internet to obtain health information in the last year. The subjects of the survey were randomly selected from local residents according to age and sex. It was performed in Timiș County, rural and urban areas, after prior telephone consent. The use of health information on the Internet has been classified into four categories as follows: general health advice, disease-specific information, shopping for health products and selection of hospitals. The questionnaire included articles on socio-demographic characteristics, such as age, gender, income, education, area of residence, health status and behaviors, such as cigarette smoking and alcohol consumption.

RESULTS

People with higher education and higher incomes are more likely to use the internet for health information. City dwellers use health information on the Internet more than those in rural areas, although there have been more since the pandemic. Personal health seems to be the most important factor to look for information about general health tips on the Internet.

Healthy people (68.3%) used the internet more than people with diseases (32.7%) who used the internet most frequently for disease-specific information (62.6%). The area of residence was the most important factor in choosing the health care provider contacted. While 31.8% of urban dwellers used the internet, only 19.0% of rural dwellers used it for the same purpose.

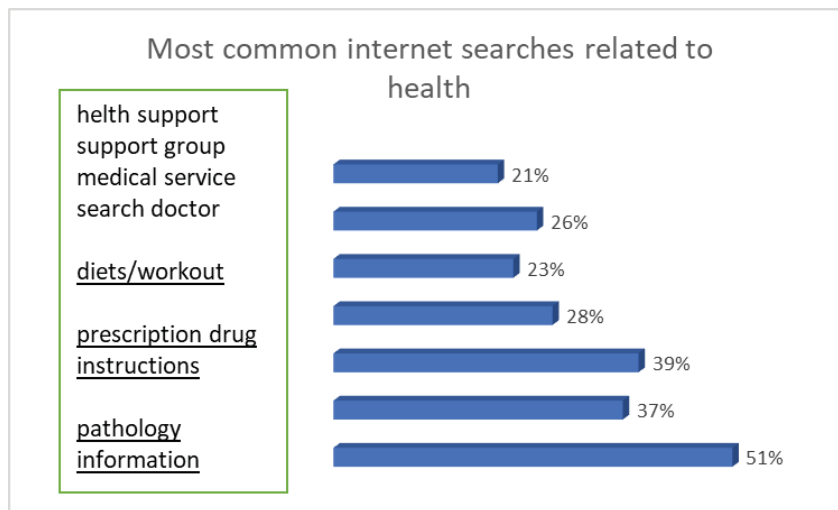


Figure 1. Health-related Internet search domains

The determining factors for the use of the Internet for the selection of the hospital were the area of residence, age and health and the recommendations received on social platforms.

During the pandemic, education took place exclusively online on Zoom education platforms, Google Classroom, Teams, etc. and all proved to be effective for advancing the education of pupils and students. Although the practical aspects of education are missing, there are also many beneficial points in using the internet for education.

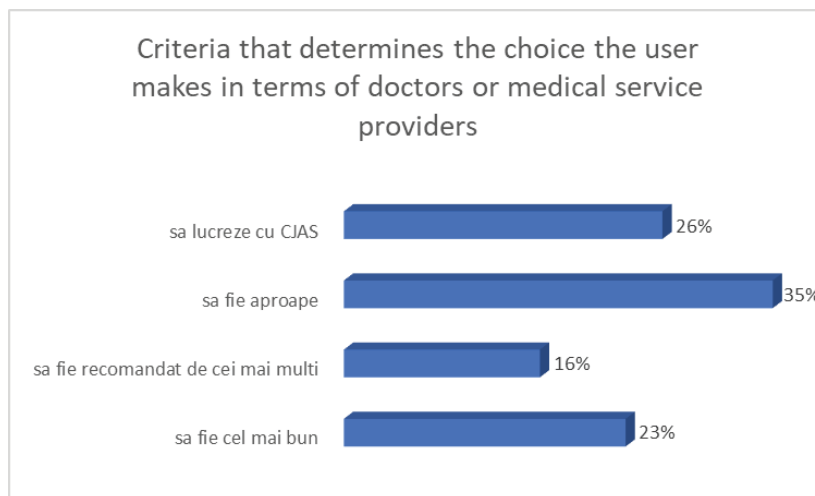


Figure 2. Criteria for choosing internet users looking for a doctor/healthcare provider from the recommendations received

DISCUSSIONS

The Internet provides a low-cost means of information and assistance to a large number of people and can therefore have the potential to reduce the financial costs of health education. It also allows the provision of personalized health information to each person, depending on their health status and concern. In addition, the Internet has the potential to disseminate health information to certain groups of the population, which have previously been untouched or difficult to reach by conventional means.

There are several ways in which the Internet has been used for health education. The first involves professional development. Several studies have examined the use of the Internet for distance learning and continuing education in health-related courses [11, 12].

The second and most important is the use of the Internet as a channel of intervention. This includes the distribution of health information or intervention systems designed to help individuals change their health behavior. Indeed, research has documented the effectiveness of a wealth of health education or intervention that has been delivered through various Internet channels.

The use of online support groups is associated with positive outcomes, including better mental health, a better quality of life, and a higher level of optimism and greater use of active coping strategies [13, 14], and the benefits do not. they seem to differ between hidden ones that read only messages posted to the group and posters that read and post messages to the group [15].

To date, most studies in this field tend to focus on the effectiveness of health education to be delivered online; There has been relatively less discussion about how we can promote the optimal use of the Internet for health education so that the general public can benefit the most from the Internet. Intervention should be provided to educate patients about their health-related internet skills.

Healthcare professionals should also increase patients' motivation and self-efficacy by minimizing perceived barriers to Internet use and helping them to develop strategies to overcome these barriers. Specifically, patients should be educated about the role of the Internet in managing their disease, technical skills on how to obtain useful information and assistance from the Internet, and how to transfer information and support from the Internet in managing the disease. Healthcare professionals or administrators of online support groups need to regularly evaluate and monitor the content of the message that is shared between group members, in order to minimize the chances of harm caused by misinformation on the Internet.

Overall, the current response to the pandemic has been to raise awareness and adopt the technologies currently available in medical education, as well as in the wider education sector. These changes along the continuum of medical education have been mainly to replace existing approaches to the provision of medical education, driven by the urgency of implementing a feasible and practical solution to crises, with educators using family technology.

Medical schools and other providers of medical education, including commercial organizations and professional bodies, have rapidly expanded the provision of online educational content and training, as well as the development of faculties in the use of technology, especially through online courses. Large group personal lectures have been replaced by streaming online lectures, using technologies for screen capture and online broadcasting.

Currently available technology, such as videos, podcasts, simple virtual reality, computer simulations, and serious games, is beginning to be used to assist educators and to facilitate students' learning and instruction in these areas. Simple online platforms, such as websites and blogs, can provide basic information, but also provide opportunities to host videos to demonstrate essential skills, such as clinical procedural skills and communication [16]. Medical educators can remotely train students with real-time mobile video tools and applications.

CONCLUSIONS

During the pandemic, education shifted exclusively online on Zoom and other educational platforms, Google Classroom, Teams, etc. All proved to be effective for advancing education in pupils and students. Although the practical aspects of education are missing, there are also many beneficial points in using the internet for education. Implementing "learning engineering" as an emerging technology can help in the teaching and learning process. Training of more educators who can continue their further training in the effective

use of technology to improve teaching and learning. The development of emerging technology, especially when it is specific to teaching and learning, is often costly and requires a range of different expertise.

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