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Information and communication technologies: use of podcasts as a strategy to promote health education

EXPERIENCE REPORT

Tecnologias da informação e comunicação: uso de podcasts como estratégia promotora de educação em saúde

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ABSTRACT

Introduction: Information and communication technologies (ICTs) are technical means of propagating information. Currently, its use in the health education process has been discussed, as well as the need for training professionals to use them in this action. This work aimed to describe the experience of academics in the use of ICTs as a means of disseminating information that promotes health education, through the construction of informative “podcasts”. **Experience Report:** Division of the 3rd period nursing class into eight groups, where each one developed a podcast. The creative process included three stages: planning, creation and publication. This report specifically sought to describe the experience of two groups, which developed the themes “Golden hour” and “Abusive relationship”. **Discussion:** Recommended by the National Curriculum Guidelines, ICTs were incorporated into the teaching-learning process, constituting a differential for the training of students, qualifying them for the era of Telehealth and remote health education processes. The easy dissemination of knowledge was demonstrated by the result of 88 accesses to the podcasts, contemplating national and foreign Internet users.

Therefore, the union between technological tools and the health promotion strategy proved to be fundamental to implement the new health practice.

Descriptors: Health education; Science, technology and society; Community health nursing; Health science, technology and innovation management.

RESUMO

Introdução: As tecnologias de informação e comunicação (TICS) são meios técnicos de propagação da informação. Atualmente, tem-se discutido, seu uso no processo de educação em saúde, assim como a necessidade de capacitação dos profissionais para utilizá-los nessa ação. Este trabalho objetivou descrever a experiência de acadêmicas no uso das TICS como meio para disseminação de informações promotoras de educação em saúde, através da construção de *podcasts* informativos. **Relato de Experiência:**

Divisão da turma do 3º período do curso de enfermagem em oito grupos, os quais desenvolveram um *podcast* cada. O processo criativo contemplou três etapas: planejamento, criação e publicação. Este relato buscou, especificamente, descrever a experiência de dois grupos, os quais desenvolveram os temas “*Golden hour*” e “Relacionamento abusivo”.

Discussão: Preconizado pelas Diretrizes Curriculares Nacionais, as TICS foram incorporadas no processo de ensino-aprendizagem, constituindo-se como um diferencial para a formação das discentes, capacitando-as para a era da Telessaúde e os processos de educação em saúde remotos. A fácil disseminação de conhecimento foi demonstrada pelo resultado de um total de 88 acessos ao *podcasts*, contemplan-

do internautas nacionais e estrangeiros. Portanto, a união entre ferramentas tecnológicas e a estratégia de promoção à saúde mostrou-se fundamental para implementar o novo fazer saúde.

Descritores: Educação em saúde; Ciência, tecnologia e sociedade; Enfermagem em saúde comunitária; Gestão de ciência, tecnologia e inovação em saúde.

INTRODUCTION

Information and communication technologies (ICTs) may be defined as technical means of propagating information, including computers, mobile devices, software and networks, such as the internet¹. ICTs can mediate various processes in different areas, such as commerce, industry, the investment sector and education, with a focus on gathering and distributing information².

In the field of education, these technologies began to be used as a pedagogical way of creating, seeking and sharing knowledge, by expanding communicative possibilities and knowledge, in addition to providing new ways of learning and teaching³.

Currently, the use of ICTs in the health education process has been discussed, as well as the need to train professionals to use them in this process⁴⁻⁶. The Ministry of Health defines health education as:

Educational process of building health knowledge that aims at thematic appropriation by the population [...] Set of sector practices that contribute to increasing people’s autonomy in their care and in

debate with professionals and managers in order to achieve healthcare according to their needs.⁷

In this perspective, ICTs are a good alternative for the development of health education, in addition to enriching teaching-learning dynamics, which they provide the exchange of information, breaking geographical and time barriers, integrating institutions, professionals and health users to the varied sciences, also capable knowledge of responding to their needs. Furthermore, the use of ICTs as a means of education allows individuals to develop autonomy in learning, managing their time, rhythm, cooperation and learning preferences⁵.

The ICT Households 2020 survey released by the Regional Center for Studies for the Development of the Information Society (Cetic.br), revealed that Brazil has 152 million Internet users, which corresponds to 81% of the country's population aged 10 or over, an increasing of 7% compared to 2019⁸. By revealing the size of the public exposed to ICTs, these data reinforce the need to explore this means to mediate health education processes.

Article 196 of the Brazilian Federal Constitution of 1988, determines health as a right for all, and, like the principles that underlie the Unified Health System (sus), and advocates universal and equal access to actions and services for its promotion, protection and recovery. Therefore, platforms that promote access to health-promoting information, in an understandable and unlimited way for everyone, are essential to guarantee this right⁶. It is essential that health professionals are able to use these resources as a means of

promoting the acquisition of knowledge about health, fulfilling their role as educators, without forgetting to consider the context of each region in terms of accessibility conditions and the use of these platforms by the population.

The onset of a pandemic, a completely unexpected epidemiological context, put not only the population's education at risk, but also health promotion, prevention and protection. Thus, the use of ICTs as a means of guaranteeing education and access to health has become fundamental. Consultations and monitoring of patients through video calls, classes and educational lectures through *Lives* (Live video streaming), are clear examples of the use of ICTs as a means of ensuring less damage to the education and health of Brazilian society in the face of the new reality⁹.

This report aims to describe the experience of nursing students at *Faculdade Ciências Médicas de Minas Gerais (FCMMG)*, regarding the use of digital and informational technologies to create informative podcasts, as a strategy for producing and disseminating information that promotes health education.

EXPERIENCE REPORT

One year after the start of the pandemic caused by the SARS-CoV-2 virus, a new, completely unknown scenario was established in the country, and, for this reason, it was necessary to outline actions in favor of adapting to a new reality capable of respecting the health protocols, including social distancing.

In this way, it was proposed by the subject “Nursing, Science and Profession”, from the 3rd period of the undergraduate Nursing course at FCMMG, in the city of Belo Horizonte, Minas Gerais, an extension action was performed entirely remotely, organized in the first half of 2021, between the months of March and July.

The social isolation imposed by the COVID-19 pandemic restricted face-to-face interaction, therefore, the extension action sought to disseminate and consolidate health education strategies, covering topics of public health, epidemiology, disease control, vaccination, chronicle non-communicable diseases, quality of life, mental health and responsibilities of health professionals, through the construction of informative and collaborative podcasts with focused themes on and based on health.

Podcasts are cyber culture media tools in audio format, which have become popular on the internet, mainly during the pandemic, as they convey information and enhance the production of information remotely, asynchronously and dynamically¹⁰.

For the activity, the group of students enrolled in the subject “Nursing, Science and Profession”, where they divided into eight groups, made up of seven members each. Subsequently, the development of three stages was established for the construction of each of the projects: planning, creation and publication.

The planning stage started with deciding on behalf of the channel on which the podcasts would be published and the logo design. Among several options, the title “SUSpeitas” was established, paying homage

to the Unified Health System (sus), an achievement from Brazilian population, guaranteed by the Federal Constitution of 1988, in its article 196, through Law No. 8,080/1990.

Also in the planning phase, the determination of themes was the students’ free choice, with creations being established on the following themes: *Golden hour*; mental health; blood donation; palliative care; breastfeeding; immunological memory; abusive relationship; vaccines against COVID-19; new technologies to face viral diseases; nutrition of elderly people with diabetes in primary care.

Considering that the four academics involved in preparing this report, exclusively, created the podcasts on the topics “*Golden hour*” and “Abusive relationship”, two of the eight themes, this report specifically seeks to describe the experience only in the development of both.

The second stage, creation, used two technical-methodological resources: *WebQuest* (wq) and scripting. WB is a theoretical instrument built from guided and investigative research, in which information comes from the Internet, so that the covered subject is presented in a creative way¹¹. Moreover, scripting is a primordial and indispensable process for good organization during the recording of the podcast, as the absence of a good script increases the manifestation of flaws and empty spaces about speeches, affecting the description of details, and, consequently, understanding the topic¹².

It is noted that from the conformation and structuring of the WQ, the organization of the scripting process for subsequent recording of the podcast takes place.

For the production of the theme “Abusive relationship”, the title of the podcast was “Abusive relationship: from a fairy tale to a nightmare”, the students involved in the project researched the concept and impact of an abusive relationship on a person’s health, regardless of the sex and gender. Therefore, addressing the concept of abusive relationship, classified by an author in the area¹³ as that in which, there is “an unequal power relationship, where there is the oppressor and the oppressed [...] in many cases, this power is imposed in a physical, patrimonial and emotional way.”

The author¹³ also highlights that in these relationships, there is a record of frequent violence, sometimes leading to death. To address this issue in its entirety, four objectives were defined: to talk about how to identify an abusive relationship; to demonstrate that the person suffering the abuse is not to blame; to present the cycle of violence with the phases of an abusive relationship; and demonstrate that it is possible to leave an abusive relationship.

To achieve these objectives, the types of violence were explained and exemplified in the podcast, such as physical, moral, psychological, sexual, property and digital violence¹⁴. Furthermore, the three phases of an abusive relationship that make up the cycle of violence were explained, namely: the Tension Scale, where abuse starts in the form of psychological violence; the Explosion of Violence, a phase in which

psychological violence intensifies and physical aggression begins; and the Honeymoon, a phase in which the aggressor says he is sorry and makes promises of change, restarting the cycle¹³. Furthermore, the victim and the aggressor were encouraged to seek psychological support, and channels for reporting violence were also presented.

The biopsychosocial impact of these manifestations of violence on the victim demonstrates the importance of knowledge of the topic on the part of health professionals, given that, according to Dahlberg and Kung¹⁵ public health is concerned with preventing health problems and providing safety and care to populations as a whole.

Considering the theme “*Golden hour*”, the selected title was “*Golden hour: a strategy for humanizing childbirth*”, the group researched and reflected on why Brazil is the second country with the highest rate of cesarean sections in the world at 55%, according to the World Health Organization. Furthermore, there was a search for the concept and specificities of humanized birth - a set of procedures that aim to promote a more peaceful, respectful and humane environment, aiming at the health of the pregnant person, the baby and those involved in the process, regardless of the route of birth¹⁶ - and from *golden hour*, given name after the first hour where baby is born.

Some important points for proper conduct throughout the *golden hour* covered in the *podcast* were: delayed clamping of the umbilical cord; prevention of hypothermia; nutrition support; sepsis prevention; family

communication and counseling, and its positive effects on the health of that family and the newborn¹⁶.

Both themes were presented in a simple and educational way, so that the listening public could assimilate and appropriate the knowledge, as well as understanding and reflecting on the subjects.

It is noteworthy that the entire construction of both scripts took place in light of the contents placed in the WQ, as the arrangement of theoretical contents in an organized and logical manner is essential for synthesizing what, in fact, is essential in the translation of knowledge¹¹.

At last, the last step in the creation phase was recording the podcast episode, at which it became essential to have the script as a support for recording and minimizing unnecessary deviations.

The recording process took place using cell phone applications: *Anchor*, *Super Sound* and *Gravador*. Each member of the group individually recorded their speeches, which were later edited into a single audio file. The used apps for editing were *Anchor* and *Super Sound* and, the total time of each podcast, after recorded and edited, was 10 minutes, for both.

The third and final stage was the publication, completed with the release of the *podcast* edited in the platform *Spotify*, and disseminated by all students involved in the construction of the extension activity on their social networks, such as *Instagram*, *Twitter* and *WhatsApp*.

There were several difficulties throughout the process of developing and recording the audios. With social isolation, the audios were recorded separately by each member, for this reason, several disparities arose such as different volumes and intonations, which needed to be edited in the future, in addition to the challenge of finding a quiet place to make the recordings and learn to handle the editing and recording application.

Moreover, researching and discussing topics and their variables during the pandemic was not an easy task. At that moment, the platforms that provide the video calling tool were the solution. Yet, the lack of technological resources and stable internet connections were also limitations present during the implementation of the extension activity, demonstrating the fragility still present in Brazil in terms of technical-scientific advances and developments. At last, it was not possible to measure the impact and effectiveness of the educational action on the lives of listeners, due to the chosen audience for the extension, which was not delimited, with the podcasts being open to everyone.

DISCUSSION

Until the end of June 2021, there were 88 accesses to the podcasts produced and published on the “suspeitas” channel and on *streaming Spotify*. Internet users from Brazil, the United States, Belgium, Prague and London cover this number.

With this data, it is possible to observe the dissemination and internationalization of knowledge, through digital platforms, breaking geographical and time

barriers, given that podcasts are available in an asynchronous format.

During the creation of the project, the application of technological skills, such as audiovisual editing, human-computer interaction and resourcefulness with video calling applications, along with scientific research, resulted in a rich experience of combining health with technology, in addition to uniting stories, experiences, ideas and knowledge generating good things for society.

These possibilities and advantages resulting from the increasing accessibility to a range of information and means of communication help to justify why educational trends in current culture consider cyberspace a privileged locus for knowledge construction processes¹⁷.

Recognizing the importance of this means of communication, the United Nations (UN) has one of the 17 Sustainable Development Goals (SDGs) to increase the proportion of young people and adults with ICT skills by 2030. This reinforces the importance of involving technology in health education, thinking about the potential of this resource to reach a larger and more varied audience, in order to guarantee the universality of the right to access to health, as well as actions for its promotion, protection and recovery.

Thus, assuming that the *podcast*¹⁸ is a digital means for disseminating information, the use of which has grown considerably in different societal environments, the proposal of this tool as a promoter of health education is pertinent and innovative.

Moreover, considering the impact of ICTs in the current scenario, the ability to appropriate these tools to mediate the teaching process constitutes a differentiator for health professionals⁵. In view of this, thinking about preparing these professionals from their training, the National Curricular Guidelines (DCNs) recommend the incorporation of ICTs in the teaching-learning process in higher education¹⁹. Thus endorsing the development of this extension activity.

Despite a context full of difficulties, the students involved in the construction of *podcasts* achieved great technological development in the acquisition of new skills.

To develop *podcast* to share health information enriched the academic experience of future nurses, as doing so, in practice, in addition to broadening the horizons of possible ways of carrying out health education, also promotes training, exceeding the plane of ideas and unlocking new skills that can be used in the experience of the profession.

Since 2013, in Brazil, the Regional Center for the Development of the Information Society (CETIC.br) has been carrying out research (TIC *Saúde*) to verify the sustainability, availability and access of information and communication technologies in health institutions, as well as its applicability by professionals in the field²⁰. In 2020, through the ICT COVID-19 panel, the Center released information that portrays the growth of Telehealth.

The data shows that more than half of internet users searched for information about COVID-19 in *websites* and/or apps, 25% of them used a virtual screening

application to check symptoms and receive guidance about the disease, also 20% consulted with a doctor or other health professional online during the pandemic²¹. These data aid to measure how technology has gained importance in the healthcare scenario, once again justifying the importance of healthcare professionals training in the use of ICTs.

It can be highlighted that the strategic way in which the content was produced and disseminated, with clarity in the presentation of ideas, interactivity and short duration, exploring a digital media that has become very popular in the last two years, provided the involved students with the opportunity to develop related skills planning and critical thinking, as, in addition to exploring technologies, it was necessary for professionals to understand when and how these technologies can be used to their full potential.

As it said before, strategic planning is necessary, understanding which digital media are used by the public, what their interests and language are, exploring aspects of adaptation to the content and the public as essential skills, which were developed in practice.

It is noteworthy that the four pillars of education - learning to know, learning to do, learning to live together, and learning to be²² - were essential for the development and completion of the task. It is also worth highlighting the fact that the project is completely new for everyone who were involved, who had to fully learn to articulate the tools, platforms and content in a very complex moment, the pandemic caused by the SARS-CoV-2.

Therefore, it is noted that despite the difficulties encountered, the union of ICTs, health knowledge and actions has proven to be extremely beneficial for the process of transmitting and sharing scientific knowledge, mainly for the lay population who benefit from more accessible appropriation of health education^{23,24}.

Due to the mentioned facts, it is possible to conclude that the development of technological skills, even at the beginning of graduation, increases creativity, critical thinking, *hard* and *soft skills*, as well as the attention of academics, which is important for the training of qualified professionals.

As a limitation of this study, we can highlight the fact that no tool was used to verify whether there was appropriation of knowledge by listeners, such as forms and tests, given that the action was performed in an asynchronous format and in a streaming of international circulation. However, counting the number of hits and the locations where the podcasts were used. In the meantime, it was seen that both studies that base their positive results solely on the number of accesses and studies that use tools for data collection demonstrate that the podcast fulfills its role as a tool to promote health education^{23,24}.

It is also emphasized the need to develop more studies on the subject of ICTs and health education, in order to expand understanding of the effectiveness of these tools for this purpose.

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